## Tribunal rules in favour of Dufferin Wind

The Environmental Review Tribunal has upheld ministerial approvals of the 100-MW Dufferin Wind Power (DWP) wind farm in Melancthon.

The approvals include not only the turbines but also the 230 kv transmission line along the rail corridor. DWP also has Ontario Energy Board ?leave to construct? the power line but lacks agreement with Dufferin County and other property owners for necessary easements, and is seeking permission to expropriate.

In upholding environmental approvals, the tribunal essentially rejected claims of adverse effects on human and animal health and of irreparable damage to the environment.

?The Tribunal finds that the Appellants have not established that engaging in the Project as approved will cause serious and irreversible harm to plant life, animal life or the natural environment.

?The Tribunal finds that the Appellants have not established that engaging in the Project as approved will cause serious harm to human health.

?The Tribunal finds that the Appellants have not established, on the facts of this case, that the renewable energy approval process violated the Appellants' right to security of the person under section 7 of the Charter,? reads the decision.

The case is listed as Bovaird v. Director, Number 13-070 to 13-075. It will be posted on the ERT website although it hadn't been this week.

The Director is Vic Schroter of the Ministry of Environment. He had issued DWP's Renewable Energy Approval on June 10, 2013. Roselyn Bovaird, CORE (Conserve Our Rural Environment), VanDerZagg (farms), John Maguire and Kathleen Kurtin appealed on the basis of irreversible harm to the environment and animal health on June 25, as did Dennis Sanford on the basis of serious harm to human health.

Then, on July 14, Mr. Sanford was joined by the other parties in raising the Section 7 challenge.

The ERT issued its 127-page decision on the morning of Monday, Dec. 23 following 26 days of evidence.

The decision cites three main issues, but the hearing actually dealt with five ?sub-issues? at great lengths: effects on soil and productive farm land generally, especially Honeywood loam; water resources; the Niagara Escarpment Plan; and bats and other animals.

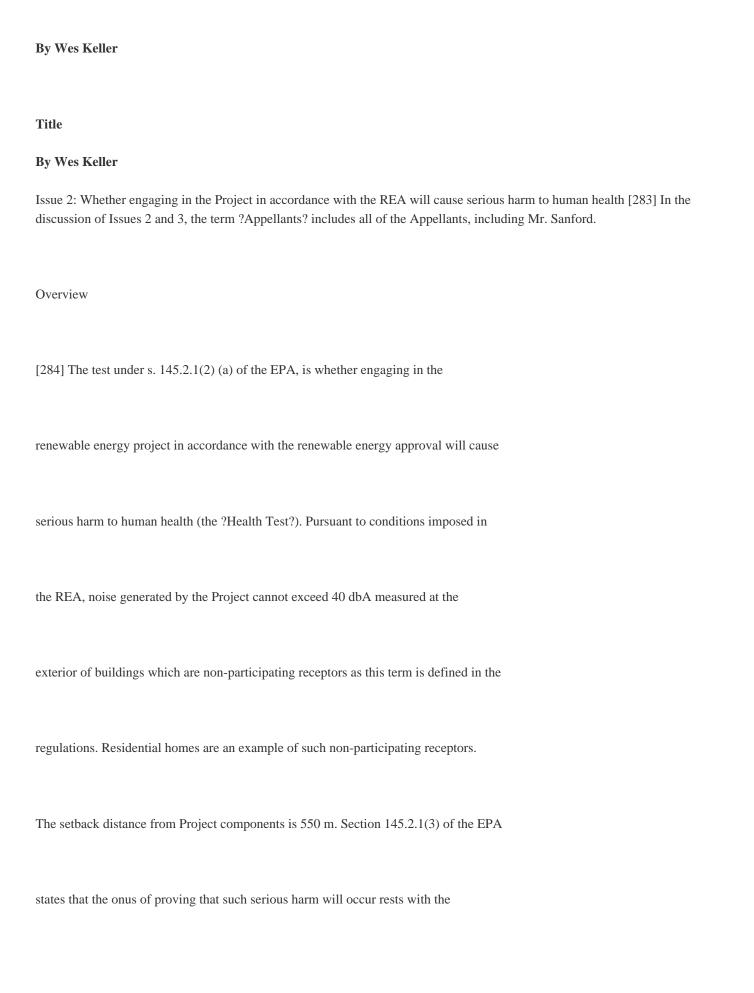
The decision may be subject to appeal but Dennis Sanford said in a phone interview Tuesday that, because of the holidays, it might be difficult to meet the 15-day deadline for an appeal.

Mr. Sanford, represented by anti-wind lawyer Eric Gillespie, heads Wind Resistance Melancthon. He had not spoken with his committee or lawyer at the time of the interview.

Noting that there has been only one instance of the ERT over-ruling a wind turbine approval, he said adverse health effects are difficult to prove. The one instance of over-ruling involved the habitat of a Blanding's (Emydoidea bandingil) turtle at the site of a proposed Gilead Power wind farm in Prince Edward County.

In fairness to the tribunal with respect to timing, Chair Heather Gibbs had stated at the outset that it had to meet a deadline.

The individual sub-issues are covered in separate stories below:



Appellants. Therefore, they must demonstrate that serious harm to human health will occur in circumstances where these conditions have been met. If the evidence suggests that serious harm will occur only in circumstances where noise levels exceed 40 dbA at a non-participating receptor and/or at a distance less than 550 m from a receptor, then the Health Test will not be satisfied. [285] The Appellants were represented in two groups. CORE, D&C Vander Zaag Farms Ltd., Ms. Bovaird, Mr. Maguire, Dr. Crysdale, and Ms. Kurtin (collectively referenced as the ?CORE Appellants?), and Mr. Sanford. However, these two groups relied on the evidence adduced by each other, and filed joint written submissions regarding the Health Test in this proceeding. [286] The Tribunal heard extensive evidence on this issue, and, as well, extensive written submissions from the parties numbering several hundred pages. While the Tribunal has reviewed and considered the evidence and submissions in detail, it is not

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although the evidence, issues, and submissions are very similar, this case is not a
duplicate of APPEC. The Tribunal has undertaken its own deliberation of the evidence
and submissions of parties in this proceeding, and has independently arrived at its own
conclusions respecting the issues raised. However, as the Tribunal's findings are
similar to those in APPEC, the Tribunal has structured its analysis and discussion in a
manner similar to the approach adopted by the Tribunal in APPEC. In this regard, the
Tribunal accepts that its analysis of Issue 2 should be addressed under three sub- issues:
? 2A. Whether the Appellants have established a causal link between wind
? 2B. Whether engaging in this Project in accordance with the REA will cause
? 2C. Whether Sarah Laurie should be qualified as an expert to give opinion
turbines and human health effects where there is a 550m setback and 40 dBA
noise limit;

Mechanism Is Not Required: Para. 819 - For the purposes of this

Decision, the Tribunal finds that the Appellants can attempt to satisfy the section 145.2.1(2) test even if there is uncertainty about the specific mechanism that causes the alleged health effects. IWTs Can Cause Harm to Human Health: Para. 872 - While the Appellants were not successful in their appeals, the Tribunal notes that their involvement and that of the Respondents, has served to advance the state of the debate about wind turbines and human health. This case has successfully shown that the debate should not be simplified to one about whether wind turbines can cause harm to humans. The evidence presented to the Tribunal demonstrates that they can, if facilities are placed too close to residents. The debate has now evolved to one of degree. The question that should be

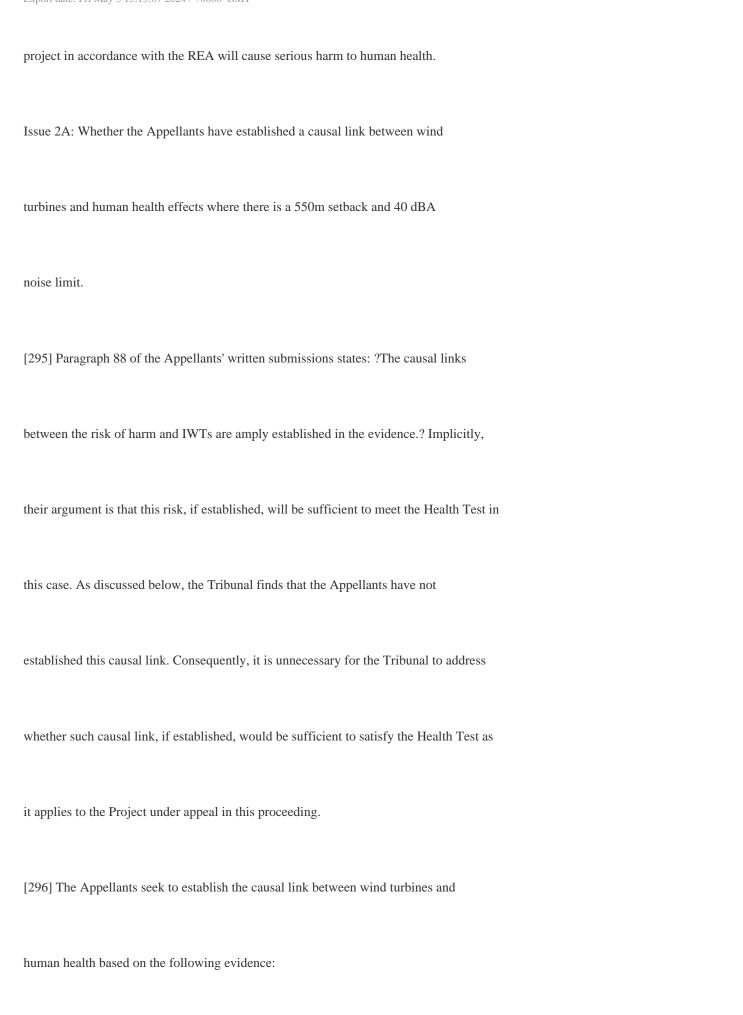
issues would be extremely onerous and unmanageable. Erickson allows

will cause serious harm to human health. The first basis is to show that current experience with wind farm projects, both in Ontario, and elsewhere in the world, demonstrates that it is sufficiently predictable that some or all persons living within the vicinity of wind project components (wind turbine(s) being the prominent component) will experience serious health effects. This may be generally described as a generic approach, as it does not seek to establish causation with respect to specific identified individuals. To support their position in this regard the Appellants adduced evidence regarding the incidence of annoyance, which they assert will be caused by wind turbine projects, as well as evidence that environmental noise and annoyance cause stress and sleep disturbance. The Appellants also adduced evidence of persons living in the vicinity of existing wind turbine projects, both in Ontario and elsewhere in the world, who report adverse health effects attributed to their exposure to these wind turbine projects.

