



**TOWN OF BOURNE
BOARD OF HEALTH
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Cynthia A. Coffin,
Health Agent

**MINUTES
February 2, 2011**

Members Present: Kathleen Peterson, Chairperson; Stanley Andrews, Vice Chairperson; Galon Barlow and Carol Tinkham. Members Absent: Don Uitti

Support Staff: Kathy Burgess, Secretary

Call to order: Meeting called to order at 7:00 P.M.

Ms. Peterson stated that she wanted to inform everyone that the meeting was being filmed for future use and that she did not know they were coming. Ms. Peterson stated that if there was anyone else in the audience filming the Board would like to know. There was not.

1. **62 Old Plymouth Rd-Continued-**Discuss & Possible Vote regarding non-compliance with housing order dated October 29, 2010- Mr. Andrews stated that he had spoken with Carrie Furtek, Health Inspector, who had told him that there was still a screen that needed to be replaced and a small gap near a basement window that needed to be sealed up. Ms. Furtek is suggesting that the Board give them another couple of weeks and was pleased with the repairs made so far. Gail Spencer, tenant, stated that they had moved out of the house for a week and a half but are now back in. One screen has been fixed but there are still two remaining screens that need repair. Ms. Spencer stated that they are going to put shields on the basement windows to prevent water from coming in but that has not been done yet. The front door is rotted and that has not been repaired yet. Ms. Peterson asked if the house was habitable right now. Ms. Spencer stated yes but they would like to be able to open the windows and not have animals come into the house through broken windows. Mr. Andrews stated that he would like to continue this for three weeks. Ms. Peterson stated that she would like to hear from the bank in writing when they will make the rest of the repairs. Ms. Spencer stated that she was told the bank would be here tonight. Ms. Peterson stated that they cannot force a bank to attend the meeting but there are other avenues they can pursue.
Mr. Andrews made a motion to CONTINUE 62 Old Plymouth Rd until

March 9, 2011. The bank is required to let the Board know in writing what days they will make the repairs and also to notify the tenant. Mr. Barlow seconded the motion for the continuance so that the bank will have a little more time to finish the work. All in favor and the motion PASSES.

2. **68 North Beach Ave-Bracken Engineering for Michael Bosse-Requesting** waiver to use existing septic system for renovations-Don Bracken stated that the owner is proposing to expand existing kitchen area and master bedroom area and living area. The living area and kitchen area are on the first floor. The kitchen expansion will be on the North side of the house within an existing covered porch area. The bedroom and living room expansion will be towards the East side of the house which is currently being used as a porch which will be converted to year round space. Mr. Bracken stated that in accordance with the Board's policy for bedroom and non-habitable expansion the project meets the guideline for less than 25% bedroom area with a proposed increase of 14% bedroom area and 33% non-habitable area. The existing septic system was installed in 1997 consisting of a 1500 gallon septic tank pump chamber which goes into a mounded leaching system. The project has been reviewed and approved by the Conservation Commission. The resource area in question is Eel Pond which is a salt water pond. The existing septic system is 77 ft from the edge of the pond. They are looking for a waiver of 73ft. from the 150' setback. Mr. Andrews stated that Ms. Coffin had left some notes as she is not at the meeting. Ms. Coffin's notes show a difference in calculations from Mr. Brackens. There was general discussion regarding the plans and calculations. Mr. Andrews stated that Ms. Coffin's calculations are from existing bedrooms which are 629ft and proposed at 787. Ms. Coffin's calculations come up with a 25% increase in bedroom space. Mr. Bracken stated that he will confirm that and submit a follow up letter for the files. Mr. Barlow stated that he does not believe there is a significant increase but if it does become too much of an increase and Ms. Coffin gets concerned then they will have to come back before the Board to look at nitrogen removal. **Mr. Barlow made a motion to grant the request of reduction of setback distance to the existing soil absorption system to a pond from 150' to 77' (73' waiver) at 68 North Beach Ave for Michael Bosse. Ms. Tinkham seconded the motion. All in favor and the motion PASSES.** Ms. Peterson stated that she wanted to make sure that Mr. Bracken clarified the calculations with Ms. Coffin. Mr. Bracken agreed.
3. **68 Monument Ave-Michael Steller-Requesting extension of existing variance originally granted on January 27, 2010 and requesting amendment to existing architectural of record.** Ms. Peterson stated that Mr. Steller is not coming to the meeting tonight and is just requesting an extension. Mr. Andrews stated that Ms. Coffin had requested that the Board have a signed contract for the installation of the system prior to the issuance of a building permit and sign off of Board of Health. **Mr. Andrews made a motion to APPROVE the request for an extension with the condition that a signed contract for installation of the system is submitted prior to the issuance of a building permit and sign off by**

the Board of Health. Ms. Peterson seconded the motion. All in favor and the motion PASSES.

4. **Informational session regarding proposed wind turbine project-**Ms. Peterson stated that the same rules will apply this time as last time. Everyone will be respectful of each other. Ms. Peterson stated that after each side presents she will allow the other side 15 minutes to discuss what that side had to say and then will open up for public comment. Public comment should be kept to health and environment. There will be no discussion of financials. **New Generation Wind, LLC-** Dave Peterson stated that he works for Cape Cod Aggregates and the LaRusso family, one of the proponents and owners of New Generation Wind. Mr. Peterson stated that he would like to provide the Board with the best information possible. Mr. Peterson would like to update the Board on the various health related issues that have been raised as part of the special permit process that is now before the planning board and the Cape Cod Commission. Mr. Peterson stated that Diane Tillitson, of Hemenway & Barnes, is the lead attorney for New Generation Wind. She has dealt extensively on health matters and legal issues. Doug Sheddel, an acoustic expert working as a consultant for New Generation Wind, is also at the meeting and will present a more detailed analysis of the sound attributes of the project. Jerry Ingersoll, one of the two project proponents and a long time resident of the Town of Bourne, will present some information on other wind projects in New England where many individuals do live in close proximity to wind projects without any incident of deleterious affects. Mr. Robert McCunney is the project consultant and expert on health issues but could not be at the meeting tonight. Mr. Peterson stated that he would like to stress that with careful selection of the proposed turbines and protocols in place to protect the neighbors they can operate a facility without negative health impacts. Mr. Peterson stated that he understands that there are those that are still concerned with these issues. Mr. Peterson stated that how the regulatory structure at the local and State level and the rigorous review by the local planning board and the Cape Cod Commission will insure adequate protection for the neighboring residents and businesses. The State regulation and Bourne's own wind energy conversion system bylaw provide that noise complaints are to result in mitigation or succession of turbine operation until the problem is resolved. Mr. Peterson stated that the bylaw provides further assurances that expert sound monitoring and evaluation will be available. In the event of a formal noise complaint the project is including funded mitigation protocol similar to that which other businesses and the Town have established years ago to be activated in the response of any noise complaints that might be raised. Mr. Peterson stated that based upon the compliance regulations within the Town's existing bylaw they feel there is no need for the Board of Health to propose its own regulations and instead they would recommend that the Board participate in the review and application of the regulations that already exist. Mr. Peterson stated that the Planning Board will include the Board of Health during its analysis of the special permit application and they strongly encourage the Board's involvement in that process. Mr. Peterson stated that they are before the Cape Cod Commission for their regulatory

