

READINGTON TOWNSHIP BOARD OF HEALTH

December 17, 2014

Chair William C. Nugent called the meeting to order at 7:08 p.m. and announced that all laws governing the Open Public Meetings Act have been met and that this meeting has been duly advertised.

Attendance Roll Call:

Christina Albrecht	present	Beatrice Muir	absent	Tanya Rohrbach	present
Jane Butula	absent	William C. Nugent	present	Wendy Sheay	absent
Robert Colburn	present				

Also in attendance: Board of Health Engineer – Ferriero Engineering
Division of Public Health – Debra Vaccarella

A. APPROVAL OF THE MINUTES

1. **Minutes** of 8/20/14. (*-Albrecht, Butula, Muir vote*).

Deferred.

2. **Minutes** of 11/17/14. (*-Nugent, Sheay vote*).

Deferred.

B. CORRESPONDENCE

1. **Suspected Hazardous Discharge Notification** letter dated 11/15/14 regarding oil heating 2.

2. **HCHD LINCS – 12/8/14 UPDATE:** “Management of Domestic Animal Rabies Exposures”.

Complete report available @ BOH office.

3. **Block 13/Lot 9, 15 Mill Road** – Freshwater wetlands LOI application. Menlo Engineering Assoc.

4. **Block 9/Lot 13, 1A Old Hwy. 28** – Response Action Outcome – letter dated 12/4/14, Norton Conservation Co.

5. **HCHD LINCS – 12/8/14 INFO :** First Responder Program Updates.

C. OLD BUSINESS

1. **Follow up regarding 81 County Line Road, 11/19/14 agenda item B. 2.**

Chair Nugent thanked Ms. Vaccarella for her response. NJ public information system ‘Dataminer’ should have been updated.

Chair Nugent asked Ms. Petzinger to follow up on this for the January agenda.

2. **NALBOH – 2015 membership renewal.**

The Board agreed to renew their membership.

D. NEW BUSINESS

1. **Rabies Clinic – Saturday, January 3, 2015, 10:00 a.m. – 12:00 noon, @ RT Recycling Garage, 287 Mountain Road, Whitehouse Station.** www.co.hunterdon.nj.us/health/rabiesclinics.htm

Ms. Petzinger stated that weather permitting, the clinic will be held as indicated.

E. APPROVALS

Chair Nugent switched the order of the applications as follows:

Time heard 7:25 pm

1. **Block 62/Lot 1.02– Engr. & Land Planning, Federico, 132 Stanton Road.**

Escrow fees paid 11/17/14, ck. #13303, \$750.00.

Mr. Wayne Ingram of Engineering & Land Planning, NJ licensed engineer appeared before the board. This application is for 132 Stanton Road, it is a 4 bedroom house with existing septic field on it. There is nothing wrong with the septic, it is before the board this evening along with the other application because of the Transco Pipeline. This system is extremely close to the easement and this is an issue of concern of possibly hitting the system or something happening to it during construction. They are trying to be proactive and have a plan in place. Chair Nugent asked if that implies that there is no intent to construct this system unless there is damaged occurring to it during the process of installing the pipeline?

Mr. Ingram stated that this was a contingency plan if and when it became necessary, and it is definitely on at this point.

Mr. Sean McEvoy, Sr. Land Representative stated that both septic fields are within the proposed area of easement workspace, so they will be working over top of the existing system. In both cases part of the septic field reaches into our permanent easement so that becomes another issue as well, they want to make sure that they have an operating

Chair Nugent asked as a point of clarity on the map, does the dotted line on the map indicating the Transcontinental Pipeline easement indicate the extent of any disturbance, or is that the extent of the easement and disturbance will occur to the property owners side of that line?

Mr. Ingram stated that in this case, the construction will occur to the east of that line. Transco staked out the limits of their construction and located those flags to make sure that what they proposed was well outside of those limits. That as they know it is the limit of what the construction is. The area labeled as the prior disposal field is based on what was found as township records and what they knew the system to be, there was a subsequent investigation to determine that it was located as indicated, and was found to extend across the line, so it is being disturbed.

