

Minutes – Thursday, January 10, 2008

State Well Drillers and Pump Installers Examining and Advisory Board

Board Members Present:	Art Becker	(Master Driller/Acting Chairperson)
	Anthony Tirro	(Master Driller)
	Joseph Pepe, Sr.	(Pump Installer)
	Dick Dalton	(NJDEP)
	Fred Sickels	(NJDEP)
	Karl Muessig	(NJDEP)

Board Members Absent:	Norman Primost	(Master Driller/Chairperson)
	Pete Demicco	(Public Member)

NJDEP Staff Present:	Pat Bono (Section Chief)	Holly Papp
	Julia Altieri	Steve Reya
	Brian Buttari	Michael Schumacher
	Melinda Strahle	

Others Present:	Gary Poppe	(Kaye Well Drilling)
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1. **Call to Order** – The meeting was called to order by Art Becker at 9:35am with a quorum present.
2. **Review of Minutes from November 8, 2007 meeting** – The Regular Session minutes from the November 8, 2007 meeting were review by the Board. Art Becker would like to change the spelling of George Strycker’s name in item #5; it was originally spelled incorrectly. A motion to accept the minutes with the suggested change was made by Anthony Tirro; seconded by Dick Dalton.

The Executive Session minutes from the November 8, 2007 meeting were reviewed by the Board. A motion to accept the minutes with no changes was made by Fred Sickels; seconded by Anthony Tirro.

3. Testing and Licensing Issues

Pump Installer Exam Results – Steve Reya noted that this was the first testing cycle in which the new Pump Installer Exam questions were used. Joseph Pepe would like to know if the applicants are all first-time takers.

Joseph Pepe said that he doesn't think that applicants should be allowed to review the test they took, and then come back and take the same exact exam. Art Becker stated that a quick review shows that only one person passed the technical section of the test, and only 25% of the applicants passed the regulatory section. Fred Sickels noted that it is difficult to manage a big bank of questions, and if the NJDEP were to create multiple test versions, they would have to make sure that when the questions are rotated, that each exam is as hard/easy as another. Fred Sickels thinks that the NJDEP might have to lower the passing score to 75, or increase the amount of field experience required. Art Becker pointed out that if the passing score was 75, not that many more applicants would have passed this last exam. Anthony Tirro thinks that we need to lower the passing score. Art Becker and Joseph Pepe agreed that there is no sense in lowering the bar (difficulty of the tests), however lowering the passing score might be considered in the future.

Fred Sickels said the fact that there are people who have taken the exam multiple times and are still failing shows that something needs to be done. The Board asked when the regulations would be changed again. NJDEP staff says that it might be in the near future, in order to add-in e-Permitting requirements. Karl Muessig asked if the Board has to wait until the regulations are changed to lower the passing score if they decided to do that. NJDEP staff answered yes. Art Becker thinks that the Board needs to consider what can/should be done; thinks lowering score might be the right option. Dick Dalton wondered if the Pump Installer exam has historically been the exam that more applicants pass? Art Becker and Holly Papp said no; the Monitoring Well exam usually has the best passing rate. Steve Reya noted that usually, approximately 20% of the applicants pass the Pump Installer exam. A motion to accept the Pump Installer Exam Results was made by Dick Dalton; seconded by Anthony Tirro.

Soil Borer Exam Results – Holly Papp noted that this was also the first testing cycle using the newly revised Soil Borer questions. Art Becker asked if those applicants who are noted as "Passed MW Test" actually paid for, and took, 2 tests that day? Holly Papp said yes, and added that Moustafa Abouelmagd didn't have time for his Soil Borer test, but passed the Monitoring Well test – so it is a moot point. Art Becker noted there was an approximate 17% passing rate.

Art Becker said there is a gentleman who has been in the drilling industry since at least the early 1970's, took the Soil Borer exam this past cycle, and didn't pass. Art Becker added that this person did, at one time, have a drilling license; however, he let it lapse. Art Becker thinks most people don't study, and that is possibly why they fail the regulatory section; what is scary is that they are also failing the technical side and are out drilling everyday. Art Becker said it doesn't seem like there are enough drilling companies that are spending enough time to teach their applicants.

Joseph Pepe noted that the onus is on the person taking the test; that they need to know/understand the information. Joseph Pepe worries that licensing boards, in general, take the same thought process that schools take – to just push students forward, not holding anyone back. He thinks that maybe we shouldn't keep lowering the bar; whether that means lowering the passing score or making the test easier. Joseph Pepe wonders why you would want someone who has taken and reviewed the test multiple times, and still fails; eventually getting a license and doing work?

Art Becker recognized that it would be too hard to get multiple versions of the regulatory section of the test. Pat Bono thinks it would be helpful to hold review sessions before the exams in order to help the drillers prepare properly. Karl Muessig believes that attending a review session is studying in a way. He also thinks some questions are geared directly to what is said in the texts (study material). Art Becker stated that clearly we all agree that there is some kind of disconnect, and he agreed with Joseph Pepe that we shouldn't make the exams easier. Anthony Tirro said that the California driller's test is completed on the computer, and that you can purchase versions of the test and practice on them. Anthony Tirro said he sat with his applicants last round to help them review and they all passed. A motion to accept the Soil Borer Exam Results was made by Karl Muessig; seconded by Fred Sickels.

Monitoring Well Exam Results – Holly Papp noted again that this was also the first testing cycle after revisions were made to the Monitoring Well exam. Joseph Pepe asked if the Soil Borer and Monitoring Well Driller applications both require 3 years experience; Holly Papp said yes. Joseph Pepe confirmed with Holly Papp that Pump Installers were the only license class that only requires 1 year experience.

Art Becker noted that there was a greater than 50% passing rate on this Monitoring Well exam. Holly Papp noted that there were quite a few first-time takers that passed, as well. Art Becker thinks that the difference between Monitoring Well Drillers and the other two (Soil Borers and Pump Installers) is that they are out with a consulting engineer every day of the week; the daily regiment of the business is a better learning environment for the driller. Art Becker said this is shown by there being a significant difference in the passing rate compared to the other two. Art Becker said that almost all Monitoring Well installations have a specific scope of work and every job is attended; the drillers are under the influence and scrutiny of the client/engineer. Art Becker says that since the Monitoring Well test came about in 2001, they have always had the highest passing rate. A motion to accept the Monitoring Well Exam Results was made by Anthony Tirro; seconded by Dick Dalton.

Gary Poppe made a comment that he agrees with Art Becker about the Monitoring Well Drillers who are working with a consultant on a job. He sees that as well with the towns that have mandatory witnessing for water wells; you

have to know more and are checked. Gary Poppe thinks we would see the passing rate coming up if there was more oversight from regulating authorities. Fred Sickels noted that not every town or county has mandatory witnessing. Gary Poppe said that in a heavily regulated town, all the drillers are doing the work the same. Fred Sickels said we'll never be able to regulate everyone, everywhere. He thinks the NJDEP needs to get towns to step up oversight in order to help. Gary Poppe said that not all of the town and/or county inspectors have knowledge about what they are inspecting, and what they should be looking for. Art Becker thinks that those that are disciplined in the industry need to do seminars, continuing education, and programs to teach the young drillers; they are not getting the information and experience they from their employers. Pat Bono asked if the NJ Groundwater Association has any videos or training seminars, etc? Art Becker doesn't think they have much....they might be working on it. Fred Sickels would like to have some of the NJDEP staff work on training the inspectors in towns and counties (when we get time).

- 4. Update on Board Vacancy Applicants/Process, New Request for Applicants for upcoming July vacancies (Master Well Driller and Public Member) –** Pat Bono said they are a little slow on getting the memo up to the Commissioner's office for the appointee who is to replace Robert Stothoff; but that it is moving. She said the NJDEP is going to post notices for the upcoming July vacancies on the NJDEP website soon. The new members would officially come in for the July meeting. Pat Bono would like to have the positions filled before the May meeting in order to have the new members attend the May meeting. Fred Sickels noted that there was a pretty decent response for the first vacancy, and that we need to keep those people in mind, as well, when we review applicants for the upcoming open positions.

Art Becker asked if the Board will be looking to replace Pete Demicco and Norm Primost? Pat Bono said yes, but that filling Pete Demicco's position will be a little more tricky since the person can't be a driller or pump installer. She said the NJDEP will be sending a notice of vacancy to water companies and environmental consulting firms. Karl Muessig asked for the regulatory description of Pete Demicco's position. Art Becker read the description from the regulations "One member not employed by the State and who has no pecuniary involvement in well drilling or pump installing". (Fred Sickels left the meeting at 10:25).

Art Becker asked why the old vacancy appointment recommendation didn't go to Commissioners office right away. Pat Bono says some things got held up in November and December but has now gone up.