review which is why the local permitting with the planning board has stopped. They have completed the formal public hearing process and they are now awaiting the beginning of the Commission's project review sub-committee meetings. The purpose of those meetings is to work out the details necessary for compliance with the Commission's regulatory standards and present the project and permitting conditions to the full Commission for approval. After the Commission's review is complete the local permitting process begins and at that point they will be going before the planning board to try and obtain a special permit. Mr. Peterson stated that they expect that process to be thorough and rigorous and in anticipation of that process beginning they are here tonight to try and address some of the many issues and concerns. Mr. Peterson stated that they feel that the project has minimal permanent and temporary impacts to the land resulting in development of less than 1% of the entire site. This land could be developed for at least 100 or under 40B perhaps as many as several hundred houses each producing untreated septic waste, creating water demands, potentially introducing roughly 300 gallons of heating oil and other hazardous materials per household all while generating traffic and permanently altering an enormous area of forest classified as rare and endangered species habitat. Mr. Peterson stated that the renewable energy project that they propose will provide electricity to power the equivalent of a minimum of 4,000 homes displacing roughly 32,000 lbs of air borne nitrogen per year and 39 million lbs of CO₂ per year. Air borne nitrogen from burning fossil fuels represents a major contribution of nitrogen pollution to the estuaries and fresh water sources on Cape Cod. Mr. Peterson stated that the reduction in CO₂ emissions reinforces the trend toward non fossil fuel, non-polluting and competitive energy economy. The project's transformers will use, at an increased expense to the project, a non hazardous bio degradable coolant fluid derived from 100% edible sea oils and food grade additives. The fluid meets the EPA's criteria for ultimate biodegradability classification. Mr. Peterson stated that this is a project that is entirely dependant upon private funding and the risk is on the proponents as they must comply with the Cape Cod Commission's decision and its conditions with the local bylaws and any conditions imposed by the planning board. If for any reason any aspect of the projects operation goes out of compliance the turbine will be shut down until a compliance issue is resolved. Mr. Peterson stated that they do not want to see any issue like that raised because it would hurt the project and ultimately jeopardize it. The compliance provisions in the local bylaws remove any risk to the local residents of the Town of Bourne. Mr. Peterson stated that the reason the town passed this bylaw was to promote clean energy and its resulting benefits to the health of its residents and the environment. Mr. Peterson stated that they are sensitive to the issues raised by some of the neighbors and they are here to insure that those issues are addressed and are also confident as a result of ongoing site and equipment analysis proposed mitigation protocols and conditions that will be imposed by both local and regional permitting authorities after extensive review that our project will meet all regulatory noise standards and provide the maximum protection for the neighbors and the citizens of Bourne. Mr. Peterson stated that it is also their belief that the health impacts of not obtaining some level of self dependence for our energy

needs will continue to cripple the economy and tax the overburdened health care system. Doug Sheddell, Modeling Specialties, stated that he would like to outline some basic noise fundamentals and address the sound from this project and also the noise concerns of the neighbors for this and other wind projects. Mr. Sheddell stated that the lowest sound that can be heard in laboratories is 0 or 1 decibel but in reality the lowest sound that anyone can hear in an absolutely quiet environment is about 10 decibels. The highest sound that can be heard is roughly 120 decibels such as a jet flying by. Mr. Sheddell showed the Board a thermometer chart with different sound analysis. Mr. Sheddell stated that a 5 decibel sound is usually noticed but seldom troublesome and that is the context for the regulatory backdrop for this project. The DEP noise standard requires that any new source be limited to 10 decibels or less because it prevents new sources from dominating the field of the environment that they are installed in. Mr. Sheddell then went through different items and what sound decibels they would be heard at. Mr. Sheddell stated that some people can hear up to 16,000 hertz and as low as 12 hertz, while he can hear up to about 6,000 hertz. The wind turbine is approximately a 1 hertz sound while under power and that is usually heard as a gentle whoosh and is not heard as a 1 hertz sound. The regulatory backdrop is the DEP noise policy and you also have a wind power ordinance that requires the DEP criteria to be applied at the property line. Mr. Sheddell stated that they have done noise analysis with the two best models out there which are the Wind Pro and also Cadna (a German model) to make sure that if there are concerns they find them first and find ways to work around them. Mr. Sheddell stated that one of the long term sound monitors that was put in the quietest location was actually right behind the existing hill on Bournedale Rd. where it was concealed from almost everything Mr. Sheddell stated that the residents of Glacier Way know that it was shielded and during quiet night time with no wind levels gets less than 30 decibels. They have done their analysis based on the quietest sound levels measured at times when the turbine will operate. The turbine will not make any sound if there is no wind to drive the turbine. Mr. Sheddell stated that if you look at the changing ambient conditions most of the time the turbine is operating well beyond ambient and it will not be noticed in any part of the community. If the turbine does need to be shut down the system is already in place to modulate the wind turbine operation or even shut it down to protect from exceeding the noise standard. Mr. Sheddell stated that the World Health Organization provides a level of 40 decibels but that is not a level of recommendation on what the nighttime levels should be but rather a recommendation that below 40 decibels there is not a health affect for sound. Somewhere between 85 and 40 is the area that would be reviewed by health professionals. The EPA provides the level at about 55 decibels balanced for day and night which is recommended for an ambient level. Mr. Sheddell stated that looking at his chart the ambient is already well below 55 and the sound from the turbine is 42 and are well below the EPA's recommendation for an ambient level and are meeting the criteria for the 10 decibel both at the residences and property line. Mr. Sheddell stated that they are basing their analysis on the quietest ambient and the vendors recommended sound power levels working with that turbine and producing for the Board the most

