



State of New Jersey

Department of Environmental Protection

Jon S. Corzine
Governor

Mark Mauriello
Acting Commissioner

Division of Water Supply
Bureau of Water Systems and Well Permitting
P.O. BOX 426
TRENTON, NEW JERSEY 08625-0426
TELEPHONE (609) 984-6831
FAX (609) 633-1231
STATE WELL DRILLERS AND PUMP INSTALLERS
EXAMINING AND ADVISORY BOARD

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

Board Members Present: Chairman Arthur Becker, Anthony Tirro, Richard Dalton, Joseph Pepe, Sr., Fred Sickels, Karl Muessig, Joe Yost, Gary Poppe.

Board Members Absent: - Carol Graff

NJDEP Staff Present: Steve Reya, Pat Bono, Tracy Omrod, Michael Schumacher (afternoon only), Brian Buttari (afternoon only), Julia Altieri (afternoon only),

Other State Personnel Present: D.A.G. Jill Denyes - Legal advisor to the Board

Member(s) of the Public: George Lindenmulder – Twin County Irrigation, LLC

1. Call to Order - The meeting was called to order by A. Becker at 9:35 am with a quorum present

2. Review of Minutes from Jan. 27, 2009 Meeting - A motion to accept the minutes without change was made by G. Poppe, seconded by T. Tirro and unanimously approved.

3. Motion to approve the application for the April 9, 2009 Exams

Master Exam – A motion to accept the Master Well Driller exam applicant list was made by G. Poppe, seconded by J. Yost and unanimously approved.

Journeyman Exam – A. Becker questioned why two men were not approved to sit for test. S. Reya responded, stating that one applicant, Matthew Lowry, was rejected for insufficient experience. S. Reya added that Mr. Lowry's application noted a specific project in which he had been actively involved with the drilling of several production and observation wells, however, the listed experience was confined solely to one project, not over a three year span, which is required by the regulations. According to S. Reya, the second applicant, Frank Goss, was rejected because one of the wells listed as experience

was a “change of use” permit. A Master Well Drill who had re-permitted the well completed the reference questionnaire for this well but was not actually the driller who originally drilled the well. A motion to approve the list of applicants was made by J. Yost, seconded by R. Dalton and approved unanimously.

Journeyman B – The Board reviewed two applications from J. Olinger Drilling LLC employees, Keith Russel and Darrell Caton, Jr. Both applicants previously worked for Dunn & Dunn Inc. prior to their employment with J. Olinger Drilling LLC. John Olinger, from John Olinger drilling submitted a letter with each applicant noting that both applicants had the required three years of drilling experience, but could not obtain the required documentation from their previous employer due to “unanswered telephone calls and lost paperwork.” Mr. Olinger also stated that he was a licensed well driller for many years while employed by Dunn & Dunn Inc. and could vouch for the fact that the applicants were drillers’ helpers during that time period.

The letter that accompanied Mr. Russell’s application noted that he had been drilling water wells for approximately 6 years. Mr. Russell began his employment with John Olinger in May of 2006. He worked for Dunn & Dunn Inc. from September 11, 2003 to April 2006. The reference questionnaire completed by Mr. Olinger noted that he had supervised the applicant from September, 2003 to February, 2009. Additionally, S.Reya noted that he located a copy of Mr. Russell’s apprenticeship application (which is no longer required) in the Bureau’s files. His apprentice program application was completed by Allen F. Dunn, of Dunn & Dunn Inc. His official enrollment date was September 1, 2004. Mr. Russell had also satisfied the criteria of submitting permits and records for wells he helped drill. Therefore, it appeared that Mr. Russell’s experience met the standards required in the regulations. A motion to accept Mr. Russell’s application was made by J. Yost. The motion was seconded by K. Muessig and approved unanimously.