5. Technical Issues

Update on new grout demos – Steve Reya said there is no new update on the Cetco geothermal grout mix demonstration; we have to meet them on site to do pumpability testing and the company is experiencing scheduling problems. Steve

Reya said that there is an update on the Morrison geothermal grout issue. The 14 wells that were completed with the non-standard mix are being drilled-out (starting 1/9/08). Steve Reya was onsite and Morrison got down to 145' when drilling-out the first well. He stated that there were pockets where the grout was solid and hard and then other pockets where it was soft. Morrison was switching back and forth between a hammer and roller bit. Steve Reya noted that there were a couple of voids where the rods dropped about 3 feet. Art Becker asked if the NJDEP will be onsite to oversee all 14 drill-outs? Steve Reya said that he will probably not be there all day every day, but will provide a good amount of oversight. Steve Reya thinks that it is going well, but slow.

Update on Wyo-Ben Grout – Pat Bono said that the NJDEP needs to set up a field demonstration, and she will find out why that hasn't happened. Art Becker stated that the NJDEP needs to send Wyo-Ben a letter and find out what's going on. Dick Dalton said he had been called by Wyo-Ben last summer, and he sent two memos over to Pat Bono, and thinks they talked to Pat Bono at that time. Pat Bono said we initially started contact with them, but she doesn't know what happened. Art Becker noted that he ran into an employee of Wyo-Ben at the National Groundwater Association convention in Florida who asked if Art Becker could find out where the NJDEP is with it. Pat Bono asked Art Becker to provide her with the gentleman's name and number (Stewart Krause), Art Becker said he will send his information over to Pat Bono.

Discussion of GPS units and training dates for i-Map/NJGeoWeb – Pat Bono discussed how the regulations, which require the submittal of coordinates of proposed well locations and actual well locations, become effective in July 2008. The NJDEP is changing the i-Map program; an entirely new program (NJGeoWeb) will be coming out soon. NJDEP will be providing hands-on training for the new system in order to make it easier for drillers to comply with the new regulations. She said the NJDEP has had some trouble getting the new system up and running, and that it is supposed to be operational in March. The driller training sessions are planned for April. The sessions will be free to drillers/drilling companies, there are currently 8 sessions available. Each company will be allowed to send (up to) 2 people to the training. Pat Bono said that the NJDEP is also thinking about having some additional presentations (one in northern NJ and one in southern NJ), showing how to use the program for those who are not able to attend any of the training sessions. Step-by-step instructions on how to use the program (to acquire the required coordinates) will also be posted to the NJDEP website. Art Becker asked if it would be appropriate to show a demonstration on how to use the program at a NJ Groundwater Association meeting? Pat Bono said that all that is needed to perform the training is internet access; and she was thinking of holding a session at the Pequest Hatchery in northern NJ. Joseph Pepe asked if the instructions will be sent out to the drillers? Pat Bono said yes, it will.

Pat Bono explained that there will be a driller profile, which will have all the options a driller needs, and nothing they won't need when they log on. Karl Muessig mentioned that the NJDEP had a lot of problems with the new software; initially they tried to put too much information in it and that slowed the program down. Pat Bono added that the treasury has more control over it now and that is taking more time. Art Becker said that he will get the word out to the NJ Groundwater Association that they should try to show this training at one of their meetings. Art Becker asked if this new system (NJGeoWeb) isn't available by the July 1, 2008 deadline, if the requirement is still viable? Pat Bono assured that, yes, drillers will still be held to the requirement and will have to use i-Map to find their coordinates. She added that the April training sessions will be on the same system that the drilling community will be using.

Pat Bono mentioned that the NJDEP is starting to receive emails about GPS units. Lou Jacoby (GIS) has been getting emails about units as well. Art Becker, speaking on behalf of the NJ Groundwater Association, said that the Association committee reviewed and discussed the required parameters for the GPS units, went to 3 leading manufacturers, and found 2 units that would work. He said that the criteria they used included user friendliness, price, and compliance. Art Becker believes the committee saved drillers time on researching what is available and what meets the required standards. Art Becker noted that he wants to make sure that the public and NJDEP understand that the Association, in no way, dictates what needs to be done or bought. Pat Bono said that Lou Jacoby has been answering questions about what units meet the required specifications and what does not. Pat Bono reminded everyone that the NJDEP can't recommend units, they can only require that the units used meet our standards. Art Becker reiterated that the Association is not buying and selling the unit that they recommended, they only set up a good deal for members to take advantage of.

Other Issues

Gary Poppe would like to speak about the no-tank system for wells; which actually places a tank inside a well (mostly irrigation wells). He has a no-tank system at his house, and has installed a number of them. Gary Poppe stated that on January 9, 2008, he was converting a well to include a no-tank system in Marlboro Township (Monmouth County). The well in question was drilled in 2001 as a domestic replacement well. The house is now supplied with city water, and the owner wants to keep the well for irrigation purposes. The local health officer performing oversight on the work stated that she won't accept a no-tank system for that well because it isn't an approved method. She told Gary Poppe that he needs to provide a letter from the NJDEP which states that the no-tank system is an approved method. Gary Poppe stated that he has installed approximately 25 to 30 of them in the past couple years; and that the main reason his clients have them installed is for aesthetic purposes. Karl Muessig asked if the regulations include anything about tanks. It was confirmed that the regulations do not include any specifics about tanks/tank systems. Art Becker said he's not in the water well field, but looking at the regulations, there is no discussion about

tanks; he therefore thinks you can place the tank in any reasonable place. Julia Altieri said it would have to be a local code that prevents it from being approved. Art Becker noted that it is a technology that has been around for some time and is widely used in the Midwest. Joseph Pepe asked Gary Poppe some questions about the construction and placement of the tank system; Gary Poppe explained the system and how it works. The Board agreed that the health officer's request is not under the jurisdiction of the NJDEP. Pat Bono said the health officer can call the Well Permitting Bureau and discuss the situation with her.

6. Program Updates

Update on e-Permitting – Mike Schumacher explained that the e-Permitting program is still going thru, however they are still fine-tuning a few things. The latest update is that we are adding some automatic approvals to it. Anthony Tirro asked if the program will also be able to be utilized for test borings? He also asked when will it be up and running? Mike Schumacher said they are supposed to be getting a revised cost estimate today, and that they are still waiting on a final design for it. He said they definitely won't see anything before the fall, and testing might start in June. Pat Bono informed the Board that the contract end is coming up and that the fall seems to be the realistic timeframe. She said that the NJDEP will be testing the program in the summer. Pat Bono noted that they have become aware that the Bureau is getting a lot of attention on this because they issue so many permits. OIRM (Office of Information and Research Management) is looking at it and starting to see the potential; so well permitting has been pushing to see what approvals can be done automatically. She said in the best case scenario, drillers might be able to get some permit approvals before walking away from computer, or possibly over one night. Anthony Tirro said that right now it's taking 3-4 wks to get a permit back. Pat Bono agreed that maybe with taking into consideration from the time when you put it in the mail, to getting it back, that might be accurate. Mike Schumacher said that it will be necessary to keep in mind that the more permits that come in on the portal, the faster the entire process will be. He said the paper process will actually slow down when we start using e-Permitting because more data will need to be entered manually on the NJDEP end.

Anthony Tirro asked if it will still be necessary to send in a paper well record. Mike Schumacher explained that drillers can submit well records online as well. The system will handle permits, records, abandonments, and cancellations.

Pat Bono said that the cost of the program has turned out to be much higher than thought at the beginning. The reason for the extra expense is that they are trying to make it a smart program from the beginning. Art Becker pointed out that the initial cost is substantial, but in the long term it will be cheaper. Pat Bono said that the NJDEP's tendency is to build it small and add things to enhance it later. She said they've argued that it needs to be done correctly from the beginning.

Art Becker asked at what point details be available as to what kind of portal there will be and how many people will have access to it? He asked if it will be based on a well driller, or is it going to be by company? Art Becker would prefer if it was the licensed individual who is responsible; but says in reality, it ends up being the company. Mike Schumacher said that if something is wrong with the permit application, the problem goes back to the company and not the driller. It might end up going back to the facility administrator or whoever certified that submission. Mike Schumacher wasn't sure which one it will be at this time.

Mike Schumacher noted that GPS coordinates for soil borings will be a required submission through the portal; however, only one coordinate will be required for a site-wide permit. Karl Muessig asked if the program is completely designed. Mike Schumacher said that we had one draft that had over 100 comments. The next draft might become the final version, and has had 40-50 comments made. Karl Muessig asked if there will be people brought in for a testing period/dry run. Pat Bono said we are hoping to get some drillers and drilling companies in to help us test it. Pat Bono said that e-Permitting is not the only program that is being worked on, and that we'll have to wait for the other programs' projects to be completed because they test everything all at once.

Art Becker asked if there is any further discussion on payment options for permits? Mike Schumacher said drillers will be able to pay using either credit cards or electronic checks. Art Becker asked if licensing will be included in the program; Pat Bono said not at this time.