conservative potential affect at the residents which is below the 10 decibel criteria. Mr. Sheddell stated that this is provided for them by working with Atlantic Design Engineers, the engineers for the project. Wind turbines of current design do not produce infra sound. Because of the level of concern it is typical for turbines, particularly ones that are under public scrutiny like in Falmouth, to have infrasound analysis done for those turbines and it has been determined that they do not produce infra sound. Ms. Peterson asked why then was this sound bothering people and how does Mr. Sheddell determine that that sound is not driving someone insane. Mr. Sheddell stated that he does not make that determination and that he has a meter that operates with the amplitude of individual sounds and can evaluate that compared to the backdrop. Mr. Sheddell stated that typically if it's less than 3 decibels most people don't hear it. That doesn't mean that someone doesn't hear it though and that someone that hears it may be troubled by it. Being really aggravated by anything has a variety of human physiological challenges. Mr. Sheddell stated that when you are angry you have high blood pressure, clenching of teeth and trouble sleeping and there is a fine distinction between what is a regulatory balanced view of application of the criteria and what is troublesome to a few people. Mr. Sheddell stated that the sound is heard and most people are not troubled by it and in fact on Cape Cod it is difficult to make the argument that this sound character is fundamentally dangerous to the human body. The most valuable properties all around Cape Cod are within 1000 ft of the ocean which is a sound that is extremely similar to the rhythmic motion of the turbine. Mr. Sheddell stated that he is not saying that is attractive to everyone but is suggesting that it is not fundamentally troublesome to hear sound of that character. Mr. Sheddell stated that he studied outside the fence of Falmouth 1 because of its troubled history. Ms. Peterson asked where Falmouth 1 was located. Mr. Ingersoll stated that Falmouth 1 is closest to the dog pound and Falmouth 2 is North of Falmouth 1, closer to Bourne. Mr. Sheddell stated with wind turbines at 1500 ft, which is what they are proposing, the sound levels are low, in the 45 decibel range, and the closest residences will hear the rhythmic blade passage of that sound and that is an amplitude modulation. Mr. Sheddell stated that amplitude modulation that is expressed as a concern in most literature is a very rare affect. An audience member expressed concern that Mr. Sheddell mentioned that there was no infra sound on the modern day turbines but stated that there is infra sound on the ones in Falmouth and just did a sound study on the web turbine there which showed 6 decibels of infra sound. Mr. Sheddell stated that if he stated there was no infra sound that was a mistake because everything has infrasound but his suggestion is that the low frequency sound from wind turbines tends to be at a level that is near or below ambient therefore there isn't a intrusion of intra sound that comes from typical wind turbines and as the curve indicated it's below the typical ambient. Mr. Sheddell stated that Falmouth produces low level infrasound and low levels are not health issues and are in fact approved for treatment. Mr. Barlow asked what Mr. Sheddell meant by treatment. Mr. Sheddell stated that Dr. McCunney sites an FDA review treatment for some kind of an ailment with low levels of infra sound for the purpose of helping people move toward an area of health. Mr. Barlow stated that he only asks

because it sort of admits that it exists and if they use it for treatment then it must exist. Diane Tillotson, an attorney, stated that she has been in practice for over 30 years and focuses on land use and environmental permitting and litigation. She has worked on cases involving sound and health effects dealing with quarries and the aggregate industry and is familiar with the sound standards. Ms. Tillotson stated she has been working with this project team for about a year and this is a very complex topic with a mountain of material and it is a very difficult process that everyone is going through trying to sift through everything that has been presented. Ms. Tillotson stated that the task is to work together to achieve a regulatory balance that allows a project such as the New Generation Wind Project to move ahead because it will produce green renewable energy through wind harvesting with no adverse material affects to the environment and at the same time protect legitimate interest of members of the public. Ms. Tillotson stated that whether it's the Cape Cod Commission or a local BOH the task is to really be able to approach the material presented with discernment so that they can figure out what reports are based on science and fact and what are based on legitimate fears. Ms. Tillotson stated that she believes it may not be accurate to say that wind turbines can never be associated with health risks but it is also inaccurate that there is overwhelming scientific evidence that wind turbines cause adverse health affects. All the slides and materials presented tonight from New Generation Wind are also in a binder that is available at the Board of Health Office at Bourne Town Hall. Ms. Tillotson stated that when the Board reviews the modest number of accidents and people that are annoyed with respect to turbines how does that compare with accidents and incidents with other energy producing industries such as coal mining, natural gas exploration and production, and oil drilling. Ms. Tillotson stated that the risks associated with turbine production and maintenance is small and the demand for energy is going up and she believes we need clean and reliable renewable sources of energy. Ms. Tillotson stated that the BOH is primarily concerned with health impact and issues associated with wind turbines relate to noise, flicker, visual impact, property values, turbine fires and ice throw. Ms. Tillotson stated that even though fire and ice throw are public safety issues, the statistical incidents are very small and the advances in the technology of producing turbines has increased significantly. Shadow flicker may be annoying on a limited basis some of the time the effects of that very slowly moving turbine is isolated and limited and easily resolvable. Ms. Tillotson stated that the World Health Organization has suggested that the regulatory framework be flexible enough to incorporate new data as it comes in. The Bourne bylaw which has a complaint based mechanism anticipates that there will be instances when a turbine is not in compliance with that 10 decibel increase over ambient level. Ms. Tillotson stated that the Nordex technology permits the monitoring of that sound and the reduction or cessation of a turbine during those periods and there is a full description of the Nordex engineering in the materials provided. The MA and Bourne standards for noise are relative standards. There are some suggestions that there be an absolute standard for noise so nothing would be produced over 45-55 decibels. Ms. Peterson stated that the Board is well aware of a nuisance factor as they have had with the landfill and odors and knows that people don't always call

