



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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STATE WELL DRILLERS AND PUMP INSTALLERS
EXAMINING AND ADVISORY BOARD

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State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for Nov. 19, 2009

Board Members Present: Art Becker (chairperson), Richard Dalton, Fred Sickels, Karl Muessig, Gary Poppe, Joe Pepe, Carol Graff, Joe Yost

Board Members Absent: Anthony Tirro

NJDEP Staff Present: Steve Reya, Pat Bono, Tracy Omrod, Michael Schumacher (pm only), Brian Buttari (pm only), John Fields (pm only)

Other State Personnel Present: D.A.G. Helene Chudzik (am only)- Legal advisor to the Board

Member(s) of the Public: Peter Cicalese (Clinton Water Treatment Services), Peter Cicalese Jr. (Clinton Water Treatment Services)

1. Call to Order - The meeting was called to order by A. Becker at 9:50 am with a quorum present

2. Review of Minutes from Sept. 17, 2009 Meeting – Carol Graff made a motion to delete the majority of the second paragraph of the “Journeyman section (within item 3). The entire paragraph, with the exception of the actual motion, will be omitted from the final minutes since it is nearly identical to the first paragraph. The motion was seconded by Art Becker and approved unanimously.

A motion to approve the minutes with the change noted above was made by Gary Poppe, seconded by R. Dalton and approved unanimously.

Review of Executive Minutes - A motion to accept the executive minutes was made by R. Dalton, seconded by K. Muessig and approved unanimously. It was noted that there were two minor “typos” which were corrected.

3. Review and Certification of the Oct. 6, 2009 Master, Journeyman, and Journeyman Exam Scores

Master – A motion to accept the scores was made by F. Sickels, seconded by G. Poppe and approved unanimously.

Journeyman – A motion to accept the scores was made by G. Poppe, seconded by F. Sickels and approved unanimously.

Journeyman B – A motion to accept the scores was made by F. Sickels, seconded by R. Dalton and approved unanimously.

Review and Certification of Well Driller & Pump Installer Exam Applicants for December 10, 2009 (all license categories) –

Master – A motion to approve the applicant list was made by G. Poppe, seconded by R. Dalton and unanimously approved.

Journeyman – A motion to approve the applicant list was made by G. Poppe seconded by F. Sickels and unanimously approved.

Journeyman B – A motion to approve the applicant list was made by R. Dalton, seconded by A. Becker and unanimously approved.

Monitoring Well – A motion to approve the applicant list was made by G. Poppe, seconded by C. Graff and unanimously approved.

Soil Borer – A motion to approve the applicant list was made by C. Graff, seconded by G. Poppe and unanimously approved.

Pump Installer – A motion to approve the applicant list was made by F. Sickels, seconded by J. Pepe and unanimously approved. G. Poppe noted that one of his employees was on the list and wanted to ensure that he was not creating a conflict of interest issue by certifying the applicant list. H. Chudzik advised G. Poppe that staff members of the Bureau of Water Systems & Well Permitting reviewed all applications for compliance with the regulatory and application requirements.

Prior to voting, Board members noted that pass rates for test candidates is very low. J. Pepe suggested that the Department increase the required amount of work experience to sit for the licensing exam from one to two years. He felt that advances in pumping equipment technology and the variety of issues encountered in the industry now necessitate a greater experience requirement before an applicant should be allowed to sit for a test. He felt that this was a main reason for the low exam scores and high failure rate. Additionally, A. Becker stated that the three-year experience requirement for all categories of well driller exams might be excessive. He felt that the experience requirements for all license categories should be re-evaluated when the regulations are revised. The current rules sunset in March, 2012.

4. **Proposed Board Meeting Dates for 2010**– The Board members discussed a list of proposed meeting dates for 2010. There were scheduling conflicts with several Board members, which resulted in changing the proposed January and March dates. The meeting dates for 2010 will be as follows: January 14, March 16, May 20, July 15, September 16 and November 18.
5. **Licensing Topics** – Peter Cicalese, owner of Clinton Water Treatment Services, addressed the Board to discuss the role of pump installers and plumbers within residential homes. P. Cicalese indicated that he received his pump license 25 years ago. He said that local municipal code inspectors have recently caused problems for he and his company, as they were not consistently interpreting and applying Department of Environmental Protection (DEP) and Department of Community Affairs (DCA) regulations. Specifically, he said that the issue over work jurisdiction between licensed

Master Plumbers and licensed Well Drillers and Pump Installers had become contentious in many municipalities. He stated that typically the defining point between the two individual licenses was the house valve. He added that from the bottom of the well to the house valve was Pump Installer/Well Driller work and everything on the opposite side of the valve was clearly under the jurisdiction of Master Plumbers. This meant that the Pump Installers/Well Drillers would also be able to install water treatment, provided it is on the "well side" of the house valve. P. Cicalese also said that he is unable to acquire the permits that local inspectors are now requiring because he is not a licensed Master Plumber and does not feel that he needs one to do the work in question. G. Poppe noted that he obtained a letter in the past, which was a DCA interpretation of the rules, and it indicated that the line between the well, well tank and water conditioning were under the purview of DEP. The Board also discussed the duties that are regulated by DEP through N.J.A.C. 7:9D-1.7(b), which authorizes pump installers to "install or replace well pumping equipment and appurtenances, storage tanks and appurtenances and connecting lines between a well and storage tank." This led to a discussion over the lack of a clear definition of "appurtenances" and how the word could be open to different interpretations amongst local inspectors. G. Poppe said that he would provide Bureau staff and P. Cicalese with the above-referenced DCA letter. This letter is also believed to reference the fact that "appurtenances" had historically been interpreted to include water treatment equipment installation.