Joseph Pepe asked if he can log into the site as a Pump Installer, or even as the general public, and find out the details of a well. Mike Schumacher said no. Pat Bono stated that the system is only meant to perform 4 functions (permitting, records, abandonments, and cancelations); what Joseph Pepe is asking for is a well search function. She said that eventually, we will be able to do a certain level of web based searches. Mike Schumacher added that they might eventually be able to use data miner to do searches on a well. He said the reason we couldn't add well searches to e-Permitting is that most of our data is scanned and not data-entered; it's not an easy conversion. Joseph Pepe asked if, once the well is drilled and the data is known and entered into the system, how will the NJDEP access this data? Pat Bono said that the information comes through the portal and gets "dumped" into NJEMS. Data miner will go into NJEMS and find what you are looking for. Pat Bono stated that so far we are only entering a couple of key fields and the rest of the info is scanned. With e-Permitting, all pieces of information will be searchable. Pat Bono said this will revolutionize access to this data. Joseph Pepe would like a place where, as a Pump Installer, he can enter what equipment they installed in a well. Mike Schumacher said that hopefully somewhere down the line they will be able to add that option to e-Permitting. A discussion of Pump Installer submittals of pump information when the driller doesn't install pump ensued. Pat Bono said that all information, unless restricted for some reason or another, is publicly available. In e-Permitting, every driller

will have his own username and password, and the system will be smart enough to let the user know if an administrative error has been made.

Brian Buttari reminded Art Becker that he wanted to discuss changing the technical regulations. Pat Bono said that there has been some discussion about getting to that eventually, but recently it has been moved up to the forefront. Pat Bono noted that the NJDEP has been very restrictive when they do and do not open regulations up for revision; however, because of e-Permitting, we might not have to wait as long. Pat Bono suggested that the Board and NJDEP use the revision (initiated by adding e-Permitting) as an opportunity to make other desired changes. Pat Bono suggested that the Board members push the NJDEP to make changes to the well regulations (including sending in comments on other issues that should be changed). Karl Muessig asked if the NJDEP and Board have a list of all the things that they had wanted to change during the last revision? Art Becker thinks that Kristen Tedesco has that list. Pat Bono said we are not sure who the rule manager will be. Karl Muessig asked if the NJDEP can send out the list of changes that was previously assembled? Art Becker asked the NJDEP to find out who the Board should contact to push for additional changes. Pat Bono said she's sure there will be a lot to add to it, and will send that list to the Board members for their review and reflection.

- 7. Adjournment** – A motion to adjourn the meeting was made by Karl Muessig; seconded by Anthony Tirro. Art Becker adjourned the meeting at noon.

State Well Drillers and Pump Installers Examining and Advisory Board Activity For March 2008

The March 18, 2008 Board meeting was cancelled due to the inability to obtain a quorum. Therefore, all business that required action by Board members was handled via email and telephone between March 11, 2008 and May 6, 2008. All Board members (Fred Sickels, Karl Muessig, Norman Primost, Richard Dalton, Anthony Tirro, Peter Demicco, Joe Pepe, and Art Becker) participated in voting on licensing activities.

Licensing Activities:

- **April 2008 Well Drilling Exams:**

Board members unanimously approved the roster of applicants for the Journeyman, Journeyman B, and Master Well Driller exams scheduled for April 2008.

- **Daniel Callahan Pump Installer Exam Challenge:**

Mr. Callahan's January 27, 2008 letter (copy attached) notes that he failed his December 2007 Pump Installer's Exam. Additionally, he states that after he reviewed his test with Bureau of Water Systems & Well Permitting Staff (Bureau), he "realized there is a dilemma with some of the questions that were marked incorrect." He requested that the Board review three (3) questions in the technical section. Mr. Callahan failed this section of the test by one percentage point and received a score of 90 on the regulatory section.

First challenge question:

F. Sickels, R. Dalton, A. Becker, P. Demicco, J. Pepe (5 total) voted that the question was scored correctly, and points should not be awarded for the applicant's answer. N. Primost, K. Muessig, and A. Tirro (3 total) voted that the question be omitted entirely. The scoring of this question will remain unchanged.

Second challenge question:

F. Sickels, K. Muessig, N. Primost, R. Dalton., A. Tirro, P. Demicco, J. Pepe (7 total) voted that question was scored correctly, and points should not awarded for the applicant's answer. A. Becker abstained, stating that he does not specialize in pump installation and did not feel comfortable commenting on the question. The scoring of this question will remain unchanged.

Third challenge question:

The Board unanimously voted that the applicant should not be awarded points for his answer. The scoring of this question will remain unchanged.

Mr. Callahan's exam score will remain the same as initially scored. Bureau staff will send him a written response regarding the Board's decision. Email and telephone correspondence between Board members and Bureau staff is attached as "Attachment A."

Note: Mr. Callahan's application for the June 2008 pump installer's exam was received and held by the Bureau pending a Board decision regarding the grading of his December 2007 exam. Once the final Board vote was obtained, the Bureau notified Mr. Callahan via

telephone that he would have to take the upcoming exam and subsequently processed his application.

Attachment A

Board activity via telephone (clarification of initial emails by A. Tirro and J. Pepe only)

April 11, 2008-

A. Tirro states that no credit should be awarded for any of the three questions

May 6, 2008-

J. Pepe states that he stands by his initial email response. After reading through the additional references and email correspondence between Board members and Bureau staff, he still feels that no credit should be awarded for any of the questions.

•Email correspondence from A. Tirro, J. Pepe, and all other Board members can be found in Attachment B.

Minutes – Thursday, May 22, 2008

State Well Drillers and Pump Installers Examining and Advisory Board

Board Members Present: Chairman Norman Primost, Art Becker, Tony Tirro, Dick Dalton, Joseph Pepe, Sr., Fred Sickels, Karl Muessig, Peter Demicco, Joe Yost

Board Members Absent: – none

NJDEP Staff Present: Brian Buttari, Holly Papp, Steve Reya, Michael Schumacher, Julia Altieri, Vince Monaco, Pat Bono, Kristin Tedesco, Gary Sondermeyer (am only), Bob Mancini (am only)

Others Present: D.A.G. Helene Chudzik, Gary Poppe (Kaye Well Drilling)

1. **Call to Order** – The meeting was called to order by Norman Primost at 9:40 am with a quorum present
2. **Review of Minutes from January 10, 2008, Board Meeting** – A motion to accept the minutes without changes was made by Art Becker and seconded by Tony Tirro.
3. **Email Approvals of Applicants for the April Exam & Challenge of Score on the December Pump Installer Exam by D. Callahan** – No March meeting was held this year due to scheduling conflicts with Board members, therefore certification and approval of licensing issues was conducted via email. The Board members certified the lists for the April Exam for Journeyman, Journeyman Class B and Master Well Driller licenses. Dan Callahan challenged several questions on the December Pump Installer exam, but the Board voted not to overturn any of his answers so his failing score remains unchanged. A letter will be sent to Mr. Callahan explaining the Board's decision. A motion to ratify the actions taken via email was made by Art Becker, seconded by Tony Tirro with none opposed. Gary Poppe questioned why an applicant (Ricigliano) was approved for the April Journeyman B Exam when he was only 19 years old, which would make it difficult for him to meet the requirement of 3 years of experience. That discussion was postponed until later in the meeting when the exam results are certified. (see item # 12)
4. **R. Wilbert Letter Requesting Reinstatement of Pump Installer License** – Robert Wilbert is asking for reinstatement of his Pump Installer License based on his assertion that a clerical error was made by the State. The license renewal notification sent in 2005 was sent to an incorrect address that does not exist most likely due to a keystroke error in entering data into NJEMS. Mr. Wilbert is stating that he had no notification that his license would expire and otherwise would have renewed. Although the State was at fault for an incorrect address, license renewal notices are sent out as a courtesy not a requirement. As a license holder it was Mr. Wilbert's responsibility to figure out when his license expired and to follow up on the renewal. Helene Chudzik stated there is no legal basis for granting the reinstatement. The DEP will follow up with a phone call or letter to Mr. Wilbert and will waive the

application deadline to allow him to sit for the June Exam based on his past experience. (See Item #7)