to complain. Ms. Peterson stated that becoming a nuisance knowing you will become a nuisance concerns her. Ms. Tillotson stated that they do not anticipate they will be a nuisance as their measurements to date suggest that they will be fully in compliance 100% of the time but recognize that those are projections and are not always accurate. Ms. Tillotson stated that she believes there is an additional need for developing additional information and they would not be opposed to providing regular information to the Board so they would be self monitoring whether there was a complaint or not. Mr. Barlow stated that the Board recognizes that shadow flicker is a nuisance and also recognizes that New Generation is working to address these issues and are trying to locate the turbines where they are not going to be a nuisance to people and he is sure they will work on this as they go forward. Ms. Tillotson stated that Dr. McCunney was not able to be at the meeting but his presentation is also in the material handed to the Board and she will be happy to forward any questions to him. Dr. McCunney was on a panel of seven international experts that produce a report called *Wind Turbine Sound and Health Affects*. It is a 2009 report and was commissioned by the American Wind Energy Assoc. and Canadian Wind Energy Assoc. The proponents of wind projects have been criticized for using that report on a couple of different grounds. Ms. Tillotson stated that neither are justified criticisms. People have said the report is biased but Ms. Tillotson stated that the report is very readable. The introduction of the report states is that both Wind groups wanted to be proactive in measuring whether there were any adverse health affects sought private or government entities to do the study but could get no takers so the commissioned the study on their own and retained seven of the worlds leading experts in acoustics, medical and occupational therapy. They got them together and provided no input and no direction other than that they were to review the existing material that was out there. Ms. Tillotson stated that given the credentials which are listed on the report of the people on this panel it is foolhardy to suggest that those experts would jeopardize their professional integrities and reputation by producing something that was due to the mandate of the person who was financing the study. Ms. Peterson stated that that was hearings were about, to hear both sides and come up with something in the middle. There will always be someone with 12 letters after their name and on the other side you will also have someone with 12 letters after their name too. Ms. Tillotson agreed and stated that experts often differ in there opinions but you also have to look specifically as to what the expert was relying on. Ms. Tillotson stated that another criticism with the report was that it was not peer reviewed and they have, as a group, criticized some of the material of opponents of wind projects have put out saying that they are not peer reviewed. The study was never intended to be peer reviewed because it wasn't a scientific study of a cohort and didn't go out and take raw data, measure it, and report on it. Those are the instances where you really need to have a peer review panel looking to make sure your research methodologies were appropriate. Ms. Tillotson stated that the panel was charged with reviewing all the peer review material that was out there through Nov 2009 which is the date that they concluded their research and to report on those findings. They looked at all the European studies that were done, all the Peterson studies, and the studies that

were done by various universities and concluded that there was no medical evidence that supported the notion that sound from wind turbines could have adverse health affects. Ms. Tillotson stated that they did report that there were a small percentage of people, somewhere between 3 and 5%, that were annoyed as a result of the turbines. Ms. Tillotson stated that New Generation appreciates the fact that if you are annoyed enough it could cause sleep deprivation and sleep deprivation will in turn frequently have other adverse medical conditions but there is no direct link between the wind turbine sound and adverse health affects. Ms. Tillotson stated that as the project proponents they appreciate that annoyance is not something that they are comfortable with having their neighbors live with and they are committed to not producing any adverse health affects but also making sure that people are not annoyed living in the vicinity of the turbines. Ms. Peterson stated that there is a difference between nuisance and annoyed. Ms. Tillotson stated that the DEP defines noise as a sound that is disturbing to people on a regular basis either preventing them the enjoyment and use of their homes or on an occupational basis and believes that that is also the definition of nuisance. It is something that is persistent and happens on a regular basis. According to the National Research Council sound pressure from a turbine is usually in the 50-60 decibel range at a distance of 40 meters. Ms. Tillotson stated that this is about the same level as a normal conversational speech. Sound pressure or sound levels from on shore wind projects are typically in the 35-45 decibel range which is consistent with the turbines in Falmouth and what they are projecting from the sound studies they have looked at in Bourne. Ms. Tillotson stated that their study showed projected wind turbine sounds of between 35 decibels and 51 decibels. Ambient sound measurements at the same location for the same wind speed ranged from a low of 37 decibels to a high of 49 decibels and in some instances the ambient sound measured was actually higher than the sound of the wind turbine. Ms. Tillotson stated that putting this in perspective with what the World Health Organization suggests as guidelines is between 30-35 decibels for continuous noise in a bedroom at night and 45 decibels for a single sound event. The guidelines from the WHO suggest that sound levels about one meter or 3ft. from the façade of living spaces should not exceed 45 decibels so that people may sleep with bedroom windows open. Ms. Tillotson stated that they are well within the regulatory range because they measured at the property line and not anywhere near the residences in question. In conclusion, the amount and complexity of the literature is staggering and because of the amount of the information available on the internet you have to be careful in terms of what you look at and what you review. Ms. Tillotson stated that Dr. Nissenbaum has been widely referred to by opponents of wind projects who has done a number of studies and his conclusions were rejected by a Canadian judge in a case where some opponents of the wind project were seeking to stop the construction based on anticipated nuisance. The judge looked at that study and found that Dr. Nissenbaum did not have the expertise, qualifications or objectivity to reach the conclusions that he reached. Ms. Tillotson stated that information is not knowledge and Bourne has adopted a clean energy policy that promotes clean renewable energy and to take all the information presented and really applies a discerning and analytical eye to it.

Jerry Ingersoll, New Generation Wind, stated that he wanted to be clear that energy conservation is the cheapest cleanest form of energy that anyone will ever see. Mr. Ingersoll stated that we are the worlds champion energy gluttons. 25% of the oil per year that the world produces is consumed in this country and we are headed for electrification and something has to be done about it. All turbines are not equal and increasing the size of turbines does not necessarily increase the noise. Most of the large scale turbines are quieter than their earlier smaller predecessors. Mr. Ingersoll stated that the Mass Maritime turbine rotates at about half the RPM of earlier turbines and is noisier than the turbines that New Wind is proposing. Mr. Ingersoll stated that fear, worry and uncertainty are well documented characteristic emotions experienced by many in the presence of development plans for a new development which can be a health influencing factor. Mr. Ingersoll stated that tonight they are engaging in an orderly discussion for the purpose of removing some or all of that uncertainty and demonstrating that there are many persons in MA and elsewhere who are living, working and playing comfortably with large turbines operating nearby. Mr. Ingersoll distributed pictures to the Board of operating turbines. Mr. Ingersoll stated that he asked the manager of Hull Power and Light to give him some brief information regarding any issues there. Mr. Ingersoll stated that his answer was that three to six months into operation people realized their fears were unfounded and in the last three years there has been one complaint from a man in a condo that got a shadow during the month of March and he has had no noise complaints. Mr. Ingersoll read what he had received from MMA saying that their turbine has been in operation since June 2006 generating over 4500 megawatts renewable energy. Predictions on the modeling were for 7.6 decibels sound level change over the ambient level reported at the nearest house which was 522 ft. away. The MA regulation allows a maximum of 10 decibel increase of the property boundary and is happy to report that they have received no complaints about noise or any other issues from their immediate neighbors or from the more than 1100 students living on campus. Mr. Ingersoll stated that on the MMR there are 66 air force dwellings within 1800 ft southeast of the turbine there and a total of 92 dwellings within 2500ft. and there have been no complaints of noise or vibration. Mr. Ingersoll stated that he was referred to Gary Gump, who was the energy committee chair in Portsmouth at the time the first notion of putting up the turbine was circulating. He organized a survey involving 500 people and stated that there were no formal objections by any group ever. The Portsmouth sustainable energy committee made extensive efforts to educate the town about the wind turbine and the committee appeared numerous times in front of Town Counsel to keep all parties apprised of activity along with other forums. It was overwhelmingly approved at a town wide voter referendum. In the first 3-6 months following the start of the turbine there were no formal complaints by any person or group received by Town Hall. One citizen complained that the blade shadow was more than he had expected. After a year of operation there have been no formal complaints. Mr. Ingersoll stated that he had a video interview of several abutters produced by another entity and is available if anyone wanted to see it. Diana Barth, Bourne Enterprise, stated that she has heard a lot about the turbines in Falmouth, particularly the one impacted by the residents