[292] The second basis on which the Appellants seek to establish that the Health Test

is met is to show that specific individuals have suffered serious harm to their health as a
result of living in proximity to wind project components. In this case, the Appellants have
adduced evidence of persons living in the vicinity of existing wind turbine projects in
Ontario who report adverse health effects which they assert are caused by these wind
turbine projects (?the post-turbine witnesses?).
[293] In overview the Appellants assert that they have established causation on both
bases. Based on the generic approach, they maintain that it is predictable that a certain
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percentage of the persons living in proximity to the Project will suffer adverse health

effects. Based on the approach respecting the experience of specific individuals, they maintain that the evidence of the post-turbine witnesses establishes that wind turbines do cause harm to human health, and, more specifically, that wind turbines exacerbate certain types of pre-existing medical conditions. The Appellants then argue that this evidence will establish causation with respect to this Project. In this regard, they point to evidence they have adduced respecting individuals who will live in the vicinity of wind turbines in the Project (the ?pre-turbine witnesses?), asserting that each of these individuals currently suffers from medical conditions that will be exacerbated by exposure to wind turbines. The Appellants maintain that the evidence of these preturbine witnesses ?is highly relevant to establish a causal link between the proposed Project and the more likely than not probable effect on those living nearby.? [294] In summary, it is the Appellants' position that this evidence, considered in the context of the Erickson and APPEC decisions, demonstrates that engaging in the



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73. This causal chain is evidenced by the adverse health effects

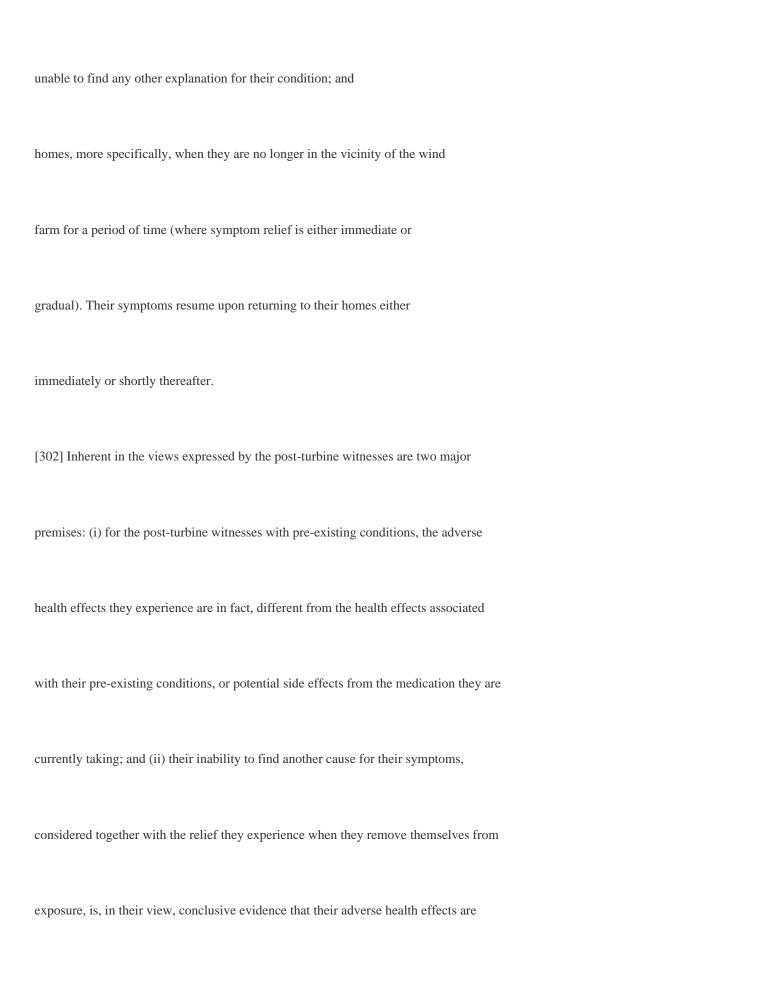
effects.

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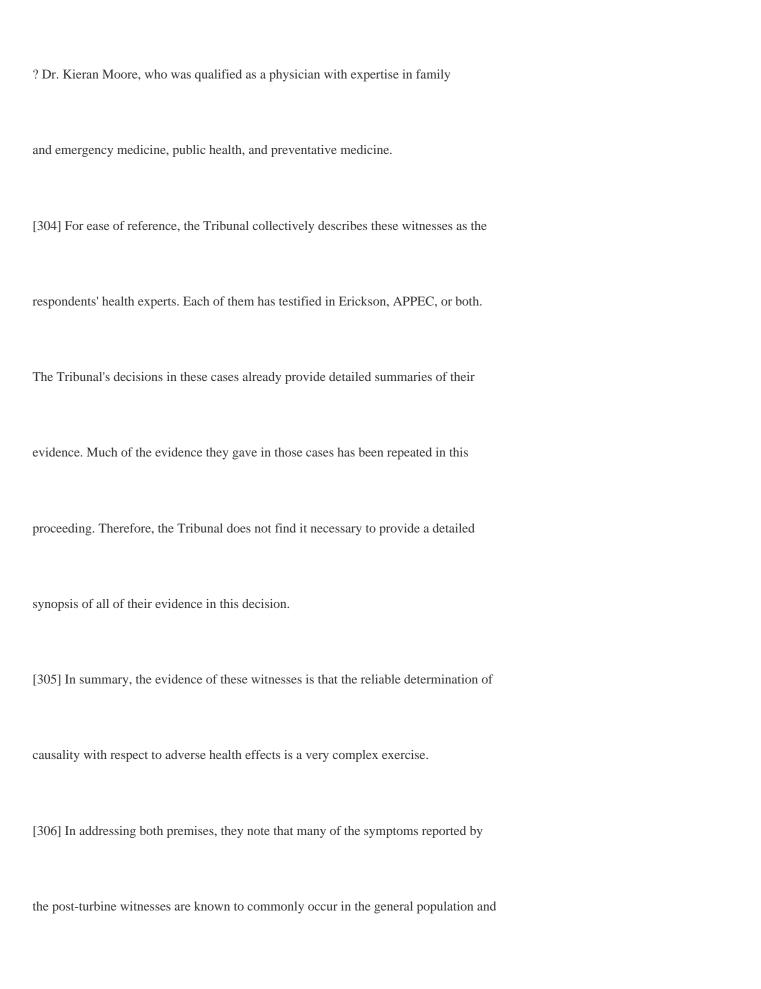
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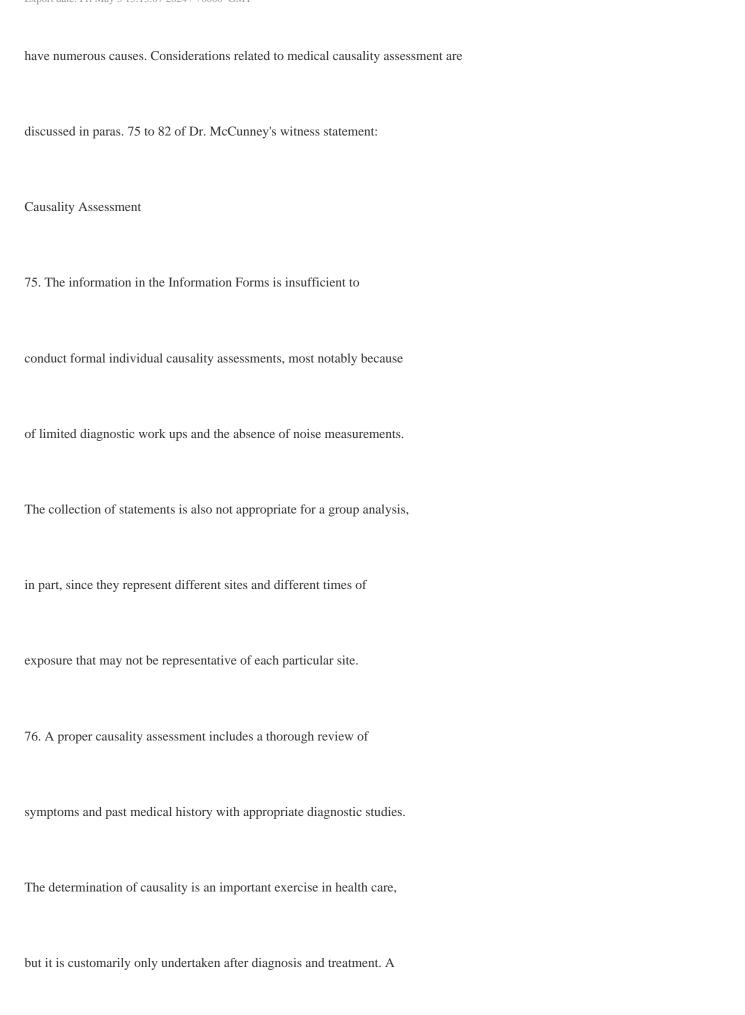
farm project commenced operation, or shortly thereafter, and they have been

