



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PHILIP D. MURPHY
Governor

CATHERINE R. McCABE
Commissioner

SHEILA Y. OLIVER
Lt. Governor

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New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for January 17, 2019

Approved by the Board on March 21, 2019

Board Member Attendance:

Present	Absent
Gary Poppe (Vice-Chairman) Gordon Craig Joe Yost Joe Pepe Jeff Hoffman Richard Dalton Steve Domber	Art Becker (<i>Present via phone around 12:00</i>) Carol Graff

Board Legal Representative Present: Deputy Attorney General (DAG) Robert Guzek, NJ Division of Law (arrived at 10:55 am)

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Julia Altieri, Steve Reya, Mike Schumacher, Mark Ortega, and Mark Miller (present for a portion of the meeting)

Other DEP Staff: Brian Sage, Bureau of Nonpoint Pollution Control (present for part of the meeting)

Members of the Public Present: Denis Crayon, New Jersey Groundwater Association (NJGWA) President/Summit Drilling Co., Dermot Dillon, New Jersey Groundwater Association (NJGWA) Secretary/Summit Drilling Co.

1. Call to Order and Opening Statement-

The meeting was called to order by Vice-Chairman Gary Poppe at 9:32 am with a quorum present.

The Board and staff members introduced themselves to Dermot Dillon, Master Driller from Summit Drilling Co. He also serves as the Secretary of the New Jersey Groundwater Association.

S. Reya informed the Board that later in 2019 they would need to complete the full Ethics Training, which is mandated by the State of New Jersey. He reminded the Board that at the May 2018 meeting they had received the shortened training, which is required on a yearly basis. He continued to tell the Board that this longer version of the training should be held every three (3) years. He asked the Board whether they would prefer someone from the Ethics office conduct the training in person or if they would rather complete the training online. J. Yost stated that he preferred the meeting in person. G. Poppe agreed with having the meeting in person. J. Pepe asked if the meeting could be taken online if the in-person training was missed and S. Reya said that the training would be made available online.

S. Reya also informed the Board that as per the bylaws, elections for Chairman and Vice-Chairman will be held in May and that moving forward, elections will be held every May. He followed up by stating that after reviewing the bylaws, he noticed that Board resolutions needed to be numbered. He informed the Board that staff members already created a spreadsheet to track and number the Board's resolutions.

2. Review and Certification of the Minutes for the November 29, 2018 Meeting-

A motion to approve the minutes after changing "G. Poppe" to "G. Craig" in item number nine (9) was made by G. Craig, seconded by J. Yost and approved unanimously.

3. Review and Certification of the Executive Session Minutes from the November 29, 2018 Meeting-

A motion to approve the minutes without change was made by J. Hoffman, seconded by S. Domber and approved unanimously.

4. Review and Certification of the Minutes for the December 20, 2018 Conference Call-

A motion to approve the minutes after changing the times listed for G. Poppe and J. Yost departing the conference call and the adjournment time was made by J. Yost, seconded by G. Craig and approved unanimously.

5. Board Business and Correspondence-

Remaining meetings and conference calls for 2019:

The Board will physically meet at NJDEP Headquarters (401 E. State St. in Trenton) on the following dates beginning at 9:30 am:

March 21, May 16, July 18, September 19, November 21

Board telephone conference calls will be held during the intervening months to review continuing education course applications and approve qualified candidates for NJ driller or pump installer licenses. The calls will be held at 10:00 am on the following schedule:

February 14, April 18, June 20, August 15, October 17, December 19

6. Review and Certification of License Applicants-

S. Reya informed the Board that there were no new license applicants this month. He continued to state that starting at the end of January that the Department will begin receiving reports from the

National Ground Water Association with test scores of individuals who have taken the New Jersey Regulatory test modules to see the volume of individuals taking exams for the purpose of NJ licensure as well as the pass/fail rate for each exam category.

7. Discussion of Well and Septic Minimum Setback Distances as Required by N.J.A.C. 7:9D and N.J.A.C. 7:9A-

T. Pilawski introduced Brian Sage to the Board. The Board and staff members introduced themselves to Brian. Brian works for the NJDEP Bureau of Nonpoint Pollution Control in the Division of Water Quality. T. Pilawski continued by bringing the Board up to speed regarding an issue with a conflict between the well rule and the septic rule. According to the well rule (N.J.A.C. 7:9D), there is a minimum setback distance of 100 feet for Category 1 (potable use) wells to a septic disposal field. According to the septic rule (N.J.A.C. 7:9A), no wells shall be constructed within 100 feet of a disposal field. The septic rule does not differentiate between types of wells, therefore, reference to wells, which the regulated community and health officers often view as inconsistent with the well rule, which pertains only to minimum distances from potable wells. T. Pilawski stated that there is a concern regarding effluent being brought to the surface from irrigation wells, but the septic rule as it is written restricts environmental resource, geotechnical, and geothermal wells from being constructed within 100 feet of a disposal field. Denis Crayon explained that he was originally made aware of the issue with the conflict in the rules when a county health department mandated that a homeowner decommission an irrigation well that was constructed too close to a disposal field (which was in violation of the septic rule, but not the well rule).

M. Miller asked the Board if they had any recommendations on handling the fact that the well rule and the septic rule conflict with each other. G. Craig suggested that the well rule be changed to include a minimum distance requirement of 100 feet for all irrigation wells around a disposal field. He also suggested that the septic rule should change the “all wells” language. J. Yost suggested that all well categories except for closed loop geothermal wells should have a minimum distance requirement of 100 feet around a disposal field. J. Yost elaborated on some examples of why he believed that all wells (except closed loop geothermal) should have this minimum distance requirement. G. Poppe recapped the discussion and stated that all Board members agree that at a minimum, all Category 1 and Category 2 (non-potable use) wells should have the 100-foot setback distance to a disposal field.

Brian informed the Board that the septic rule is scheduled to be readopted with no changes in April, but he would bring the concerns of the Board to his superiors. T. Pilawski updated the Board on the proposed well rule changes, which the Board had been briefed on in the November 2018 meeting. She stated that it might be possible for the Well Permitting program to drive the change of N.J.A.C. 7:9A by changing N.J.A.C. 7:9D. J. Hoffman asked the Board and Brian if they had a recommendation regarding setting minimum distance requirements for other well categories. One possible recommendation that was discussed was to require a minimum of 15 feet between a disposal field and a well of any category. It was noted that this should be acceptable if there is a steep slope from a raised septic field. G. Craig suggested Category 1, Category 2, and Category 6 (dewatering wells or dewatering wellpoints) have the 100-foot setback distance requirement and that if any of those wells be needed to be drilled less than 100 feet from a disposal field that the Department issue a deviation, if warranted. These well uses were identified due to being types of wells in which groundwater (and potentially sewage effluent) is pumped and discharged above ground surface. T. Pilawski informed the Board that Well Permitting staff would come up with some proposed solutions and present language to the Board at the next regularly scheduled meeting.

Brian and M. Miller departed after being thanked by the Board and staff members.

8. Continuing Education Program Development Update-

S. Reya informed the Board of the Well Permitting program's progress regarding getting the continuing education program up and running. He informed the Board that the licensing and exams website will soon be updated with the up-to-date continuing education information. After the website is updated staff will send out a mass mailing to all licensed individuals informing them to visit the website for more information. S. Reya asked the Board if they could begin reaching out to potential course providers whom they feel may be qualified to submit. He told the Board that until the website is updated, Board members could instruct these potential course providers to reach out to him or M. Ortega to obtain the necessary course provider application.

9. Enforcement Activities and Field Work-

J. Altieri provided a brief overview of Bureau field work and enforcement actions taken since the last meeting as follows:

Field Inspections – November 29, 2018 thru January 17, 2019

- Issue: Final site visit to confirm successful drilling and grouting of new domestic well on November 29, 2018. New well was constructed to resolve homeowner complaint of unsatisfactory water quality. Bureau staff on-site during new well construction. Completed well record reviewed and accepted on December 17, 2018. No required enforcement action by Department. Upper Freehold Twp., Monmouth County.

Ongoing Investigation-Suspected unlicensed well pump installation and repair-status update

- Issue: Suspected unlicensed individuals performing well pump installation and repair in Millstone Twp., Monmouth County. Unacceptable response received on December 3, 2018 from the unlicensed individual regarding the Department's November 26, 2018 letter requesting additional information concerning its investigation of unlicensed well pump work.
- Enforcement Action: Bureau staff contacted a New Jersey licensed pump installer, who may have been on-site to supervise others and/or performed well pump installation at various locations in Millstone Twp., Monmouth County. Follow up, 2nd letter to be issued requesting additional, relevant documentation that supports compliance with pump installation regulations was met. More information needed.

Referrals to Water Compliance & Enforcement

- Issue: Various confirmed construction and permitting violations of N.J.A.C. 7:9D referred to Central Region Water Compliance and Enforcement for further processing of civil administration penalties and orders to decommission improperly constructed wells.
 - Five (5) cases total: Violations include the following: improper grouting and constructing of domestic and irrigations wells, well started prior to approved permits and unlicensed well construction and pump installation activities.
 - Four (4) additional cases to be referred by end of January.

10. Continuing Education Course Applications-

R. Guzek, DAG, explained to the Board that until he did more research on the Ethics rules he believed that the New Jersey Geological and Water Survey staff members who are on the Board (J. Hoffman, S. Domber, and R. Dalton) should recuse themselves from the following discussion regarding review of a continuing education course since they work in the same organization as one of the presenters. It was noted that J. Hoffman is in the chain of command for one of the presenters

while the other two Board members work in the same office. A. Becker was brought in via conference call in order to allow these abstentions and maintain a quorum for voting on the applications.

S. Reya summarized the application for the Radioactive Isotopes in New Jersey Groundwater course, presented by Dr. Steve Spayd, of the New Jersey Geological and Water Survey. G. Craig and G. Poppe stated that the course sounds very informative and beneficial. A. Becker stated that he believed that the course should be counted for one (1) CEP. A. Becker clarified with S. Reya that the administrative review of the application was completed. S. Reya explained that due to the circumstance of this presentation being offered during a NJGWA membership meeting that the information that Dr. Spayd submitted was being combined with the information that Mr. Crayon submitted on behalf of the NJGWA for their membership meeting.

A motion was made by J. Yost to accept the “Radioactive Isotopes in New Jersey Groundwater” presentation for one (1) CEP, provided the event host, NJGWA receives CEP approval as well. The motion was seconded by J. Pepe. All were in favor except for J. Hoffman, S. Domber, and R. Dalton, who abstained from the vote (M01-2019).

S. Reya then provided a brief overview of the application received for the NJGWA membership meeting, presented by Mr. Crayon. NJGWA is the event host for the above presentation, therefore, a number of required items such as the capturing and reporting of event attendance for both the meeting and presentation will be handled by NJGWA. G. Craig explained that he thought that it was a good idea to award one CEP for this meeting for educational, informational and networking purposes. A. Becker clarified with R. Guzek about a recommendation that he made on the December 2018 conference call. A. Becker asked if he believed that the Board could not award points for attending industry events. R. Guzek clarified that the Board should focus on course applications that provide training. He advised the Board to avoid giving points out for events that are solely for networking or solely for administrative events, such as Board meetings where the primary focus is business/agency housekeeping items.

R. Dalton suggested that the NJGWA membership meeting receive less than one (1) CEP due to the lack of content listed in the application. R. Dalton advised the Board to use caution for assigning a full CEP for a meeting as the agenda provided for review did not seem to demonstrate a full hour of appropriate work-related content. T. Pilawski explained that the Department’s position was more in line with R. Dalton’s position. Members discussed whether the NJGWA membership meeting should be awarded .5 CEP, rather than one (1) CEP. One issue identified was that there need to be enough available courses and points to allow for license holders to be able to obtain the required credits. Several members felt that allowance for only .5 CEP would further limit the opportunities open to license holders. J. Yost stated that he believed that for this first licensing cycle the course should be approved for one full point. Then at the start of the next continuing education cycle, which will be a full three (3) years, consider making the NJGWA membership meetings count for less than one (1) full point if the Board is not satisfied that the course application submitted at that time that the full credit hour is not warranted.

A motion was made by G. Craig to award one (1) CEP for the April 2, 2019 NJGWA membership meeting, seconded by J. Yost. All were in favor except for R. Dalton, who was opposed (M02-2019).¹

¹ J. Hoffman, S. Domber, and R. Dalton were a part of this discussion and vote since it did not involve a member of the New Jersey Geological and Water Survey.

A. Becker departed after being thanked by the Board and staff members.

11. Well Permitting Program Updates-

T. Pilawski gave the Well Permitting Program update. She recapped the discussion from earlier regarding the potential rule changes/updates that were suggested to the Office of Legal Affairs. She stated that interviews will soon be conducted for a new Section Chief for the Well Permitting Section, a position which has been vacant since Pat Bono retired at the beginning of 2018. Terry presented the Board members with a copy of the judge's decision in the geothermal well field case, in which the judge found in the Department's favor. T. Pilawski informed the Board that the Department has issued a conditional approval to the latest pilot plan submittal and that the Well Permitting Program expects to see permits and decommissioning authorization requests submitted by February 4, 2019 in order to address the existing well field.

12. Adjournment-

At 12:12 pm a motion to adjourn the meeting was made by G. Craig, seconded by J. Pepe and approved unanimously.



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New Jersey Department of Environmental Protection State Well Drillers and Pump Installers Examining and Advisory Board Conference Call Minutes for February 14, 2019

Approved by the Board on March 21, 2019

Board Members Present at NJDEP Headquarters Building: Jeff Hoffman

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

Board Members Absent: Joe Yost

Board Legal Representative Participating Via Telephone: Deputy Attorney General (DAG) Robert Guzek, NJ Division of Law

NJDEP Water Supply (Bureau of Water Allocation and Well Permitting) Staff Present: Terry Pilawski, Steve Reya, and Mark Ortega

1. Call to Order-

The meeting was called to order at 10:02 am with a quorum present via telephone.

2. License Application Review-

Master – Kenneth A. Fletcher

Environmental Resource & Geotechnical – Peter Lelliott and Matthew Smart

A motion to approve the three (3) listed license applicants, who were found to meet the licensing criteria, was made by G. Poppe, seconded by G. Craig and approved unanimously.

S. Reya noted that Mr. Fletcher is the first Master applicant to be accepted under the new process. He informed the Board that since Mr. Fletcher had obtained his journeyman license prior to January 2, 2018, he only needed three (3) exams to obtain his master license.

3. Testing & Continuing Education Program Discussion-

Testing:

S. Reya informed the Board that the Well Permitting program had recently received information on exam score data from the National Ground Water Association (NGWA) for both the regulatory and technical exams required for NJ licensure, which M. Ortega compiled the into a pass/fail spreadsheet for the Board to view. A Becker asked if the Department had any concerns regarding the information that was obtained and S. Reya noted that the only item of concern was that no one has passed the pump installer exam as of the date that the report was ran, however, it was a small sample size. A. Becker suggested that once the Department has received a new report, the Board can take a closer look at the data at the March meeting.

Continuing Education:

S. Reya informed the Board that there are no applications for continuing education courses for their review, however, the Department has received five (5) in total since the January meeting. He continued by saying that the New Jersey Groundwater Association (NJGWA) submitted an application on February 12, 2019 which would be reviewed at the March meeting and that another individual submitted information for the remaining courses, however, those applications have not yet been found to be administratively complete by the Department.