Chair Nugent confirmed that it would not be disturbed at all on the north side of the line.

Mr. Ingram stated that is correct.

Chair Nugent asked Mr. Ingram to continue.

Mr. Ingram stated this is a 4 bedroom home, pg. 6 of the plan gives an overview of the entire site. The Transco easement comes across the property. This is a large site but much of it is inaccessible due to the easement. The 100' well buffer is also indicated. When both conditions are factored, there is very little land to locate the system. The property had very good permeability, a basin flood passed very quickly so there are no concerns on the functionality of the system. The location was selected downhill as far as possible, away from any wells, the swimming pool and prior disposal field. This system employs a HOOT H-600 aerobic treatment unit, it has the same benefits from the State as a peat system but the main difference is where the peat systems operate with a filtration media, this system operates on an aeration system. There is no tank or effluent filter, you have a concrete chamber where there is a small septic tank within the unit, the water will leave that and go into a kind of funnel, and the blower is aerating all of the effluent and the aeration sends the clean water out and treats the water within the tank. What is sent out is meeting the same quality standards that the peat systems meet, is all NSF certified and approved by the state. As of 2012 they have switched to these systems over peat because they are less maintenance and they are cheaper and easier to maintain and there is no long term implications of what to do with the peat when it has gotten saturated and you need to replace it. Their firm, like many other engineers, have stopped designing the peat systems and have started using the ATUs. They like this one because of its compact nature, everything in one tank, it is concrete so there are no issues with the plastic. So that provides our treatment, there is a pump tank after that to dose the disposal field, there are no size reductions for either one, so whereas they could have by State law a multiplier of .956 in terms of sizing over the gallonage, they are still operating at 1.61. The reason they are installing this is to take advantage of the height reduction of the mound, partially due to the limited location on the property. If elevated to be a 4' mound on the slopes they are on, they would be dangerously close to the property lines and would be required to do grading within the easement. They have no issues of permeability here so they are essentially putting clean water back into the ground in a shale formation they know can handle the load.

They are getting far superior treatment than we would get going through 4' of sand material, they are asking for a 2.5' reduction in the zone of treatment, and they believe as does the DEP that they are getting better treatment out of this tank than you would out of the sand zone of treatment. It is a far superior system and their recommendation to most people over traditional systems. It is very low maintenance, very high success rate.

Chair Nugent asked if they had provided the board with any of the materials regarding the HOOT system?

Mr. Ingram stated that within the packet on pg. 3 is a detail of what the unit actually is. The literature that you get really isn't anything different than what is provided with the peat system, it basically states that they meet the NSF certifications, they are getting their 95 – 99% treatments of BOD and TSS. The different models are described, the 600 model is one that is made for 4 – 5 bedroom homes, the slightly smaller H500 is for 3 bedrooms and smaller. This design has been reviewed by the manufacturer. A letter has been provided by the manufacturer indicating that they have reviewed the design and it complies with their standards. They have asked that we comment on the fact that there is no septic tank or effluent filter which is actually a requirement of the system to meet its NSF code, that has been provided, and if the board wishes any more information he would contact them.

Chair Nugent stated yes, for something that this board has not seen before, they would want to see the material regarding the HOOT system so that they can make a judgement of whether as an ATU it is something that the board feels comfortable with. Regarding the lack of an effluent filter, could the logic behind why an effluent filter is not recommended be explained especially when in essence you have less filter material that would remove some of the solids that would otherwise get out to the field?

proposed design. You are trying to send the water into the ATU, it needs that bacteria, that material to process so that it can break it down, so that the microbes survive and thrive which is what allows the blower unit to function and send the clean water out. If you don't give it any food by having too big of a septic tank by taking out everything to the effluent filter, the bacteria won't survive and the ATU actually do the treatment.

Chair Nugent asked what keeps the solids in the ATU and therefore not getting down into the field?