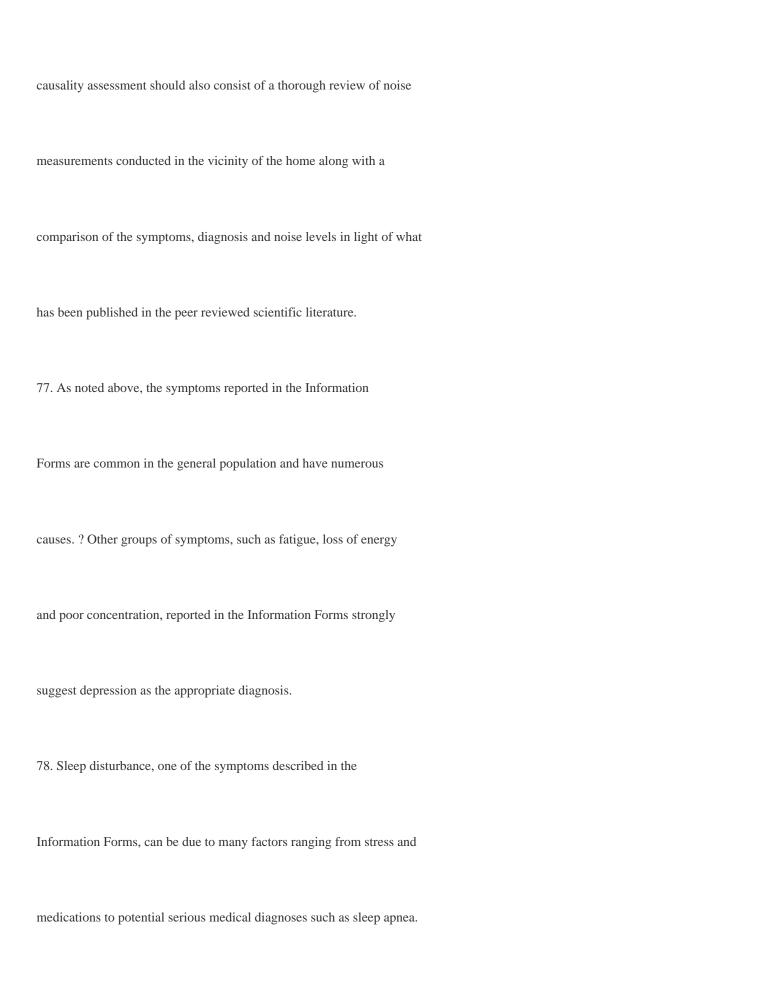


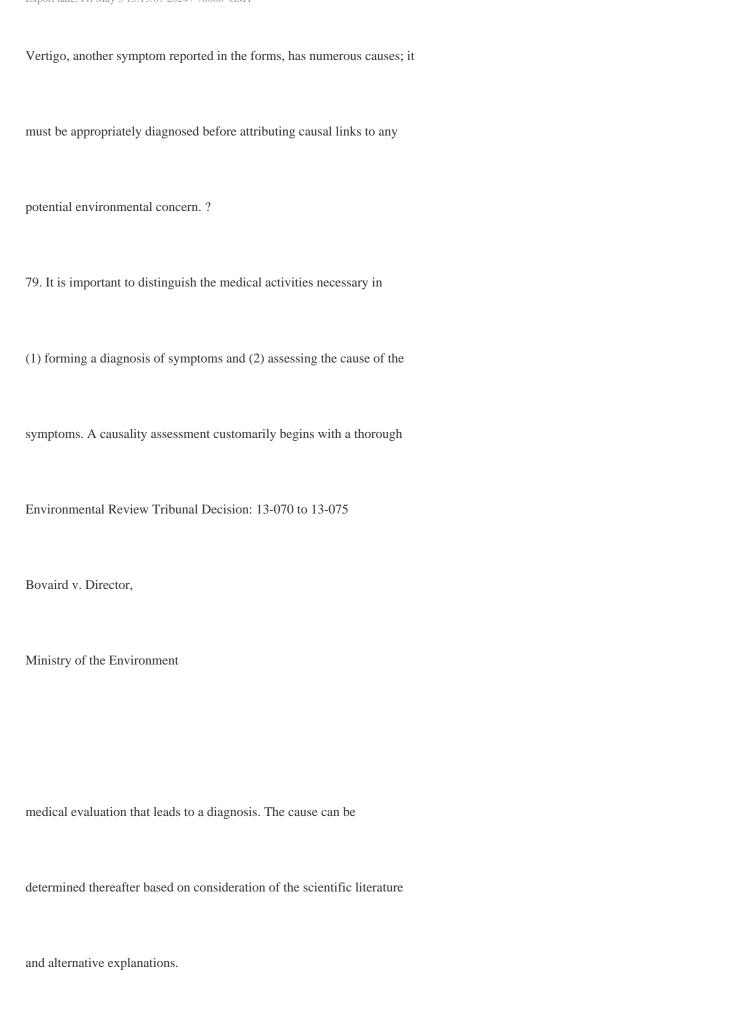
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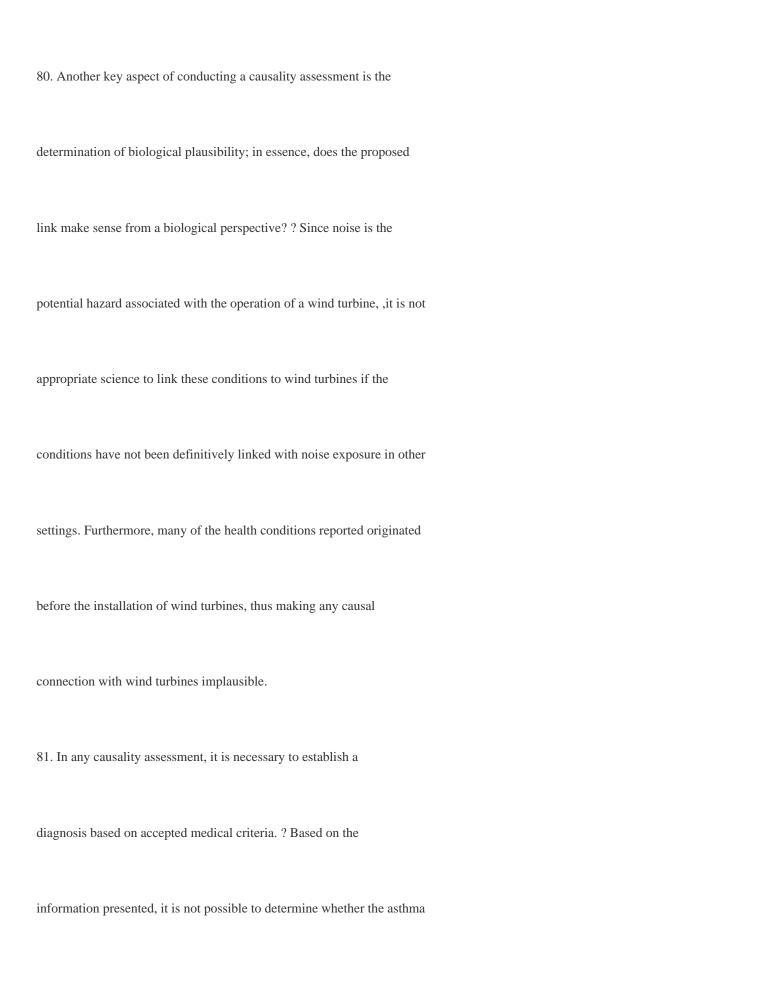
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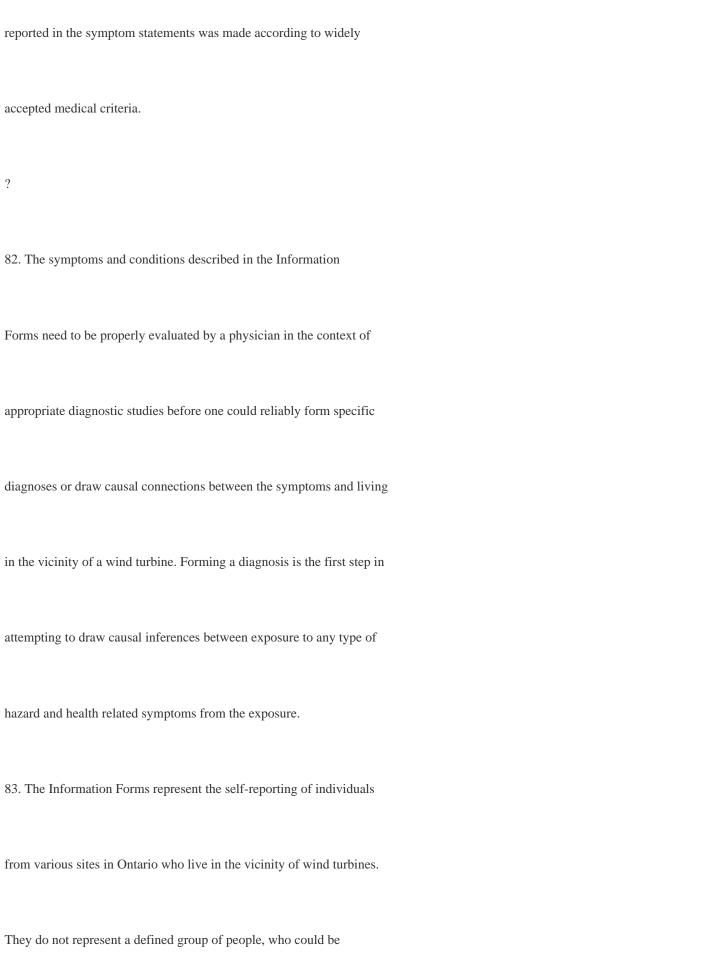


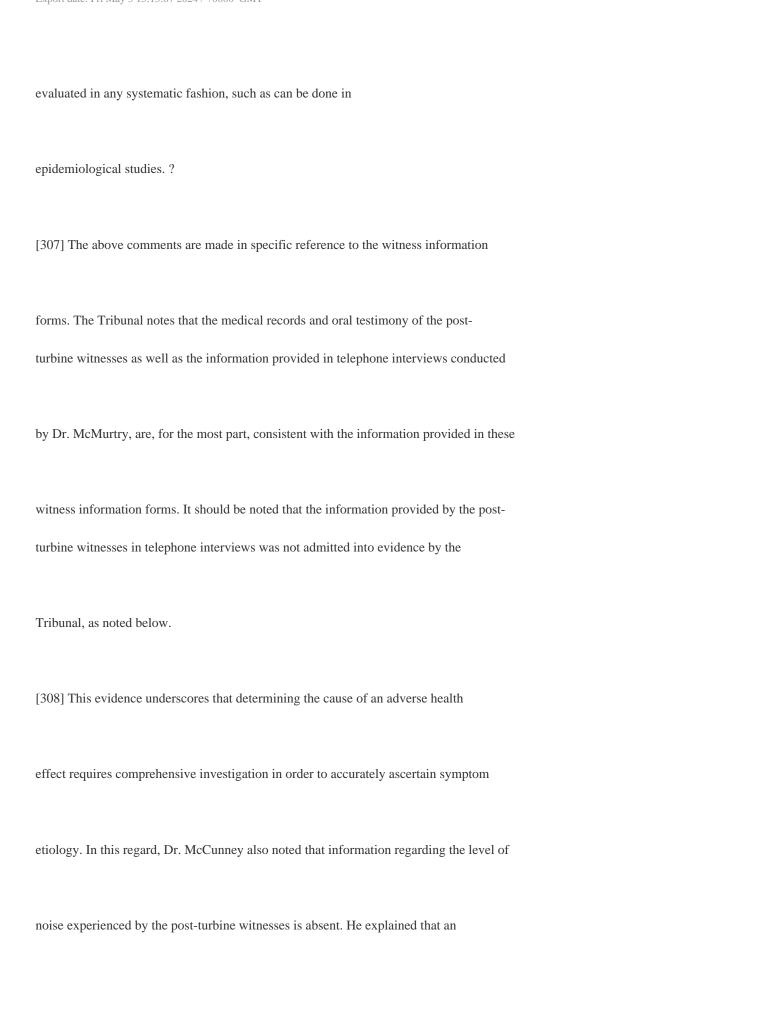








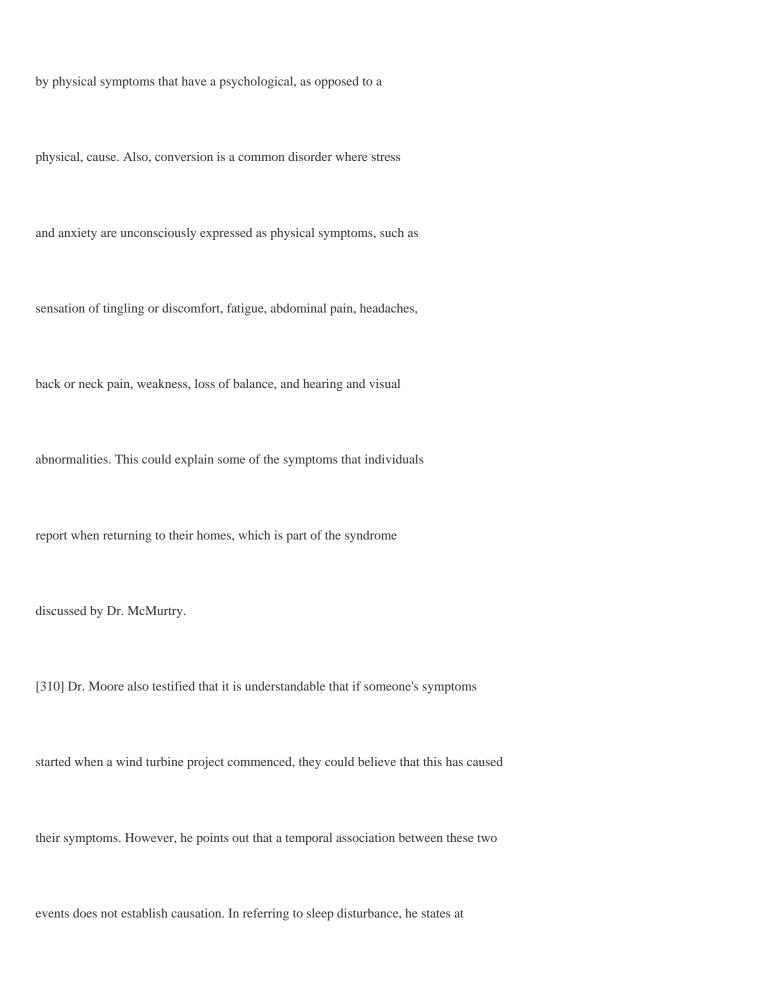


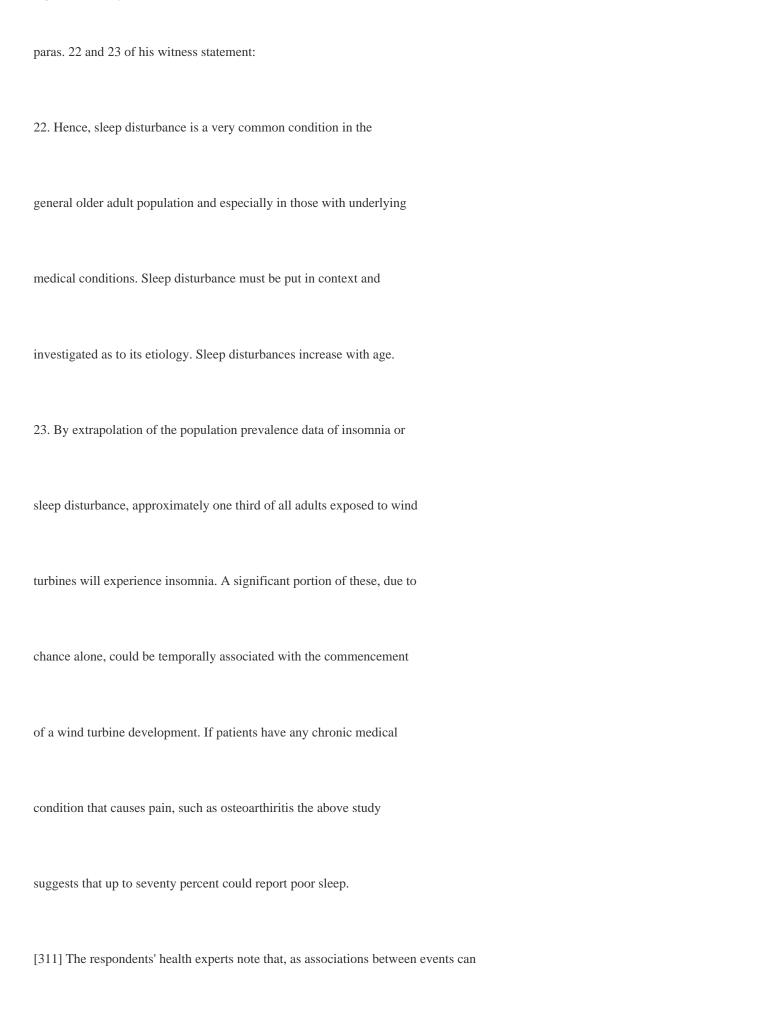


106. Since multiple witnesses have stated they have depression, this

can be associated with somatoform disorders, which are characterized

statement at para. 106:





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Findings
[312] The issue to be addressed by the Tribunal in respect of the post-turbine
witnesses is whether they have experienced adverse health effects that have been
caused by exposure to industrial wind turbines outside of the 550m regulated setback
and under 40 dBA noise limit. For the following reasons, as well as the Tribunal's
analysis and findings in respect of the other Appellants' health witnesses (discussed
below), the Tribunal finds that the Appellants have not done so.
[313] The Tribunal does not question the sincerity of the post-turbine witnesses in
giving their evidence. They acknowledge that the identification of their adverse health
effects is through their own self-diagnosis. They also acknowledge that they have
reached personal conclusions regarding the issue of causation. Several of them assert

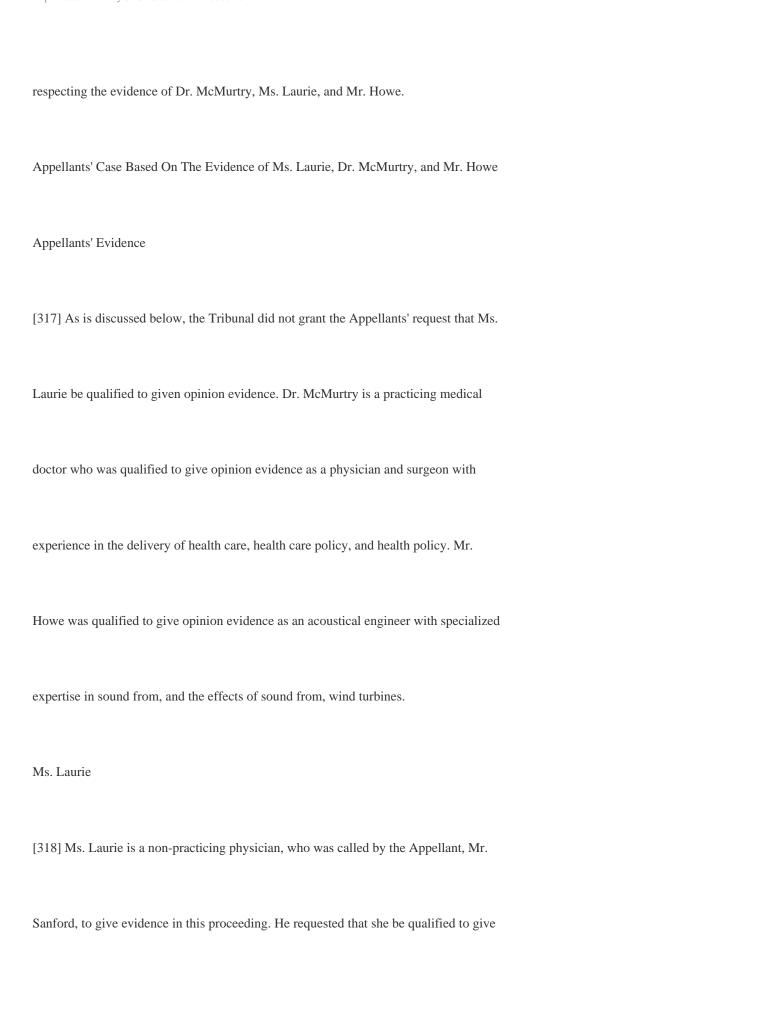
that they have had to do so, because they maintain that medical professionals either have no knowledge regarding the effects of wind turbines, or are skeptical or dismissive of the possibility that wind turbines can negatively affect human health. Nevertheless, none of the post-turbine witnesses adduced any medical opinion from their health practitioners which confirms that they have experienced symptoms caused by wind turbines. The Tribunal does not question that the post-turbine witnesses have experienced the symptoms they have described. After all, only they can say how they feel. However, in order to arrive at a reliable conclusion respecting causation, personal assessments which do not consider the full range of potential causes of these symptoms, are incomplete. Furthermore, the exercise of arriving at a diagnosis requires a level of education, training and experience, which none of the post-turbine witnesses possess. In this regard, the Tribunal notes that in Kawartha Dairy, the Tribunal found

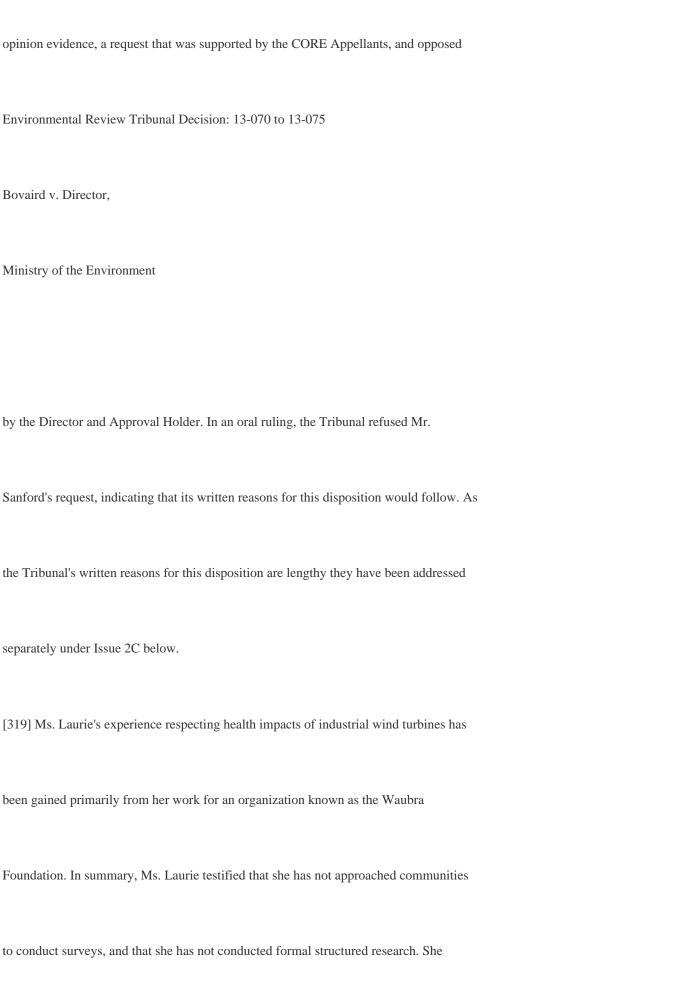
that confirmation of medical conditions requires the diagnostic skills of a qualified health professional. This conclusion was accepted in APPEC, and the Tribunal accepts that it applies in the circumstances of this case. As discussed below, the Tribunal also does not find that Dr. McMurtry's opinion about each of the post-turbine witnesses establishes they have experienced adverse health effects caused by wind turbines. [314] The evidence adduced must support a conclusion that the post-turbine witnesses have experienced serious harm that is caused by wind turbines or related components. The Tribunal accepts that causality assessment is a complex exercise. The Tribunal finds that the evidence adduced by Dr. McCunney, Dr. Baines, and Dr. Moore respecting causality assessment has not been seriously challenged by the Appellants. Therefore, the Tribunal accepts their evidence in this regard. Their evidence is that there is a level of uncertainty regarding the conclusions reached by the post-turbine witnesses in several areas including: (i) failure to obtain qualified medical investigation

support a conclusion that the post-turbine witnesses have experienced serious harm to

their health caused by wind project components.

[315] Even if the Tribunal accepted that causation is established, it is unclear whether this evidence could be extrapolated to apply to the Project under appeal in this proceeding. In this regard, the Tribunal has noted that the evidence adduced does not include confirmation of the noise exposure levels experienced by the post-turbine witnesses. As such, the Tribunal finds that it is has not been established that the adverse effects they have described, if attributable to industrial wind turbines, are caused by noise levels at or below 40 dbA. [316] Finally the Tribunal notes that, although causation has not been established with respect to these individuals, this does not preclude their evidence from being considered as data in support of the Appellants' position that current evidence demonstrates that it is sufficiently predictable that some or all persons living within the vicinity of wind project components (wind turbine(s) being the prominent component) will experience serious health effects. This is considered below in the Tribunal's analysis