A. Becker expressed his concern regarding the lack of approved courses going into the start of the continuing education cycle and asked the remainder of the Board to weigh in on their thoughts. He asked if the other Board members wanted to reach out to other organizations, such as NGWA to begin submitted course provider applications. G. Poppe also expressed his concern with the lack of approved courses considering the continuing education cycle will begins in approximately a month and a half. J. Pepe stated that they need to get in contact with the manufacturers and followed up by saying that he had already sent the course provider application to two individuals.

A. Becker asked R. Guzek if Board members could offer courses to be counted for continuing education points. C. Graff and J. Hoffman explained that members of the LSRP Board who either offer courses or are affiliated with a course that is being offered will abstain from voting. R. Guzek stated that he would look into the Ethics laws and provide clarification at the March meeting. G. Graff stated that some of the courses currently approved by the LSRP Board would probably be acceptable for the well drillers and pump installers. J. Hoffman offered to reach out to the LSRP Board to coordinate outreach to course providers offering courses that would potentially meet the continuing education requirements for drillers and pump installers.

G. Craig asked the Department staff members if any progress has been made developing and scheduling the upgrade course for currently licensed soil borers. S. Reya explained that the Department would start the planning process soon. A. Becker noted that the Board would be willing to assist as necessary.

Finally, Board members were reminded that at the March meeting Water Compliance and Enforcement and Bureau of Water Allocation & Well Permitting staff will present charges against a pump installer that illegally conducted hydraulic fracturing without a license for the Board's consideration of pursuing potential license sanctions.

4. Adjournment-

At 10:24 am a motion to adjourn the meeting was made by G. Poppe seconded by J. Pepe and approved unanimously.



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New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for March 21, 2019

Approved by the Board on May 16, 2019

Board Member Attendance:

Present	Absent
Art Becker (Chairman) – 9:49 Gary Poppe (Vice-Chairman) Joe Yost Joe Pepe Carol Graff Jeff Hoffman Richard Dalton	Gordon Craig Steve Domber

Board Legal Representative Present: Deputy Attorney General (DAG) Robert Guzek, NJ Division of Law

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Julia Altieri, Steve Reya, Mike Schumacher, and Mark Ortega

Other DEP Staff: Joe Mattle, Bureau of Water Systems Engineering; Ed Hudzina, Water Compliance and Enforcement – Northern Region (present for part of the meeting)

Members of the Public Present: Dermot Dillon, New Jersey Groundwater Association (NJGWA) Secretary/Summit Drilling Co.

1. Call to Order and Opening Statement-

The meeting was called to order by Vice-Chairman Gary Poppe at 9:34 am with a quorum present.

T. Pilawski introduced J. Mattle to the Board as the Well Permitting Section's future Acting Section Chief, replacing Pat Bono. J. Mattle currently works in the Bureau of Water Systems Engineering, in the Engineering Section as a Supervising Environmental Engineer. The Board introduced themselves to J. Mattle.

2. **Review and Certification of January 17, 2019 Draft Meeting Minutes-**
A motion to approve the draft minutes from January 17, 2019 as they are was made by J. Yost, seconded by C. Graff and approved unanimously.
3. **Review and Certification of February 14, 2019 Draft Conference Call Minutes-**
A motion to approve the draft conference call minutes from February 14, 2019 as they are was made by C. Graff, seconded by J. Hoffman and approved unanimously.
4. **Board Business and Correspondence-**
Remaining meetings and conference calls for 2019:

The Board will physically meet at NJDEP Headquarters (401 E. State St. in Trenton) on the following dates beginning at 9:30 am:

May 16, July 18, September 19, November 21

Board telephone conference calls will be held during the intervening months to review continuing education course applications and candidates for NJ driller or pump installer licenses. The calls will be held at 10:00 am on the following schedule:

April 18, June 20, August 15, October 17, December 19

5. **Review and Certification of License Applicants-**
Journeyman – Charles Michel
Environmental Resource & Geotechnical – Andrew Mistina

A motion to approve the two (2) listed license applicants, who were found to meet the licensing criteria, was made by J. Yost, seconded by J. Pepe and approved unanimously.

S. Reya informed the Board that M. Ortega had used the data received from the National Ground Water Association (NGWA) to create graphs of pass/fail rates for each exam. After reviewing the graphs, J. Pepe expressed his concern that of the six (6) individuals to take the pump installer exam, that none have passed. He suggested the individuals might not have enough job experience before taking the exam, especially those who are sitting for exams before they have obtained the two (2) years of experience that is necessary for licensure. S. Reya and M. Ortega informed the Board that there still is not enough information to accurately infer anything based on the small sample size and that they will continue to update the data monthly as NGWA sends reports in and monitor the data for trends.

A. Becker arrives at 9:49.

The Board and staff updated A. Becker about the discussion. A. Becker suggested that the Department reach out to NGWA and ask them to distinguish whether individuals taking the exams are doing it for certification or for state exams.

6. Soil Borer/Journeyman (Class B) Upgrade Course-

S. Reya began by discussing the background of what the well rule says about the upgrade course that will be required for Soil Borers to upgrade their license to the phasing out of the license upon the current license expiration date of June 30, 2020. S. Reya explained that the Department is starting to plan this course out since the continuing education component in the well rule is up and running and is seeking some guidance from the Board. S. Reya asked the Board members if they believed the course should be all regulatory or if there should also be a technical component. A. Becker asked how long the Department planned on making this course and S. Reya responded that it would only be a few hours, not an all-day event. S. Reya further clarified that no exam would be administered for this course and that soil borers attending this class would automatically be upgraded to the Environmental Resource and Geotechnical license and that Journeyman (Class B) well drillers would be upgraded to a Journeyman license. S. Reya advised the Board that since those licensed as Soil Borers and Journeymen (Class B) have already taken exams that involve soil borings that the technical component of the class would only need to discuss cased environmental wells. A. Becker asked the Board for their opinion. C. Graff and G. Poppe both agreed that there should be a technical component to the class. J. Hoffman asked approximately how many individuals would need to take this class and S. Reya said about 140. A. Becker asked the Department to consider offering this class on a Saturday, so more people can attend it at one time. A. Becker volunteered to offer a technical course to assist the Department. He explained that he already has several courses already made that will fit into this and suggested that it should be offered three (3) or four (4) times before the licensing cycle ends. T. Pilawski said that the Department will look into the logistics of hosting a Saturday course.

A motion recommending that the Department offer the upgrade course four (4) times before the licensing cycle ends was made by G. Poppe, seconded by R. Dalton and approved unanimously.

S. Reya brought up how it was the Department's interpretation of the well rule that individuals who upgrade their license via this method would be exempt from the continuing education requirement for this cycle because they are obtaining a new license. G. Poppe expressed that he does not believe that individuals upgrading their license by this method should be exempt from the continuing education requirement.

A. Becker asked R. Guzek for his opinion on the matter. After looking over the language in the well rule, R. Guzek informed the Board that he believed that this only applies to newly licensed individuals, but not to licensees who are upgrading to a new license. J. Yost agreed and suggested that the Department submit to have the upgrade course count for CEPs so those individuals can obtain credit for attending.

7. Potential for Board Member(s) to Become Approved Course Providers-

A. Becker explained to the Board that he had reached out to R. Guzek to see if Board members could offer courses for the continuing education program. R. Guzek informed the Board that they can be an instructor or host of a course given two (2) conditions: they must recuse themselves from the vote of the course and they must state that their views are their personal views and not that of the Board. J. Pepe asked the rest of the Board if the Board meetings count for CEPs. The rest of the Board agreed that the Board meetings should not count for credit. J. Hoffman advised the Board that the LSRP Board does not count their meetings for credit.

8. Presentation of Charges to Board Regarding Possible License Sanctions Against a Licensed Pump Installer-

J. Altieri re-introduced the case and Mr. Ed Hudzina of the Department's Northern Water Compliance and Enforcement office to the Board. J. Altieri began by reading a sworn complaint against Mr. Kevin Blumhagen of Henderson Well and Pump. The allegations were that Mr. Blumhagen committed one or more construction related violations by twice hydrofracturing a well within 150 feet of another well and committed one or more non-construction related when he twice hydrofractured wells without a valid New Jersey Well Driller's License of the proper class. The Department's complaint further stated that Mr. Blumhagen demonstrated either incompetence or misconduct in the practice of well drilling or repair by performing work outside the scope of his license and by failing to ensure the wells being hydrofractured were more than 150 feet from another well; and because Mr. Blumhagen made false or misleading statements to Bureau of Water Allocation & Well Permitting employees who were investigating his actions when he claimed that a properly licensed driller had overseen the hydrofracturing of the more recent allegations. Therefore, pursuant to N.J.A.C. 7:9D-4.6 the Department presented these items for the bases for license revocation or suspension.

J. Altieri deferred to E. Hudzina to go over his 2017 investigation regarding the second site. E. Hudzina explained to the Board that the Bureau of Water Allocation and Well Permitting had received a four-page complaint from a homeowner and he was asked to investigate the complaint. E. Hudzina stated that he had obtained permission from the homeowner who filed the complaint to visit the home to measure the distance from their well to the well that was hydrofractured. He was refused access to the property on which Mr. Blumhagen had performed the well work. Without being able to gain entry to that property he was unable to directly measure the well to well distance. He estimated that the wells were approximately 140 feet apart based on his measurement to the property line and scaling off the approximate distance from the property line to the adjacent well.

E. Hudzina next contacted Mr. Blumhagen, who confirmed that he was on site when the well was hydrofractured. He said that Mr. Blumhagen told him he thought that the well was more than 150 feet and stated that a New Jersey licensed journeyman well driller, Mr. George Slater, was on site with him. E. Hudzina stated that he later called Mr. Slater and was told by him that he had arrived on site an hour after the work had started, that he was not hired by Mr. Blumhagen, and that he did not supervise the activities taking place. E. Hudzina added that he requested that Mr. Slater send him an email summarizing his statement, which he did.

At the end of E. Hudzina's presentation, A. Becker asked the Board for their opinion. T. Pilawski explained that the Board needs to decide if the Department provided enough information to have a formal hearing to pursue license sanctions against Mr. Blumhagen. R. Guzek told the Board that the burden of proof will be on the Board if they choose to move forward with a hearing and that the Board will independently do their own fact-finding.

At the suggestion of the Board's legal representative, DAG R. Guzek, it was recommended that the Board enter an executive session to further discuss legal questions posed by Board members.

A motion to enter an executive session was made by J. Hoffman at 11:33am, seconded by C. Graff, and approved unanimously.

A motion to resume the open session was made by G. Poppe at 12:04pm, seconded by J. Yost, and approved unanimously.

A motion to move forward with the hearing for Mr. Blumhagen was made by J. Yost, seconded by G. Poppe, and approved unanimously.

A motion was made to waive the 90-day hearing requirement by J. Hoffman, seconded by G. Poppe, and approved unanimously.

9. Department Outreach-

M. Ortega told the Board that letters communicating continuing education were sent out to every license holder. M. Schumacher stated that email notifications will also be sent out to every license holder for whom the Bureau has an email address on file.

10. Horizontal Direction Drilling Update-

J. Hoffman informed the Board that there has not been a lot of progress on the issue of horizontal directional drilling requirements. He explained that the Department's upper management believes that it should be in the well rule and that they were looking into ways to move forward. T. Pilawski told the Board that in the meantime, Land Use Management will be able to enforce grouting and abandonment requirements by including those requirements in their permits.

11. Course Approval for Courses with Various Providers-

S. Reya told the Board that there have been a lot of questions regarding the approval of OSHA training. He explained that the license holders would be giving the Department the information since there are numerous providers of OSHA courses that are offered both in person and online. Because there is no sole course provider of OSHA courses there would not be an entity that could submit for CEP approval. Board members and Bureau staff discussed a mechanism that could be used to approve a course that could be taken through multiple providers (as well as both in-person and online).

J. Hoffman and T. Pilawski depart at 12:35pm.

Following discussion by Board members, A. Becker stated that since there are a lot of different OSHA courses, that more specific discussion is needed. He asked the Department to make a list of specific courses and present them to the Board.

12. Board Continuing Education Subcommittee Review-

S. Reya explained the roles of the Department and the Board for the continuing education course approval process. He said that the Department is only reviewing for accuracy and completeness of the applications and that the Board should be conducting a review of the content. He said that the Board's continuing education subcommittee will review the content prior to the Board meetings. C. Graff said that she thought that this was a good idea, but that it would only need to be temporary to get the program up and running.

A motion was made to form a subcommittee of Board members for the purposes of reviewing course applications by C. Graff, seconded by G. Poppe, and approved unanimously.

A. Becker asked for volunteers to join the subcommittee, which will be headed by C. Graff. G. Poppe and J. Yost volunteered. S. Reya mentioned that G. Craig told him that he would be interested in joining if the subcommittee was formed. A. Becker said that if G. Craig was unable to join, that he would take his place on the subcommittee.

13. Continuing Education Course Applications-

S. Reya went over all of the courses that have been deemed administratively complete by the Bureau:

Courses for approval:

NJGWA Membership Meeting w/ Geophysical Logging Presentation – NJGWA – **2 Technical CEPs**

A motion to approve this course was made by J. Yost and seconded by G. Poppe. All were in favor except for R. Dalton, who was opposed.

Groundwater in Fractured Bedrock – Rutgers – **6 Technical CEPs**

A motion to approve this course was made by G. Poppe, seconded by C. Graff, and approved unanimously.

Courses not approved:

Underground Storage Tanks – Rutgers – **6 Technical CEPs requested**

Board members discussed the relevance of this course to NJ licensed well drillers and pump installers. After reviewing the detailed course description and agenda, the majority of the Board felt that the course did not specifically cover information related to their field. A motion to not approve this course was made by C. Graff and seconded by J. Yost. All were in favor except for A. Becker and G. Poppe who were opposed.

M. Ortega departed at 1:45pm.

14. Raw Water Sample Tap-

S. Reya presented information and a photograph provided to him by the Bureau of Water Systems Engineering. Their staff requested guidance from the Board on whether the installation, as shown, would compromise the integrity of the well. A county inspector recently discovered the situation and felt that it may be in violation of the Federal Ground Water Rule (and associated NJ rule and guidance documents). The scenario they provided showed a line that fed the “sample port” that was believed to have been teed off of the pitless adapter. The valve was essentially a hose bib for a garden house and was only a few inches above the soil outside. The Board agreed with the assertion that it is not a dedicated raw water tap and compromises the integrity of the well with regard to potential bacteriological contamination. G. Poppe also stated that it would not be frost proof and would likely be under a vacuum when the pump cycles on and off, which could pull in surface contaminants. S. Reya thanked the Board for their input and assistance.

15. Well Permitting Enforcement Activities & Field Work-

J. Altieri presented the following summary of inspections and enforcement activity that has occurred since the last meeting.

Field Inspections – January 17, 2019 to March 21, 2019

- Issue: Bureau staff spot checked new construction of potable test well for future public supply use in Bergen County. No issue of non-compliance noted or further action by Well Permitting needed. Ridgewood Village, Bergen County.

Status update- Ongoing Investigation-Suspected unlicensed well pump installation and repair

- **Issue:** Suspected unlicensed individuals performing well pump installation and repair in Millstone Twp., Monmouth County. Follow up letters received on February 13, 2019 and March 3, 2019 from the licensed pump installer of record and an unlicensed individual in response to the Department's November 26, 2018 letter and January 24, 2019 letters requesting additional information.
 - **Enforcement Action-**Bureau staff received additional relevant documents and two (2) letters dated February 13, 2019 and March 3, 2019 from a New Jersey licensed pump installer, stating he was present during the on-site installation and supervision of pump work done by others at 3 out of 4 identified locations in Millstone Twp., Monmouth County. This statement was collaborated with the unlicensed individual. Both individuals stated in writing that pump work (45 gals. water pressure tank and a new square D pressure switch) was installed at one of the properties without on-site supervision of a New Jersey licensed pump installer. Pending referral to Central Region Water Compliance and Enforcement for further processing of civil administration penalties.