Mr. Ingram stated that there is a pretreatment tank, pg. 3, its about a 400 gallon chamber, just smaller than the 1,000 gallon unit, which has been determined is the appropriate size for this size unit. The appropriate amount of strength of wastewater is getting into the ATU which is something that is modified, so when they come out to do their inspections they have the ability to change the strength of the blower so that they can raise the rate and get more air into the system, depending on the use. It all comes down to use, if there is very little water going into the system, you tone it down, if they are using it quite a bit you turn it up. The semi annual maintenance is done to make those adjustments.

Chair Nugent asked what controls the output of the ATU into the pump tank?

Mr. Ingram stated it is a gravity system, if the power goes out, the system still flows. It flows to the pump tank and limited by the reserve of the pump tank which is one day.

Chair Nugent asked what prevents the solids from getting out of the ATU into the pump tank and therefore out of the pump tank into the field and thereby deleting the value that the effluent filter is supposed to provide per state code?

Mr. Ingram stated it is operating the same way a septic tank would, it still has a baffle, the main component of the tank is still only sending water into the second chamber. It is operating the exact same way a septic tank does, so it is no different than any other septic tank only it is smaller. The effluent filter is a recent addition to the code, it never was a requirement before, you still can't pass solids between these two chambers. You are sending a little more strength than the wastewater into the chamber.

Chair Nugent stated that in a standard constructed septic tank with an effluent filter installed, even at 1,000 gallon or 1250, solids are still trying to get out of the tank and the filter is preventing that.

Mr. Ingram stated not necessarily solids, but more suspended solids in that effluent. The solids are settling to the bottom. There are some solids that are going to get out, that 2nd compartment of the ATU needs that to survive. The blower functionally retains those solids in that 2nd compartment of the ATU. When the blower operates, there is a cone inside the device, the blower operates out of the center so when it does its aerating it is sending the solids to the sides for further treatment and is sending the clean water up through the cone and out of the system, that is essentially how it operates. The air is acting as a pumping action of the water to elevate it up and out of the tank, it is basically pushing all the solids to the edges so they don't come up through the center and get deposited.

Chair Nugent asked what prevents the solids from floating up and out of that ATU?

Mr. Ingram stated the blower prevents it. He has observed these in the field and the water that comes out is crystal clear, it is sending the solids to the perimeter and making sure that the breakdown is occurring within the tank and because the outlet is so high, it is sending the clean water out and the settlement is forcing everything to the edges away from where it can exit the tank. If all that is getting shifted to the outside of the cone, it is only the inside of the cone that is sending water to the outlet, that is what is pushing all the solids to the side.

Chair Nugent asked if the narrowness of the entry point of the cone is what is going to limit the exiting of solids from the ATU?

Mr. Ingram stated when the blower operates, yes.

Chair Nugent asked why is an effluent filter not installed on the outgoing side of the ATU?

Mr. Ingram stated that you could probably rig something up outside of the tank to do that, at that point it is clean water anyway, it would be stopping nothing. If the board required one, they could install one after the tank, but it wouldn't do anything. After seeing them operate, nothing comes out but clean water.

Ms. Vaccarella asked if the board were considering a filter, would it make more sense to install it on the inlet side of the pump tank rather than a separate port? There is an external sump that you could put between the two, but when used it is much deeper than the filter itself, and that in itself may create a problem, especially with freezing.

Mr. Ingram stated that they could install it if required.

Chair Nugent asked why the effluent filter would be perceived as not being valuable with the ATU?

Mr. Kosinski stated it depends on the pretreatment unit you are describing. A septic tank is a pretreatment unit, it is not an advanced pretreatment unit, so the DEP recognizes that some solids are going to leave a standard septic

apples to apples here.

Ms. Vaccarella stated that in speaking to the contractors, the effluent filters do nothing other than clog up the outlet so that what happens is that the tank is pumped out because there is effluent backing into the house. It is not necessarily protecting the field, it is reminding the homeowner to pump the solids out.

Mr. Kosinski stated that NJDEP recognizes that some of these units need the BOD content to function properly. Chair Nugent stated so that makes sense why there isn't an effluent filter between the first and second compartment, but the larger concern is the 'annual visits to adjust the aeration' which the engineer mentioned. In the case of additional people in the house, even for a short time, is there a problem?