5. **Recognition of outgoing members** – Gary Sondermeyer (Director of Operations, Office of the Commissioner) attended the meeting on behalf of the Department to thank Norm Primost and Peter Demicco for their years of service. Letters of recognition signed by the Commissioner were presented to both outgoing Board Members.
6. **Board Appointments** – Joseph Yost, a Master Well Driller of Layne Christensen has been appointed to the Board to fill the vacancy in the Licensed Well Driller position. Gary Poppe, a Master Well Driller of Kaye Well Drilling, and Carol Graff, a Public Member, have been appointed by Commissioner Jackson to the Board effective July 1, 2008. They will assume the positions vacated by resignations of Norm Primost and Peter Demicco, respectively.
7. **Review and Certification of Pump Installer Applicants for June 10, 2008, Exam** – A motion to waive the application deadline for the June Exam and include R. Wilbert on the list of test applicants was made by Fred Sickles and seconded by Joe Pepe, and approved unanimously. A motion to accept the Pump Installer Applicants for the June Exam with the inclusion of R. Wilbert was made by K. Muessig, seconded by A. Becker and approved unanimously.
8. **Review and Certification of Soil Borer Applicants for June 10, 2008, Exam** – A motion to accept the Soil Borer Applicants for the June Exam was made by A. Tirro, seconded by P. Demicco and approved unanimously. A discussion started on 5 individuals who were not approved to take this exam because they all submitted the same permitted soil boring on their test application. The Department does not allow multiple drillers to submit the same well to meet the experience requirement. In this case, all 5 had enrolled in a one day soil boring class conducted by a licensed well driller. Further discussion will be required once the Department gathers more details on the soil boring class. This policy will also need to be revisited specifically for deep monitoring wells and public supply wells where construction takes place over several days/weeks and multiple individuals are involved in different aspects of the job.
9. **Review and Certification of Monitoring Well Driller Applicants for June 10, 2008, Exam** – A motion to accept the Monitoring Well Driller Applicants for the June Exam was made by R. Dalton, seconded by A. Tirro and approved unanimously.
10. **Review of April 10, 2008, Exam Results for Master Well Driller** – A motion to accept the Master Well Driller exam results was made by K. Muessig, seconded by P. Demicco and approved unanimously.
11. **Review of April 10, 2008, Exam Results for Journeyman Well Driller** – A motion to accept the Journeyman Well Driller exam results was made by F. Sickels, seconded by A. Tirro and approved unanimously.
12. **Review of April 10, 2008, Exam Results for Journeyman Class B Well Driller** – Discussion continued on concerns over S. Ricigliano, one of the applicants for the April Exam. The Board questioned how a 19 year old person could have the necessary 3 years experience required to take the April test, when an individual must be at least 18 years old to work in a hazardous occupation. It was noted that S. Ricigliano failed the exam and therefore would have to reapply to take the test. The Board's counselor, Helene Chudzik, advised the Department that the burden of proof should be placed on the test applicant in the future. The

test applicant will be required to provide documentation on how he/she meets the 3 years of experience without violating Child Labor Law prior to being accepted for the test. A motion to accept the Journeyman Class B Well Driller exam results was made by A. Tirro, seconded by K. Muessig and approved unanimously.

13. **Photo ID Requirement for All Test Applicants** – The Board asked what identification is required to enter the testing room and sit for an exam. This was amid rumors that test applicants were allowing other individuals to sit and take the test for them. A motion to require a valid government issued photo ID to sit for any licensing exam was made by A. Becker, seconded by A. Tirro and approved unanimously.
14. **Discussion of Enforcement Issues** – J. Pepe suggested that the Board hold a separate meeting on just licensing and enforcement issues. The Board is constantly running out of time on the agenda to focus on the real issues. P. Bono recognizes that many things need to be addressed but emphasized that the Department is currently focusing on epermitting, license renewal activities and the revisions to the technical regulations in 2009. Therefore, a small group of Board members (no quorum) will meet separately to discuss and summarize suggestions on improving enforcement efforts. This item will be added to the agenda for the July meeting.
15. **Recognition of Holly Papp's service** – In recognition of the retirement of Holly Papp, Fred Sickels proposed the following resolution to the Board: "Whereas Holly Papp has worked for over 30 years for the DEP; Whereas she has managed the licensing program for many years, reviewing applications, grading tests and reviewing exams with applicants; Whereas she has conducted numerous site inspections working to protect ground water and enforce compliance in the industry. She has served as a liaison to this Board and the industry as a whole, always in a professional and friendly manner. This Board hereby makes a motion to extend our deep thanks for her years of service and wish her well in her retirement for many, many years to come." The motion to thank Holly and recognize her input was made by A. Becker, seconded by A. Tirro and approved by the Board members unanimously.
16. **Program Updates** –
 - The Department is reporting that license renewal notices were mailed out. There was a small mistake in the dewatering invoices on the cost of license renewal, however, the invoices were revised to reflect the correct dollar amount and re-mailed.
 - Well Permitting staff reported that training sessions for drilling companies and drillers to learn how to use the DEP's new digital mapping software (NJGeoweb) will be held in the fall. NJGeoweb should be fully operational by early summer, but drilling companies will be able to use I-map to report the proposed well locations on permit applications for at least another 6 months.
 - Staff will be testing the e-permitting system beginning in mid-June. Testing will run through July and as a result permit processing and well searches will slow down. There may be follow-up testing, but the Department expects that e-permitting should be functional by the end of the year.
17. **Cetco Geothermal Grout Update** – S. Reya noted that he and A. Tirro attended the onsite pumping demonstration, which was held in Woolwich Township on April 22, 2008. The demonstration was to observe whether the 400 lb. sand mix could be adequately mixed and pumped into an actual borehole without exhibiting problems with sand segregation. This mix, when mixed in accordance with the CETCO

Geothermal Grout Technical Data papers contains 400 lbs. silica sand, 50 lbs. high-solids bentonite, and 22 gals. of water. The density of this mix is listed as 14.6 lbs./gal. S. Reya explained that the field mix was pumped through a tremie pipe into the bottom of a 5.5-inch diameter, 500-ft. deep borehole, containing 1.25-inch polyethylene loops. The density of the grout return as measured coming out of the borehole was 14.6 lbs./gal. A. Tirro and S. Reya both stated that they did not observe any problems with sand settlement or ability to pump the mixture. They also noted that after allowing the mixture to sit in a 5-gallon bucket for approximately 45 minutes, the silica sand remained in suspension and the mix appeared to be fairly uniform throughout the bucket. Final lab permeability results of the onsite mix were submitted to the Bureau in Todd Tannehill's May 21, 2008 email. This value, 3.94×10^{-8} cm/sec, was below the maximum permeability value stipulated in the regulations. S. Reya noted that the 400 lb. mix contains the most sand, which is the reason it was tested for all parameters, however, five (5) other mixes containing less sand were also pending approval. If the 400 lb. mix is found to be acceptable, all six (6) mixtures listed in the Geothermal Grout Technical Data Paper would be approved. All Board requirements and requests have been met, therefore CETCO has requested approval of their Geothermal Grout mixes. A motion to approve the CETCO Geothermal Grouts was made by R. Dalton, seconded by P. Demicco and approved unanimously.

18. **Adjournment** – A motion to adjourn the meeting was made by J. Pepe at 2:30 pm, seconded by F. Sickels and approved by all.

State Well Drillers and Pump Installers Examining and Advisory Board

Minutes – Thursday, July 10, 2008

Board Members Present: Art Becker, Gary Poppe, Joe Yost, Karl Muessig, Carol Graff, Fred Sickels, Anthony Tirro, Dick Dalton

Board Members Absent: Joe Pepe, Sr.

Board Legal Advisor: D.A.G. Helene Chudzik, present for the morning session

NJDEP Staff Present: Steve Reya, Kristin Tedesco, Pat Bono, Vince Monaco, John Olko (NJDEP Enforcement)

Others Present –Chris Bandoian (Talon Drilling), Pieter Casius (Choice Water Group), Jim Rotonda and Mike Adams (EduTech), Hugh Streep (NextGen Technology), Jim Hardin, Sr. (Hardin Geotechnologies), Steven F. Coe (Brown Environmental Services Corporation)

1. **Call to Order** – The meeting was called to order by Art Becker at 9:41 am with a quorum present.
2. **Review of Minutes from May 22, 2008 Board Meeting** – A motion to accept the minutes without changes was made by Joe Yost, seconded by Karl Muessig and approved unanimously.
3. **Introduction of new Board Members** – The Board welcomed new members Carol Graff and Gary Poppe who were appointed effective July 1, 2008.
4. **Nominations for new Chairperson and Vice Chairperson** – Tony Tirro nominated Art Becker for Chairperson. The motion was seconded by Fred Sickles and approved unanimously. For Vice Chairperson Gary Poppe nominated Tony Tirro, the motion was seconded by Fred Sickels and approved unanimously.
5. **Certification of June 10, 2008, Exam Results for Pump Installer** – Joe Yost questioned if some individuals are failing the pump installer exam because they work for companies who work primarily on larger diameter wells while the test is geared toward pumps used for smaller domestic wells. Joe Yost will work with Steve Reya to review the test and suggest changes to include information on larger capacity well pumps. A motion was made by Dick Dalton to accept the results of the June Pump Installer exam, seconded by Joe Yost and approved unanimously.
6. **Certification of June 10, 2008, Exam Results for Soil Borer** – The results of this exam were reviewed. A motion was made by Gary Poppe, seconded by Tony Tirro, and approved unanimously to accept the Soil Borer exam results.
7. **Certification of June 10, 2008, Exam Results for Monitoring Well Driller** - The results of the exam were reviewed. A motion was made by Tony Tirro, seconded by Dick Dalton, and approved by all.