New Investigation-phone complaint February 1, 2019

- **Issue:** Suspected unlicensed, unpermitted dewatering well construction activity in Lacey Township, Ocean County. New Jersey licensed well driller reported the installation of 12" steel casing, augured into the bottom of excavation down to 20 feet. The casing is filled with stone.
 - **Alleged Violations:** A well permit and licensed well driller of the proper class would be required to supervise work or perform well drilling activity since the alleged borehole diameter is greater than 6' and deeper than 10 feet in depth.
 - **Enforcement Action-** Well search of location determined no well permit was on file. At the time of complaint, Bureau staff was unable to determine if activity described by the caller qualified as a regulated well construction activity that would be regulated by N.J.A.C.7:9D. A follow up field site visit was conducted by Central Region Water Compliance and Enforcement staff on February 3, 4 & 5, 2019. It was determined that the activity was part of an (R-tank) underground water storage basin system that was altered to include the casing. In rare instances, the stone filled casing at the bottom of the basin is installed to create an outlet thru underlying clay layers to facilitate better drainage. Bureau staff consulted with the Bureau of Nonpoint Pollution Control and determined that this activity may require a well permit and licensed well driller when the installation requires auguring casing at the bottom of the basin system. Further research and possible New Jersey Stormwater Best Management Practices manual update pending.

16. Adjournment-

At 1:57 pm a motion to adjourn the meeting was made by G. Poppe seconded by J. Hoffman and approved unanimously.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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New Jersey Department of Environmental Protection State Well Drillers and Pump Installers Examining and Advisory Board Conference Call Minutes for April 18, 2019

Approved by the Board on May 16, 2019

Board Members Present at NJDEP Headquarters Building: Jeff Hoffman

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

Board Members Absent: Gary Poppe

Board Legal Representative Participating Via Telephone: Deputy Attorney General (DAG) Robert Guzek, NJ Division of Law

NJDEP Water Supply (Bureau of Water Allocation and Well Permitting) Staff Present: Steve Reya and Mark Ortega

1. Call to Order-

The meeting was called to order at 10:06 am with a quorum present via telephone.

2. Testing & Continuing Education Program Update-

S. Reya explained to the Board that himself and M. Ortega had reviewed all of the course applications submitted since the last Board meeting and submitted 15 administratively approved course applications to the Board's newly formed continuing education subcommittee, headed by C. Graff. The subcommittee had recommended that all 15 courses be approved for credit. J. Yost noted that the International School of Well Drilling course, Drilling Safety, should count as a safety credit, not a technical credit, on the spreadsheet. The listed OSHA courses were also not properly captured as being safety courses on the spreadsheet, which will be revised. G. Craig inquired about the number of online continuing education points (CEPs) that can be taken in a given cycle. S. Reya explained that the Board made a motion to allow 8 online CEP per cycle, but that would not take place until the full cycle

J. Pepe inquired if instructors would receive CEPs for courses that they host. A. Becker noted that in other states in which he is licensed, the instructor also receives credit. He also requested that this topic be added to the May 16th meeting agenda to discuss this matter more thoroughly.

Courses for approval:

Mud Rotary Class – Drill Tech Group LLC – **8 Technical CEPs**

Well Rehabilitation I – International School of Well Drilling – **1 Technical CEP (Online)**

Well Rehabilitation II – International School of Well Drilling – **1 Technical CEP (Online)**

Well Development – International School of Well Drilling – **1 Technical CEP (Online)**

Drilling Safety – International School of Well Drilling – **1 Safety CEP (Online)**

Basic Geology – International School of Well Drilling – **1 Technical CEP (Online)**

Generic Well Abandonment in the U.S.A. – International School of Well Drilling – **1 Technical CEP (Online)**

Groundwater Basics – International School of Well Drilling – **1 Technical CEP (Online)**

Geothermal Heating and Cooling I – International School of Well Drilling – **1 Technical CEP (Online)**

Geothermal Heating and Cooling II – International School of Well Drilling – **1 Technical CEP (Online)**

Practical Applications in Hydrogeology – Rutgers – 18 or 24 Technical CEPs, but will only count for a maximum of **17 Technical CEPs** due to Safety CEP minimum

Environmental Field Sampling and Data Collection – Rutgers – **3.5 Technical CEPs**

OSHA HAZWOPER 8 Hour Refresher – Multiple Providers – **8 Safety CEPs (Online or In-person)**

OSHA HAZWOPER 24 Hour Training – Multiple Providers – 24 Safety CEPs, but will only count for a maximum of **11 Safety CEPs** due to Technical CEP minimum (**Online or In-person**)

OSHA HAZWOPER 40 Hour Training – Multiple Providers – 40 Safety CEPs, but will only count for a maximum of **11 Safety CEPs** due to Technical CEP minimum (**Online or In-person**)

A motion to approve 15 courses, as listed above, was made by J. Yost, seconded by G. Craig and approved unanimously.

A. Becker suggested that the Department consider the OSHA 10-Hour Construction course for the May meeting.

3. License Application Review-

Environmental Resource & Geotechnical – Kenneth Hynes, Justin Mariani, Christopher Lacko, and Douglas Hansen

A motion to approve four (4) license applicants was made by G. Craig, seconded by C. Graff, and approved unanimously.

4. Adjournment-

At 10:24 am a motion to adjourn the meeting was made by G. Poppe seconded by J. Pepe and approved unanimously.



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New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for May 16, 2019

Approved by the Board on July 18, 2019

Board Member Attendance:

Present	Absent
Art Becker (Chairman) Gary Poppe (Vice-Chairman) Gordon Craig Joe Pepe Steve Domber	Joe Yost Carol Graff Jeff Hoffman Richard Dalton

Board Legal Representative Present: Deputy Attorney General (DAG) Robert Guzek, NJ Division of Law

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Julia Altieri, Steve Reya, Mark Ortega, and Sabrina Hill

Members of the Public Present: Dermot Dillon, New Jersey Groundwater Association (NJGWA) Secretary/Summit Drilling Co.; Denis Crayon, New Jersey Groundwater Association (NJGWA) President/Summit Drilling Co.; Mark Sussman, EarthTech Energy Solutions, LLC; Jeff Urlaub, MEP Associates; Karen Jezierny, Princeton University; Tom Nyquist, Princeton University; Ted Borer, Princeton University; Lane Lawless, Rygan Corporation (*present via conference call for the Princeton University discussion*)

1. Call to Order and Opening Statement-

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

The Board members introduced themselves to Sabrina Hill. She is a new hourly employee in the Well Permitting section who will be assisting with the review of well records, well decommissioning reports and completion of well searches.

2. **Review and Certification of March 21, 2019 Draft Meeting Minutes-**
A motion to approve the draft minutes from March 21, 2019 without change was made by G. Poppe, seconded by J. Pepe and approved unanimously except for S. Domber and G. Craig who abstained as they were not present at the March meeting.
3. **Review and Certification of April 18, 2019 Draft Conference Call Minutes-**
A motion to approve the draft conference call minutes from April 18, 2019 without change was made by G. Craig, seconded by J. Hoffman and approved unanimously except for G. Poppe who abstained because he did not participate in the conference call.
4. **Review and Certification of March 21, 2019 Draft Executive Session Meeting Minutes-**
A motion to approve the draft executive session minutes from March 21, 2019 without change was made by G. Poppe, seconded by J. Pepe and approved unanimously except for S. Domber and G. Craig who abstained as they were not present at the March meeting.
5. **Board Business and Correspondence-**
S. Reya informed Board members that they are currently appointed in their roles as Board members until March of 2020 at which time all terms expire. He discussed that the term limits of Board members were intended to be staggered so that all Board members terms do not expire at the same time but explained that everyone needs to reapply. This issue was previously raised by DAG, R. Guzek who noted that the Department should make all reasonable attempts to again stagger the terms to be consistent with the Board requirements prescribed in the Subsurface & Percolating Waters Act (N.J.S.A. 58:4A). S. Reya will send an email to Board members with instructions to reapply to be on the Board for all those who wish to seek reappointment. This will include the submittal of current resumes. Existing resumes on file will be emailed to members for them to update, as necessary.

As discussed, at previous meeting, Board members were reminded that it was necessary to vote for Chairman and Vice-Chairman. A. Becker expressed his interest in remaining as the Board's Chairman and invited other Board members to put their names forward if they wanted the position. No other Board member expressed interest in serving as Chairman or Vice-Chairman and unanimously agreed that the individuals in those roles are performing admirably.

A motion was made by G. Poppe to reappoint A. Becker as the Board's Chairman, seconded by G. Craig and approved by all except for A. Becker who abstained.

A motion was made by G. Craig to reappoint G. Poppe as the Board's Vice-Chairman, seconded by A. Becker and approved by all except for G. Poppe who abstained.

Remaining meetings and conference calls for 2019:

The Board will physically meet at NJDEP Headquarters (401 E. State St. in Trenton) on the following dates beginning at 9:30 am:

July 18, September 19, November 21

Board telephone conference calls will be held during the intervening months to review continuing education course applications and candidates for NJ driller or pump installer licenses. The calls will be held at 10:00 am on the following schedule:

June 20, August 15, October 17, December 19

6. Continuing Education Update-

S. Reya began by reviewed an item that was brought up on the April conference call by J. Pepe. The Board was asked to consider whether the course provider, if a licensee, should receive continuing education points (CEPs) for the course that they administer. A. Becker stated that other states allow this. G. Craig asked the Board if it mattered whether the licensee who was providing the course was being compensated for the work. J. Pepe said that he did not think that mattered. A. Becker said that he believed that going down that road would be challenging and recommended against considering whether they licensee teaching the course is paid or is volunteering their time.

A. Becker asked the Department staff what was being done to prevent duplicate course from being approved for licensees. Department staff informed him that with this was being tracked with the course number that is issued to the course provider. They explained that if a licensee's license number appears under a course more than once then it will trigger an error.

G. Craig asked if the Department would retroactively give a course provider credit if they administered a course that was not already approved. S. Reya explained the Department's stance on retroactively accepting courses and the process for a licensee to apply for the credit.

A motion was made to allow a licensee to receive credit for a course that they instruct or administer. This motion was made by G. Craig, seconded by G. Poppe and approved unanimously.

Regarding the overall status of the continuing education program, Bureau staff noted that as of this Board meeting, there are 18 approved courses for licensees. These courses are all listed on Well Permitting's Licensing and Exams website.

Of these courses, the OSHA 8, 24, and 40 HAZWOPER courses are all approved. A. Becker asked if the Department had considered the OSHA 10 and 30 Construction courses. G. Craig said that he believed that those should be courses that are accepted as they are clearly safety courses that relate to the drilling industry.

The Board asked about courses offered by the National Ground Water Association (NGWA). M. Ortega informed the Board that during a recent conference call he had with their staff, he discussed the course approval process with them. M. Ortega told NGWA staff that the Department would work with them to get some courses approved and sent NGWA the course provider application.

A motion was made by G. Poppe to recognize all OSHA courses as recommended courses, seconded by G. Craig and approved unanimously.

S. Reya expanded on the topic of retroactively approving courses taken by licensees. He stated that the Department's stance was that the well rule does not set a hard date for beginning to accept courses so the Department believes that courses taken prior to April of this year should be eligible for credit provided they meet the regulatory/Board criteria for approval and were taken after the latest version of the rule was implemented. Previously, there has been some confusion regarding the required timeframe for a course to be accepted for credit due to the fact the Department and Board did not have a mechanism in place for course approvals. R. Guzek, DAG, stated that if the course was taken

after the well rule became operative on March 1, 2018 then the course could be accepted if the content was relevant.

S. Domber departed at 10:27 am. There ceased to be a quorum present at this time.

7. Closed Loop Geothermal Well Design – Princeton University-

The Board members introduced themselves to the representatives from Princeton University. A. Becker opened the conversation by stating that he had a prior working relationship with EarthTech Energy Solutions, LLC (EarthTech) about four (4) or five (5) years ago. In their prior conversations, A. Becker assisted EarthTech with Well Permitting's deviation process. He added that he has not since worked or for EarthTech in any capacity.

Princeton University representatives explained the purpose of the geothermal project that they were planning. Princeton University does a lot of climate change research and wanted to install this geothermal well field to reduce their carbon footprint.

To efficiently complete this project, it was proposed that the geothermal wells be installed using a Rygan geothermal system. It was explained to the Board that this system was successfully used in Wisconsin to a depth of 500 feet and that there were two (2) projects in Massachusetts which have target depths of 1500 feet. G. Poppe asked the Princeton University representatives how many wells were going to be installed at the university. The Princeton University representative said that there would be approximately 1000 wells for the whole campus if they were granted permission to use the High-Performance Geo Xchange (HPGX) pipe; more wells would be needed if they had to use the standard pipe. Bureau staff had previously advised interested parties that the system did not meet the current well rule requirements due to the proposed grout, which is believed to exceed the maximum allowable permeability specified in the rule and fiberglass casing. Board members asked a number of questions regarding the type of epoxy to join the separate sections of casing, possible alternative conforming grout mixes that could be used, and the pressure/strength ratings of the fiberglass casing and how these values compare to currently approved HDPE piping for closed loop geothermal wells.

A. Becker asked the Department staff what kind of deviations or information would be needed for this project. S. Reya stated that a revised schematic would need to be submitted, which reflects the appropriate dimensions of the well and the appropriate grout interval/materials. The Department and Board also requested that a sample of the Rygan HPGX pipe and the safety data sheet for the adhesive used on the well be sent to the Department. Should the Bureau have any concerns upon review of the additional information they will consult with the Board prior to issuing any permits. Finally, G. Craig asked if Board representatives would be permitted onsite during the installation should the project proceed as he felt that such new technology/installation methods should be observed first hand to assess the ability to install the system pursuant to the rules. Princeton representatives stated that Board members and/or Department staff are welcome to visit the site.

Princeton staff were thanked for their time and departed.

S. Domber returned at 11:40 am. A quorum was restored at this time.

8. Testing and Licensing-

M. Ortega explained that the Department is continuing to receive monthly updates from NGWA for potential license applicants who have taken their exams. The report is generated based on individuals

who take one of the regulatory exams. If someone takes a New Jersey regulatory exam then they send data regarding other exams that the potential applicant has taken to the Bureau.

M. Ortega told the Board that based on the current information there was still not enough data to draw any real conclusions. He told the Board that NGWA recommends a sample size of 150 for the rest of the results to try to interpret the data. M. Ortega continued by saying that he is compiling the old test data to look for similar trends. He said that his goal was to have this information ready for the Board by the July meeting.

9. Soil Borer/Journeyman (Class B) Upgrade Course-

Department staff informed the Board that they have reserved rooms for the course but needed to confirm with A. Becker before officially announcing dates. The course would be three (3) to four (4) hours total. Department staff will go over the well rule and ePermitting for 1.5 to two (2) hours. A. Becker would use the other 2 hours to conduct a technical presentation.

The Board members asked if the Department gave any consideration to administering this course on a Saturday. Department staff said that they have reserved enough time slots over the course of a 4-month period to give the 100 licensees ample time to attend the class. A. Becker said that he could turn his presentation into a webinar if he was unable to physically be able to attend the class.

Department staff will write a course provider application for this presentation so that those who attend can receive CEPs for attending.