on Blacksmith Shop Rd, and wanted to know what distinguished the turbines New Generation is planning from the troubled turbines in Falmouth. Mr. Ingersoll stated that what distinguishes it chiefly is that they have built in technology by computer according to ambient conditions and works also with the shadow flicker. The shadow flicker is the easiest problem to solve because you can predict when exactly the shadows will fall. Mr. Ingersoll stated that the Falmouth turbine situation is very similar to a miniature of Mars Hill where there is a noise source in the air and a small hollow in the Blacksmith Rd area which has very low ambient and that is probably where most of the problem is coming from. Mr. Shedell stated that the trouble with Falmouth is because it was proposed by the town they bypassed much of the process that the Town of Bourne is now going through where everyone is participating in the review and modeling. All the technical analysis was not done up front and it was installed before much participation was given to the community. After it was installed there were some repairs made to it but basically the analysis indicates it is and was in compliance with the DEP noise standards but the analysis that they have outlined and have volumes of documentation on wasn't done in Falmouth until after the turbine was cranking. Barry Funfar, Falmouth, asked if the computer will shut off the turbine if there is shadow flicker. Mr. Ingersoll stated that it is capable of shutting it off if it is determined by the resident and the operators that it is necessary. In many cases the only thing the shadow flicker analysis program knows is the topography and elevation but knows nothing about trees and there are a many trees that can stop a shadow flicker if they are near your house. Mr. Funfar asked if it could be programmed to shut down if there were no trees. Mr. Ingersoll stated that yes; it could and also knows when the sun is shining and when the day would not cast any shadows. Mr. Ingersoll stated that it is a very good technology and is working very effectively. A resident at 57 Mirasol Drive stated that he will be affected by the turbines which will be within 1200 ft of his home and that Dr. McCunney's study was on sound and not low frequency vibrations attributed to vibroacoustic disease which is associated to wind turbines that are near your home. Jim Porter, Citizens for Responsible Wind Energy, stated that they are a group of local Bourne residents that have been the sleeping giant that this project has awoken and wouldn't say that several hundred people in the group are based on fear but rather concern and understanding of actualities that this project would bring to the community. Mr. Porter stated that there is no green in the project for Bourne and is this something that we can invite into our community with the potential for all these adverse health affects amongst other issues. Mr. Porter passed material to the Board Members on behalf of their group with 10 items that can be reviewed at their leisure. These items include Evaluation of Noise Data from Winds 1 turbine, Expert acoustical Engineering critic of New Generation Wind, a presentation that was submitted to the Cape Cod Commission, Public Health Impacts of Wind Turbines as prepared by the Minnesota Dept of Health, Wind Energy Industry Acknowledgement of adverse health affects, Analysis of the American Canadian Wind Energy Assoc., Wind Turbine Sound and Health effects, Summary and rebuttal of Dr. McCunney's testimony on behalf of Green Mountain Power Corp by Dr. Nina Pierpont, Wind Turbine Syndrome and the Brain by Dr. Nina

Pierpont, Noise Complaints Draw Opposition to Wind Farms, Infra Sound; Your Ears Hear it But They Don't Tell Your Brain, which was a presentation by Mr. Alex Soule, Washington University School of Medicine, Siting of Wind Turbines with Respect to Noise Emissions and their Health and Welfare affects on Humans in Bourne MA and lastly an 11x17 diagram showing the number of homes that are within 1 ½ kilometers (4921 ft) of the proposed wind farm. Mr. Porter stated that his group is probably more for wind power for green energy but not industrial wind turbines next to residents and the Town Bylaw that was approved and they have taken issue with as not a complete document but can certainly be improved wanted to point out that in the very beginning of that bylaw under purpose it states *The purpose of this section is to provide for the development and use of wind power as an alternative energy source benefiting both the economy and the environment while protecting public health, safety and welfare preserving environmental, historic and scenic resources, controlling noise levels and preventing electromagnetic interference.* Mr. Porter stated that if you look through the entire document and there is not one section that protects anything to do with public health, there is noise and the other criteria listed, but nothing about public health. Mr. Porter stated that he would like to applaud the Board of Health for undertaking this. Mr. Carl Phillips, an epidemiologist, has spent most of his career as a professor of public health. He has been working on issues associated with wind turbines and health affects on local residents for most of the last year and has reviewed the literature and given testimony. He is also participating in ongoing research including Dr. Nissenbaum. Dr. Phillips stated epidemiology is the only science that studies real health effects in people. Dr. Phillips stated that there is overwhelming evidence residents living nearby industrial wind turbines suffer serious health problems. There are an enormous number of reports living from people living near turbines and what is critical about these there are a dramatic consistency to them across locations and the disorders that are reported are mostly sleep disorders but also difficulty concentrating while awake and other stress mediated disorders. Also mood disorders such as anger and depression as well as balance and dizziness problems, migraines and other physiological affects. Dr. Phillips stated that this can be devastating and severe enough to make someone's life miserable and actually force them to abandon their house. There is also concern about blood pressure and Dr. Phillips believes this may be stress related because it is a constant stress and the psychological affects can be quite severe. Dr. Phillips stated that they have observed hundreds or possibly thousands of individuals having this affects to a great enough extent that they wanted to write them down and publish them to the world and what reason would they have for sending that information out if it were not true. Dr. Phillips stated the adverse event reports have been referred to already but some are not out yet but he has an opportunity to look at them and they suggest numbers higher than the 4-5% and none below 5%. That means that 3 people out of a room of 60 exposed would have substantial health effects and no one would allow that for a pharmaceutical that was being poured into the water and everyone had to take it whether it was hurting them or not. Dr. Phillips stated that population studies, because they are lacking, create a huge difficulty for those who are trying to prevent these