8. **Challenge of Pieter Casius to Journeyman Class B Exam Questions** - Pieter Casius is challenging his score on the Journeyman Class B exam based on two questions that he believes were incorrectly marked wrong. A motion by Karl Muessig was made at 10:20 a.m., seconded by Gary Poppe and approved unanimously to enter Executive Session to discuss the exam questions. The Board returned to Open Session at 10:30 a.m. A motion was made by Carol Graff, seconded by Tony Tirro and approved unanimously to approve Pieter Casius' Journeyman B license based on additional credit given for his answers.
9. **Discussion of Enforcement Actions** – John Olko was present to represent Compliance and Enforcement. Both Enforcement and Water Supply emphasized that due to the current budgetary situation the Department is not available to dedicate more staff or resources to this issue. Gary Poppe expressed concerns that there is no enforcement at all right now so anybody can drill without penalty action being seriously considered. What steps can the Department take to change this? Helene Chudzik stated that the Board and Department need to consider different steps or penalties that can be imposed without taking a license away immediately. Fred Sickels suggested coming up with a more aggressive process with what we can do realistically with available resources. The Department will set up a meeting to discuss a streamlined enforcement matrix that includes major/minor infractions and the appropriate penalties for each infraction.
10. **EduTech Well Drilling School** – Jim Rotonda, Director of Training and Mike Adams, Business Manager attended the meeting to present information on EduTech Well Drilling School. The school was developed to help qualified individuals with field experience pass the NJ Soil Borer exam and expand their general industry knowledge. The class covers topics ranging from technical issues on different types of drilling and geology to training participants on how to take a test. The course was going to include drilling a permitted boring to over 50' in depth to meet one of the soil borer application requirements. However, the State historically has not accepted the same well as experience for different individuals. Under current DEP policy the applications of individuals using the same permit number would be denied. EduTech has held two classes with 8-10 individuals per class and is asking what changes can be made to have a 50' well that has been drilled in class meet the application requirement. Jim Rotonda and Mike Adams questioned if each individual would need to drill a separate well or if DEP would allow EduTech to use a blanket permit and drill several borings even though it would fall under the same permit number. Steve Reya stated that in that situation, the prospective drillers could submit a log for the hole they drilled as DEP has allowed in the past for borings submitted as experience that did not require well permits. They would also be required to use EduTech's licensed well driller as a third reference. Joe Yost commented that it is a big environmental impact to drill a separate hole for each when the borings are being drilled into the ground for no real purpose. However, he thinks the purpose of the class is a good one and Art Becker agreed. Steve Reya commented that on the application the individuals have already demonstrated 3 years of experience so it is just a question of how to verify the hands on experience for a boring over 50'. It is not uncommon for multiple drillers' helpers to be involved in drilling one well, especially for larger diameter wells. Several Board members questioned what additional experience is gained from having one helper per driller versus two per driller, or more? Even though the drilling process is well explained it is not the same as actually performing the work. Any decision on this topic can affect other companies and licensing exams in the future. Therefore, Art Becker made a motion to table this topic until the end of the meeting. Carol Graff seconded the motion with all in favor. (See Item #14)

11. **Hardin BiSec Geoexchange Pipe** – Hugh Streep (NextGen Technology) and Jim Hardin, Sr. (Hardin Geotechnologies) have joined their firms in an effort to get into the NJ market using the Hardin BiSec Geoexchange Pipe. The pipe is PE 100 construction and not the PE 80 that comprises the 160 psi pipe currently allowed by DEP regulations. The PE 100 pipe has a thermal weld every 20 feet, as well as at the U-bend on the bottom of the loop, unlike the 160 psi pipe currently permitted which has one thermal weld at the U-loop only.

Jim Hardin and Hugh Streep outlined the benefits of the PE 100 pipe, stating that in theory it should last longer and in using this material outside NJ they have dropped costs of approximately 50% over standard geothermal systems by using fewer boreholes in the field. In addition, fewer wells would mean that this product could be marketed for smaller sites where geothermal applications were not practical in the past, which would be a benefit in industrialized States like NJ.

Art Becker said one concern is the grout ports located every 1 1/2 feet up the column on the 3.2" pipe that could create potential for pockets of grout to develop. Hardin Geotechnologies responded that the grouting issue is addressed by the traditional method of grouting bottom to top and verifying the theoretical amount of grout the hole should take. Art Becker questioned what the effect would be of not having the ports. The pipe is currently recommended for non-cementitious grouting and more information needs to be gathered on the effect of using cementitious grout with a lot of sand. The Board mentioned that even the bentonite-based thermal grouts would be quite dense and may not be practical. Hardin responded that they have a set of recommended drilling procedures in place for this product and initially send out a training crew on each site to make sure those procedures are followed. In addition, to address these issues they are investigating the possibility of expanding the inner and outer holes. The deepest hole the pipe was previously installed in was 500 feet, while the average is around 320 feet. Hardin said the current pipe (3.2 inches) is always installed in a 4.5" borehole and grouted with 3/4" to 1" tremie pipe. The next generation pipe he is developing would be a larger diameter pipe, and would be recommended for use in a 5" borehole.

Some members of the Board still expressed concerns with the small annular space and grout port diameter. Jim Hardin noted that they verified adequate grouting in the past by calculating the theoretical grout volume of the annulus and comparing it to the volume of grout mix used. The Board discussed whether that would be acceptable or if channeling could occur. It was also discussed how, in consolidated formations, the hole could take a large amount of grout due to large fractures, while other areas could still have voids. More information is required by the Board before any final determination on applications for the Hardin pipe is made.

The Board stated that in order to gain approval to use this product in NJ more information must be gathered to demonstrate that it conforms to DEP standards. The pressure rating for approved PE 80 pipe is 160 psi. Steve Reya questioned if it was possible to obtain ASTM certification for the PE 100 pipe given that it is not the standard cylindrical pipe and has a unique shape with grouting ports. Jim Hardin responded saying ASTM had not certified the pipe but it has been pressure tested to approximately 150 psi and should theoretically go up to 200 psi.

Hardin and NextGen will be required to submit information which demonstrates that the pipe conforms to or exceeds current DEP standards, including anything on pressure rating

for the PE 100 pipe will be submitted to the Board and the Department for approval. Hardin will also provide more detailed information on current projects in other States (Michigan, Illinois, and Ohio). Once this information is received the DEP and the Board will move expeditiously to revisit the use of this product. If the pipe specifications are found to be acceptable by the Board and the Bureau, a test project may be approved at a site in NJ.

12. **Direct Push Technology by Brown Environmental Services Corporation** – Steve Coe, Brown Environmental Services Corporation, presented a new design for direct push remediation well installation. Internal staff review feels this technology meets the intent of a driven well but the Department is looking for Board input before issuing a statement to Mr. Coe saying this is permissible. This technology is used to offset the cost of mobilizing Hollow Stem Auger rigs for the installation of Remediation points. By using the proposed direct push method, more information will be gathered on the contaminated site to outline an effective treatment technique. The wells can be laid in a grid pattern and will focus on source area elimination or attenuation. Mr. Coe stated that 70-80% of the wells are less than 25 feet deep. The wells conform to the regulations since they are driven without a resulting annular space. The Board reiterated that nothing on the well can exceed the diameter of the driven point or it would not be permissible to use this direct push technology. These wells will be used only for applications in a sand aquifer and will be abandoned and tremie grouted in place. A deviation is required because PVC can't be driven into a standard undersized borehole according to the regulations. No further action is required from the Board.
13. **Program Updates** –
 - Karl Muessig asked if there is a way for the Department to have drillers send in geophysical logs with the well records on larger capacity wells greater than 500 feet. This requirement has been placed on well permit in the past. However, given limited staffing resources the Department will need to determine the current feasibility of this requirement. Steve Reya will check with Lynn Stout of DEP to see what can be done.
 - Steve Reya provided an update on the license renewals for all well drillers and pump installers. All but 19% of Pump Installers had renewed their licenses. All but 20.7% of licensed well drillers had renewed their licenses as of June 30, 2008. The well drillers and pump installers still have six months to renew their licenses provided they pay the late license renewal fee. Steve will email a list of lapsed drillers to the Board members.
 - Pat Bono provided an update on the implementation of location requirements and the development of e-permitting submissions. The "new" location requirements took effect July 1, 2008 and the Department is continuing to work with the well drillers on the transition. Training will be provided in September on the NJGeoWeb program, which will replace I-mapNJ. E-Permitting testing took place during June and July and the Department hopes to have e-permitting up and running by the end of the year. A significant effort on the part of the well permitting program staff has been spent on this project. If development is far enough along, a demo will be provided for the Board at the September meeting.