10. Update and Discussion on Possible License Sanctions Against a Licensed Pump Installer-

S. Reya updated the Board regarding their decision to move forward with licensing sanctions against a licensed pump installer. He stated that while the Board had decided to hold the hearing in July, the Compliance and Enforcement Deputy Attorney General (DAG) would be unable to make it to that meeting. Therefore, the hearing will be scheduled for September, when the appropriate DAG will be present. R. Guzek asked if the Department could send out the appropriate information to the Board before the June conference call.

11. Continuing Education Course Applications-

A summary of all courses that have been found administratively complete by the Bureau was provided as follows:

Approved Courses from Course Providers:

Construction Dewatering and Groundwater Control – ASCE – 14 Technical CEPs

A motion to approve this course was made by G. Poppe and seconded by G. Craig and approved unanimously.

Water Treatment and Pump Seminar – Duff Co. – 6 Technical CEPs

A motion to approve this course was made by G. Poppe, seconded by G. Craig and approved unanimously.

Water System Fundamentals – Goulds Water Technology – 7 Technical CEPs

A motion to approve this course was made by G. Poppe, seconded by G. Craig and approved unanimously.

Approved Courses from Licensees for previously attended events:

Jeffrey Segreaves – Maryland Delaware Water Well Association Convention – Demonstrated 10 hours of training and is requesting 10 CEPs

A motion was made to recommend accepting this course for 9 *Technical CEPs*, disallowing the Opening Remarks of the convention. This motion was made by G. Craig and seconded by G. Poppe. All were in favor except for A. Becker, who was opposed.

Christopher Jaworski – Maryland Delaware Water Well Association Convention – Demonstrated 10 hours of training and is requesting 10 CEPs

A motion was made to recommend accepting this course for 9 *Technical CEPs*, disallowing the Opening Remarks of the convention. This motion was made by G. Craig and seconded by G. Poppe. All were in favor except for A. Becker, who was opposed.

Jeffrey Jaworski – Maryland Delaware Water Well Association Convention – Demonstrated 10 hours of training and is requesting 10 CEPs

A motion was made to recommend accepting this course for 9 *Technical CEPs*, disallowing the Opening Remarks of the convention. This motion was made by G. Craig and seconded by G. Poppe. All were in favor except for A. Becker, who was opposed.

Joseph Deithorn – Maryland Delaware Water Well Association Convention – Demonstrated 10 hours of training and is requesting 10 CEPs

A motion was made to recommend accepting this course for 9 *Technical CEPs*, disallowing the Opening Remarks of the convention. This motion was made by G. Craig and seconded by G. Poppe. All were in favor except for A. Becker, who was opposed.

Not Recommended for Approval for Licensees for previously attended events:

Anthony Favorito – Ethics: Laws and Regulations for Public Works Managers and New Jersey State-Licensed Water and Wastewater Operators

A motion was made to not recommend this course because it is not technically relevant. This motion was made by G. Craig, seconded by S. Domber and approved unanimously.

Anthony Favorito – Disinfection Equipment Maintenance and Repair

A motion was made to not recommend this course because it is not related to the drilling and pump installing industry. This motion was made by G. Craig, seconded by J. Pepe and approved unanimously.

12. Geothermal Recommissioning Pilot Plan Update-

A status update on the progress of the pilot plan to recommission for improperly installed geothermal wells at a site in Woodbury, NJ was given by S. Reya. He explained that Summit Drilling was contracted by the property owners to conduct the pilot plan, which was intended to determine the feasibility of recommissioning the closed loop geothermal wells to be in compliance with the well rule, N.J.A.C. 7:9D. S. Reya told the Board that M. Schumacher and himself had been on site while Summit Drilling used a sonic drill rig to core around the first loop to the total installed depth, completely remove the original loop from the ground, and replace the loop and grout it in accordance with N.J.A.C. 7:9D-2. Only two (2) wells are currently permitted for the pilot plan. The second well was being drilled out while the Board meeting was taking place.

S. Reya told the Board that once the pilot plan is completed a compliance plan needs to be submitted to the Department. The compliance plan will address either the recommissioning or decommissioning of the entire well field based on the findings of the pilot plan.

13. Enforcement Update-

Field Inspections – March 21, 2019 to May 16, 2019

- Issue: Bureau staff spot checked the new construction of two (2) future public supply wells in Monmouth County as per the requirements for witnessing construction contained in their approved well drilling permit. No issue of non-compliance noted for well construction, licensing or permitting were found.
 - Enforcement Action- No action by Well Permitting needed.

New Investigation-Lost and/or Destroyed Wells-Settlement Agreement

- Issue: Two (2) shallow improperly decommissioned monitor wells that were destroyed by excavation located in Jersey City, Hudson County. Notice of destroyed wells was submitted by the Licensed Site Remediation Professional company representative notifying the Department of improper well decommissioning because of redevelopment and construction activities, a violation of N.J.A.C. 7:9D-3.1.
 - Enforcement Action- Bureau staff reviewed and determined that a violation occurred, and penalties should be assessed to settle the matter with the State in accordance with the regulations. Referral to Northern Region Water Compliance and Enforcement was sent and payment is pending by the violator for the two (2) wells that were improperly decommissioned.

Status update- Ongoing Investigations and Enforcement Activity

- Issue: Investigation of Suspected unlicensed individuals performing well pump installation and repair in Millstone Twp., Monmouth County. Letters received on February 13, 2019 and March 3, 2019 from the licensed pump installer of record and an unlicensed individual verified an instance of unlicensed pump installation work.
 - Enforcement Action- Bureau staff assessed penalty and referral to Central Region Water Compliance and Enforcement for further processing of civil administration penalties. Letter to be sent advising unlicensed individual of the requirements for obtaining a pump installers license with the Department.

Administrative Hearings - Requested

- Issue: Formal Administrative hearing requests were filed by well drillers and their companies in accordance with the required deadline specified in the civil administration penalties and orders to decommission improperly constructed wells documents. These documents were issued by the Department's Southern Region Water Compliance and Enforcement for various confirmed construction and permitting violations of N.J.A.C. 7:9D. Five (5) cases total with violations including improper grouting and constructing of domestic and irrigations wells, well started prior to approved permits and unlicensed well construction and pump installation activities.
 - Enforcement Action- Pending negotiations to follow with the Department as per SOP's for hearing requests.

G. Craig brought up an issue regarding some recent Department enforcement practices that he believes were handled improperly. A. Becker asked G. Craig to write his complaint and specific concern so that it could be added to the agenda and addressed by the Board at the July meeting.

14. Horizontal Directional Drilling (HDD) Update-

An update was given to the Board regarding HDD projects in the state. New Land Use permits will reference the well rule, specifically the need to comply with grouting requirements for abandoned boreholes, for public health and safety purposes.

15. Other Topics-

G. Poppe asked S. Reya to investigate the new water testing requirements. Certain items which need to be tested for cannot be when high turbidity is present. S. Reya said that he would reach out to the Bureau of Safe Drinking Water for more information.

A. Becker announced that R. Guzek would no longer be the Board's DAG after this meeting. R. Guzek will be moving to the Department's Office of Legal Affairs. Jill Denyes will be returning to be the Board's DAG.

16. Adjournment-

At 1:30 pm a motion to adjourn the meeting was made by G. Poppe, seconded by G. Craig and approved unanimously.



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New Jersey Department of Environmental Protection State Well Drillers and Pump Installers Examining and Advisory Board Conference Call Minutes for June 20, 2019

Approved by the Board on July 18, 2019

Board Members Present at NJDEP Headquarters Building: Jeff Hoffman

Board Members Participating Via Telephone: Art Becker (Chairman), Gary Poppe (Vice Chairman), Joe Yost, Gordon Craig, Joe Pepe, Carol Graff, Richard Dalton, and Steve Domber

Board Members Absent:

NJDEP Water Supply (Bureau of Water Allocation and Well Permitting) Staff Present: Terry Pilawski and Steve Reya

1. Call to Order-

The meeting was called to order at 10:01 am with a quorum present via telephone.

2. License Application Review-

The Bureau received one license application for the Environmental Resource & Geotechnical (ERG) license and one for the Pump Installer license. A. Becker summarized the license applicant list that the Bureau previously provided to Board members via email, which listed the following applicants for licensure:

Environmental Resource & Geotechnical	Raymond G. Cappella Jr.
Pump Installer	John McCurdy

The applicants were found to meet the regulatory requirements of N.J.A.C. 7:9D-1.8. G. Poppe motioned to approve both license applicants for licensure. The motion was seconded by G. Craig and approved unanimously.

A brief discussion over the Pump Installer exam then ensued. It was noted that Mr. McCurdy is the first person to pass all three (3) required certification exams required for licensure since the implementation of the current testing format, which went into effect in March, of 2018. As has been noted at previous meetings, the high failure rate for the Pump Installer certification exams has been concerning to Board members, however, the sample size is still small (less than ten individuals) so the Department did not believe enough data exists to be able to assess a trend. S. Reya said he recently spoke with Mr. McCurdy on the phone and solicited his thoughts on the exam. The feedback Mr. McCurdy provided was that he could see why NJ license applicants struggle with the exam, as many of the questions pertain to pumping systems not utilized in NJ. The Board discussed how a national technical exam cannot be tailored to fit the specific criteria of one state, which is one of the limitations of the newly implemented “standardized” testing program.

3. Continuing Education Course Review –

A table summarizing two (2) courses, along with the supporting documentation, was provided to Board members prior to the meeting for review as they were deemed administratively complete by the Bureau. The providers for each course requested two (2) continuing education points (CEPs).

A motion to approve two (2) courses, as listed below, was made by J. Yost, seconded by C. Graff and approved unanimously.

New Jersey Ground Water Association (NJGWA) Membership Meeting including Troubleshooting with Meters Presentation by Franklin Electric – NJGWA: 2 Technical CEPs

Advanced Pressure Tanks – Flexcon Industries: 2 Technical CEPs

Several Board members mentioned that the content of both courses will be beneficial to the industry since concern has been expressed by licensees who believe that very few of the currently approved courses are relevant to them if they hold a pump installer license. Bureau staff has also received complaints from those who believe that the focus of the approved courses listed on the website pertain to drilling, not pump work.

S. Reya noted that at the Board’s last meeting a motion was made to expand the list of OSHA courses accepted for continuing education point (CEP) credit beyond the currently approved courses that include the OSHA HAZWOPER 40, 24- and 8-hour courses. Follow up discussion during the conference call identified the need for the Department to identify any OSHA courses that may not be directly related to the industry and have them reviewed by the Board for determination of industry relevance. Bureau staff will forward courses to the Board for approval consideration if they are not the previously approved HAZWOPER courses or the 30 and 10-hour general construction courses that have also been discussed at previous Board meetings as being related to industry duties.

4. Continuing Education Program Update –

Board members were informed that Michael Schumacher has recently made progress writing a report that will allow license holders to view and verify the number of CEPs the Department has on file for their license to ensure that the attendance records have been recorded. The report, which will be publicly available on the Department’s website, is approximately 90% finalized and has a few remaining issues that need to be worked out before it can be posted online. Once it is finalized in the coming weeks, a mass email will be sent to licensees to notify them of the report, along with a direct link to the report.

5. Adjournment-

At 10:22 am a motion to adjourn the meeting was made by G. Poppe seconded by G. Craig and approved unanimously.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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Governor

CATHERINE R. McCABE
Commissioner

SHEILA Y. OLIVER
Lt. Governor

DIVISION OF WATER SUPPLY AND GEOSCIENCE
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New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for July 18, 2019

Approved by the Board on September 19, 2019

Board Member Attendance:

Present	Absent
Art Becker (Chairman) Gary Poppe (Vice-Chairman) Joe Yost Richard Dalton Steve Domber	Carol Graff Jeff Hoffman Gordon Craig Joe Pepe

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

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Joe Mattle, Julia Altieri, Steve Reya, Mark Ortega, and Michael Schumacher (present beginning at 9:53 am)

Members of the Public Present: Dermot Dillon, New Jersey Ground Water Association (NJGWA) Secretary/Summit Drilling Co.; Denis Crayon, New Jersey Ground Water Association (NJGWA) President/Summit Drilling Co.

1. Call to Order and Opening Statement-

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

Dermot Dillon and Denis Crayon, of Summit Drilling and the New Jersey Ground Water Association, introduced themselves to the Board and Department staff.

2. Review and Certification of May 16, 2019 Draft Meeting Minutes-

A motion to approve the draft minutes from May 16, 2019 without change was made by G. Poppe, seconded by S. Domber and approved by all except for R. Dalton who abstained since he was not at the meeting.

3. Review and Certification of June 20, 2019 Draft Conference Call Minutes-

A motion to approve the draft conference call minutes from June 20, 2019 without change was made by G. Poppe, seconded by J. Yost and approved unanimously.

4. Board Business and Correspondence-

S. Reya informed the Board that they are currently all on the same term and are not on staggered terms as they should be pursuant to the Subsurface and Percolating Waters Act (Act). This was something DAG, Robert Guzek previously brought up and he advised that the Department attempt to process reappointments in a manner that stays consistent with the Act to the extent possible. All Board members' terms currently expire in March of 2020. Board members were recently provided with their resumes which were on file from when they previously applied for their positions. Carol Graff recently informed the Bureau that she will not be seeking reappointment to the Board after her current term expires. S. Reya told the Board that the Department will conduct outreach for a new public member to fill the vacancy. It was requested that Board members who have expressed interest in continuing to serve on the Board submit their updated resume to S. Reya so he can coordinate the reappointments.

5. Testing and Continuing Education Update-

M. Ortega provided the Board with some updated testing information for well driller and pump installer exams. He stated that the Department has continued to receive monthly updates from the National Ground Water Association (NGWA) for individuals who take a New Jersey regulatory test module. No trends could be formed thus far due to a small data set. M. Ortega informed the Board that he finished compiling the data for exams taken between 2007 to 2017. He will use the new data received from NGWA along with the old test data to determine if there are any trends evident when comparing the two (2) different testing formats. Board members indicated that they would like to see this summary table regularly updated and presented at future meetings. S. Domber recommended putting a date at the bottom of the page if the same format will be used.

M. Ortega then described the continuing education course completion statistics detailed on the same sheet. As of July 17, 2019, 89 licensees have earned the seven (7) continuing education points (CEPs) needed for their license renewal. There have also been 349 licensees that have started to earn CEPs toward their license renewal. That is out of approximately 980 total licensees who need to earn CEPs for their renewal. Approximately 45 licensees are exempt from the CEP requirements for this licensing cycle due to being newly licensed. The Board voiced their concerns based on the low percentage of licensees who have completed their CEPs. S. Reya mentioned that it is likely there are a lot more licensees who have taken their 8-Hour OSHA HAZWOPER refresher than have reported to the Bureau. Once course completion certificates are submitted the total will likely increase significantly.

It was also noted that roughly a 20 percent decline in licensees was seen after the 2017 renewal cycle and the Department anticipates a similar number this cycle, if not more due to those who do not intend to renew due to the newly implemented CEP requirements. A. Becker reminded members that during the May 16, 2019 meeting it was noted that licensees cannot receive points for courses taken prior to the well rule becoming operative on March 1, 2018.

6. Continuing Education Course Review-

Board members clarified that the Department staff had administratively approved the courses forwarded to them for review and that members still needed to review the course content, instructor qualifications, and course length. A Becker asked if there was any discussion for these courses. S. Reya and A. Becker provided J. Denyes with an update on the continuing education review process, as she was not the Board's legal advisor during the time the course approval process was initiated.