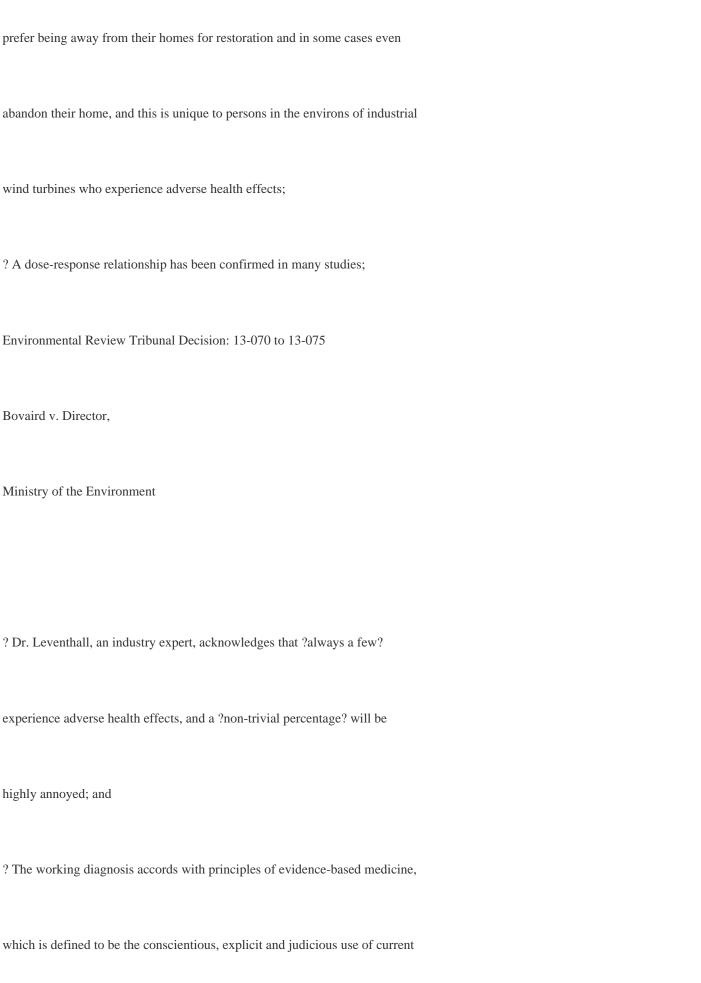


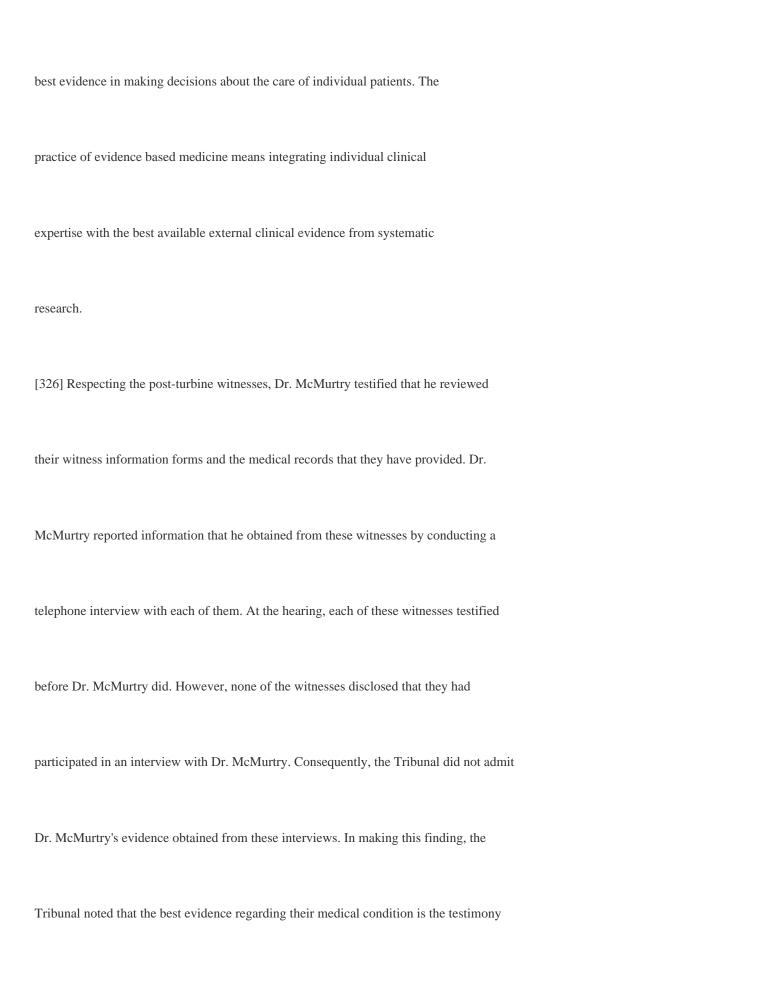
states that she conducts an ongoing survey, where, to date, she has spoken with approximately 130 people in Australia who live in the vicinity of industrial wind turbine projects. She indicated that these people have identified themselves to her, by contacting her directly, or indirectly by contacting the Waubra Foundation. She explained that these persons describe their symptoms to her and request information. She testified that the symptoms reported to her are consistent with the adverse health effects identified as being associated with industrial wind turbines by other researchers, including Dr. Geoff Leventhall, Dr. Nina Pierpont, and Dr. McMurtry. She provided a number of published articles and papers, and copies of written statements to agencies in Australia and elsewhere. Dr. McMurtry [320] Dr. McMurtry's evidence in this proceeding is, in part, similar to the evidence he

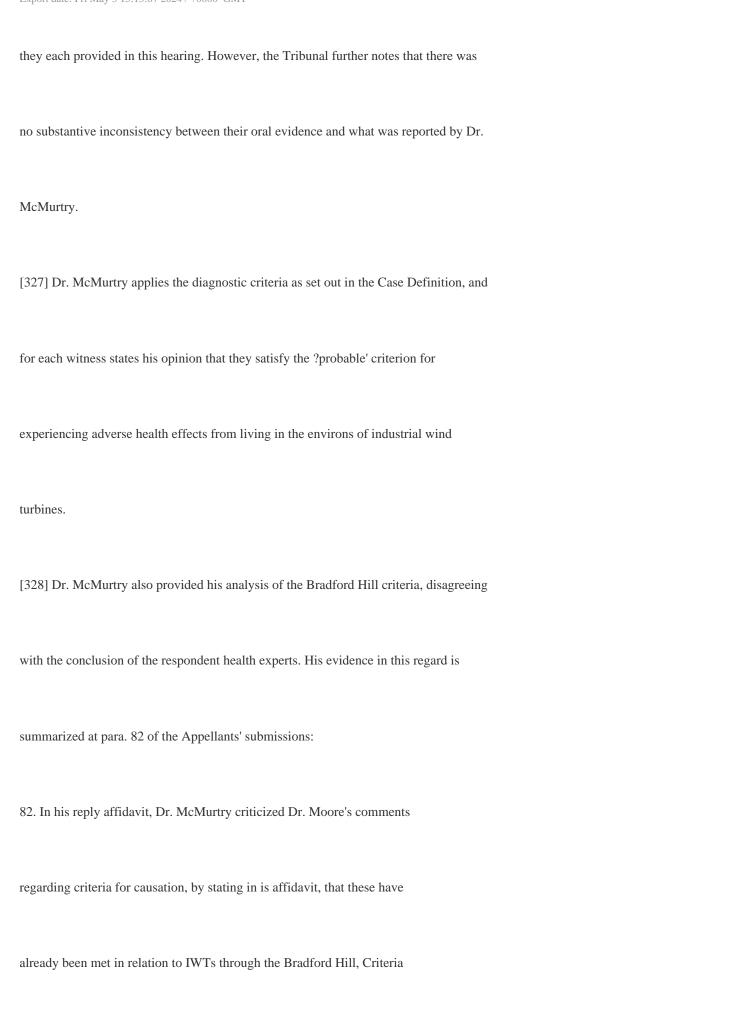
gave in APPEC. As noted at para. 74 of that decision: 74. Although Dr. McMurtry's witness statement from the Erickson proceeding was referenced in his current witness statement and included in his book of documents, the focus of Dr. McMurtry's evidence in this proceeding centred on his proposed case definition as described in his article ?Toward a Case Definition of Adverse Health Effects in the Environs of Industrial Wind Turbines: Facilitating a Clinical Diagnosis?, which was published in the peer-reviewed journal Bulletin of Science, Technology and Society, 2011 31:316. [321] For purposes of this decision, this is referenced as the Case Definition. [322] Since giving his evidence in APPEC, Dr. McMurtry testified that he has prepared an update to the Case Definition. A copy of the Case Definition and this update are attached to this Decision as Appendix B. Dr. McMurtry testified that the updated Case

Definition is intended to be used by primary health care physicians to diagnose whether
a patient who lives in the environs of industrial wind turbines is experiencing adverse
health effects. His update confirms that the deployment of the diagnostic criteria in the
Case Definition ?requires use by [a] health care practitioner licensed to take a history
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and make diagnoses.? His update also states that a ?probable' diagnosis ?indicates that
AHE/IWT [adverse health effects in the environs of industrial wind turbines] more likely
than not are the cause of the complaints. AHE/IWT is the working diagnosis. Other
diagnostic possibilities continue to exist and should be considered in the differential

? There is a common finding that persons experiencing adverse health effects



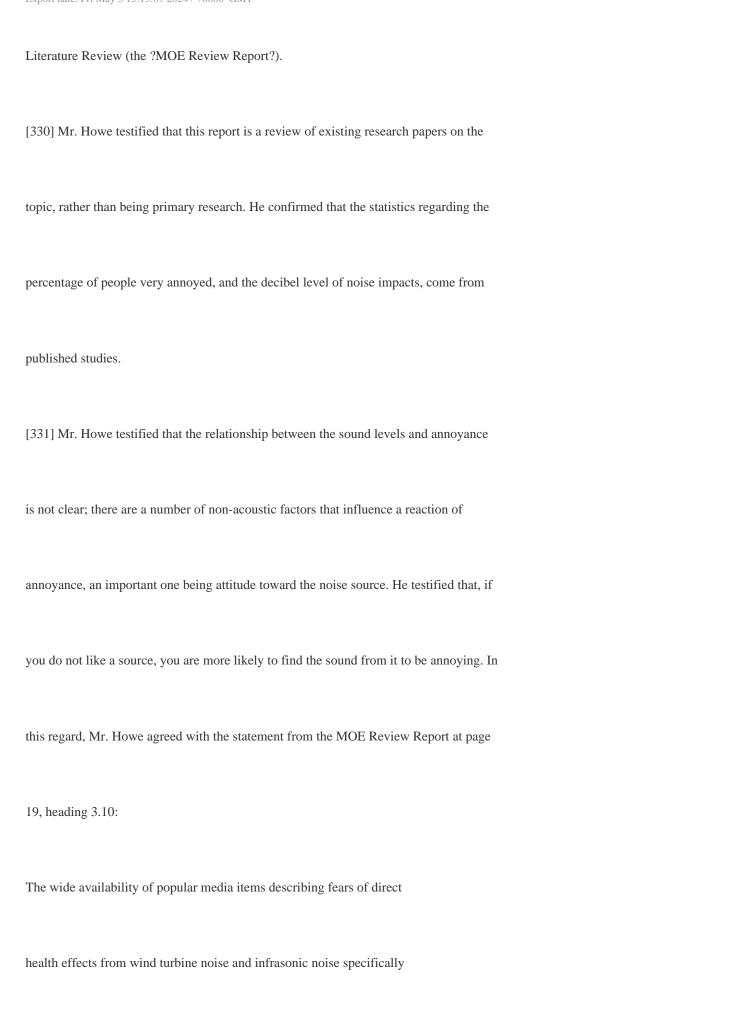




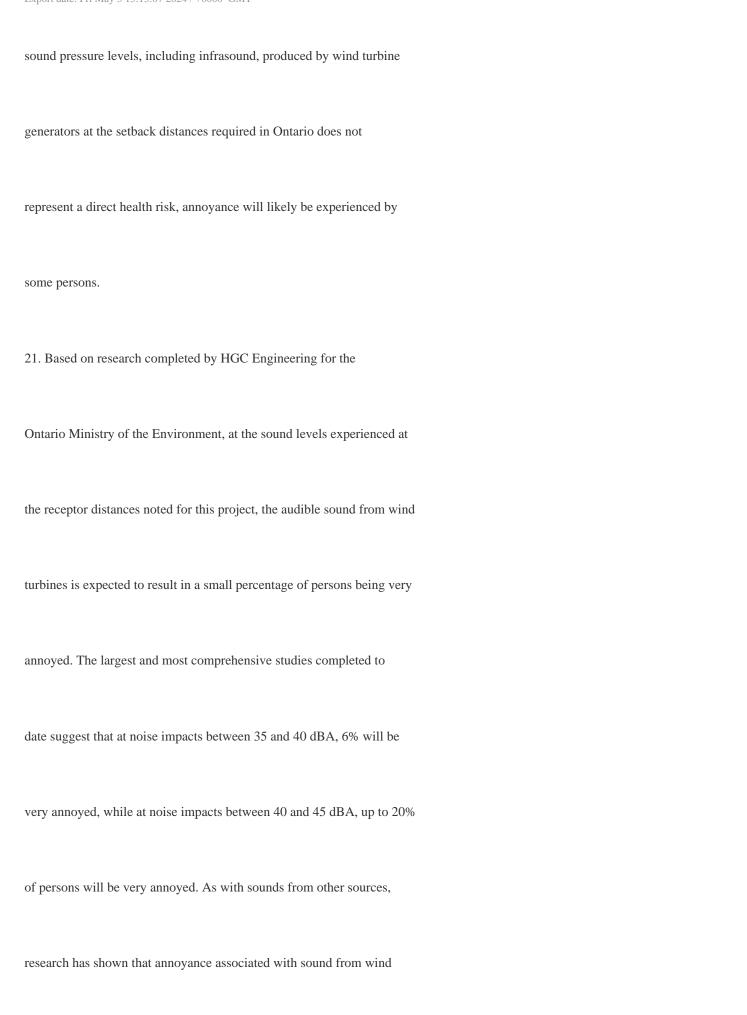
(f) Plausibility: A plausible mechanism between cause and effect is