14. **EduTech Well Drilling School Continued** – Discussion resumed on the EduTech Well Drilling School and changes that can be made so a 50' boring drilled during class will be accepted on the soil borer exam. The Board determined that because this class is in an education program setting that it is acceptable to have two applicants per borehole. This will apply to soil borer applicants only. A motion to allow the 50' boring to be used on the soil borer application provided it meets that criteria was made by Carol Graff, seconded by Joe Yost and approved unanimously. Follow-up discussion will take place at the September meeting on additional situations where the Department can accept more than one test applicant per well.
15. **Adjournment** - A motion was made by Karl Muessig, seconded by Gary Poppe, and passed unanimously to adjourn the meeting at approximately 4:40 PM.

Minutes – Thursday, Sept. 18, 2008

State Well Drillers and Pump Installers Examining and Advisory Board

Board Members Present: Chairman Art Becker, Tony Tirro, Dick Dalton, Joseph Pepe, Sr., Fred Sickels, Karl Muessig, Joe Yost, Gary Poppe, Carol Graff

Board Members Absent: – None

NJDEP Staff Present: Brian Buttari, Steve Reya, Michael Schumacher, Julia Altieri, Pat Bono, Kristin Tedesco, Tracy Omrod

Others Present: Alan Uminski (soil borer), Dan Bryant (Geo Cleanse International)

1. **Call to Order** – The meeting was called to order by Art Becker at 9:35 am with a quorum present
2. **Review of Minutes from July 10, 2008, Board Meeting** – A motion to accept the minutes without changes was made by Gary Poppe, seconded by Tony Tirro and unanimously approved.
3. **Review of Executive Session Minutes from July 10, 2008, Board Meeting** – A motion to accept the executive minutes without changes was made by Fred Sickels, seconded by Art Becker and unanimously approved.
4. **Review and Certification of Master Well Driller Applicants for October 7, 2008, Exam** – A motion to accept the Master Well Driller applicants for the October exam was made by Tony Tirro, seconded by Dick Dalton and approved unanimously.
5. **Review and Certification of Journeyman Well Driller Applicants for October 7, 2008, Exam** – A motion to accept the Journeyman Well Driller applicants for the October exam was made by Karl Muessig, seconded by Joe Pepe and approved unanimously.
6. **Review and Certification of Journeyman B Well Driller Applicants for October 7, 2008, Exam** – The Board reviewed the list of Journeyman B applicants and questioned why several of the applicants were rejected from sitting for the exam. Steve Reya stated that many of the applicants were missing parts of the application and had submitted their application at the last minute. Therefore, there was no time for them to provide the additional information needed

by the deadline. A motion to accept the Journeyman B Well Driller applicants for the October exam was made by Tony Tirro, seconded by Gary Poppe and approved unanimously.

7. **Request by Alan Uminski to Reinstate Soil Borer's License** – Alan Uminski has written a letter requesting that the DEP grandfather his Soil Borer's Certification into a Soil Borer license. With the adoption of new regulations in 2001, the Department sent notices to all individuals with a Soil Borer's Certification, which notified them of the new rule change and provided them with an opportunity to convert their certification into a license. Mr. Uminski claimed he never received a notice of the rule change. He only recently learned of the new requirements when he contacted the DEP about drilling borings over 50 feet and was told his certification had lapsed. Mr. Uminski feels that because he was never notified and because the Soil Borer certification had no expiration date, he should have the opportunity to convert his certification to a license. In addition, Mr. Uminski works as a contractor for the EPA and therefore has no New Jersey licensed drillers who can serve as references should the Department require him to retake the exam. Gary Poppe stated that precedence should be the same across the Board with regard to other individuals who have previously submitted requests to reinstate licenses and certifications. Steve Reya stated that (per Helene in the past) a license holder has the responsibility to keep informed of rule changes and license expiration dates. However, he did not recall an instance where a certification was not renewed due to the fact that a certification would not have an expiration date. Art Becker suggests that the Board hold off on making a decision until the next meeting when the Department can get Helene's legal opinion. DEP staff will contact Helene, look at the list of people who received notification of the rule change in 2001 and review past Board decisions on requests to grandfather licenses or certifications. The DEP will also check to see what was required on exam applications from other federal contractors (i.e. Anthony Stegner) with no NJ licensed well driller to verify experience. *Note: Mr. Uminski's address is currently listed as "unknown" in the Department's database. This is the status given after mail has been returned to the Department by the Post Office.*
8. **Geo-Cleanse International Presentation of Injection Well Installation** – Dan Bryant from Geo-Cleanse International is requesting approval to use direct push technology for site remediation. Geo-Cleanse is the designer/builders and would hire a NJ licensed well driller to install the Category 3 injection wells. All the well construction standards are met with the exception of the 4" oversized borehole. Geo-Cleanse has received the approval of the Site Remediation Program provided that Well Permitting approves the use of these wells. Using direct push is successful in applications on contaminated sites where it is critical to achieve a competent seal so the chemicals can't be physically pushed out into the surrounding area. With the other methods, such as the use of hollow stem augers, the pressure of injection is too much for the annular seal and can lead to failure. Karl Muessig agreed that the argument for approving this application is that the failure rate is much lower. Tony Tirro stated that with a 3" hole vs. an 8" hole for a standard injection well, it is evident that the 8" hole has potential for failure based on the larger surface area. Steve Reya stated that the DEP has previously approved on a case by case basis based on site dimensions but is now looking for general approval on when it is acceptable. Art Becker called these wells "micro" wells, saying the smaller wells are better for the environment. Art added that the wells can be effectively decommissioned and current rules allow for us to approve on technical merit. The concern is with the expertise of the driller. The Board recommended that the Department approve this application provided that the wells are part of an approved remediation plan, where the plume is already delineated. This application is limited to injection wells with a minimum size inner diameter casing of 3/4" and a maximum size cutting tool of 3 1/2".

9. **E-Permitting** – Mike Schumacher presented a demonstration of the e-permitting program which is expected to go online by the end of the year.

10. **DEP Program Updates**

License Renewals – Steve Reya reviewed the breakdown of those drillers and pump installers who have renewed their licenses. In general the numbers of expired licenses are down and currently at around 16% as of September 15.

NJGeoWeb Training – Pat Bono discussed the upcoming NJGeoWeb Program, which will eventually replace I-MapNJ. I-MapNJ will continue to be active until the NJGeoWeb Program is fully up and running. The DEP has been successfully conducting training classes for the well drilling community. Pat Bono expects NJGeoWeb to go online in about a month.

11. **Permit Extension Act-** Pat Bono stated that the Permit Extension Act, which was recently passed does impact well permits. The Bureau will notify the public upon receipt of further clarification with regard to which permits are actually extended beyond the original expiration date.
12. **Recognition of Service-** Art Becker thanked Vince Monaco for his hard work and commitment to the Board. Mr. Monaco will be leaving the Department in November. The Board wished him well in his future endeavors.
13. **Listing of Duplicate Wells by Well Drilling Exam Applicants-** Steve Reya raised the issue that was initially discussed at the July 10 2008 board meeting, which was the Bureau policy that did not allow the use of duplicate well permit numbers by multiple applicants. The motion passed at the July meeting stated that if soil boring applicants worked on permitted (over 50 ft. deep) soil borings under the supervision of a licensed driller/soil borer, two applicants could utilize the same borehole to document their experience. Steve Reya stated that a similar policy should be examined with regard to all other well drilling licenses. He noted that the Bureau policy had always been that once a permit number was “used” by an applicant, any other applicant could not use it. He also said that the policy was arbitrary, as the number was considered “used” in the order the application was reviewed. Additionally, he questioned the rationale behind not allowing more than one helper as verification of experience when often times two helpers may assist one licensed driller. Many wells also take days, weeks, or even months to drill, and there has never been any stipulation on depths, well use, or time of drilling to allow an exemption to the one to one ratio of applicant to permit number. Different crews could often work on the same well. Both Joe Yost and Gary Poppe stated that they use multiple helpers on their larger wells. Currently, the Bureau calls the listed references to verify experience when there is an apparent discrepancy to discern whether the applicant possesses the required experience. Steve Reya said that generally the monitoring well driller applications are the most common applications where duplicate wells are listed. He also said that the applications do not state the “internal policy,” so there is no way the applicant would know the policy. There is also no clear way that an applicant would know the permit numbers listed by someone else working for the same employer. He believed that the intent of the current policy was to restrict applicants from using shallow wells, which are often drilled in one day, as experience for several applicants.

Art Becker believed that when the well use is listed as “public supply,” multiple applicants should be allowed to utilize the same permit number. Art asked Joe Yost how many helpers

would generally be involved when his company drills a public supply well. Mr. Yost stated that three to nine helpers, in addition, the licensed driller would usually be involved with the drilling of the well. Joe Yost also said that his company also re-drills wells, which involved re-drilling the lower portion of the well, re-setting the screen and maintenance casing, and gravel packing the well. This would be done on multiple cased, large diameter wells, but Joe was concerned with the fact that the Bureau might not consider such activity as drilling experience, as the well was not entirely re-constructed. He noted, for instance, that there is generally, no new grout placed in the well unless a liner is being installed as part of the re-drill. Mr. Reya said that since the work required a permit, must be performed by a licensed driller, and involves the physical modification of a well, he believed that such work should be acceptable experience. Art Becker also believed that since a licensed driller is signing off on the applicant's experience in such cases, the work could be viewed as acceptable experience. Mr. Becker stated that review of the applications should left up to the discretion of Bureau staff. He felt that multiple permit numbers should be allowable for multiple applicants, provided staff feels that the experience seems reasonable. It was the consensus of the Board that staff would bring any questionable applications, which contain duplicate wells as experience, to the Board's attention for discussion prior to certification.