Courses approved by the Board for licensed individuals for previously attended events:

Joe Yost – Water Well Jetting – Demonstrated attending a 3.5 hour training course and is requesting 3.5 CEPs.

A motion was made to recommend accepting this course for 3.5 Technical CEPs. This motion was made by G. Poppe, seconded by A. Becker, and approved by all except for J. Yost who abstained.

Jeff Tomlin – Water Well Jetting – Demonstrated attending a 3.5 hour training course and is requesting 3.5 CEPs.

A motion was made to recommend accepting this course for 3.5 Technical CEPs. This motion was made by G. Poppe, seconded by A. Becker, and approved by all except for J. Yost who abstained.

Nicholas Thies – 4 Hour Water Well Drillers CE – Demonstrated attending a 4 hour training course and is requesting 4 CEPs.

A motion was made to recommend accepting this course for 4 Technical CEPs. This motion was made by J. Yost, seconded by G. Poppe, and approved unanimously.

Prior to taking a vote on the Theory, Selection, and Troubleshooting course, there was a discussion regarding how many points to award to the course. R. Dalton recommended only issuing one (1) CEP for this course. This was due to a large portion of the course being a review of laws and regulations. J. Yost and G. Poppe brought up how laws and regulations occasionally change. Well drillers and/or pump installers would want to learn about laws and regulations pertaining to areas which they are less familiar with. A. Becker agreed with J. Yost and G. Poppe and the vote followed.

Courses approved for course providers:

Theory, Selection, and Troubleshooting – Parkhurst Distributing Company – **7 Technical CEPs**

A motion to approve Theory, Selection, and Troubleshooting was made by J. Yost, seconded by G. Poppe, and approved by all except for R. Dalton who was opposed.

A. Becker asked how the Board and Department plan to handle approving courses for the next licensing cycle. S. Reya reminded the Board that it is not mandatory for course providers to reapply for their previously approved course in a new licensing cycle if the content remains the same according to the rule. The Board shall reevaluate courses at the end of a three-year licensing cycle. A. Becker asked if the Department would need to go back and change the CEP allocations to be broken down to technical and safety credits. M. Ortega informed him that the Department is already tracking technical and safety points, even though they are not being counted as such this license cycle. Doing so will allow the correct format to be in place when necessary for the upcoming full three-year licensing cycle.

It was noted that the *Water System Fundamentals* course which was approved at the May 16, 2019 meeting would be superseded by the *Theory, Selection, and Troubleshooting* course which was just approved (as listed above). A. Becker asked how this will be handled in the future to make it clear that a course has been superseded and will not be offered. M. Ortega told the Board that he was

tracking all courses in database and that a note would be put into a course which was no longer relevant or superseded.

S. Reya explained to the Board that he had received some feedback regarding some of the technical exams issued by the NGWA. He said that he was informed that there are disinfection, water treatment, national groundwater quality questions on certain exams and that he felt that it might be out of the scope of the exam and equivalent NJ license category. The Bureau will seek clarification on this issue from NGWA to better aid license applicants.

7. Preparation for Hearing for September 19th Board Meeting for Possible Licensing Sanctions Against a Licensed Pump Installer-

J. Denyes, DAG, explained that the hearing for potential license sanctions will proceed in accordance with the Subsurface and Percolating Waters Act as it pre-dates the Administrative Procedure Act, which sets specific standards and procedures for hearings to which Boards must adhere. The Subsurface and Percolating Waters Act is not as detailed with regard to the format that must be followed.

J. Denyes continued to explain that the licensed Pump Installer or his counsel, if applicable, will have the ability to cross-examine witnesses against them. The Department can cross-examine any witnesses that the accused brings forward and will have one last chance to present all their information. After the Board has evaluated both sides of the case, decision making needs to be done in open session. On the day of the hearing if the Board members determine they need to take the presented information under consideration and render a decision at the next Board meeting, that is allowed. J. Denyes reminded the Board that they are making a recommendation to the DEP Commissioner to suspend/revoke the license if that is what they ultimately decide. The final decision is ultimately up to the Commissioner. If Commissioner accepts the Board's recommendation to suspend or revoke the accused's license, then the accused can appeal the decision.

She added that if A. Becker or any other members have questions, they can reach out to her in advance of the hearing provided that no quorum is present. A. Becker brought up that Department staff should not be copied on questions due to the nature of the questions being directed solely to the Board's legal advisor.

J. Denyes said that in other hearings they have a running tape recorder and the designated person who writes minutes takes notes from the tape recorder. She said that there is nothing in the Department's well drilling statute or rule regarding how specific the notes need to be. S. Reya expressed his concern that Department staff should not be taking minutes as is typically done at meetings and that it should be done by a third-party stenographer or transcriber. T. Pilawski agreed.

The Board discussed how in court cases a bailiff is always present so the Department may wish to have a State Trooper available. It was also noted that an alternative would be to utilize security staff that works at the Department's offices for this role.

A. Becker asked who will notify the Board whether the accused will be showing up and if he will have an attorney present for the hearing. T. Pilawski said that the Department staff will notify the Board and that she will arrange to have a stenographer present at the hearing. J. Denyes said that the accused might request that the hearing be delayed and that the Board should extend whatever courtesies within reason. A. Becker polled the Board members whether they believed it was a good idea to postpone the hearing if necessary. A. Becker asked the Board if the accused requests an

extension, would they be willing to extend it by one meeting, to the November 21, 2019 meeting. All Board members agreed that this was reasonable.

G. Poppe made a motion that if the license holder responds to the hearing notification notice and requests an extension the Board would extend the hearing to November 21, 2019. R. Dalton seconded the motion and it was approved unanimously by the Board.

G. Poppe made a motion to go into executive session at the request of legal counsel to advise them on specific legal matters related to the hearing. J. Yost seconded the motion to go into executive session. The motion was approved unanimously at 10:56 am.

The Board resumed open session at 11:12 am.

8. Update on Closed Loop Geothermal Well Designs Proposed for Installation in New Jersey-

Three (3) items that the drilling contractor and Princeton University's geothermal project engineer needed to send to the Department, which were requested by the Bureau and Board during the May 16th Board meeting were submitted and reviewed by the Bureau, stated S. Reya. He said that a revised well design installation sketch, safety data sheet of the epoxy and a section of the Ryan pipe were all evaluated. S. Reya discussed his concerns with their proposed grouting method and said that he emailed the Bureau's concerns to the drilling company and engineer. It was further stated that Bureau and potentially Board representatives would be onsite to oversee the installation and ensure that the contractor is able to install the well in accordance with the design specifications and conditions that will be included upon issuance of the well permit. Both the proposed depth and annular space dimensions, which limit the amount of clearance for the casing and a tremie pipe that is large enough in diameter to facilitate placement of a Department-approved grout mix, pose challenges to the installation. As Board members previously noted at the May meeting, the geology and high volume of anticipated groundwater could also make the installation difficult. The Department still has not received the permit for the test well.

R. Dalton sent S. Reya detailed geophysical logs for Princeton University which were obtained in 1994, which he provided to the contractor. The geophysical log's pump information shows that there are fracture zones down to 3000 feet that appeared to be water bearing. R. Dalton said that the Stockton Formation typically contains a lot of water and discussed potential difficulties of drilling with air rotary to 1,500. ft if a significant amount of water is encountered during drilling. R. Dalton asked if grout could be pumped down a small tremie down to 1500 feet. G. Poppe said that he believes it will be difficult to accomplish.

A. Becker requested that S. Reya coordinate with the Board when the drilling will take place. He informed the Board that a quorum cannot be present on site, so only a maximum of four Board members can be present at one time. Board volunteers will be notified once the Bureau is made aware of the drilling schedule.

9. SWAGE Casing Patch Liner Proposed to Repair Public Community Supply Well-

A proposal to repair a public supply well in South Plainfield that has tested positive with eColi has been submitted to the Bureau. Bureau staff identified numerous concerns with the proposed fix and sought the expertise of Board members in evaluating the proposal. The well in question is 70 feet deep and 18 inches in diameter. Subsurface Technologies proposed using the Precision SWAGE casing patch liner (SWAGE) to address an issue with this well. The SWAGE was approved for use in

New Jersey once before, however, when the SWAGE was approved at that time it was used to patch a small section of casing that had failed.

After performing a television inspection of this particular well, Subsurface Technologies noted that the casing was observed to be in poor condition though they were unable to identify a specific area of casing failure. According to the proposal submitted by Subsurface Technologies, they intended to install a packer immediately above the screen and line the original casing with 55 feet of the SWAGE to patch the well. A letter dated June 6th was submitted to the Department as an attachment to the well permit that was submitted. The Department sent the permit back because it was approved as a patch, not a liner and could not be properly grouted in place in accordance with the rule. S. Reya presented the Board members with some documentation about SWAGE and asked if the Board has any experience with this technology.

After reviewing the supplied documentation, the Board noted that the thin wall casing of the SWAGE liner patch does not meet the minimum casing wall thickness requirements of the Well Construction and Maintenance; Sealing of Abandoned Wells Rule, N.J.A.C. 7:9D. The SWAGE casing, which is expanded into place and held in place with a thin elastomer coating, is thinner than the minimum requirement prescribed by N.J.A.C. 7:9D-2.3. Additionally, Board members stated that although this technology is extremely effective as a repair technique, they did not believe it should not be used as a solution to address an entire length of deteriorated casing in a contaminated well. Placing thin stainless-steel casing up against the full length of deteriorated casing with a rubber layer in-between was viewed as a temporary measure that is not an appropriate way to deal with bacteriological contamination entering a well via casing failure at an unknown depth. It was also noted that the presence of a lead packer within the well also does not comply with the Safe Drinking Water Act and that modifying a well that does not, and would not, comply with standards should not be allowed.

M. Schumacher pointed out that Subsurface Technologies did not sufficiently explain why they could not install a smaller diameter casing to act as a liner inside of the original casing, which is typical practice. J. Yost said that he has used the SWAGE as a patch but has never used it as a liner. J. Yost recommended a new replacement well. R. Dalton brought up a concern with the steel being squeezed out by the SWAGE since it is already weakened. The Board's collective opinion was that the SWAGE would not be an appropriate means of correcting the documented water quality problems with this well.

10. Enforcement Update: May 16, 2019 – July 18, 2019

Multi-Bureau Compliance Inspection

- **Issue:** Bureau staff recently assisted the Bureau of Water Systems Engineering and Southern Water Compliance Enforcement program with a site visit as part of a sanitary survey at an assisted living facility in Waterford, Camden County. Some of the wells were not permitted properly.
 - **Enforcement Action-** No further action by Well Permitting needed, facility must re-permit wells for current use, which differs from original permitted use.

New Investigation-phone complaint - June 14, 2019

- **Issue:** Suspected unlicensed, well pump installation activity in Toms River Township, Ocean County. A New Jersey licensed well driller reported two (2) unlicensed individuals replacing a well pump without the on-site supervision of a New Jersey licensed well driller or pump installer.
 - **Alleged Violations:** The complainant confronted the individuals, who admitted that they did not have a license and a licensed well driller was not present. A work truck onsite identified the pump company that employed both individuals performing the work. The

complainant reported that the licensed pump company owner (who is properly licensed) was not present.

- Enforcement Action- Bureau staff confirmed, during a phone conversation with the company owner that the two (2) individuals performing the pump work at that property were not licensed. Pending referral to Central Region Water Compliance and Enforcement for further processing.

New Investigation-improper hand dug well decommissioning - June 26, 2019

- Issue: Monmouth County Health officer and a New Jersey licensed well driller reported to the Department an instance of improper well decommissioning of a 12-foot hand dug well during house remodeling.
 - Alleged Violations: A worker on-site witnessed the dumping of construction debris into a newly exposed 12-foot hand dug well instead of properly decommissioning it. The worker reported the violation and the project was halted while local construction code officials investigated, and photo documented the incident.
 - Enforcement Action: -Bureau staff confirmed that a violation did occur. Local Health Department will pursue penalties and remediation work of well to be performed by the property owner before further building may be conducted or CO is issued.

A. Becker asked J. Altieri if the Department was taking any action against the property owner. She said the Department is waiting to see the results of the Monmouth County Health Department's investigation.

Status update- Ongoing Administrative Hearings - ADR Requested by the Department

- Issue: Administrative hearing requests filed by well drillers and their companies to dispute five cases of improper permitting, grouting and constructing of domestic and irrigation wells.
 - Update-Hearing requests were granted by the Department. DEP Office of Dispute Resolution requesting affected parties to take part in Alternate Dispute Resolution (ADR) process to attempt to resolve the issue without a hearing.

11. Program Updates-

T. Pilawski informed the Board that Joe Mattle is officially the Section Chief of the Well Permitting Section as of July 6, 2019. The Board members congratulated and welcomed him.

T. Pilawski stated that the Department had received the compliance plan for the Woodbury geothermal well field. She, along with M. Schumacher and S. Reya, have completed the initial review of the document, which describes how the results of the recently completed Pilot Plan will lead to the re-commissioning/decommissioning of 80 improperly installed geothermal wells.

T. Pilawski provided an updated about the updates to the well rule. She stated that a launch meeting was recently held with other interested parties within the Department and the legal team. She added that the Department is hoping to have the proposal to the NJ Register by September for publishing and that feedback been positive due to industry support of the rule.

S. Reya talked about the turbidity issue that G. Poppe brought up at the May 16, 2019 Board meeting. He reviewed the Safe Drinking Water Act and was unable to find anything that addressed the sampling of wells containing high turbidity that could not be demonstrated to meet Safe Drinking Water Act (N.J.A.C. 7:10) standards when testing the raw water. He asked that G. Poppe attempt to get something in writing from the local administrative authority that indicated that water treatment

could not be used to ensure that water supplying a residence would meet standards post treatment. G. Poppe will follow up if unable to receive further clarification from the local health department.

12. Adjournment-

At 12:03 pm a motion to adjourn the meeting was made by R. Dalton, seconded by J. Yost and approved unanimously.



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New Jersey Department of Environmental Protection State Well Drillers and Pump Installers Examining and Advisory Board Conference Call Minutes for August 15, 2019

Approved by the Board on September 19, 2019

Board Members Present at NJDEP Headquarters Building: Richard Dalton

Board Members Participating Via Telephone: Joe Yost, Gordon Craig, Joe Pepe, Carol Graff, Richard Dalton, and Steve Domber

Board Members Absent: Art Becker, Gary Poppe, and Jeff Hoffman

NJDEP Water Supply (Bureau of Water Allocation and Well Permitting) Staff Present: Terry Pilawski, Joe Mattle, Steve Reya, and Mark Ortega

1. Call to Order-

The meeting was called to order at 10:03 am with a quorum present via telephone. Deputy Attorney General, Jill Denyes, called in as the Board's legal counsel but was advised that the only Board item for consideration during the call was the review of continuing education courses. Since it was anticipated that legal guidance would not be necessary, she then left the call.

2. Continuing Education Course Review-

A table summarizing three (3) courses, along with the supporting documentation, was provided to the Board members prior to the meeting for review as they were deemed administratively complete by the Bureau. Below are the three courses and how many continuing education points (CEPs) were requested by the course provider:

National Drilling Association (NDA) 2019 Fall Convention – NDA – **4 technical CEPs and 2 safety CEPs**

Well Contractor's Workshop – International School of Well Drilling – **11 technical CEPs and 1 safety CEP**

7 Hour New Jersey Water Well Continuing Education Course – All Star Training – 7 technical CEPs

S. Reya discussed comments that were emailed to him from A. Becker about the classes that were under review, due to being unable to participate in the call. A. Becker's email, which was read aloud on the call, noted that he recommended approval of all listed courses listed, but he did not agree with the amount of points that the NDA was requesting. He believed that a total of five (5) points should be awarded to this class: three (3) technical and two (2) safety points. He did not agree that the "Pentagon Search and Recovery" course should be granted any CEP credit as it does not directly relate to the well drilling/pump installation trade. He noted that he had previously taken the Well Contactor's Workshop in the past and said that it was a very well-presented class.