6. **Study Guide Materials Update** – C. Graff stated that she researched Google to see if it would be possible to have Johnson's "Groundwater & Wells" and other recommended study texts scanned and put into an electronic study guide for exam applicants. She indicated that Google now scans things and makes them available to the public. Unfortunately, however, she found that it would not be feasible because a text such as "Groundwater & Wells" would cost several times the price of actually purchasing the book. The Board and Bureau will have to explore alternative ways to create a study guide to better assist exam applicants.

6. **Elevator Drilling Update** – P. Bono discussed how she, J. Fields and S. Reya met with representatives from the Elevator Safety Unit within the Department of Community Affairs (DCA) to attempt to resolve the permitting and licensing requirements for companies that solely drill boreholes for the installation of elevator pistons. J. Fields and S. Reya also mentioned the fact that DCA staff advised them that the terms "elevator shaft" that is referenced in both the Department's well drilling law and regulation is incorrect. DCA staff advised them that the shaft is actually the above-ground structure in which the elevator car rides. Therefore, DCA felt that language referring to the drilling of elevator shafts meant nothing to those in the industry because shafts are constructed not drilled. They indicated that the casing in which the hydraulic cylinder sits is what the DEP regulations are actually attempting to regulate. DCA staff did indicate that they do regulate the construction and installation of the piston. Specifically, they regulate the cathodic protection controls and containment systems that are designed to prevent the release of hydraulic fluid into groundwater, should a hydraulic leak occur. A. Becker also discussed a conversation he had recently had with a New Jersey Licensed Well Driller who has historically installed a large number of elevator casings within New Jersey. This driller informed him that 20-inch casing could be installed in the ground via a dual rotary rig. These installations do not contain any grout or backfill material and have only a very small micro-annulus. The other way to install the casings would be to drill an oversized borehole, via a rotary drill rig and either grout or backfill the annular space. A. Becker said that he was also told that once the casing has been installed by the drilling contractor an elevator company comes in and uses either PVC or polyethylene pipe to surround the piston for purposes of containing potential hydraulic fluid releases. He stated that there is annular space between this "can" and the casing, which is not grouted. Finally, the driller informed him that the boreholes for such installations are typically around 35 feet deep and occasionally as deep as 60-65 feet. A. Becker indicated that the elevator industry appears to be self-regulating with regard to creating a potential fluid release.

At the meeting, DCA representatives stated that they could incorporate grouting requirements into their regulations, which would allow the DEP to cease regulating that aspect. As discussed in previous meetings, the DEP does not regulate any type of construction type drilling, other than elevator work. This work is regulated through the law and regulations; however, very little compliance has been achieved within the state (only three well permits have ever been issued for this use). F. Sickels, C. Graff and J. Yost all cautioned about getting too far away from the regulations because they felt that it would set precedent and may limit the scope of activities that the Department should and could regulate in the future. DCA will reportedly be drafting a letter to DEP staff regarding proposed changes to regulations. This letter would propose transferring the governing authority of the drilling for elevator related issues to DCA, and incorporates the DEP grouting and casing installation requirements into DCA oversight.

- 7. Licensing Topics** – P. Bono requested clarification from Board members regarding recent changes to reviewing applicants' qualifications that were recommended by the Board at the last meeting. She also requested clarification on what the Board expected in terms of experience in order to sit for the master well driller exam. When reviewing the recently agreed upon changes by Board members, staff had noticed that applicants with no experience drilling water wells would now qualify to sit for the master's exam. This raised a concern since as master drillers construct public community water supply wells. This situation was created when the requirements for both Journeyman and Journeyman B exam applicants were changed to include any well category. The old process would have required Journeyman and Journeyman B applicants to demonstrate the experience in drilling potable wells, so water well experience was covered at a "lower" level license. In order to rectify this situation, P. Bono proposed changing the application requirements for the Master exam to cover this gap. After considerable discussion, the Board members and Bureau staff agreed to change the experience requirements for the master's exam to requiring five (5) wells from category 1, 2 or 3 (any combination) within a three (3) year period. The rationale for this was that these categories all represented wells that supplied water, regardless of whether the water is potable or non-potable. This would ensure that all applicants would at least have some experience with wells that supply water and with the construction requirements of such wells.
- 8. Well Driller Exam Application Revisions** – P. Bono discussed how the Bureau would incorporate the above change as well as many other changes that have to be made as a result of the past few Board meetings. She also talked about making checklists on the application coversheet to make sure applicants are filling out the application correctly.
- 9. Geothermal Discussion** – S. Reya discussed a proposal he had recently received (by submission on November 18th) a request for the Department to consider accepting a new closed-loop geothermal system which consists of an outer pipe (approximately 3 inches in diameter) comprised of Fiberglass/Carbon and an inner tube (1 ¼" diameter) consisting of spiral-finned PVC pipe. The installer of these systems, Able Environmental, reports that loops are typically installed to a depth of approximately 300 feet. S. Reya also indicated that applicant is proposing to use a grout mix which is not currently approved for geothermal wells grout in New Jersey. The representatives from Able Environmental, however, had assured him that the system would also work with one of the already-approved bentonite-based geothermal grout mixes. Since the outer casing of fiberglass/carbon is not currently approved, a deviation would be required to install such a system. The manufacturer of the system, Kelix Heat Transfer Systems, provided some data on the strength and pressure ratings of the outer pipe. Board members discussed how approving such a system could only be done if the manufacturer could demonstrate that the pipe is actually equal to, or stronger than, the 160 psi polyethylene piping currently approved in the regulations. Additionally, S. Reya noted that the chemical composition of the epoxy used for attaching the threaded sections of outer pipe would also