helpful (but Hill noted that knowledge of the mechanism is limited

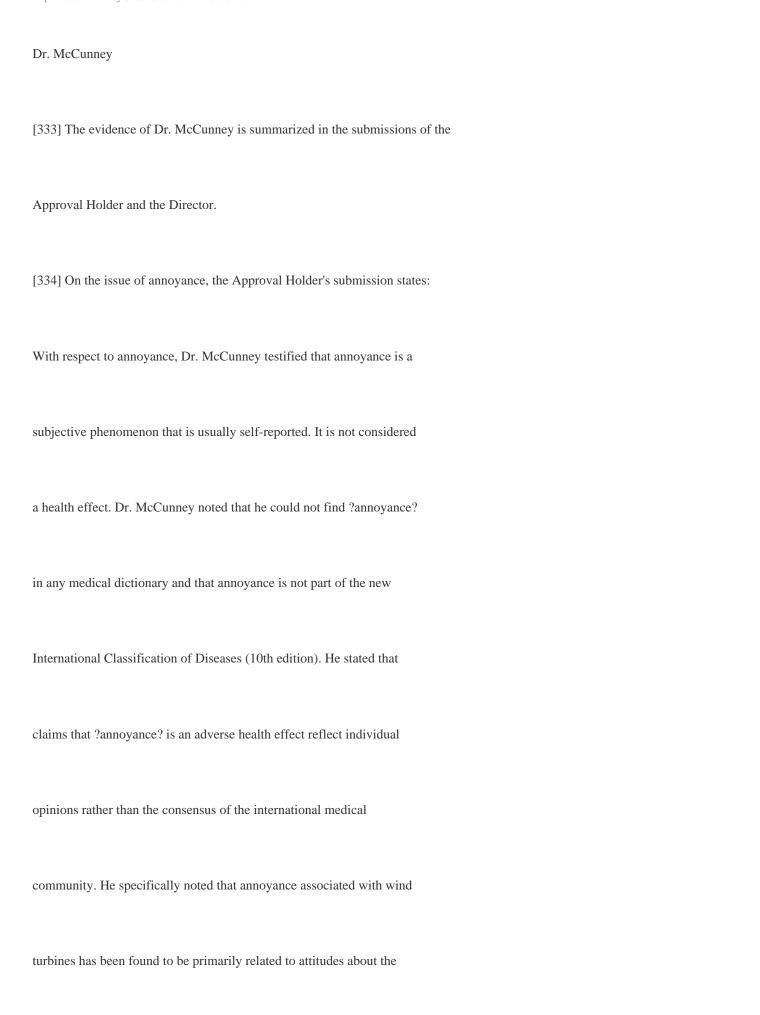
lower incidence.



9. The report concluded that, while the overall magnitude of the



turbines can be expected to contribute to stress-related health impacts in some persons. These finding have been supported by papers and general consensus of the Wind Turbine Noise 2011 conference held in Rome, http://www.windturbinenoise2011 .org/ and a comprehensive review by the Oregon Health Authority, 2013. The relationship between the sound level and the prevalence of annoyance is complicated, and is often influenced by other non-acoustic factors. Given the number of receptors expected to be impacted at a sound level between 35 and 40 dBA, it would be statistically invalid to predict the exact number of persons expected to be very annoyed, other than noting that those predisposed against the project are more likely to be annoyed. Respondents' Evidence



sets to another population would be fraught with uncertainty and

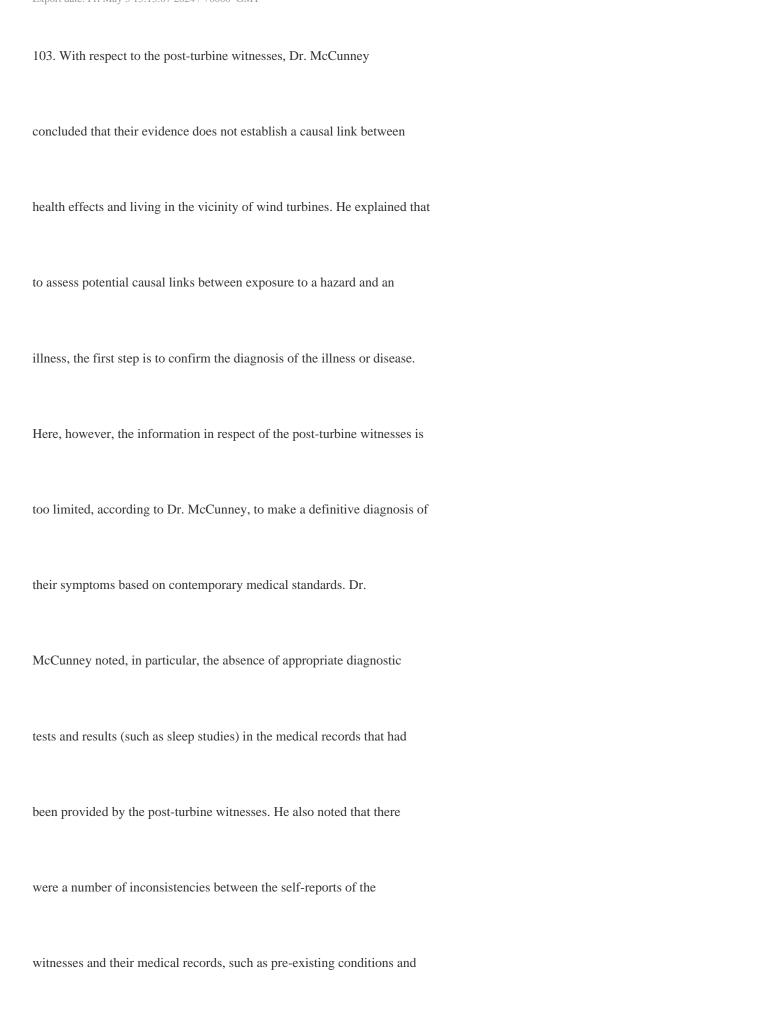
108. Dr. McCunney was also critical of Dr. McMurtry's proposed case
definition, concluding that it was devoid of scientific validity and of no
value in assessing causal links between health effects and wind turbines.
His specific criticisms included:
(a) the flawed process by which it was developed and proposed for
use (proposed by one individual, through a process that did not
follow international standards for the development of consensus
statements);
(b) its lack of validation by any medical association (Dr. McMurtry
himself admits that his proposed case definition has not been
validated);
(c) its lack of any scientific support for the exposure metric (i.e.,

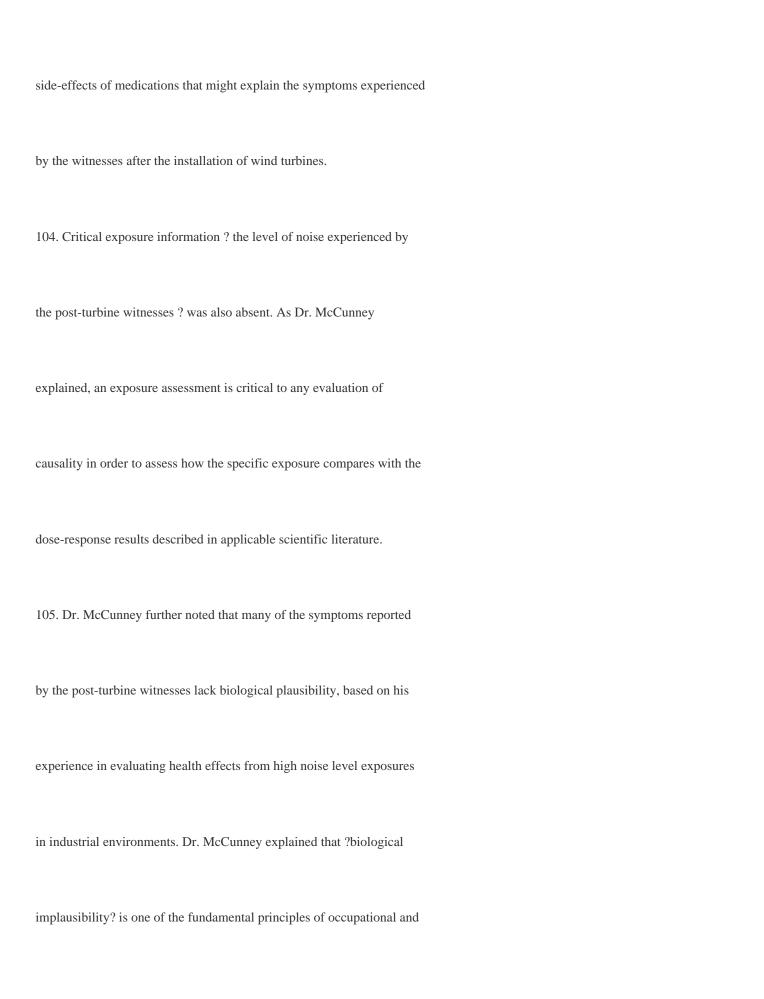
causal link between chronic noise exposure of less than 40 dBA and

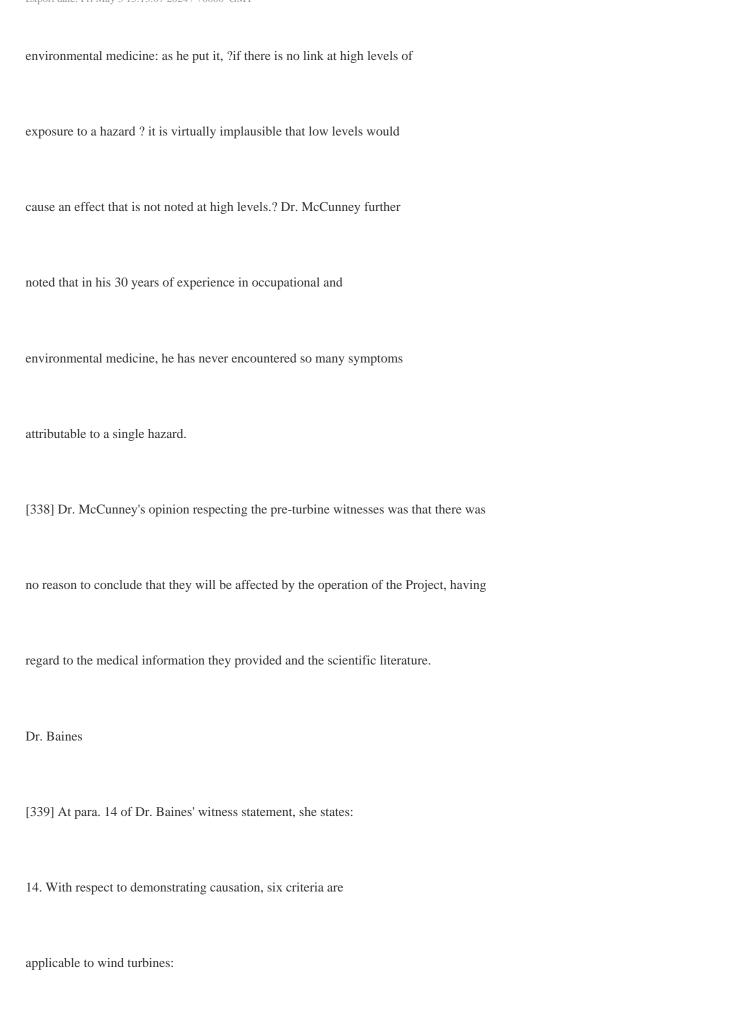
adverse health effects. Dr. McCunney highlighted field studies in the