The letter that accompanied Mr. Caton’s application stated that he had been drilling water wells for approximately 3 ½ years. Mr. Caton began his employment with John Olinger in August 2008. Mr. Olinger had reportedly already left Dunn & Dunn, Inc. to start his own business prior to the period in which Mr. Caton had worked at Dunn & Dunn Inc. Additionally, three of the five wells listed on the reference questionnaire were drilled prior to August 2008, which was the date Mr. Olinger’s supervision began, according to both the questionnaire and the “work experience” section of the application. Several Board members noted the fact that there was a lack of specific information with regard to the individual(s) contacted at Dunn & Dunn Inc. and the reason that documentation and signed/notarized reference questionnaires could not be obtained. The Board members discussed the fact that W-2 forms would also assist in verifying that the applicant had obtained the required experience. The application, as submitted will be rejected by the Bureau, as it is technically deficient with regard to the fact that the wells listed as experience were drilled prior to the supervised period. Board members suggested that the “rejection letter” should also provide the specifics the Board would like to review, should the applicant still be unable to obtain the required references prior to the next exam. Specifically, the names of former Dunn & Dunn Inc. employees who

supervised his work along with the problems encountered while contacting the references should be provided with the application. Documentation of employment history with Dunn & Dunn, such as W-2 income tax forms, would have to be furnished.

A motion to certify the applicant roster, with the two changes to the above applicants, was made by A. Tirro, seconded by G. Poppe and unanimously approved.

- 4. Additional licensing issues-** P. Bono discussed a letter that was submitted by Harry Sussman, from EarthTech Energy Solutions. Mr. Sussman requested that the Board reconsider the application of one of his employees, Scott Costa. Mr. Costa's application was rejected by the Bureau of Exams and Licensing, as it did not contain a copy of his high school diploma or GED. Mr. Sussman stated that "in light of the fact that Mr. Costa meets all Board requirements and appropriately consulted with and followed the direction of the Board administrative staff regarding this one issue, we respectfully request that the Board allow Mr. Costa to sit for the April 9th licensing test." A. Becker stated that since the application was deficient at the time of the May first deadline, the Board and Department staff must reject the application.
- 5. Pump Installer Exam question challenge** – George Lindenmulder, Twin County Irrigation, LLC, addressed the Board with regard to a March 9, 2009 letter he submitted in which he challenged the scoring of one question on his December 9, 2008 Pump Installer Exam. The question that he wanted the Board to review pertained to the installation of pump/well pits and pitless adapters. A motion to enter Executive Session was made by G. Poppe, seconded by A. Tirro and approved unanimously at 11:00 am.
- 6. Executive Session** – 11:00 AM – 11:18 AM
- 7. Pump Installer Exam question challenge** (continued) A. Becker thanked Mr. Lindenmulder for bringing the question to the attention of the Board members and stated that they recognized the confusion after reviewing his letter and supporting documentation. He also informed Mr. Lindenmulder that he would be awarded credit for his answer and would now receive a passing score on his Pump Installer Exam.
- 8. Request for Technical Advice-** John Shevlin, Bureau of Safe Drinking Water, brought up proposed amendments to the New Jersey Safe Drinking Water Act (Act). The proposed amendments would require non-community water systems to demonstrate safe and reliable yield. Mr. Shevlin noted that Subchapter 13 of the act refers to safe and reliable yield must be demonstrated, however there are no standards that must be met. He indicated that there is merely guidance information. Mr. Shevlin indicated that he had recently been working with Karl Muessig's staff at the New Jersey Geological Survey to establish a safe yield pump test for such systems. Mr. Shevlin also stated that pump tests are currently performed on new wells only, however they are looking into the possibility of requiring tests to existing systems, as additions or modifications to the system are made. The proposed pump test would have a "pre-built" path for those systems currently

in operation and an “as-built” path for new systems. Mr. Shevlin stated that the proposed pump test would be performed for five consecutive days, but would not be “around the clock.” He added that the theory of such a test was to prevent repeatedly opening up the well, which could lead to potential contamination and inadequate well cap seal problems. F. Sickels noted that since the day was to be conducted over five days, the individuals performing the tests would have to ensure that all water is discharged far enough away from the well that the recharge does not influence the pump test data. Mr. Shevlin said that the typical entities that would fall into the amended pump test requirements would be hotels, day care facilities, hospitals, large restaurants and retail establishments. J. Yost questioned whether holding tank capacity was also factored in when determining the safe yield. He also asked whether a step down pump test could be performed and later followed up with a long term test to determine the actual production of the well. K. Muessig indicated that the staff had attempted to keep the test simple, as the systems are not large public supply water systems pumping large quantities of water. Mr. Shevlin also noted that typically such tests are especially important in Northern New Jersey where there is generally much less water available. Mr. Shevlin asked the Board members whether they saw any physical problems that would arise within the pumping systems if such testing were required. All Board members agreed that as long as the well was not over pumped beyond capacity, there would not be any problems with the pumping equipment. They all felt that such a test would not stress the equipment beyond their design.