Ms. Vaccarella stated that the autodialer is set to track and alarm if there is, so the homeowner is aware of it.

Mr. Ingram stated that a small increase is not going to have any effect on the system. The microbes will just multiply. Chair Nugent asked if the maintenance contract is structured so that if the autodialer is reporting a higher frequency of pumping, will they come out and adjust the air settings because of a change in the readings?

Mr. Ingram stated yes.

Ms. Vaccarella stated that her office has attended a seminar on these treatment systems by the people who install and maintain these systems. They know their clients, and track the use, if need be every day.

Mr. Kosinski stated regarding the DEP and effluent filter, they recognize that they need the BOD content in these units so that the units can build up the biomass to function properly and that is why they are not required on septic tanks that incorporate certain technologies. That provision is put in the code so that they can function properly, their NSF certification is based on a certain effluent quality, that is why the provision was put into the code by DEP. Chair Nugent stated regarding the stimulus of an ATU being because of the height of the mound if it were a standard system. How was 5' concluded as the regular mound?

Mr. Ingram stated that on pg. 3, 'the estimated seasonal high water table is a 353.5' if they had a 4' zone of treatment, a 1.5' of gravel and 1.5' of cover they would be at a 360, they are proposing to be at a 357. There is a mound on the downhill side, but the point is how high it has to come up on the uphill side. There is another 3' uphill and 5' on the downhill.

Chair Nugent stated the regional zone is 3' below grade, a traditional system would be 4' zone of treatment, then 15" for the piping and 12" for the cover grade, which would be barely 3' of a mound that would have resulted from a standard system.

Mr. Ingram stated the 353.5, 4' up from there plus another 3' for additional material puts you at 360.5, 360.25 to be exact. The highest grade is 357, exactly flush with grade.

Chair Nugent stated that one of the principal reductions being taken is the depth of the zone of treatment. The requirements are 48", and that is being reduced to 18", so that severely depends on the quality of the effluent coming out to only require 18" of treatment. What is meant by the zone of fill soils below that?

Mr. Ingram stated on page 3, there is an intermediate zone below the seasonal high water table that is not fractured rock, they put sand in to bridge the gap between the seasonal high water and the rock. It doesn't count as zone of treatment or disposal, it just bridges the gap. That 21" does not have passing permeability. There isn't fractured rock until the bottom of the 21".

Chair Nugent asked if the current disposal field is mounded at all? and was the depth explored?

Mr. Ingram stated it is at grade flat. The depth was irrelevant.

Ms. Vaccarella stated that a new system was installed in 1992, the bottom of the bed was 90" deep.

There was some discussion and agreement that this is consistent with the current findings.

Chair Nugent asked what the distance is from the bottom of the grading to the property line?

Mr. Ingram stated that it is about 10'.

Ms. Vaccarella stated that the State and local code is 10'.

Chair Nugent asked regarding the HOOT system, there is a blower, a 30 amp circuit for the blower, what is the CFM, sones, decibels and actual amperage draw of that unit?

Mr. Ingram stated that the panel is evaluated and determined to be on a dedicated switch, it will be upgraded if its not. Whatever the draw is, it is done by a licensed electrician.

Chair Nugent stated that there is a chance that the panel will have to be upgraded to 200, 300 whatever.

Mr. Ingram stated yes, and it is done by a licensed electrician or whatever the code requires. Regarding the noise, the advantage of the HOOT system, it is in its own concrete box. The blower sits above grade, it is put inside that enclosure and basically makes the unit silent. The maximum recommended distance is 100'.

Mr. Ingram stated that the lids are aerated, they have holes in them, they are basically flush at grade. Nothing sticks out of this particular unit. The vent for the pump tank sticks up in the air about 2.5 – 3'. The HOOT tank is vented at grade, the pump tank is at grade or a 3" diameter air vent.

Chair Nugent asked what odors are present? What is the volume of air going in?