[337] Respecting the Appellants' post-turbine witness evidence, the Approval Holder's

submission states:



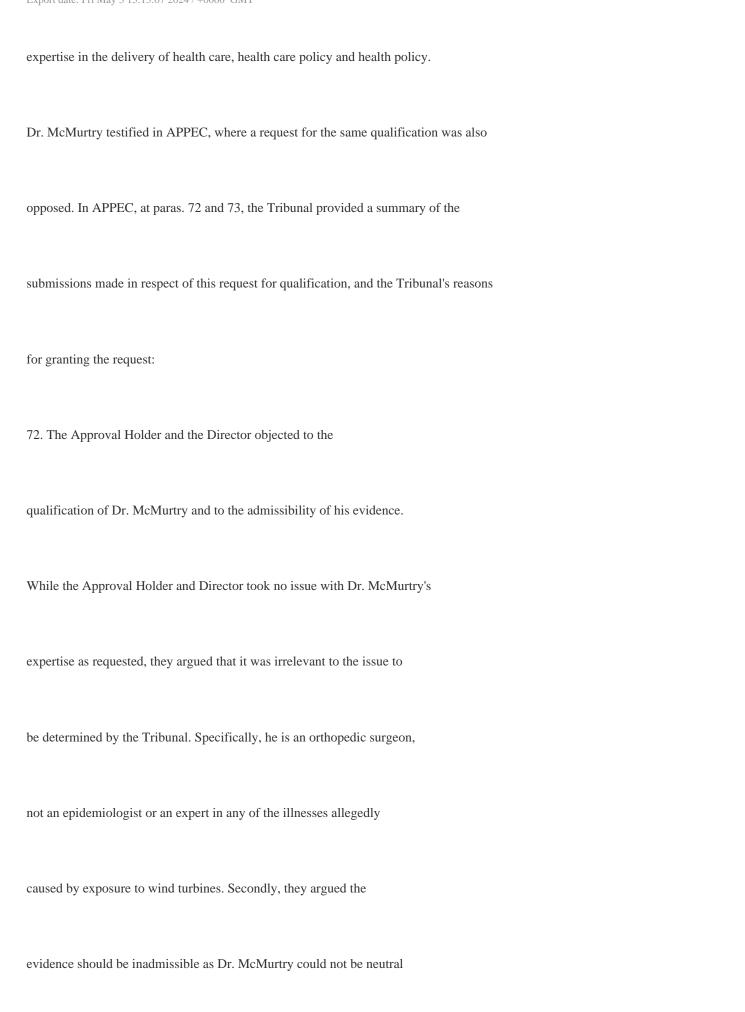




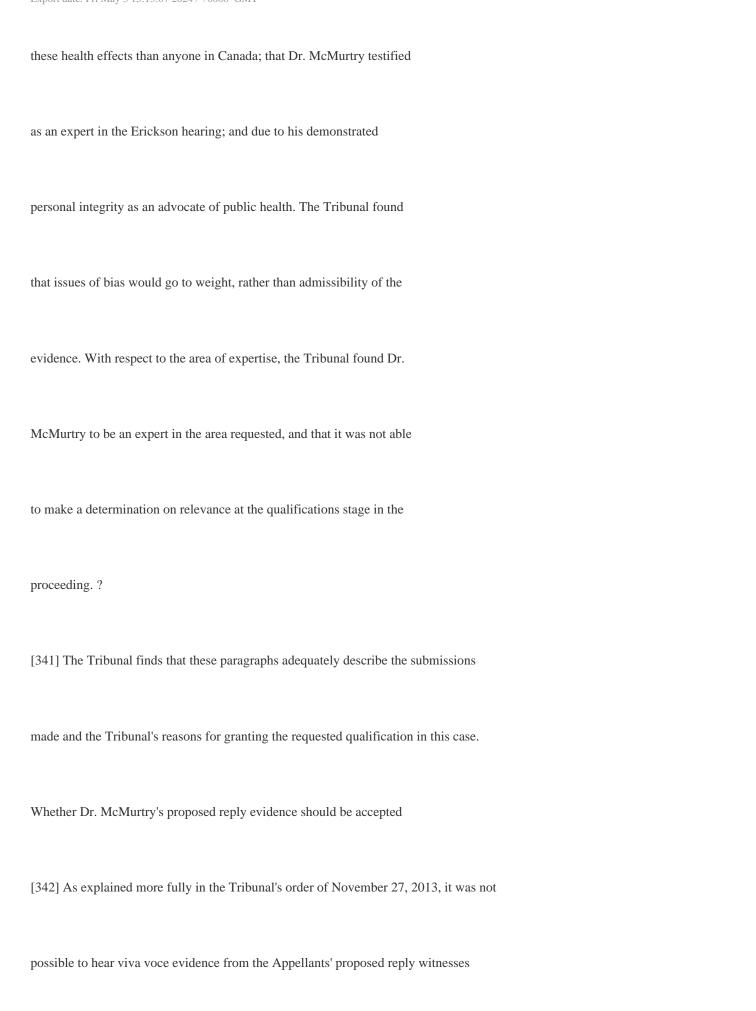
media reports of illness due to IWTs, concern about loss of

property values) may all lead to heightened awareness of

been persuasively demonstrated in the anti-turbine literature.
f. The sixth criterion is biological plausibility. It is generally accepted
that a wide range of symptoms involving many body systems will
not be due to a single cause or, in the case of IWTs, arise from the
visual and sound consequences of their presence. With the wide
range of reported symptoms, virtually all of which are experienced
widely in the general population, the case for causality due to IWTs
is weak.
Findings
Dr. McMurtry's qualification as an expert witness
[340] The Director and the Approval Holder opposed the Appellants' request that Dr.
McMurtry be qualified to give opinion evidence as a physician and surgeon with

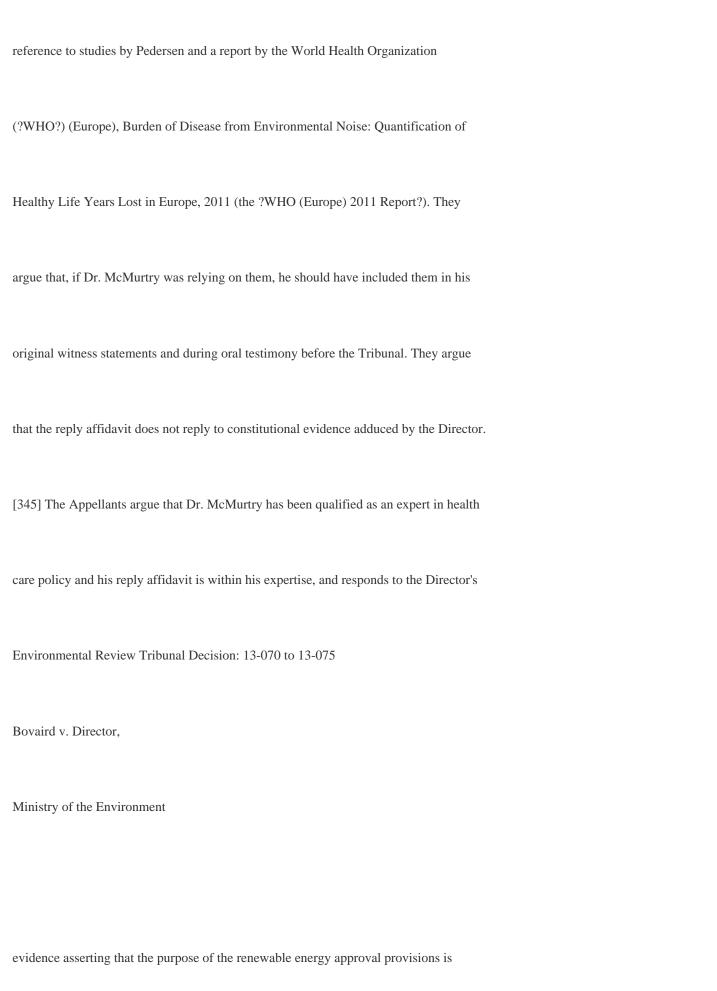


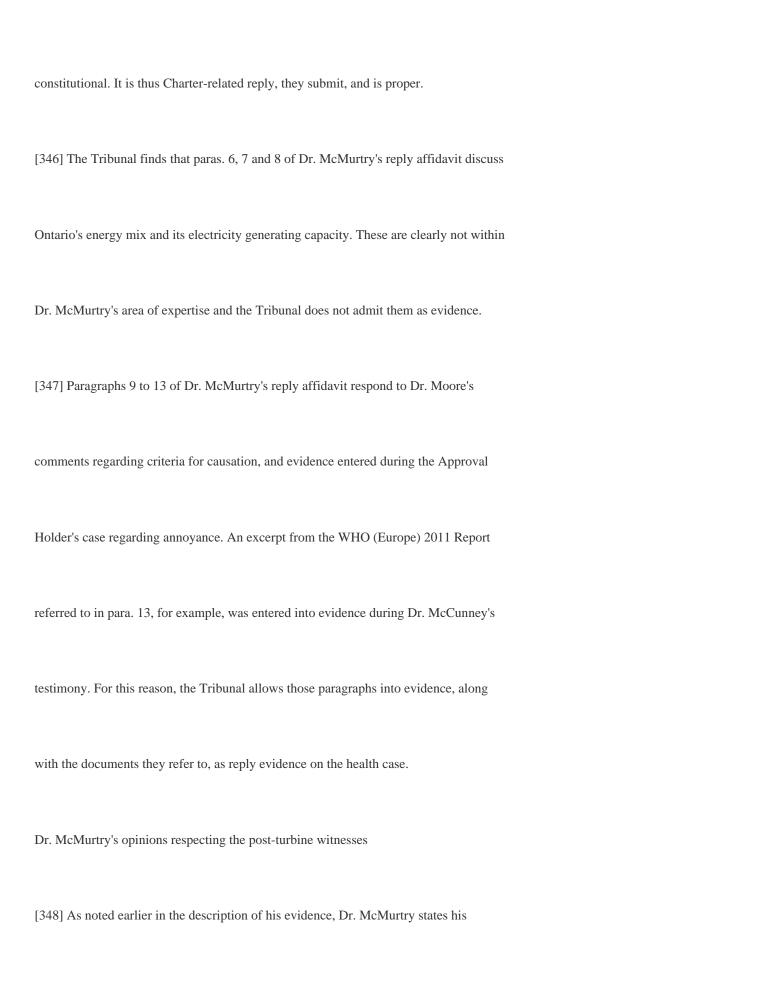
testify; that Dr. McMurtry has engaged with more individuals alleging



during the scheduled days for the hearing. The Tribunal therefore outlined a schedule whereby the Appellants' reply evidence would be filed by way of affidavits, along with the transcripts of the cross-examinations of those witnesses. As the Approval Holder and the Director submitted that the evidence was not proper reply, the Tribunal directed the parties to address this issue in their final written submissions. All parties did so. [343] The Director and Approval Holder argue that Dr. McMurtry's reply affidavit is improper reply and should not be accepted by the Tribunal. The Director discussed bringing a motion to exclude the proposed reply evidence, but the Tribunal ruled orally on October 7, 2013 that it would receive the evidence via affidavit, and consider submissions on admissibility of the proposed reply evidence along with the final submissions of the parties.