9. **Licensing Topics – Study Guide Material for Well Driller & Pump Installers-** S. Reya asked whether the Board members had any revisions or comments regarding the draft revisions to the study guide material for well drillers and pump installers. He added that he had not received any comments since the meeting. R. Dalton said that he believed the study guides for all exams should have a disclaimer stating that in the event of conflicting information within the recommended study material, the DEP regulations supercede all other references. He believed that some information in the ASTM standards, for example, is allowed in much of the country but prohibited by New Jersey regulations. The remainder of the Board members indicated that they would look at the draft study guide and submit comments and/or revisions to S. Reya to (or prior to) the May meeting.
10. **Program Updates –** P. Bono informed the Board that the Division of Compliance and Enforcement might soon be assuming the role of administering the testing for well drillers and pump installers. She had previously informed the Board that the Department planned to eliminate the Bureau of Exams and Licensing, which had previously handled this task, along with the administrative review and some data entry tasks associated with the applications. Additionally, she said that it is unclear how these changes would impact the program but said that it might actually limit the frequency of the exams (possibly even as few as one day per year), as the program would be administering the exams multiple programs within DEP. She added that she did not have any additional information and is currently awaiting further clarification. F. Sickels also said that they had explored options of contracting with a third party to administer the exams, however,

the duties would likely have to be transferred to the Division of Compliance and Enforcement rather than an outside agency. S. Reya said that the test dates and location have been reserved for the remainder of 2009, however, nothing beyond the December 2009 exams has been set up. F. Sickels said that he would follow up with management within the Division of Compliance and Enforcement.

P. Bono discussed a conversation she had recently had with the Florida licensing official. The official informed her of how their continuing education program was structured. P. Bono said that the NJ regulations call for a continuing education program to be in effect by 2011, however, the program has limited resources to institute such a program at the current time. The Florida official informed P. Bono that Florida contracted with a third party to administer their continuing education program. In their program, the driller/pump installer pays a tracking fee to the outside company based on the number of continuing education units (CEU) points taken, which are then certified, entered in a database and posted on a website. The licensing (state) representative is then able to view the website for approval of the CEU requirements. P. Bono thought a similar system would likely work for New Jersey and that it might be possible to handle most of the new licensing aspects "in house" while outsourcing the continuing education portion. A. Becker noted that Maryland has program similar to Florida's.

10. Exam Revisions-

S. Reya asked the Board for assistance to revise what he believed to be an incorrect question/answer on the Master Well Driller exam, in addition to revising the Pump Installer exam question from earlier in the day. A motion to enter Executive Session was made at 12:12 pm.

11. Executive Session (Part 2)- 12:12 PM - 12:27 PM

12. Hardin Geothermal Pipe Update

S. Reya informed the Board members that he had received material specification data for Hardin's BiSec 3.2 geothermal pipe. He said that the information was submitted in response to the following email request he sent:

The Board members reviewed the material you submitted (which was attached to your October 7, 2008 email) and discussed the Hardin BiSec Geoexchange pipe at their November 18, 2008 meeting. The first attachment, HDPE properties, addresses the physical, mechanical, electrical, thermal, and optical properties of the material. It does not, however, indicate the Hydrostatic Design Basis (HDB) or pressure rating of the material, both of which were used by the Bureau when evaluating the use of the polyethylene pipe currently in use in New Jersey. The polyethylene pipe currently approved for use in New Jersey (through N.J.A.C. 7:9D-2.5(a)4) is required to be 160 psi with a 1600psi HDB at 73.4 degrees F (per ASTM D-2837). Based upon your submittal, there is no standard test (ASTM or other) that has been performed that can verify the pressure rating of the pipe. Additionally, the "MatWeb Material Property Data" sheet you supplied does not specify a specific material designation. The sheet is an overview of injection molded HDPE and doesn't apply to any particular rating

of pipe. Therefore, the actual specifications of the proposed HDPE pipe are unclear. Even if the Board/Bureau were to ultimately approve such a request, we would need specific criteria by which we could refer to a particular specification of HDPE. Please provide additional information regarding the pipe pressure ratings, if available, at your earliest convenience.