A motion to enter executive session was made by Gary Poppe and seconded by Tony Tirro.

14. Return to open session- A motion to end executive session was made by Fred Sickels and seconded by Gary Poppe.

15. New Business- Art Becker asked Fred Sickels whether there was any update regarding enforcement actions, as had been discussed at the last meeting. Fred stated that there had not been any coordination meetings since then and he did not have any news to report. Art Becker also asked whether the penalty point matrix system had been modified, as they had discussed at the previous meeting. Pat Bono noted that a new matrix had not been drafted. Fred emphasized the fact that other programs already had matrices that were fairly straightforward and could probably be adapted to the well permitting program. Gary Poppe questioned why we would attempt to further draft matrices or regulations when there are already clear regulations that outline misconduct penalties. He also noted that the current regulations should be strictly enforced rather than drafting anything new. Fred Sickels explained that due to limited staff resources, the Bureau would have to rely on local health departments to enforce the regulations. He felt that additional outreach to health departments would help identify commons problems in the drilling industry, which would allow them to better assist us. Gary Poppe noted that new construction is slow in the state. He felt that local inspectors generally had more time on their hands than in recent years. Mr. Poppe suggested that the Bureau should contact the local inspectors. Joe Pepe volunteered to look into the Electrical Board's regulations and inspections program and see how it functions to determine if a similar system would work with the well drilling industry. Gary Poppe asked who he should contact within New Jersey's government to address the problem of inadequate staffing within the Bureau. Fred stated that he would get back to him with the appropriate contact person.

16. CEUs- Art Becker discussed the possibility of the state hiring a third party to administer such a program. He was familiar with several other states that utilized a third party to manage the program and forward the results to the state, thereby eliminating most of the work involved in administering such a program. Fred discussed the fact that the Department may not legally be allowed to choose a third party because it would be difficult to demonstrate the fact that the Department was unbiased in the decision to pick one party over another. Art

questioned whether the New Jersey Ground Water Association (NJGWA) could look for an independent third party able to perform the work. Fred said that such an arrangement might be feasible and that NJGWA should keep the Bureau and Board informed with as they look into possible solutions.

17. GPS requirement- Art Becker discussed the fact that at the last NJGWA meeting, many drillers expressed the fact that they are not utilizing the appropriate equipment to GPS well locations. He noted that many drillers were using recreational grade units or simply altering the original easting and northing coordinates that they obtain from iMapNJ. Many drillers are apparently not using the mapping grade GPS units that are in accordance with the Department's GIS specifications. Mr. Becker felt that the community was aware that the Bureau could not enforce the regulation, since the well record simply lists the easting and northing coordinates. Bureau staff agreed that without the submittal of proof of the GPS unit used, along with other pertinent information, they do not know how the coordinates were obtained. They also noted that such a requirement would effectively double the amount of paper volume the Bureau receives. Art suggested that the Bureau should require the submittal of documentation to enable the Bureau to ascertain the accuracy of such coordinates.

18. Direct exchange geothermal technology- Fred Sickels discussed the fact that a geothermal company was exerting pressure on New Jersey lawmakers to allow the installation of direct exchange geothermal systems. Mr. Sickels stated that the company did not believe that such systems should be regulated under the Department's well drilling regulations. Therefore, they claimed the systems did not require permits, oversight by New Jersey licensed well drillers, or any construction requirements. Mr. Sickels instructed them to provide documentation to the Board and Bureau for review, and informed them of the proper channels that must be followed to obtain approval for such a system. Steve Reya added that two or three other manufacturers of such systems had also approached him and he had instructed them in the same manner as Fred Sickels.

19. Adjournment- A motion to adjourn the meeting at 3:45 p.m. was made by Fred Sickels, seconded by Joe Pepe and approved unanimously.



State of New Jersey

Department of Environmental Protection

Jon S. Corzine
Governor

Mark Mauriello
Acting Commissioner

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STATE WELL DRILLERS AND PUMP INSTALLERS
EXAMINING AND ADVISORY BOARD

State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for Tuesday, November 18, 2008

Board Members Present: Chairman Art Becker, Tony Tirro, Dick Dalton, Joseph Pepe, Sr., Fred Sickels, Karl Muessig, Carol Graff, Joe Yost, Gary Poppe

Board Members Absent: - none

NJDEP Staff Present: Steve Reya, Pat Bono, Tracy Omrod, and Brian Buttari (PM session only)

Other State Personnel Present: D.A.G. Helene Chudzik, D.A.G. Jill Denyes,
Legal advisors to the Board

Members of the public who addressed the Board (PM session only):

Paul Auerbach, Total Green, Monroe, NY

Charlie Wynosky, Advanced Geothermal Technology, Reading, PA

Andrew Ward, Princeton Construction Group, Stockton, NJ

Hal Roberts, Earthlinked Technologies, Lakeland, FL

Mel Hensch, Energy Star Partner, Tiverton, RI

Thomas Ambrosio, Earthlinked Dealer, Silver Fox Construction, Lyndhurst, NJ

John Ambrosio, Developer, Little Falls, NJ

1. **Call to Order** - The meeting was called to order by Art Becker at 9:40 am with a quorum present
2. **Review of Minutes from Sept. 18, 2008, Board Meeting** - F. Sickels questioned the wording of the last sentence in paragraph two of item #13, which read "it was agreed that staff can bring up any questionable applications to the Board prior to certification." This sentence referred to the issue of multiple applicants utilizing the same well permit numbers to document their well drilling experience. Mr. Sickels suggested that it should be revised by replacing the phrase "it was agreed" with the phrase "it was the consensus of the Board." He felt that the statement was vague, as it did not specify that the Board, specifically was the party in agreement. The sentence will be revised to state "It was the consensus of the Board that staff would bring any questionable applications, which contain duplicate wells as experience, to the Board's attention for discussion prior to certification." A motion to accept the minutes with the change noted above was made by G. Poppe and seconded by A. Tirro and unanimously approved.
3. **Review of Executive Session Minutes from Sept. 18, 2008** - A motion to accept the minutes without changes was made by Gary Poppe and seconded by Dick Dalton and unanimously approved.

4. **Discussion of proposed 2009 Board Meeting Dates** – A motion to approve the proposed dates for the 2009 Board meetings was made by J. Yost, seconded by K. Muessig and unanimously approved. The meetings will be scheduled as follows: January 27, 2009, March 19, 2009, May 21, 2009, July 16, 2009, September 17, 2009 and November, 19, 2009. S. Reya said that he would grade the December exams and email the results in a spreadsheet for email certification. He did not want the applicants to have to wait until early February to receive their exam results. H. Chudzik stated that the Board had done so in the past and could do so again provided they followed up the email certification with a formal motion at the meeting.
5. **Review and Certification of Applicants for the December 9, 2008 Pump Installer, Soil Borer and Monitoring Well Driller exams** – A motion to approve the Pump Installer exam applicant list was made by R. Dalton, seconded by J. Pepe and unanimously approved. A motion to approve the Soil Borers exam applicant list was made by G. Poppe, seconded by T. Tirro and unanimously approved. A motion to approve the Monitoring Well exam applicant list was made by K. Muessig, seconded by G. Poppe and unanimously approved.
6. **Review and Certification of Scores from the October 7, 2008 Master, Journeyman and Journeyman B Well Driller Exams** – A motion to approve the Journeyman B well driller exam scores was made by A. Tirro, seconded by J. Yost and unanimously approved. A motion to approve the Journeyman Well Driller exam scores was made by J. Yost, seconded by D. Dalton and unanimously approved. A motion to approve the Master Well Driller exam scores was made by F. Sickels, seconded by J. Yost and unanimously approved. The passing rates for the exams were as follows: Journeyman B- 31%, Journeyman B-25% Master-67%,
7. **Licensing Topics –**

Alan Uminski-Lapsed Soil Borer Certification

S. Reya introduced the issue of Alan Uminski's Soil Borer certification. Mr. Uminski's July 8, 2008 letter was discussed at the September 18, 2008 meeting and the issue was deferred, as legal council was not present at the September meeting. Mr. Uminski originally wrote to the Board stating that at the time he received his Soil Borer Certification (January 19, 1990), the certification was "**perpetual** never requiring renewal." He also noted that he was not given the opportunity to be grandfathered into the Soil Borer License, through payment of the required fee, as the Department failed to notify him of the change to his certification status. After contacting the Bureau, he was reportedly informed that the address listed in the Bureau's records was "unknown." Therefore, Mr. Uminski requested that his license be reinstated. Bureau staff was also to look into past precedent that had been set, with regard to a lapsed certification. It was not clear whether an individual could have a license "reinstated" if the individual had perpetual certification and was not notified of a grandfathering process.