need to be reviewed prior to approval. The system specifications call for water as the circulating fluid for heating-cooling exchange. Able Environmental may consider adding a small amount (approximately 10%) of one of the Department's previously approved anti-freeze mix; this would be acceptable within the current regulations. In their submission, Able Environmental offered to demonstrate the installation of a system for the Department and Board members to witness. F. Sickels pointed that the regulations allow the Bureau to issue deviation approvals based on site specific conditions, but there is no specific provision mentioning materials as the basis for the deviation. Board members indicated that any approval should be based on demonstration that ASTM strength standards, such as compressive strength of the casing, must be met. They requested additional information on the Fiberglass/Carbon corrosion properties for further review. S. Reya will contact the drilling contractor and/or the system manufacturer to request the above information prior to the next Board meeting in January.

10. Nebraska Grout Conference – S. Reya presented the highlights of a seminar he had recently attended entitled “Nebraska Grout Study Report Release and Conference.” Board members were very interested in hearing the details of this report as these studies represent the first in-situ data of it's kind. Conducted by the Nebraska Grout Task Force, the study has covered a ten year span in which the effectiveness of various grouts were viewed by installing a clear well casing in numerous wells installed in multiple locations throughout Nebraska. After installation, regular downhole camera inspections were performed on the wells to visually determine the integrity of the grout seals. Additionally, dye tests were conducted to better quantify the actual performance of the grout seals. The released study results include all work performed between 2001 and 2007. The Task Force intends to conduct future studies to pursue the effectiveness of additional grout mixes based upon some of the problems with they have observed with current grout mixes. To date the majority of the problems that were noted in the study pertained to the unsaturated portions of the borehole. The Task Force, which is partly comprised of representatives from three bentonite suppliers, is currently developing and testing many new grout mixes in an attempt to create more effective grout mixtures. S. Reya believes that the information will provide the Department with much needed information when revising New Jersey's well drilling regulations;

11. DEP Program Updates – ePermitting- M. Schumacher reported the Bureau recently issued the 1600th electronic permit. He added that 30 different companies have now submitted e-permits and that approximately 20% of all permit submittals have been electronic. Most are of the well permit applications received through the ePermitting portal have been for monitoring wells.

G. Poppe raised a complaint on the turnaround time his company experiences regarding completion of well searches and searches approvals of decommissioning plans. He stated that the average turnaround time is approximately four to six weeks and requested that the Bureau attempt to return decommissioning approvals in a more timely fashion.

A. Becker discussed the pass/fail rates for the National Groundwater Association (NGWA)'s well driller and pump installer exams. At previous meetings the Board discussed the potential of utilizing the NGWA exams, or possibly a modified version of them with a section focused on New Jersey regulations. A. Becker noted that the exam fail rate is fairly high in most categories offered by NGWA, therefore, he did not believe the exams were as easy to pass as some Board members indicated in previous meetings.

12. Authority of the Board- A. Becker raised the topic of the powers and duties of the Board, as stipulated in N.J.S.A. 58:4A-12. He stated that according to this law, the Board can make recommendations to have a licenses suspended, hold hearings, look into complaints and send referrals to the commissioner of the Department regarding violations of the regulations. A. Becker stated that

he would like to start addressing enforcement problems in the industry. He also said that states such as North Carolina publish violations in their newsletter, which he feels acts as a deterrent and is a technique which could be used in New Jersey. A. Becker will check with H. Chudzik for clarification on Board duties. He would like to have the Board start to develop a process for enforcement follow-up so that important issues and egregious violations could be dealt with or referred to the Commissioner for action. G. Poppe voiced concern with the number of unlicensed individuals working in the industry and the amount of drilling that is done without permits. A. Becker would like the next Board meeting agenda to list a follow up item for further discussion on the Board's authority to suspend or revoke licenses.

13. **Adjournment** - A motion to adjourn the meeting was made by C. Graff, seconded by D. Dalton and unanimously approved at 3:20 PM.