Mr. Ingram stated when the unit is operating as it should, there are no smells. If an odor is noticed it means the blower is not operating properly and they can call their representative directly. The specific flow rates of the unit are variable, but it is a constantly flowing motor, it goes from 1 to 100 depending on how much the system needs to operate.

There was some discussion of how noisy the blower would be.

Mr. Ingram stated a lot quieter than a pool filter. The usage is equivalent to a light bulb on your electric bill.

Chair Nugent asked what the warranty is provided to the home owner?

Mr. Ingram stated 2 years maintenance upon purchase which is mandated by the DEP. The semi annual maintenance would determine if anything is wrong. A packet of information is provided to the homeowner on how to operate it, who to call, what the system consists of and what their rights and warranties are.

Ms. Vaccarella stated that all of that information is on file at the county.

Chair Nugent asked what the regular intervals for pumping are? and is that included in the maintenance charge?

Mr. Ingram stated at the semi-annual maintenance they can look at the unit and determine if it is ready for pumping or not. Typically it is the same as a septic system, and it is a separate charge.

Chair Nugent referred to the 11/25/14 letter from HOOT SYSTEMS, LLC , last sentence and asked what the 'certified designer' referred to?

Mr. Ingram stated that is the product that they manufacture, they are saying they are certified in the design of HOOT SYSTEMS. Mr. Ingram is certified in NEHA systems.

Ms. Vaccarella stated after 1/1/15 someone who is NEHA certified must be there during installation of the entire system.

Chair Nugent asked on page 2 regarding the minimum compressive strength if 4,000 psi was standard? Below filter material, item #2., size and graduation, why are 3 sizes given?

Mr. Ingram stated yes, the psi is standard. Any of the sizes can be used, these are the base standard notes.

Ms. Vaccarella stated those are the DOT sizes that are required in the code.

Mr. Ingram stated the inspections are done after the first 30 days, then every 6 months.

Ms. Rohrbach asked what is the cost to the homeowner? And how many systems have they done?

Mr. Ingram stated \$350.00 annually. 40 – 50 systems have been installed throughout Hunterdon , Mercer, Somerset and Warren counties.

Chair Nugent asked about the reserve capacity at 686 gallons, that is 1 day. Has that information along with the deed restricted wording been discussed with the homeowners? Have the limitation in the event of a power outage been explained to the homeowners?

Mr. Ingram stated yes, the deed restriction has been explained to the homeowners. Possible limitations in the event of a power outage have been discussed.

Chair Nugent asked about the credentials of the wetlands expert, Mr. Paul Harenberg, and if they could be provided to the board, in particular the courses and training he has had.

There was some discussion of applying for and providing a GP25 online.

Mr. Ingram stated that for the pipeline, they had to do full delineation for everything along the route, so it has already been verified. There is an LOI for their property which encompasses miles and miles, there is nothing on the plans which they have been given or any wetlands delineated in this area in any reasonable distance.

Mr. Sean McEvoy testified that that statement was accurate.

Ms. Vaccarella stated that the County checks every application on iMap in the wetlands mapping tools and did not find anything near this property.

Mr. Kosinski stated that he also did not recall seeing any wetlands on iMap.

Chair Nugent asked on the County forms 2b's, 3b's and 4's. Pg. 21 of 13, laterals of 10 in quantity, length of 240, is that correct?

Mr. Ingram stated yes.

There was some discussion of the system being seeded with bacteria, which is usually only done if the homeowners are not living in the residence for an extended period.

Mr. Ingram stated the noticing was due to the fact that the applicant is asking for an advanced treatment unit utilizing the design. It is essentially the same reason for both, and any additional waivers or variances deemed necessary. Primarily it is noticing the advanced treatment unit.

Chair Nugent stated also you are requesting a waiver from the 4' of fill for the zone of treatment to be reduced to 18", is that correct?

Mr. Ingram stated yes.

Chair Nugent confirmed with Ms. Vaccarella and Mr. Ingram that both applications are classified as 'alteration with no expansion.' Also on the County review letter dated 11/6/14, #3. 'service contract', this should be taken care of by the applicant.

Ms. Vaccarella stated that they do make sure that that is in.