The information provided by Mr. Strep, on behalf of Hardin Geotechnologies (Hardin), indicated that the material did appear to exceed the criteria established in N.J.A.C. 7:9D, according to S. Reya. R. Dalton, however, pointed out the fact that the submitted tables appeared to have been compiled by Hardin. He believed that the Board should require verification via an independent lab, just as the Board requires independent lab permeability testing when evaluating new grout mixtures. The consensus of the Board members was that independent verification of the data is required. S. Reya will contact Hardin representatives and have them provide the source of the data, which illustrates that the specified criteria was verified through the appropriate ASTM standard by an independent, certified lab.

Additionally, the Board discussed the grouting operation with regard to the non-standard grout method in which grout ports are utilized, rather than a tremie pipe being installed with the loop and then grouting the open annulus. S. Reya explained that Hardin had submitted a proposal to install such systems in which they would drill an oversize borehole (larger than they typically would with the Hardin Pipe). They would then grout the hole via the standard pressure grouting method with a tremie pipe. This method was proposed since they did not feel that the T-111 grout mix (cementitious thermally enhanced grout) could be pumped through the grout ports. Department representatives would also like to observe a test installation for one well in a consolidated formation and one well in an unconsolidated formation. A deviation request, including full details on the grouting procedure, borehole and casing dimensions, and the exact grout mixture that is being proposed, would have to be submitted with a drilling permit application. Finally, the deviation would have to acknowledge the fact that should the grout ports (in the case of the unconsolidated well) fail to adequately transmit grout into the annulus, the driller would overdrill the well and abandon the borehole. Alternatively, if they were able to pull the well, the borehole could be reamed out to a larger diameter and tremie grouted via the standard method of installing the tremie on the outside of the casing.

S. Reya and F. Sickels also discussed whether deviations would be required for both the consolidated and unconsolidated wells. S. Reya also suggested adding a separate well use to the database used by the Bureau of Water Systems and Well Permitting (Bureau). He felt that it would be helpful to be able to run a search in the system to determine where the systems were being installed and would allow the Bureau to better track any potential problems, since there are currently no known installations in the state. S. Reya stated that if deviations were not submitted, the closed loop geothermal permit

applications would appear the same as the typical polyethylene U-loop geothermal permits.

13. Discussion of DX Geothermal Well Systems – A. Becker states that he has done a significant amount of follow up to find additional information on these systems. He has heard there are problems with the copper and problems with the systems in general if they are not installed properly. He added, however, that there could be problems with any type of system if not installed correctly so he was not sure if such problems were actually a technology related issue. A. Becker added that due to the lack of data regarding potential harm to the state's groundwater resources, he doesn't think that DX is an appropriate technology for New Jersey at this time. He also questioned whether the Department would be sending a formal response to the DX community, making it clear that such systems are not currently approved. F. Sickels said that he would be talking to his chain of command and would ultimately like to issue such a letter. He also stated that the Michelle Putnam, Director of Water Supply, recently sent a letter to the Director of the Division of Codes and Standards within the Department of Community Affairs (DCA) essentially stating that the systems are illegal. Additionally, it reportedly requested assistance from DCA to have their code enforcers refer any potential violations to the Bureau.

14. DEP Program Updates – P. Bono provided an update regarding the Bureau's online permitting program, Epermitting. She stated that the program development (the portal and NJEMS) is moving along but it is not turned on as of yet. She believed that it would be in April for a pilot with a couple of companies and hoped that most companies would begin to use the program in May. M. Schumacher also explained how companies and licensed well drillers would sign up and access the program. P. Bono also said that staff has been working on the website to keep it up to date. She also informed the Board that new Webi reports could be run on the Department's website. Such reports could be run for well searches, lists of New Jersey licensed Well Drillers and Pump Installers and well drilling contractors (company list). A. Becker noted that he would like to receive communication on when Epermitting is up and running to inform members of the New Jersey Groundwater Association.

15. Adjournment - A motion to adjourn the meeting was made by A. Tirro, seconded by G. Poppe and unanimously approved at 2:45 PM.