J. Yost said that he agreed with A. Becker's comments. G. Craig noted that the NDA did not request any credit for the exhibit at the convention so perhaps awarding six (6) total credits is still warranted because attendees would also spend time at the exhibit, which is of some educational value. Department staff noted that it would be very hard to track individuals in attendance of the exhibit and that awarding credit for exhibit attendance would set a precedent that they felt was inconsistent with other application requirements in which course providers must track, document and report attendance in order for attendees to receive credit. S. Domber said that he agreed with A. Becker's assessment and that only five (5) points should be given for this course. Due to varying opinions on the amount of points to award to this course, a vote was held:

1. J. Yost – in favor or 6 total points (4 technical and 2 safety)
2. J. Pepe – in favor or 6 total points (4 technical and 2 safety)
3. C. Graff – in favor or 6 total points (4 technical and 2 safety)
4. G. Craig – in favor or 6 total points (4 technical and 2 safety)
5. S. Domber – in favor or 5 total points (3 technical and 2 safety)
6. R. Dalton – in favor or 5 total points (3 technical and 2 safety)

A motion to recommend the approval of the National Drilling Association's 2019 Fall Convention for 6 continuing education points (4 technical and 2 safety) was made by J. Yost, seconded by G. Craig and approved by all except for R. Dalton and S. Domber who were opposed.

A motion to recommend the approval of the International School of Well Drilling's Well Contractor's Workshop for 12 continuing education points (11 technical and 1 safety) was made by J. Yost, seconded by C. Graff and approved unanimously.

C. Graff departed the call at 10:20 but noted that she believes the final course should be approved for credit.

A motion to recommend the approval of All Star Training's 7 Hour New Jersey Water Well Continuing Education Course for 7 continuing education points (7 technical) was made by G. Craig, seconded by S. Domber and approved unanimously.

3. Adjournment-

Having no further licensing or continuing education business to address, the Board ended the call at 10:22 am.



State of New Jersey

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New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for September 19, 2019

Approved by the Board on November 21, 2019

Board Member Attendance:

Present	Absent
Art Becker (Chairman) Gary Poppe (Vice-Chairman) Gordon Craig Joe Pepe (left at 11:32) Carol Graff Jeff Hoffman (left early/later returned) Richard Dalton Steve Domber	Joe Yost

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Joe Mattle, Julia Altieri, Steve Reya, Mark Ortega, Rebecca McCullic, Sabrina Hill, and Jeremy Wick

Members of the Public Present: Dermot Dillon, New Jersey Ground Water Association (NJGWA) Secretary/Summit Drilling Co.; Wesley Eichfeld, SGS; Bill Buschur, Total Green; Patrick Casselman, Total Green

1. Call to Order and Opening Statement-

The meeting was called to order by Chairman Art Becker at 9:31 am with a quorum present.

Wes Eichfeld of SGS and Dermot Dillon of Summit Drilling and the NJGWA, introduced themselves to the Board and Department staff. T. Pilawski introduced Rebecca McCullic, Well Permitting's newest staff member, to the Board. Rebecca will be assisting S. Reya and M. Ortega with continuing education and will be assisting the Permitting Unit.

2. Review and Certification of Draft Meeting Minutes-

It was noted that G. Craig and J. Pepe were erroneously listed in the minutes as being present though they did not attend the meeting. A motion to approve the July 18, 2019 draft minutes

pending this correction was made by G. Poppe, seconded by S. Domber, approved by all except for J. Pepe, G. Craig and J. Hoffman who abstained as they did not attend the meeting.

3. **Review and Certification of July 18, 2019 Draft Executive Session Minutes-**
It was again noted that G. Craig and J. Pepe were erroneously listed in the minutes as being present. A motion to approve the draft minutes pending this correction was made by G. Poppe, seconded by S. Domber and approved by all except for J. Pepe, G. Craig, and J. Hoffman who abstained as they did not attend the meeting.
4. **Review and Certification of August 15, 2019 Draft Conference Call Minutes-**
A motion to approve the draft conference call minutes from August 15, 2019 was made by R. Dalton, seconded by C. Graff and approved by all except for J. Hoffman, G. Poppe, and A. Becker who abstained as they did not participate in the call.
5. **Remaining Calls and Conference Calls-**
The Board will physically meet at NJDEP Headquarters (401 E. State St. in Trenton) on the following dates beginning at 9:30 am:

November 21

Board telephone conference calls will be held during the intervening months to review continuing education course applications and candidates for NJ driller or pump installer licenses. The calls will be held at 10:00 am on the following schedule:

October 17, December 19

6. **Board Meeting Schedule for 2020-**
The Board members were presented with a list of potential 2020 Board meeting dates. After review of the proposed dates the Board members decided to meet on the following dates at NJDEP Headquarters in Trenton beginning at 9:30 am:

January 23, March 26, May 21, July 23, September 24, November 19

The following dates were selected to hold telephone conference calls to begin at 10:00 am:

February 13, April 16, June 18, August 13, October 15, December 15

7. **Board Correspondence-**
S. Reya brought two letters to the Board's attention. The first letter was sent by Board Chairman, Art Becker, to Mr. Kevin Blumhagen. This letter, dated August 23, 2019, approved Mr. Blumhagen's request to postpone the hearing scheduled for potential sanctions against his NJ Pump Installers license to the November 21, 2019 Board meeting. The letter noted that he has until 30 days before the November meeting (October 22, 2019) to confirm his attendance with or without counsel and to provide the Board with any evidence, materials, documents or information to assist the Board in making its recommendation. The second letter was sent to the Board by the NJGWA President, Denis Crayon, regarding a Department of Labor Regulation/Public Works Contractor Registration and

apprenticeship requirements that are currently being implemented. A. Becker noted that no additional action is required from the Board on either of these topics.

8. Testing and Licensing-

The Bureau received two (2) license applications for the environmental resource and geotechnical license and three (3) for the pump installer license. S. Reya summarized the license applicant list:

Environmental Resource & Geotechnical – Nicholas Lippincott and Leon Ellis
Pump Installer – Ryan Schinella, Nicholas Schinella, and Edward A. Woolf

The applicants were found to meet the regulatory requirements of N.J.A.C. 7:9D-1.8. A. Becker asked if there was any discussion regarding the license applicants. No further discussion was needed.

A motion to approve all five license applicants was made by G. Poppe, seconded by C. Graff, and approved unanimously.

9. Continuing Education Program-

A table summarizing one (1) administratively complete course, along with the supporting documentation, was provided to the Board members prior to the meeting for review. The course provider requested two (2) technical continuing education points (CEPs) for the course. Below is the course information:

New Jersey Ground Water Association (NJGWA) September Membership Meeting including Environmental Drilling Methods and Procedures Presentation – 2 Technical CEPs

S. Reya discussed the list of courses that were originally sent out to the Board via email. Two courses were submitted to the Department, but only one was administratively complete. A. Becker confirmed that if a course provider adds a date to an identical course then a separate application would not need to be submitted. R. Dalton brought up that he does not think that this course should count for the full two points; only one and a half (1.5) points. There was a discussion about changing the amount of points issued for these meetings for the next licensing cycle. S. Reya said that at the end of each licensing cycle the Board can reevaluate the courses and points that were issued, as prescribed in the well rule (N.J.A.C. 7:9D). A. Becker brought up the one and a half (1.5) credit recommendation noted by R. Dalton and asked for the opinion of other Board members. J. Pepe, G. Craig, and G. Poppe said that they feel that it should be two (2) points. S. Domber said that he is sympathetic to what R. Dalton is saying, but that he has not been to a meeting to directly evaluate whether or not two (2) full training hour credits are warranted based on the supplied agenda. A. Becker discussed the history of the meetings and said he believes they are very good, professional, and informative.

A motion to recommend the approval of the NJGWA September Membership Meeting including Environmental Drilling Methods and Procedures Presentation for two (2) technical CEPs was made by G. Poppe, seconded by G. Craig, and approved by all except for R. Dalton who was opposed.

M. Ortega discussed the progress made among licensees obtaining CEPs for their license renewals. He stated that, as of September 17, 2019, 11 percent of licensees have completed the CEP requirement needed for their renewal in 2020. He said that about 26 percent of licensees have started obtaining CEPs but have not completed the seven (7) CEPs needed for their renewal. The remaining 63 percent have not yet started to obtain CEPs. M. Ortega noted that there are a few classes coming

up that a lot of pump installers will likely attend. He also pointed out that he had been receiving a lot of certificates and inquires after the Department recently sent out a mass mailing about continuing education. He told the Board that he will be able to provide a clearer picture at the January meeting because the licensees that are relying solely on NJGWA for their CEPs will have obtained the necessary amount of points.

10. Update on Closed Loop Geothermal Test Well Installation at Princeton University-

S. Reya discussed the Princeton geothermal project with the Board. He recapped the purpose of the project and the original specifications of the proposed closed loop geothermal test well. American Augering and Ditching Co., Inc. (American) was subcontracted to drill this well. A New Jersey licensed well driller of the proper class was on site while drilling activities were taking place. American's polycrystalline diamond compact (PDC) bit was used for the first 100 or so feet of drilling before it became damaged by the formation. It was decided to switch to an air hammer and reduce the size of the borehole diameter, so a new well design was submitted to the Department. The revised design used the smaller size Rygan pipe and included a seven (7) inch, 380-foot temporary casing intended to case off a highly productive water bearing zone.

S. Reya continued to inform the Board that while drilling, American encountered approximately 400 to 600 GPM in the first 200 feet. The water was contained in baker tanks. Upon completion of the well, American was able to successfully retrieve the temporary casing with no issues. Once the temporary casing was installed, there were no issues with the quantity of water. S. Reya noted that after American switched their PDC bit to an air hammer, they drilled to a total depth of 1,440 feet; the original intended depth of the project was 1,500 feet.

S. Reya stated that the United States Geological Survey logged the well. The well was logged with the temporary casing in place, so there is no information for the first 380 feet. A drift interpretation shows that the borehole goes 140 feet to the south, toward Route 1. A. Becker said that something like that can be better managed by using different tooling and approaches. S. Reya discussed his concerns about the project. He said that when the temporary casing was retracted about 80 feet of the hole was filled in due to the cuttings that fell back into the borehole.

S. Reya talked about the issues that were encountered with grouting. He indicated that no issues were encountered while grouting shallower than 1,000 feet. While grouting deeper than 1,000 feet, American had several issues with the grout line. He said that the site engineers are considering a 1,100-foot target depth moving forward. The site engineers are thinking about doing four (4) more test wells, based on the latest information he has been given. A. Becker asked who the construction manager. S. Reya said that Whiting Tuner was the company. G. Craig asked if the Board could request that a geothermal expert be out on site as a permit condition. He recommended that a geothermal inspector certified by the International Ground Source Heat Pump Association (IGSHPA) be out on site for the duration of the project. A. Becker agreed with G. Craig and expressed that this entity should only be interfacing with the Department. G. Poppe said that he agrees with G. Craig and A. Becker. Based on the scope of the project that has been noted as involving as many as 1,000 wells that are drilled over 1,000 ft. Board members felt there was no way the Department would adequately be able to oversee the drilling and grouting operations and that the potential to negatively impact groundwater necessitates direct oversight of the project.

G. Craig made a motion to require that a special condition be put on well permits associated with the Princeton geothermal project. The special condition should require that an IGSHPA certified geothermal inspector should be on site for each well installation and report their

findings directly and only to the Department. G. Poppe seconded the motion and it was approved unanimously.

S. Reya then showed the Board members photos for the days when he was on-site, which included some of the drilling and all of the geothermal pipe/tremie line installation and grouting. S. Reya said that the well record containing the driller's log has not yet been submitted. G. Craig and A. Becker discussed their concerns about the wells intersecting based on the vertical drift encountered when drilling the first well and the ramifications of the large volume of water potentially disturbing the grout.

J. Wick arrived at 10:29

11. Direct Exchange Geothermal Presentation-

A. Becker opened this topic by noting that Direct Exchange (DX) geothermal systems have never been approved in the state and that although he realizes the time sensitivity of reviewing supplied documentation, the Board would need time to ask questions and evaluate all of the documentation and answers provided by the product representatives in attendance. Bill Buschur and Patrick Casselman of Total Green Manufacturing (Total Green) were introduced to the Board and staff members. Mr. Casselman provided some background information for DX geothermal systems including specifics on the different refrigerants used over the years. He said that they use copper loops that their maximum depth is 100-feet. These systems typically use a use a two (2) to three (3) inch borehole. Patrick acknowledged that their company is aware the Board and Department staff has expressed concerns with the pH of water in New Jersey and how it would react with the copper pipe. He said that they can sleeve the copper in PVC to address the concern that the copper piping would corrode and release the refrigerant. They also noted that they employ cathodic protection systems to protect the horizontal copper pipe components from corrosion. Patrick said these wells are good for small properties because the wells are installed diagonally about seven (7) feet apart, which means DX systems can be installed within a small footprint.

A. Becker asked how the wells were constructed. The Total Green representatives explained that there are two methods of constructing these wells. The first method is to drill vertical wells to approximately 100-feet. This method requires less loops to be installed. The second method is to drill diagonal wells to approximately 70-feet.

G. Poppe asked about grouting specifications for the product. Bill Buscher said that their grout is very fluid and can be pumped down a half inch tremie pipe. A. Becker asked R. Dalton to review the grout information thoroughly when he has a chance. Bill said that there is Portland cement in the mix as well as a variety of other products for which he provided the Safety Data Sheets.

Bill said that he has concerns with the well rule in respect to the American Society for Testing and Materials (ASTM) standard which dictates how grout should be tested for permeability. He said that the United States Army Corps of Engineers standard C48 should be used for non-porous materials. He indicated that ASTM standard 5084 should only be used for porous materials, such as bentonite. R. Dalton said that he talked to the individuals at ASTM regarding these standards and the recommendations that he received were intended to cover both porous and non-porous grouts. He said that the Department has received hundreds of samples to back up the permeability data. Bill stated that he's comfortable testing their grout against ASTM standard 5084, but that no other state will allow that test because their grout is non-porous. A. Becker asked the Department staff to research the ASTM standard.

J. Pepe departed the meeting at 11:32 am.

G. Craig asked about the different sleeves that they use around the copper pipe as the supplied documentation, dated August 19, 2019, appeared to illustrate multiple methods that could be utilized and it was not clear what was being proposed for use in NJ. The Total Green staff noted that there is a plastic coating that they are currently working on and a thin wall PVC pipe that they can currently use as a casing around the loop. G. Craig brought up the four (4) inch oversized borehole requirement in the well rule. The PVC casing that was presented was one and a half (1.5) inches so the borehole would need to be at least five and a half (5.5) inches. G. Craig said that he did not believe the Department will not allow an undersized borehole. Mr. Buscher noted that they do not foresee any issues with such a requirement. A. Becker said that there would need to be centralizers if they're installing wells diagonally. Patrick said that they already use centralizers.

A. Becker asked about their installer certification process noted in the documentation. Bill explained that Total Green trains people to install the copper piping. They plan on using New Jersey licensed well drillers to drill the borehole needed for the pipes. Bill continued by stating that Total Green offers a three (3) day training program that also covers repairing existing systems.