Chair Nugent stated that that covers about everything he wanted to discuss, and asked if any other board members had questions or concerns?

Mr. Colburn stated that there is a statement 'prior disposal field to be removed of and disposed of at a licensed facility'. From the design plans, that field may not be effected.

Mr. Ingram stated that anything in the easement is taken up, analyzed and is shipped to a licensed disposal facility.

Chair Nugent asked if there were any other questions from the board ?

Chair Nugent stated as a review, the board requires:

1. Literature for the HOOT system, including TSS reduction, effluent quality.
2. Provide the LOI number for this project.
3. Revision to the application form for waiver.
4. Service contract.

There was some discussion of the next meeting date. The boardmembers agreed on January 14, 2015.

Mr. Sean McEvoy asked the board if there was anything outstanding that may not be approved by the board at the next meeting.

Chair Nugent stated that he did not anticipate anything coming out of the literature to be provided that would cause the board to not move forward with acceptance. The information requested is important for the board to review and make sure they are comfortable with these systems.

Chair Nugent asked the board if there were any questions or concerns regarding the proposed systems to cause concern and possibly on further review not approve what they have seen that is being proposed?

The board members indicated that there were no questions or concerns.

Chair Nugent stated that this is a conservative board, and their goal and objective is to protect the health and well being of the homeowners that are here today and also future homeowners. Being less familiar with ATU's than the peat systems and pump systems, being familiar with the challenges presented by the soils in this township, the board's real concern is to determine that what they are reviewing will work for many years to come for the homeowners without causing undo hardship.

Mr. William Auld, 145 Dreahook Road addressed the board. Mr. Auld stated his concern for the well being of the applicants, and stated that he has no concern for his own property. Will there be board members present at the January 14, 2015 meeting that are not present this evening and may not be aware of what transpired this evening?

Chair Nugent determined that Mr. Auld was a concerned citizen questioning the application process and with that clarified, the answers are 1) yes, there may be more board members here for the 1/14/15 meeting. 2) all of the board members are diligent in reviewing what was discussed at the prior meeting if they are going to adjudicate it. The majority of the board members are in attendance this evening and have not voiced a concern.

Chair Nugent asked that Mr. Auld hold any further questions or concerns until after the next application, and possibly some of those concerns may be addressed.

Time heard 9:08 pm

2. Block 44/Lot 43.01– Engr. & Land Planning, Rodino, 127 Dreahook Road.

Escrow fees paid 11/3/14, ck. #13302, \$750.00.

Mr. Wayne Ingram of Engineering & Land Planning, NJ licensed engineer appeared before the board. This is a 4 bedroom home with an existing disposal system. There were some issues with this application, mainly that there wasn't nearly as good permeability as on the other property. Six soil logs were performed instead of 2. The only place that had permeability was the south side near the street. The west side is the pipeline, so they have to go

requested for the previous application. It was previously noted that the distance from the neighbors well across the street was deficient. They do however have the required 50' of casing. After feedback from the County, they decided to move it to the 100' distance which still meets the distance requirements to the soil logs, as is indicated on the map. The existing disposal system is basically partially in the easement. The reason for the HOOT system in this scenario is two fold, the location of the pipeline and the existing system has satisfactory concerns. Chair Nugent questioned Ferriero Engr. 11/18/2014 letter, General Comment #2. stating that the soil logs had not been received by Ferriero Engr.

Mr. Kosinski clarified that the soil log position had not been indicated.

Chair Nugent stated that distance between the bed should be confirmed as within 15' and revised as discussed.

Mr. Colburn stated that Design note #3. and General note #6. information on the wells should be revised to 100'.

Chair Nugent noted that the same revisions as the first application apply to this one.

Mr. Ingram stated that is fine.

There was some discussion of the number of copies required by the board.

F. ADJOURNMENT

A **MOTION** was made by Ms. Albrecht to adjourn at 9:20 pm, seconded by Ms. Rohrbach with a vote of Ayes all, Nays none recorded.

Respectfully submitted:

Lorraine Petzinger