problems from occurring. Typically, studies are required of an industry by government and regulators before a lot of people are exposed to something. Dr. Phillips stated that this has not been done in this case leaving those who are trying to recommend best solutions from the public health perspective, lacking the data that they need, all they can say is that there is a problem and they really don't know enough about it to make it go away. Dr. Phillips stated that people should think of something that is really bothersome to them and then imagine that happening most days all night long. It might not bother 95% of other people but that is the type of thing that can turn an experience that is annoying into a serious health problem because of the constant stress reaction in your body creating all manner of psychological and physiological damage. Dr. Phillips stated that in terms of the question is there a serious health risk from this exposure he really doesn't think there is any doubt about it. There is epidemiological evidence, the outcomes are often quite severe and they are not rare. They are trying to collect more information and ask the question how can they do this better. Dr. Phillips stated that how could it make sense from a public health perspective to go forward until more of those questions are answered. Dr. Phillips stated that they know noise from a turbine reaches peoples bodies and at that point noise can have very complicated affects on people's minds and bodies and can cause severe distress. Ms. Peterson called for a five minute recess. Mr. Kurt Tramosch is an environmental planner whose background is in community environmental health. Mr. Tramosch is going to give a presentation on work that he has done over the last three years in trying to understand community aspects of wind especially health and safety concerns of wind turbine siting. Mr. Tramosch stated that local review of wind siting has been one of the most complex and challenging things he has ever run into in his career in local environmental health. He was a co-founder of MA Assoc. of Health Boards in the early 80's because he wanted to find ways that local Boards of Health could get a sense of their range of powers and how to apply them to environmental health issues. Wind siting can be a very complex project. Mr. Tramosch stated that in talking to the person in charge of overseeing Hull 2 when Hull 2 went in they had had experience with Hull 1 and there is a closeness of the turbine to the school and to the neighborhood and even the operators of the turbine admit that Hull is an extremely noisy community. It is under one of the busiest runways at Logan airport and had more noise complaints than any other town in the Boston basin. After years of running Hull 1 when it came to siting Hull 2 the Municipal Light dept in Hull went through the site selection process and came up with the site that they deemed the best which was next to Hull 1 and went out for an RFP to build that turbine. Mr. Tramosch stated that at the last minute neighbors met with the light board and convinced them that they did not want to put a second turbine in the neighborhood. This is part of a report that was done by a professor at UMass Amherst who said that they had to go back to look for another site because of issues those neighbors had about putting a much larger second turbine next to Hull 1. Hull 1 was said to be a toy next to Hull 2. Mr. Tramosch stated that Hull 2 is a toy compared to what they are talking about in Bourne for this project and the scale for the project here for wind turbines is among the largest in the Northeast. There may be a 3

megawatt that is a little larger in Maine. Wind turbines have a lot of working parts and are extraordinarily heavy and complex. The wind turbine company in Portsmouth, RI went bankrupt because of the frequent breakdowns of the turbines. They lost their warranty on the turbine and their yearly maintenance agreement after 18 months of operating that turbine. Mr. Tramposch stated that two large turbines have just been assembled in Gardner and are about to go on line which will be interesting to see when they are 600ft from the courthouse and 1200ft from the community college and 1500ft from a major hospital what the impacts will be. Mr. Tramposch stated that it has opened many eyes in Falmouth and there are many Falmouth residents here at the meeting tonight to reach out to other communities to give their experiences which is an incredible education for all of us to see how this is working but unfortunately in Falmouth instead of having one or two turbines at the wastewater facility it is now technically a wind farm. Mr. Tramposch stated that many communities are trying to change the bylaws because of the problems they are having with the wind turbines and that shutting down a turbine for non compliance can take up to 6-8 months. Most of the best research seems to have been done in the last year after the expert panel and the findings basically say that it is not necessary to hear infrasound to be exposed to it in an adverse way. Mr. Tramposch stated that wind turbine noise being as loud as your refrigerator is laughable; if that were the case no one would have a refrigerator. The sleep disturbance issue is part of the WHO message but is much bigger than sleep disturbance in that it leads to real extended serious health problems as many of the neighbors from Falmouth can tell them. Mr. Tramposch stated that they know from research that wind turbines cause problems for people at a much lower sound exposure. Dr. Nissanbaum has done great work in looking at a community such as Mars Hill that has an extensive problem with noise. The Board of Health, Board of Selectmen and other town leaders of Brimfield where 11 turbines were proposed visited Mars Hill to speak with residents and came to the conclusion that it was noisy with more problems than they could have imagined and that they did not think it was suitable for their town and for the noise levels they will have in that residential community. Mr. Tramposch stated that the hearings in Wareham that are under way right now that an increase in noise in the community leads to levels of complaint which become more serious as the noise is increased. Mr. Tramposch stated that he would like to see the Board of Health participate in asking for an acoustic analysis which incorporates low frequency sound. The DEP standards are from 1972 and are suggestive and outmoded for this kind of noise complexity. Mr. Tramposch stated that a school 1100 ft from one of the turbines is totally unacceptable and one of the reasons why is the work that Dr. Eileen Brunseck did showing that noise in the community can have physiological and learning problems for students. The shadow flicker strobe effects are totally misclassified as annoyance and nuisance. There is no predicting what will happen with flicker and the flicker standard for 30 hours per year is not a standard but a suggestive guideline that came out of Germany that the industry picked up on as something that the people are willing to accept at the outside limit. The Cape Cod Commission is now suggesting that any flicker over 10 hours per year be mitigated but Mr. Tramposch feels that five