Mr. Reya discussed how the November 15, 2005 Board Meeting minutes detailed a similar issue, in which the Board agreed that the regulations do not provide an avenue for license reinstatement without passing the required exam. It was also noted that the Department sends out notification of the regulation adoption as a courtesy, however, it is the individual's responsibility to remain apprised of regulatory changes and requirements.

D.A.G. H. Chudzik agreed that it would be consistent with both the regulations and Board precedent to deny the request to reinstate the license. She did, however, note that the Board could allow him to sit for the exam, as the apprentice requirement is no longer in effect. S. Reya brought

up the fact that Mr. Uminski would not be able to provide two references (one of who is licensed), or the one required permitted boring (over fifty feet in depth). His letter stated that he is employed by Lockheed Martin and conducts work under the EPA Office of Solid Waste and Emergency Response Directive 93557-03. According to Mr. Uminski, the EPA has taken the position that permit acquisition is not required for superfund sites. Since Mr. Uminski was previously certified by the state, it was the determination of the Board that he could sit for the exam, without providing the specified work experience documentation. F. Sickels suggested that the Board waive the deadline for the application, which would allow him to sit for the December 9, 2008 exam. It was stipulated that he would have to submit an application by December, 2009. Further, the Board agreed that the application could be faxed in for staff to review, and ultimately mail in the hard copy with the required application fee. The motion to waive the application deadline and allow him to sit for the exam was made by F. Sickels, seconded by K. Muessig and approved by all others excluding R. Dalton, who abstained. Mr. Dalton stated that he had known Mr. Uminski personally for many years and felt that it was not appropriate for him to vote on the motion.

John Turnbull-Lapsed Journeyman License

Mr. Reya informed the Board that the Bureau had received a Journeyman B application from lapsed John Turnbull, whose Journeyman license had lapsed. Mr. Turnbull is unable to provide the two required references, as he has owned his own business in New York for 22 years. Mr. Turnbull is currently certified by the National Groundwater Association for all categories required to sit for the Journeyman B exam. K. Muessig made a motion to waive the reference requirement and allow him to sit for the April 9, 2009. The motion was seconded by J. Yost and approved unanimously.

8. Recognition of Service to the Board

A. Becker took a moment to formally recognize the years of service DAG Helene Chudzik has provided as legal counsel to the Board. This role will now be fulfilled by DAG Jill Denyes. Board members expressed their gratitude to Helene and wished her well in her latest endeavors with the NJ Division of Law.

9. Executive Session – A motion to enter executive session to discuss revisions to exams for all licensing categories was made by G. Poppe, seconded by A. Becker and approved unanimously.

10. Program Updates –

- a. E-permitting - P. Bono reported that the DEP is still on schedule to initiate the e-permitting system sometime in January. There are some outstanding issues that need to be corrected before the system will be fully functional, but those that are operable will be turned on.
- b. A draft copy of the decommissioning report form (a.k.a. the abandonment report) for was passed out to the Board members for comment. This form will be posted on the web with an explanation on how to fill it out. G. Poppe and J. Yost raised a couple of questions regarding certain fields on the form. Due to limited time available for discussion, members were asked to forward comments to P. Bono.
- c. The DEP Well Permitting Program is initiating an effort to have well drilling companies submit outstanding well records. Some companies submit less than 10 percent of the records due to the DEP. A. Becker asked if the DEP will pursue fines for offenders that do not respond to this request and Pat Bono assured him that they would.
- d. Board members raised questions about how the well permitting staff were checking to determine that the coordinates submitted on well records are accurate. Currently staff

does do a check against the DEP's I-map system to see if the proposed location matches the address of the property. Locations reported on the well records are being checked in-house. However, limited staff resources have precluded actual field checks to determine exact accuracy of the reported coordinates. F. Sickels stated that if assistance can be secured, the DEP would like to conduct at least random spot checks to establish the accuracy of the submitted location information. Staff will continue to seek opportunities for assistance with this project.

Lunch Break

Prior to the beginning of several scheduled presentations on DX geothermal systems, Board members took some time to review the information submitted by various parties.

11. Presentations –

- a. Total Green's DX geothermal system – Mr. Paul Auerbach, represents his company which is a distributor of a DX geothermal system. The presentation was general in nature and covered basic information such as the advantages of a geothermal system for homeowners. He estimated that 8-10 holes would be drilled for well-insulated home approx. 3000 square foot in size. Twelve holes per field will 72,000 BTU's. The tubing material used to circulate the cooling/heating fluids is refrigerant grade copper. The system uses mason grade sand instead of grout in the installed wells. Mr. Auerbach claims the oldest systems are about 15 years old and that the cathode needs to be replaced every 5 years in areas of high acidity.
F. Sickels explained that this raises a concern to the DEP since there is no good mechanism to insure that the system owners would replace cathodes when needed and that certain portions of the state have very high acidic groundwaters at the depths these wells would be installed. Specifically, Mr. Auerbach is requesting that his system be granted a deviation from meeting a number of well construction requirements: the requirement to have a licensed driller install the well system, grouting the well, and the use of copper as the casing material. There was a discussion by several board members to explain that current grout requirements along with the casing requirement are set so that these systems can withstand the corrosivity of the geology and waters through which they pass. Mr. Auerbach argued that any cementitious grout would diminish the corrosion control protection applied to the copper piping. Regarding Mr. Auerbach's request to grant a deviation from the well regulations to allow for the installation of this particular DX geothermal system, F. Sickels explained that deviations are site specific and this request was technology specific. Therefore, the DEP would need to determine if there is a vehicle that would allow for a new technology to be accepted without a regulation change. The Board's new legal counsel, Ms. J. Denyes, will get back to DEP staff on that issue.
- b. Earth Linked Technologies - Hal Roberts, CEO of EarthLinked Technologies, which is a manufacturer of a DX geothermal system. Mr. Roberts submitted a package of information to members for their review and consideration. Mr. Roberts claims that Florida has given a blanket approval for the installation of these systems. Several other associates working with Earth Linked Tech raised a number of additional concerns or objections to complying with NJ state well construction regulations. Tom Ambrosio, Mel Hensch of Energy Star Partner

13. **Discussion of additional well construction materials under review by the Board – Earth Source Energy** - manufacturer of DX geothermal system from Mass submitted a package. This system uses T-111 grout (cementitious thermally enhanced grout), copper tubing and NU22B refrigerant (AKA R-422B).

A brief summary of the DX geothermal systems that have requested DEP approval for installation in NJ are summed up as follows:

Earthlinked system:

- Refrigerant: R-22 and R-407C (Genetron 22 and Genetron 407C are both manufactured by Honeywell)
- Lubricant-mineral oil: SUNISCO 3GS Refrigerant Oil
- Grout: bentonite or cement based geothermal grout

Total Green/ECR System:

- Refrigerant: R-22 (Genetron 22)
- Lubricant: mineral oil (no further specifics)
- Grout - no grout, mason's sand

EarthSource Energy System:

- Refrigerant: NU22B (aka R-422B), Manufactured by Icor International
- Lubricant: Not specified
- Grout: T-111 grout (cementitious thermally enhanced grout)

The systems are typically comprised of copper tubing (7/8" supply, 3/8" return), which is installed in diagonally-drilled boreholes that range from approximately 50 ft. to 100 ft deep. We have MSDS sheets for all three refrigerants. Additionally, the Earthlinked submittal contains some documentation regarding case studies and EPA correspondence concerning R-22.

K. Muessig will contact the appropriate state program in New Hampshire for their regulations on geothermal well systems.

Hardin Geotechnologies – Has previously requested the Board to endorse the use of their PVC pipe for geothermal systems in NJ. Previously, G. Poppe indicated he was not able to get the sample pieces of pipe to work according to the design in the Hardin presentation. A. Becker reported that he has discussed the design of the pipe with several colleagues for their opinion. They doubted the design would work as indicated since grout under pressure comes out wherever the differential pressure is lowest. This would mean that the grout would end up at (top/bottom) along the length of pipe (casing) in such a way as to leave sections of the annulus devoid of grout. A more detailed review cannot be completed until Hardin submits additional information.

14. Ongoing Topics of Discussion

Continuing Education Program - Although an amendment to the Subsurface and Percolating Waters Act now requires continuing education credits for renewing driller licenses, the DEP has not yet developed such a program. The BWS&WP has been unable to hire staff to develop the continuing education program. F. Sickels suggested that such a program would have to be out sourced given the restrictions on hiring. A. Becker suggested that staff contact the state of Florida to learn more about their licensing program, which is conducted via a third party.

15. Adjournment - A motion to adjourn the meeting was made by K. Muessig at 4:20 pm, seconded by D. Dalton and unanimously approved.