A. Becker asked if Total Green would need to get any approval from the Department since they are proposing installing the copper in the PVC. G. Craig and S. Reya pointed out that the copper and refrigerant are not approved in the rule. The use of copper pipe, refrigerant, and grout mixture need to be approved by the Department prior to installation. A. Becker and G. Craig noted that PVC pipe sleeve proposed by Total Green addresses the significant prior concerns with this technology.

Patrick and Bill were thanked for their time by A. Becker.

A Becker asked if there was anything needed from the Board for the DX review. G. Craig said that the grout would need to be field tested before any further action can be taken. It was noted that they would have to pump down grout down a borehole using the grout mixture and tremie pipe of the dimensions specified in the product literature provided. G. Craig said that he was comfortable with such installations if they meet the four (4) inch oversized borehole requirement. It was further stated if the grout can be demonstrated to meet the permeability requirements specified in the rule and can be field tested to be emplaced in accordance with the rule, members would be that the Department approve installation of these wells within the state as it would be demonstrated to be adequately protective of groundwater. R. Dalton said that he would want to see the grout information completed before deciding. He feels that the copper would not last in South Jersey due to the pH of the groundwater, which would mean using the PVC sleeve would be a necessity. He also brought up the refrigerant and A. Becker said that what they submitted to us looks very comprehensive. C. Graff said that once everything is submitted then the Board will take a vote at an upcoming meeting.

12. Enforcement Update-

J. Altieri provided the Board with a summary of field activity between July 18, 2019 and September 19, 2019 as follows:

Field Inspections – July 18, 2019 – September 19, 2019 (4 total)

- Issue: Bureau staff spot checked the drilling of geotechnical borings in Princeton, Mercer County. Part of random field inspection activities.
 - Enforcement Action- No further action, boring in compliance at time of field visit. A NJ licensed driller was onsite operating the drill rig.

- Issue: Bureau staff field inspected est. 1,500-foot closed loop geothermal test well installation constructed for designing a proposed well field in Princeton, Mercer County.
 - Enforcement Action- No further action currently.

New Investigation-alleged unlicensed pump installation – August 29, 2019

- Issue: Suspected unlicensed, well pump installation activity in Little Falls Twp., Passaic County. Staff from the NJDEP Bureau of Water Systems Engineering reported a Plumbing, Heating and Cooling Company replacing a well pump and pressure tank, allegedly without the on-site supervision of a New Jersey licensed well driller or pump installer.
 - Alleged Violations: During a review for a level 2 Assessment conducted by the Department, copies of invoices were submitted describing pump and tank work installation that would qualify as needing a license or the on-site supervision of a licensed pump installer or well driller to perform the work.
 - Enforcement Action- Bureau staff confirmed, after a review of Bureau license files that the owner of the company does not have an appropriate license. Notice of Non-compliance was issued, further investigation pending by the Department.

Status update- Ongoing Administrative Hearings - ADR Requested by the Department

- Issue: Administrative Hearing requests filed by well drillers and their companies to dispute five cases of improper permitting, grouting and constructing of domestic and irrigation wells. Hearing requests were granted by the Department. DEP Office of Dispute Resolution requesting affected parties to take part in Alternate Dispute Resolution (ADR) process instead.
 - Update-Second letter dated September 3, 2019 from Department's Office of Dispute Resolution to one of the licensed well driller requesting his confirmation of ADR participation. Deadline for confirmation is September 20, 2019. If not confirmed by driller, ADR offer expires and case proceeds to full hearing process. No response received as of today.
 - Update-One NOCAPA needed to be resent, Department could not confirm individual received original document due to wrong address.

13. Program Updates-

T. Pilawski updated the Board regarding the Woodbury geothermal well field. She said that the compliance plan was approved by the Department on August 22, 2019. The remaining onsite well field containing approximately 78 improperly installed closed loop geothermal wells will be recommissioned using sonic drilling. Summit Drilling, the company completing the recommissioning plan, will need to obtain authorization numbers and well permits to recommission the existing wells.

T. Pilawski brought up the well rule changes. She said that the Office of Legal Affairs has the changes in hand. She said that there has been significant progress in getting the rules fixed.

T. Pilawski also welcomed Rebecca McCullic officially to the Well Permitting Section. She also informed the Board that most of the Well Permitting Section is being moved to different cubicles in the coming weeks.

14. Soil Borer/Journeyman (Class B) License Upgrade Class-

S. Reya talked about the future class which will be offered to currently licensed soil borers and journeyman (Class B) well drillers. He recapped why the Department needs to offer the class to these license holders. He said that the Department plans on submitting a course application to the Board for the October conference call so those in attendance can receive CEPs. This is per the discussion held during the March 21, 2019 Board meeting where it was recommended that licensees who are upgrading their license still need to obtain CEPs for their license.

Well Permitting staff will contact the soil borers and journeymen (Class B) well drillers to start scheduling their classes once the course is approved. A. Becker again volunteered to teach the technical portion of the class. Bureau staff is extremely grateful for his offer and will contact him regarding scheduling.

15. Well Decommissioning in Water Purveyor Service Areas-

S. Reya said that the Department has been receiving several complaints from well drillers and homeowners in Cape May, Atlantic, and Gloucester counties. The complaint is that if a home was served by a domestic well then New Jersey American Water reportedly will not hook the home up to public water until the original drinking water well was decommissioned and the decommissioning report was submitted and approved. S. Reya pointed out that the coordination needed to do this was unreasonable and would result in the home not having water for several days. Although clearly the Bureau agrees that abandoned wells need to be decommissioned in accordance with the rule, staff has been attempting to work with this water company on the logistics and timing associated with connecting the property to public water and decommissioning the well within a reasonable amount of time thereafter.

The Bureau was informed that New Jersey American Water recently began enforcing this. S. Reya contacted two individuals at New Jersey American Water to attempt to get a policy in writing. S. Reya said that he was told that a reduced pressure zone device backflow prevention device would need to be installed and to be tested annually if a well is to be retained and converted from domestic to irrigation. S. Reya informed the individuals at New Jersey American Water that they would not be able to capture new irrigation wells that are installed within water purveyor service areas so it seemed that backflow prevention requirement may be inconsistently applied. The Bureau will keep the Board updated as necessary.

16. Adjournment-

A motion to adjourn was made at 12:28 pm by G. Craig, seconded by G. Poppe, and approved unanimously.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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Governor

CATHERINE R. McCABE
Commissioner

SHEILA Y. OLIVER
Lt. Governor

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New Jersey Department of Environmental Protection State Well Drillers and Pump Installers Examining and Advisory Board Conference Call Minutes for October 17, 2019

Approved by the Board on November 21, 2019

Board Members Present at NJDEP Headquarters Building: Steve Domber

Board Members Participating Via Telephone: Art Becker (Chairman), Gary Poppe (Vice-Chairman), Gordon Craig, Joe Pepe, Carol Graff, Jeff Hoffman and Richard Dalton

Board Members Absent: Joe Yost

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

NJDEP Water Supply (Bureau of Water Allocation and Well Permitting) Staff Present: Steve Reya and Mark Ortega

1. Call to Order-

The meeting was called to order at 10:02 am with a quorum present via telephone.

2. Continuing Education Course Review-

A table summarizing one (1) course, along with the supporting documentation, was provided to the Board members prior to the meeting for review as they were deemed administratively complete by the Bureau. Below is the information for the course and how many continuing education points (CEPs) were requested:

Utility Location: Safety and Science – EPI – 2 technical CEPs and 1 safety CEP

G. Craig discussed his opinion of the course. He said that he believed that this would be a very good course, as drillers need to know what to look out for and be aware of underground utility hazards. G. Poppe agreed with G. Craig's view of this course. R. Dalton asked if there is a required safety certification necessary for an individual to teach a safety course for utility location. He noted that the course instructor has no safety background listed in his resume. A. Becker stated that he didn't know of any certificate for underground utilities that the Board would

be able to cite or require that a course instructor possess. A. Becker said that the OSHA standards are often vague when it comes to who can teach those courses as they often reference qualified individuals, which is left to the discretion of the employer.

A. Becker discussed his concern with the course instructor's statement on the application that indicated he would submit the course roster by the end of the licensing cycle (the current requirement prescribed in the rule). He asked that the Department emphasize the Board's prior recommendation that the provider submit attendance records within 45-days of the course being held.

A motion to recommend approving Utility Location: Safety and Science for 2 technical and 1 safety CEPs was made by G. Poppe, seconded by G. Craig, and approved unanimously.

A. Becker discussed his concern that there is no requirement from the Department for a course provider disclose if they are charging money for a course that they are administering. He noted that without that information being listed on the Department's website, well drillers and pump installers would not know that there is a fee until they go to register for the course.

J. Pepe discussed the Water System Fundamentals course, which he attended on October 9, 2019. He spoke very highly of the course and said that about 85 people attended. He asked the Board if companies have the right to limit course that they offer to their customers. That was not done at the course he attended but he noted that this issue will likely going to come up at some point and the Board should have a position on whether providers are able to deny those who are not customers from registering. A. Becker said that he did not believe the Board and the Department should support such a practice. J. Denyes, DAG, agreed with A. Becker and felt that to the extent possible, the Board should not endorse any course limited only to the provider's customers. It was noted that the current course application does not require providers to disclose any associated costs or limitations of the individuals eligible to register.

S. Reya talked about the soon to be scheduled license upgrade course and how it would be restricted to currently licensed soil borers and journeymen (Class B) well drillers so there are instances in which limiting a course offering to a subset of the licensed community is warranted. He also brought up how companies have inquired with the Department and in-person at Board meetings if they can put on a course for their employees, which was deemed acceptable by the Board provided the course criteria meets the requirements of the rule. J. Denyes said there are appropriate instances for limiting courses, such as in these examples, but they should not be limited solely for marketing or financial gain as it would be restrictive to licensees who are not customers of that company. A. Becker said that the Board and the Department should look to restrict approvals to course providers who are putting on classes for profit motivation as a sales pitch for their business. He also inquired about whether it would be possible to include language about such restrictions in the approval letters that the Department sends to course providers. It was also suggested that the current application be modified to ask that providers disclose any limitations due to venue size, current customers, etc. so the Board is fully aware of all aspects of each course under review.

A. Becker asked to push this discussion until the November meeting and requested that it be added to the agenda if time allows.

3. License Application Review-

The Bureau received one license application for the Vertical Closed Loop Geothermal (VCLG) license:

VCLG

Tony Brokaw

The applicant was found to meet the regulatory requirements of N.J.A.C. 7:9D-1.8. G. Poppe made a motion to approve the applicant for licensure. The motion was seconded by G. Craig and approved unanimously.

4. Hearing Briefing-

S. Reya talked about the upcoming hearing, which is scheduled for the November 21, 2019 Board meeting. He said that the Department has not received a response from Mr. Blumhagen or his attorney indicating whether or not he intends to attend nor was any documentation provided for review, which must be submitted a minimum of 30 days prior to the hearing per the most letter sent by the Board. A. Becker asked J. Denyes what happens if the documentation is not received by the deadline. J. Denyes said that the Board could choose to reject the evidence if there is not enough time to review information that was submitted. S. Reya informed the Board that T. Pilawski arranged for a state trooper to be present at the hearing and that she is working on scheduling a stenographer.

5. Adjournment-

At 10:32 am a motion to adjourn the conference call meeting was made by J. Hoffman, seconded by G. Craig and approved unanimously.



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New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for November 21, 2019

Approved by the Board on January 23, 2020

Board Member Attendance:

Present	Absent
Art Becker (Chairman) Gary Poppe (Vice-Chairman) Joe Yost Gordon Craig Joe Pepe Carol Graff Jeff Hoffman Richard Dalton Steve Domber	

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

Water Compliance and Enforcement Legal Representative Present: DAG Kevin Fleming, NJ Division of Law

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Joe Mattle, Julia Altieri, Steve Reya, Mark Ortega, and Rachel Filo

Members of the Public Present: Todd Tannehill, CETCO Drilling Products; Michael Kleespies, CETCO Drilling Products

1. Call to Order and Opening Statement-

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

Todd Tannehill and Michael Kleespies of CETCO Drilling Products and Rachel Filo of the Water Allocation Program introduced themselves to the Board. T. Pilawski explained that Rachel has

worked for Water Allocation for about a year. The Board members welcomed Todd, Michael, and Rachel to the meeting. The Board members and Department staff proceeded to introduce themselves.

2. Hearing for Potential License Sanctions Against NJ Licensed Pump Installer-

Kevin Fleming, Deputy Attorney General, explained that he has been serving as counsel to the Department regarding the charges that the Department was bringing to the Board for license sanctions against licensed pump installer Kevin Blumhagen. He informed the Board that he was contacted by Mr. Blumhagen's attorney, Edward P. Azar, Esq. in advance of the Board hearing scheduled to occur during this meeting, which was to be about the potential suspension of Mr. Blumhagen's license. On November 20, 2019 the Department and Mr. Blumhagen's attorney reached a settlement agreement in principle. J. Denyes, DAG, noted that if both parties reached a settlement there would be no charges brought forward to the Board, however, since the Board is the licensing body for well driller and pump installers as established by statute, the settlement terms should be presented and put on record during the meeting for input from the Board.

DAG Fleming explained that the agreed upon settlement is for a 75-day suspension of Mr. Blumhagen's pump installers license starting January 1, 2020. The license would have to be physically surrendered to the Department at the start of the suspension. After 75-days, Mr. Blumhagen would be able to submit to the Board for reinstatement of his license. It would then be up to the Board to then reinstate his license. The settlement requires that if Mr. Blumhagen conducts any hydrofracturing activities, it must be performed under the direct onsite supervision a New Jersey licensed well driller of the proper class. DAG Fleming further noted that he would be contacting Mr. Blumhagen's attorney on speakerphone to keep him apprised of the Board's input on the settlement in principle to which both parties agreed. Mr. Azar was not initially available to answer DAG Fleming's call.

A. Becker asked J. Denyes for her opinion on the matter. J. Denyes said that the Board could either accept the settlement or choose to discuss it further. A. Becker asked the Department if they would be doing any follow-up enforcement to verify compliance with the terms. T. Pilawski said that it would be difficult to physically track his activities because although well pump work must be performed by an appropriately licensed individual, it does not require permits from the Bureau. S. Reya suggested notifying the Health Departments of the counties in which he typically works to make local inspectors aware of the issue. A. Becker asked if it was detailed anywhere as to what would happen if Mr. Blumhagen violated the terms of his suspension. DAG Fleming said the Settlement Agreement is contingent upon him fully complying with the well rule (N.J.A.C. 7:9D) and not committing any violations with Department rules during the time of his suspension. He further noted that N.J.A.C. 7:9D-(i)4 contains requirements for license reinstatement and specifies that "a person whose license has been suspended may be reinstated, after the period of suspension has ended and all conditions of the suspension have been satisfied, upon review and approval of the Board."

A. Becker asked if there was any further discussion. No further discussion was needed.

A motion to accept the Settlement Agreement between the Department and Mr. Blumhagen, as presented by DAG Fleming was made by G. Poppe, seconded by C. Graff, and approved by all except for J. Hoffman who abstained. J. Hoffman abstained because he serves in a supervisory capacity to many of the Department staff involved in this matter.

Board members inquired about Mr. Blumhagen's hydrofracturing operations in the future and how the Department will ensure that a properly licensed driller is working with him when his license is reinstated, as he will still not be properly licensed to perform that activity. DAG Fleming indicated

that he has been informed that Mr. Blumhagen has been attempting to hire appropriately licensed individuals for such work. Ensuring compliance would be left to the Department. Board members also questioned if the settlement is public record and could, therefore, be posted on websites or newsletters as a deterrent. Members were advised that it is a matter of public record.