hours is too much based on what he has seen from different communities that have experienced this. Mr. Trampusch stated that accidents with wind turbines do not have to be reported. They also attract lightening which can cause fires. Falling parts can also be dangerous. There is also concern for the water supply in Bourne. One audience member wanted to know why it was acceptable for any percentage of the residents to be annoyed and is the Board willing to aggravate 3-5% of the people in Bourne. Mr. Trampusch stated that the Board should also consider susceptible populations such as nursing homes, assisted living centers and people suffering an illness at home. Ms. Peterson asked Mr. Ingersoll if he had any rebuttal comments to make. Ms. Tillotson stated that due to the lateness of the hour they would let the public make their comments. Mr. Griffin (audience) stated that he had noticed that Mr. Ingersoll has already cleared some land for the wind turbines and asked what he would do with that land if the turbines were not constructed. Mr. Ingersoll stated that his family has been instrumental in conserving land in Bourne for the last 45 years and they have set aside several hundred acres and managed to get the town to buy another 99.5 a few years ago for open space and the land that has been cleared will ultimately reforest itself if the turbines are not approved. Mr. Ingersoll stated that they have a replanting plan for whatever happens with that site and are sincere about conservation and green energy and there would be \$200,000 a year for the Town for the life of the project and money for the residents living around them in close proximity. Sarah Cody (audience) stated that there are significant health consequences of not pursuing clean renewable energy. The report that Ms. Cody read from is attached. Ms. Cody stated that in New England we import over 90% of our electricity from other nations and other regions of the U.S and urges the Board to look at the science and benefits of utilizing a clean local resource. Greg O'Brien stated that he was here on behalf of Liz Argo of the Cape & Island Wind Information Network who couldn't be here tonight. Mr. O'Brien stated that he would email Ms. Argo's presentation to the office. Mr. O'Brien stated that in Vinyl Haven there was a survey done in 2010. Of the 515 that responded 95% did not have a problem with the turbine. Mr. O'Brien stated that in the words of the justice in Canada, Dr. Nissenbaum, in a review of his affidavit, shows that he does not take an objective approach to the issues at hand sitting leaps and logic and goes on to say that he has obtained a great deal of information on the subject but information is not knowledge and Dr. Nissenbaum does not have the type of knowledge referred to the court that makes him an expert in any of this area. An audience member asked for a copy of the report from Mr. O'Brien. Ms. Tillotson stated that if he would contact her she would get him a copy. Shawn Brennon (audience) stated that he is a taxpayer and a registered voter in the town of Bourne and lives on Chamber Rock Rd. which is located within 2000 ft. of the nearest proposed wind turbine. Mr. Brennon stated that he appreciates the Board taking the time to review the project. Mr. Brennon stated that he is concerned about shadow flicker that is going to be caused by these proposed 500ft industrial wind turbines and is providing the Board with a study that shows that the distance from turbines is not a factor in diminishing the affects of shadow flicker. The area of concern is wherever the turbines may cast a shadow. Mr. Brennon stated that means the area

of concern are the hundreds of homes and businesses in Bourne, major roadways that travel through Bourne, and Bournedale Elementary School, which are all located within one mile of the proposed wind farm. The developers of this industrial wind farm have stated publicly that the only ill effect from industrial wind turbines sited near residences is annoyance and that they have researched medical journals the world over and could not find any evidence that annoyance is a disease. Mr. Brennon stated that he would like to bring problems with concentration and learning to the Board's attention because of Bournedale Elementary School and don't our children deserve a safe and comfortable environment with which to learn and isn't that the very reason the Hoxie School was closed. Mr. Brennon sited another study that he will leave with the Board which shows there is a highly documented health condition that is triggered by shadow flicker. Professor Graham Harding is a pioneer in the research of the affects of light on photo sensitive humans. It was the Dr's research and findings that caused the television and video game industry to change their flick rates to prevent epileptic seizures. Photo sensitive epilepsy, a condition that 1 in every 4,000 people has, can be triggered by shadow flicker. Mr. Brennon stated that he would like to ask the proponents with Dr. Graham's findings along with the millions of pages of individual testimonies and doctor's findings from all the world over stating the ill effects of siting industrial wind turbines in residential neighborhoods why haven't the wind developers and turbine manufacturers acted to mitigate or eliminate the cause of these problems and in his opinion the only conclusion is that it is all about money and not about people. Mr. Brennon stated that a comprehensive study done in Bethany, NY concludes that the most effective way to reduce flicker affects is to zone them away from residences, schools, churches, libraries and places of business prior to construction. Mr. Brennon stated that he has a copy of the study for the Board. Ms. Peterson stated that in the future she would like all materials submitted to the Board of Health office with five copies for the Board members. Mr. Funfar stated that he lives near the wind turbine in Falmouth and people there are adversely affected from a one mile distance to 1320 ft. Ms. Peterson stated that Mr. Funfar has already made this presentation at a previous meeting. Mr. Andrews agreed that they have already heard this presentation. Mr. Barlow stated that this is not about one group against another and the Board is looking at this as if wind turbines are going to go anywhere in town and the Board does not have to keep hearing about what different judge's opinions are about what a scientist may have said. Ms. Peterson stated that they are not minimizing what they are going through but the Board does not want to hear repeat information so everyone gets a chance to speak. Keith Mann, (audience) who lives on Head of the Bay Rd. stated that there are 160 megawatts worth of wind power in the US and Europe producing right now, which is about 100,000 turbines. People are living with these turbines in their communities. Most power sources have some adverse health affects. Mr. Mann believes that wind turbines have the lowest risk. He is a proponent for wind projects and has a permit for three wind turbines on his farm. Mr. Mann stated that he is concerned about safety as well and has contacted the manufacturer of Nordix and asked for their safety records for the turbines and was told that they

have been producing these turbines for 10 years and have 1,000 in production right now of this particular model and as of six months ago there have not been any catastrophic problems with any of the turbines. Mr. Mann stated that Portsmouth, Hull and MMA all have turbines within 500-800 ft within schools and there have not been any complaints of lack of concentration. Mr. Mann stated that he did not hear Dr. Phillips say in his analysis any reference to any epidemiological study that had been done only that he felt they should be done. Dr. Phillips stated that every one of the adverse event reports that consist of someone doing a case crossover study on themselves is a useful epidemiological study and there are hundreds of those. Mr. Mann stated that there had never been a report generated from those. Dr. Phillips stated he understands there is a mythology about peer reviews about all the studies don't necessarily end up in a journal. Ms. Tillotson stated that there has been a lot of information brought up tonight and would like the opportunity to answer some of the questions that they didn't have the answers to tonight. Mr. Andrews stated that modeling software is retested against real world situations to fine tune some of the assumptions that are made as they are doing that and on these two programs has the model been tested against similar turbines, the exact same model and height, and difference in terrain to confirm that the assumptions in the model as tuned as close as possible. Mr. Andrews asked if they knew how much work had been done on the tuning and the software. Mr. Shedell stated that both packages he had referred to; Windpro and Cadna are the pieces of software that people use for major sources in Europe and more recently in the US. Mr. Andrews stated that if someone is going to use that information to hang their hat on and the proponents want to make sure that this software is as accurate as possible. Mr. Shedell stated that this is why they use the two premium pieces of software to back up each other because they have strengths and limitations. Mr. Shedell stated that he is certain, because these turbines did not exist then, they were not analyzed. Ms. Tillotson stated that despite the fact that the software wasn't designed to anticipate these particular turbines experimental noise measurements from existing turbines that are consistent with this turbine essentially prove the projection of the software. Mr. Ingersoll stated that in order to get financing for a private turbine project they must emulate three years of wind data. Mr. Ingersoll stated that they will continue to monitor the Glacier Way area which is potentially like the Falmouth situation and is in the wind shadow of the hilltop on which their cell tower sits so they will monitor the actual wind ambient in comparison to the actual met tower velocity so they can predict the real accuracy of what conditions will be with turbine #3. Mr. Barlow suggested this be continued on another night due to the late hour. Mr. Andrews stated that they have already heard so much information and they could continue this on forever and believes it is time for the Board to sit down and go through the regs that they have for the town and develop a set by the Board of Health that is specifically for the health so that they have guidelines and the proponent knows what he has to maintain and be within and enforcement work within those guidelines. Ms. Peterson asked if what Mr. Andrews is saying is that he finds sufficient evidence to determine that there is a potential for health affects. Mr. Andrews agreed. Ms. Peterson stated that wind turbines can have impacts

upon public health and that the Board of Health should consider formulating and adopting regulations to protect public health from such impacts. Mr. Andrews stated that they should be reasonable regulations. Mr. Barlow stated that they could probably take half the information they have received and set it aside because it doesn't pertain to public health. Mr. Andrews stated that they have been receiving many emails and have information overload and have had a lot of duplicate information. Mr. Andrews stated that he believes they have seen enough information and has heard from the proponent that shadow flicker can be an issue and it has to be limited and they have talked about the software and the proponents could actually help the Board with the regulations by saying they have certain software that can do certain things which could be implemented into the regulations. Suzanne Hebb asked if the Board would also be looking at the protocol for if the neighbors have a problem. Mr. Andrews stated that that would also be a part of the regulations. Mr. Barlow stated that they develop regulations and then there is a public hearing on it so the public can make comments. Mrs. Hebb stated that she didn't want it to become a Falmouth situation where the people were not listened to and if she is the only one that has a problem with the turbines she wants to be listened to. Mr. Barlow stated that most of them had gone to Blacksmith Shop Rd. and listened and rode around. **Mr. Andrews made a motion that the Board of Health make a finding that there is sufficient evidence to determine that wind turbines can have deleterious impacts upon public health and that the Board of Health should consider formulating and adopting regs to protect public health from such impacts.** Ms. Peterson stated that this means that they have determined that there may be detrimental health aspects that would cause adverse health impacts. With this motion they can move forward and take evidence to make rational connections with the evidence. **Ms. Peterson seconded the motion. All in favor and the motion PASSES.** Ms. Peterson stated that things will not be much different and they will make a date for the next time together. Mr. Andrews stated that there have been many topics brought up and each meeting should be topic related. Mr. Barlow stated that in all fairness to everyone setbacks should be looked at first because that is the crux of the issue because setbacks affect everything, shadow flicker and noise. Mr. Barlow stated that they have seen in previous projects that setbacks seem to alleviate some of the problems. Mr. Barlow stated that he cannot say what setback would sit with most of the Board of Health. Mr. Andrews stated that he did not believe they were at that point yet and the concern seems to be sound noise, flicker, fire and ice throw. Ms. Peterson stated that the first meeting will be about sound and noise which will be held on February 23, 2011. The acoustical expert for the proponents could not be at the meeting on February 23, 2011 so Ms. Peterson stated that would change the meeting date to March 9, 2011. Mr. Andrews asked that the proponent send in a formal request for that change.

5. Update on Working Group-Stanley Andrews-ISWM Business Model Working Group and Sewer Wastewater Committee Advisory Board-Mr.

Andrews stated that the Sewer and Wastewater advisory committee has met once and has had several cancelled meetings since and the next meeting is proposed for

next week. They will start with organization of the Board and then start working through the mandate and the suggestions of the Selectmen and the statements on scope of work and start having regular meetings. The ISWM business model working group is proposing on Feb 15, 2011 for a joint meeting of the four Boards and at that meeting, George Aronson, consultant for ISWM, is going to be coming in and going through everything that is being worked on and looked at. In the packets is a legal request form that ISWM put out to Town Counsel. Town Counsel reported back what his findings were. Mr. Andrews stated that there is also a chart prepared by the ISWM group as well as George Aronson and what they propose for a working schedule coming through. Reading the memo from Town Counsel it is anticipated that there is potentially going to be a request of ISWM to come back to the Board of Health to ask to do some of the other functions that they are looking to do such as use properties on the facility as part of their RFP. Mr. Andrews stated that the RFP should be, as far as the timeline goes through, where they will be for looking at different technologies to put in proposals to the working group. They will have a group towards the end of it that does a review of those proposals. Mr. Andrews stated that he and the chairman have both signified to the group that neither one of them would be able to sit on that process because they would be voting on those after the facts. Mr. Barlow asked if the ISWM committee think it's an adversarial position that they would try and take the site assignment of the landfill away from the Board of Health. Mr. Andrews stated absolutely not and has not heard anything about that. Mr. Barlow stated that it was announced at the Finance Committee meeting the other night. Mr. Andrews stated that he will ask for a clarification on that.

6. New Business-No new business reported

Mr. Barlow made a motion to adjourn. Mr. Andrews seconded the motion. All in favor and the motion PASSES. The meeting adjourned at 11:10 P.M.

Taped and typed by Kathy M. Burgess for the Bourne Board of Health

Respectfully submitted by the Bourne Board of Health

Kathleen Peterson_____

Stanley Andrews_____

Galon Barlow_____

Donald Uitti_____

Carol Tinkham_____

cc Board of Selectmen/Town Clerk

cc Board of Selectmen/Town Clerk