Mr. Blumhagen's attorney, Mr. Azar returned K. Fleming's call and spoke with him and the Board on conference call. K. Fleming informed Mr. Azar that the Board accepted the settlement. K. Fleming confirmed with Mr. Azar that Mr. Blumhagen understands that while his license is suspended, he cannot conduct any pump work. A. Becker and K. Fleming confirmed that this is not a restriction on his company continuing to work because Mr. Blumhagen can employ a licensed well driller or pump installer (for pump installation/repair). Mr. Azar thanked the Board for their cooperation and departed the call. The settlement document will be finalized and signed by both parties before Mr. Blumhagen surrenders his license on or about January 1, 2020.

DAG Fleming departed at 9:58am.

3. Testing and Licensing-

The Bureau received three (3) license applications for the environmental resource and geotechnical (ERG) license. S. Reya summarized the license applicant list:

ERG – Daniel O'Mara, Timothy J. Shellman Jr., Samuel Headley

The applicants were found to meet the regulatory requirements of N.J.A.C. 7:9D-1.8. A. Becker asked if there was any discussion regarding these applicants. No further discussion was needed.

A motion to approval all three applicants was made by G. Craig, seconded by R. Dalton, and approved unanimously.

4. Continuing Education Program-

A table summarizing three (3) administratively complete courses, along with supporting documentation, was provided to the Board members prior to the meeting for review. Below is the course information and requested continuing education point (CEP) totals:

Groundwater Week 2019 – *National Ground Water Association's (NGWA)* – **15 CEPs (categories vary)**

NJ Soil Borer/Journeyman (Class B) Upgrade Course – *New Jersey Department of Environmental Protection* – **3 Technical CEPs**

VFD Training – *Goulds Water Technology* – **7 Technical CEPs**

J. Hoffman asked to further discuss the NGWA's Groundwater Week 2019 course. He said that he went through the list of courses and thought that a lot of them did not meet the requirements for approval. A. Becker said that most other states approve the whole conference. A. Becker and G. Craig discussed how the business courses that are offered are important and should be considered for approval. J. Hoffman said that he does not think that they fall into the technical or safety category and therefore should not count. S. Reya said that he believed the rule states that CEPs need to be related to the well drilling and pump installing industry, however, the technical and safety categories were the Board's policies. J. Hoffman asked if there could be a more thorough review of any

conferences/conventions in the future. G. Craig agreed that some of the courses on the list may not be relevant and that next year all classes should be reviewed. R. Dalton suggested reviewing NGWA's Groundwater Week like the Maryland Delaware Water Well Association Convention was reviewed earlier in the year. The other Board members thanked J. Hoffman for bringing up this point.

The Board members asked if the Department could track the courses that licensees took for Groundwater Week 2019. M. Ortega said that he would track it and present the information during the January meeting. A. Becker said that he expects about a dozen New Jersey well drillers to attend Groundwater Week.

A motion to approve Groundwater Week 2019 for up to 15 CEPs was made by G. Poppe, seconded by J. Yost, and approved unanimously.

No further discussion was needed for the other two (2) courses.

A motion to approve the NJ Soil Borer/Journeyman (Class B) Upgrade Course for three (3) CEPs was made by G. Poppe, seconded by J. Yost, and approved unanimously.

A motion to approve the VFD Training course for seven (7) technical CEPs was made by G. Craig, seconded by J. Pepe, and approved unanimously.

M. Ortega provided the Board with updated completion percentages for licensees that need to obtain CEPs for their license renewal. He told the Board that 31 percent of licensees have met the CEP requirement and another 18 percent have started obtaining CEPs but have not yet obtained the required seven points. He said that he will continue to provide the Board with updates and that another reminder letter would be sent out in January 2020.

A. Becker asked M. Ortega if he could investigate the ages of the well drillers because he thinks that some of the older well drillers who aren't currently drilling will choose not to renew. M. Ortega said that he would investigate it, but that ages and birthdates were not information that was tracked anymore. M. Ortega said that by the next in-person meeting he would try to have a better breakdown of CEP completion by license type.

5. Review and Certification of September 19, 2019 Draft Meeting Minutes-

A motion to approve the draft minutes from the September 19, 2019 meeting was made by G. Poppe, seconded by S. Domber, approved by all except for J. Yost who abstained.

6. Review and Certification of October 17, 2019 Draft Conference Call Minutes-

A motion to approve the draft conference call minutes from October 17, 2019 was made by G. Craig, seconded by J. Hoffman, and approved by all expect for J. Yost who abstained.

7. Remaining Board Conference Call-

The final Board telephone conference call for 2019 will be held on December 19th at 10:00 am.

8. Soil Borer/Journeyman (Class B) Upgrade Class Schedule-

S. Reya informed the Board members that the class schedule for the upcoming soil borer/journeyman (Class B) upgrade course had been finalized. There will be courses held on January 21st, February 6th,

and March 12th at 9am and 1pm. This affords license holders six (6) choices to accommodate schedules. A letter was sent out to all currently licensed soil borers and journeyman (Class B) well drillers regarding class registration during the first week of December.

9. Continuing Education for Licensees who “Upgrade” Mid-Cycle-

S. Reya talked briefly about license upgrades. He said that the Department’s interpretation of the well rule is that licensees will be exempt from the continuing education requirements if they successfully upgrade their license during a cycle. Because they would not be renewing the old/lower level license, they would fall into the category of being licensed for less than three (3) years for the new license type. Department staff, Board members, and J. Denyes discussed how the soon to be held soil borer license upgrade classes impacts continuing education requirements. The course was previously approved by the Board for CEPs. Board members asked if the licensees that take the class would be exempt from the continuing education requirement due to them taking the class.

T. Pilawski said that a significant amount of time and effort is required to pass the exams. She said that when the rule was written the intent was that licensees who voluntarily upgrade their license would be exempt from the CEP requirement because they chose to study and pass additional exams for a higher-level license. A. Becker asked for S. Reya and J. Denyes to confer on this and address at a later meeting.

R. Dalton said that he believed that licensees should not get points for studying for an exam. G. Craig said that this would not be a lifetime exemption from taking CEP’s and that a licensee can only upgrade their license so many times.

10. Course Provider Customer Limitations-

A. Becker provided the Board members with the background information from the October 2019 conference call. On this call, J. Pepe asked the Board about course providers potentially limiting the course rosters to only their customers. G. Craig asked if this applies to companies who wish to offer a class to their employees only. S. Reya had brought up how the NJ Soil Borer/Journeyman (Class B) Upgrade course was only available to currently licensed soil borers and journeyman (Class B) well drillers. J. Yost stated that he does not believe that suppliers are going to shut out potential new customers.

J. Denyes questioned whether there was any need for the Board to take action at this time as there have been no reports made to the Board that there is any bias toward excluding potential individuals from a course simply for monetary reasons. As has been previously noted, courses could be limited due to venue size or due to the topic only pertaining to specific license types though Board members recognize these are valid reasons. J. Denyes recommended to continue with the current CEP review and approval process and readdress the issue if it becomes a problem.

11. Enforcement Update-

J. Altieri provided the Board with a summary of the field activity between September 19, 2019 and November 21, 2019:

Field Inspections – September 19, 2019 to November 21, 2019 (2 total)

- Issue: Bureau staff inspected suspected improperly constructed potable well in Plainfield, Union County as part of a multi-Bureau enforcement activity conducted by the Department.

- Enforcement Action- well is out of compliance for various permitting and well construction issues. Department Enforcement follow up pending. T. Pilawski noted that J. Hoffman's staff recently coordinated a sampling protocol to obtain water quality samples for the unapproved well that was being utilized as a public water source.
- Issue: Bureau staff field inspected public supply test well installation as part of routine permit notification to witness well construction. West Milford, Passaic County.
 - Enforcement Action- well in compliance - no further action

New Investigations-alleged unlicensed pump/well work – September 19 & October 24, 2019 (3 total)

- Issue: Suspected unlicensed, well pump installation activity in Jackson Twp., Ocean County. A New Jersey licensed master well driller reported and submitted photo documentation to well permitting of a well that appeared to be in the middle of pump replacement work with no licensed individuals present.
 - Alleged Violations: Pump work would qualify as needing a license pump installer or the on-site supervision of a licensed pump installer or well driller to perform the work.
 - Enforcement Action- Bureau staff confirmed location. Notice of Non-compliance to be issued, further investigation pending by the Department.
- Issue: Two suspected unlicensed well pump and well work repair/installation issues were reported in Spring Lake, Monmouth Co. and Little Egg Harbor, Ocean Co. A New Jersey licensed master well driller reported to well permitting two incidents he was made aware of from property owners that separate irrigation/sprinkler companies were performing well and pump installation work without licensed individuals or permits. No supporting documents or pictures were submitted with the complaints.
 - Alleged Violations: Pump work would qualify as needing a license pump installer or the on-site supervision of a licensed pump installer or well driller to perform the work depending on the work performed.
 - Enforcement Action- Bureau staff spoke to one of the businesses and was informed that the company owner has a NJ pump installers license and refers any well work to a properly licensed NJ well driller when necessary. Any further investigation will require more evidence needed to verify that a violation has occurred.

Status update- Ongoing Administrative Hearings - ADR Requested by the Department

- Issue: Administrative hearing requests were filed by well drillers and their companies to dispute five cases of improper permitting, grouting and constructing of domestic and irrigation wells. Hearing requests were granted by the Department. DEP Office of Dispute Resolution requesting affected parties to take part in Alternate Dispute Resolution (ADR) process instead.

12. Program Updates-

T. Pilawski informed the Board that Sabrina Hill, Well Permitting's only remaining hourly employee, was hired by the Bureau of Safe Drinking Water. Next, she updated the Board on the changes to the well rule. She said that the rule team is scheduled to meet the Assistant Commissioner and her staff in the next two weeks to brief them on the proposed changes. From there, it will be sent back to Legal Affairs before it gets published.

T. Pilawski informed the Board that the recommissioning of the Woodbury geothermal site is set to begin in December.

J. Mattle discussed the current backlog of well records and well decommissioning reports with the Board. He said that the Department has been receiving many requests to review submitted documents but due to current staffing levels the reviews are behind.

13. Board Meeting Schedule for 2020-

The Board members were reminded of the 2020 meeting dates, which will be held at NJDEP Headquarters in Trenton beginning at 9:30 am on the following dates:

January 23, March 26, May 21, July 23, September 24, November 19

Conference calls will also be held at 10:00 am on February 13, April 16, June 18, August 13, October 15 and December 15. Bureau staff will provide the required public notification to multiple newspapers for publishing.

14. Princeton University Geothermal Project Update-

S. Reya said that the design specifications for Princeton's geothermal project have changed. He said that contractors routinely call with questions about the proposed wells. As of now it is anticipated that multiple drilling companies will be hired to drill some conventional U-bend wells to 800-850 ft. and also potentially install either the Rygan well that was initially installed as a test well or other similar designs. Initial drilling progress would then be utilized to determine the final design for the wellfields.

15. New Jersey American Water– Howell Township-

A. Becker brought up a concern that was brought to his attention at the most recent New Jersey Ground Water Association meeting. He said that New Jersey American is forcing homeowners with existing wells in Howell Township to hook up to public water. A Becker said that he was under the impression that public water companies were not permitted to do this unless there was a local ordinance in place. Bureau staff asked if there was a contamination issue affecting the ground water quality. He said many of the wells are newer replacement wells for which the owners spent a substantial amount of money to install and provide a good water source, yet the water company was forcing them to hook up to their system and purchase water. A. Becker said he did not believe so

16. Direct Exchange Grout Permeability-

R. Dalton explained that during the September 2019 meeting, Total Green, who was presenting their direct exchange geothermal system, expressed concerns with the Department's grout permeability tests. R. Dalton looked back at his notes and determined that the test that is presently required by the Department (ASTM D5084) is appropriate for both porous and nonporous grout materials. He added that it can be utilized for both bentonite and cement grouts. S. Reya informed the Board that the Department is still waiting for Total Green to submit their grout permeability results, which will be forwarded to Board members for review once received.

17. Adjournment-

A motion to adjourn was made at 12:07 pm by G. Craig, seconded by C. Graff, and approved unanimously.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PHILIP D. MURPHY
Governor

CATHERINE R. McCABE
Commissioner

SHEILA Y. OLIVER
Lt. Governor

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New Jersey Department of Environmental Protection State Well Drillers and Pump Installers Examining and Advisory Board Conference Call Minutes for December 19, 2019

Approved by the Board on January 23, 2020

Board Members Present at NJDEP Headquarters Building: Richard Dalton

Board Members Participating Via Telephone: Art Becker (Chairman), Gary Poppe (Vice-Chairman), Gordon Craig, Joe Pepe, and Steve Domber

Board Members Absent: Joe Yost, Carol Graff, and Jeff Hoffman

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

NJDEP Water Supply (Bureau of Water Allocation and Well Permitting) Staff Present: Joe Mattle, Steve Reya, and Mark Ortega

1. Call to Order-

The meeting was called to order at 10:02 am with a quorum present via telephone.

2. License Application Review-

The Bureau received one license application for the Pump Installer license:

PI

Kenneth Fidalgo

S. Reya explained that Mr. Fidalgo wrote a letter to the Board with his application because he was not able to fully complete his reference questionnaire due to one of his references passing away. S. Reya said that he tried to look through the Department's old licensing records but could only find as far back as 1992. R. Dalton recalled that an exception was previously made for New Jersey American employees under similar circumstances.

G. Craig makes a motion to grant the license applicant, Kenneth Fidalgo, his pump installer license under the special circumstances. This motion was seconded by G. Poppe and approved unanimously.

3. CETCO – Geothermal Grout-

S. Reya explained that the geothermal grout that CETCO submitted permeability data for was similar to a grout that was previously approved by the Board. Both the CETCO grout and the previously approved grout use a mixture of bentonite and graphite.

R. Dalton explained that the proposed grout meets Department's standards for permeability, but that he had some minor concerns regarding the lab results that CETCO had submitted. G. Craig suggested that the graphite used in the grout was the cause of R. Dalton's concerns. G. Craig recommended approving the grout and suggested that the Department reach out to CETCO if they had other questions regarding the lab results.

S. Reya said that CETCO wants to conduct a field demo for this grout mixture at the Princeton site. He reminded the Board that the Princeton site will potentially have close to 2000 geothermal wells, ranging from 500 to 1000 feet.

A. Becker expressed his concerns with CETCO using wells that deep to test their grout. He asked what would happen if the grout failed its field demo. A. Becker suggested that CETCO conducts their field demo on a shallower well. If CETCO chooses to use Princeton as the site for the field demo, then they should understand the risks involved.

A motion to have the Department send CETCO a letter to proceed with their grout demo was made by R. Dalton, seconded by G. Craig, and approved unanimously.

S. Reya asked the Board members for volunteers to attend CETCO's field demo. A. Becker, G. Poppe, G. Craig, and R. Dalton said that they would like to attend the grout demo if they are available.

Before adjourning, A. Becker asked S. Reya for an update on the Princeton geothermal project. S. Reya explained that the project hasn't been finalized and that the Department's Office of Permit Coordination has reached out to Princeton to have a meeting in January. G. Craig said that his company is acting as a consultant for Princeton

4. Adjournment-

At 10:24 am a motion to adjourn the meeting was made by G. Poppe, seconded by G. Craig, and approved unanimously.