[344] The Director and Approval Holder note that Dr. McMurtry's reply affidavit includes





opinion that each of the post-turbine witnesses satisfies the ?probable' criteria for experiencing adverse health effects from living in the environs of industrial wind turbines. The Tribunal notes that he did not expressly state that this was his diagnosis respecting each of these individuals. However, as he noted in his update to the Case Definition, a ?probable' diagnosis ?indicates that AHE/IWT [adverse health effects in the environs of industrial wind turbines] more likely than not are the cause of the complaints. AHE/IWT is the working diagnosis. Other diagnostic possibilities continue to exist and should be considered in the differential diagnoses.? [349] The Tribunal notes the purpose of opinion evidence is to assist the Tribunal in making its decision respecting the statutory test under the EPA, which is a legal determination. Dr. McMurtry is clearly asserting that it is more likely than not that each of the post-turbine witnesses has suffered adverse health effects caused by industrial wind turbines. Consequently, the nature of this opinion evidence is to be assessed in

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reports and in physician-generated case series. [emphasis added]

[352] The Tribunal notes that evidence of the post-turbine witnesses, and Ms. Laurie's evidence respecting her survey of 130 Australians, provide data in support of this statement. However, while correlation can be indicative of causation, it is not synonymous with causation, because, as noted in Dr. Moore's evidence, associations between events can occur by chance. The evidence adduced by the respondents respecting causality assessment and the accepted use of the Bradford Hill criteria for assessing causal associations indicate that more than correlation is required in order to establish causation. [353] The Tribunal recognizes that the reasons advanced by Dr. McMurtry also include his observation respecting the incidence of reports of adverse health effects in all countries where industrial wind turbines are erected, and that the reports of adverse health effects are similar despite differing culture and languages (described as

convergent validity). While these considerations are not to be discounted, the Tribunal

finds that it has received insufficient evidence to establish that a causal association can

be made, based on this information alone. While it is Dr. McMurtry's opinion that such a

conclusion is established, the respondents' health experts clearly express their opinion

that all of the Bradford Hill criteria must be satisfied, and, in this case, that these criteria

have not been met.

[354] As is discussed in greater detail below, the evidence here is closer to the

hypothesis generating phase of scientific research than it is to the point where

conclusions can be made on causation. Consequently, the Tribunal finds that the Case

Definition does not establish causation. In reaching this conclusion, the Tribunal also

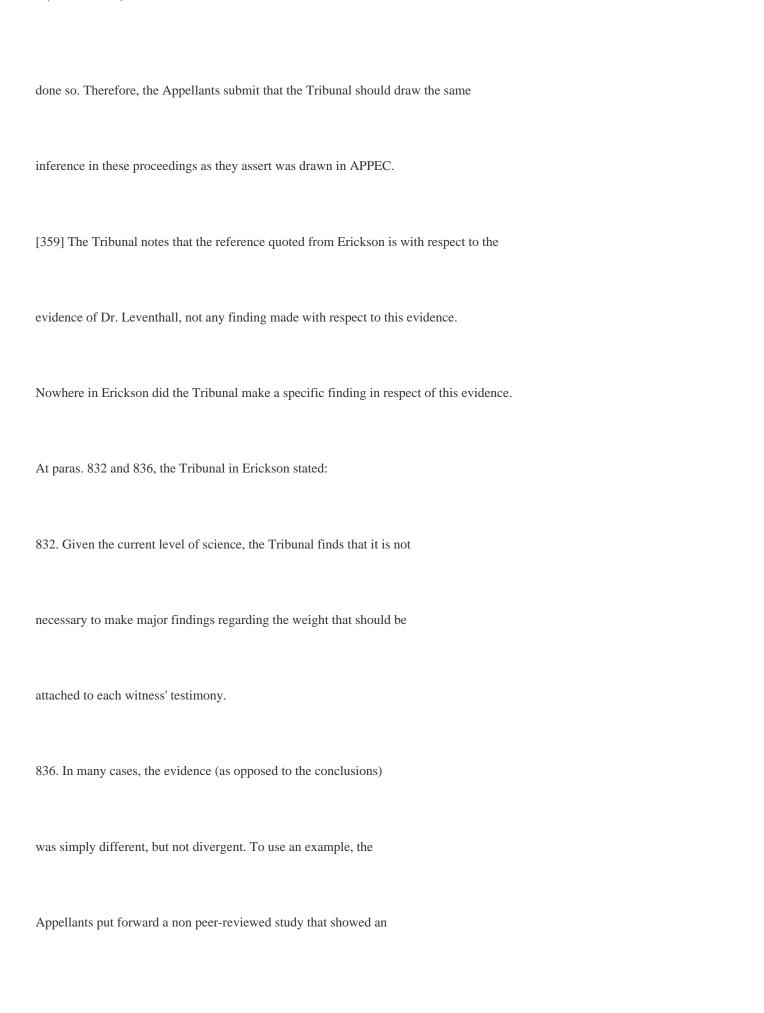
relies on its analysis and findings, described below, respecting Dr. Leventhall, and the

evidence respecting annoyance.

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position, they maintain that the evidence of Dr. Leventhall, as reported in Erickson, that annoyance is a psychological effect, predominantly somatoform disorders, which occur in small numbers of people. The Appellants further maintain that: (i) he stated that the effects of extreme annoyance include symptoms such as sleep disturbance, headache, tinnitus, ear pressure, dizziness, vertigo, nausea, visual blurring, tachycardia, irritability, problems with concentration and memory, panic episodes; and (ii) he acknowledged that sleep disturbance is an adverse health effect. [358] The Appellants state, that, in APPEC, the Tribunal found that if the approval holder disagreed with how Dr. Leventhall's evidence was interpreted in Erickson, or wished to have him give different or updated evidence, it had the opportunity to do so. The Appellants assert that the Tribunal, therefore, inferred that Dr. Leventhall's evidence from Erickson was not contested. The Appellants point out that the Approval

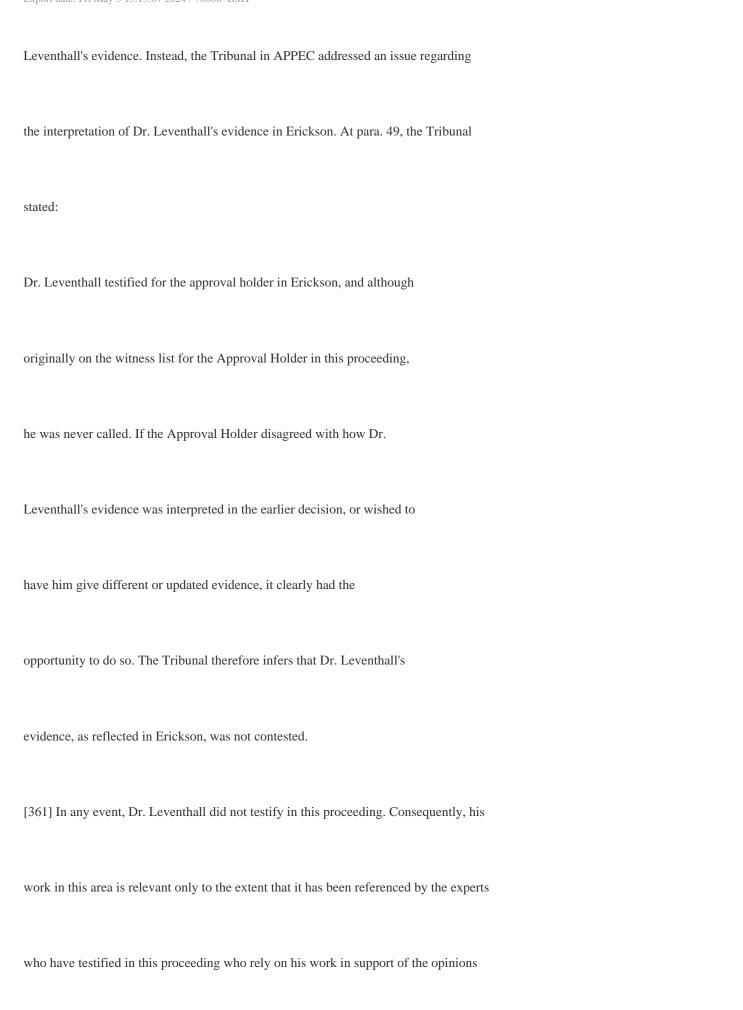
Holder could have called Dr. Leventhall to give evidence in this proceeding and has not



impacts, such as ?annoyance?, ?high annoyance?, etc.) and contrasted

them with what the legal test asks for. This type of evidence added to the

evidentiary picture presented to the Tribunal. In very few instances did the scientific evidence run in completely opposite directions. Indeed, the Tribunal heard evidence from Dr. Mundt that many of the applicable peer-reviewed articles are about the perception of noise from wind turbines and not necessarily health effects. This, in part, led to the significant debates about the applicability of words like ?annoyance? in the perception of noise studies to the test used in this proceeding, which focuses on health. Obviously, the Tribunal would have preferred clear evidence from peer-reviewed studies that actually measured health effects and their relation to wind turbines, but research in that area is still quite limited. [emphasis added] [360] Secondly, in APPEC, the Tribunal did not make a finding accepting Dr.



health effects that can be expected to result from annoyance. Instead, in his witness statement, he states that research has shown that annoyance associated with sound from wind turbines can be expected to contribute to stress-related health impacts in some persons. Mr. Howe included as part of his evidence, a report he authored for the MOE, the MOE Review Report noted above, which indicates that the referenced research is primarily the published work of Dr. Leventhall. Mr. Howe also refers to a 2013 review conducted by the Oregon Health Authority, entitled Strategic Health Impact Assessment on Wind Energy Development in Oregon (the ?Oregon Study?), and a recent study conducted by the University of Scotland. Dr. McMurtry's evidence on these issues refers to Mr. Howe's MOE Review Report. [366] The Director and Approval Holder do not agree with the Appellants' position. They rely on the evidence of the respondents' health experts, and in particular, the

evidence of Dr. McCunney described above, wherein he disputes that some people will always exhibit effects, and refers to a study which indicates that some wind projects had never been subject to noise or health complaints. [367] Based on the evidence adduced in this proceeding, the Tribunal finds that the proposition that annoyance will occur as a result of exposure to noise levels between 35 to 40 dBA has not been clearly established, as the expert opinion on this issue is divided. In this regard, for example, Mr. Howe relies on the work of Dr. Leventhall ,as well as a 2009 study by a group of researchers (Pedersen et al.) that states that close to 20% of people were ?very annoyed? by wind turbine sound levels. Dr. McCunney refers to a more recent report by Dr. Chapman which showed large spatio-temporal variations in complaints about noise and health from wind farms. Dr. Chapman found that 33 of 51 wind farms in Australia had never been subject to noise or health complaints. While

the information respecting these studies has been provided to the Tribunal, no evidence

respecting noise annoyance. At page 91 the report states:

Noise annoyance is widely accepted as an end-point of environmental noise that can be taken as a basis for evaluating the impact of noise on the exposed population. As a consequence, EU Directive 2002/49/EC recommends evaluating environmental noise exposures on the basis of estimated noise annoyance. As discussed in Chapter 1, WHO defines health as ?a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity?. This implies that noise-induced annoyance may be considered an adverse effect on health. People annoyed by noise may experience a variety of negative responses, such as anger, disappointment, dissatisfaction, withdrawal, helplessness, depression, anxiety, distraction, agitation or exhaustion. Furthermore, stress-related psycho-social symptoms such as tiredness, stomach discomfort and stress have been found to be associated with noise

exposure as well as noise annoyance. Some public health experts feel that severe forms of noise-related annoyance should considered a legitimate environmental issue affecting the well-being and quality of life of the population exposed to environmental noise. The most important issue in the present context is to what extent health (according to the broad definition given above) is reduced by noise and whether a DW that expresses this reduction, when combined with the prevalence of annoyance, leads to a significant burden of ?disease?. The other possibility would be that noise annoyance does not significantly contribute to disability and, hence, should not be taken into account when considering the noise-induced burden of disease. (emphasis added) [369] At page 93, this report also confirms that data below 45 dBA was not considered ?because the risk of unreliable noise data is high at very low levels ?? This report

likely to result solely from exposure to noise, but includes other factors affecting an

individual's attitude toward the project.

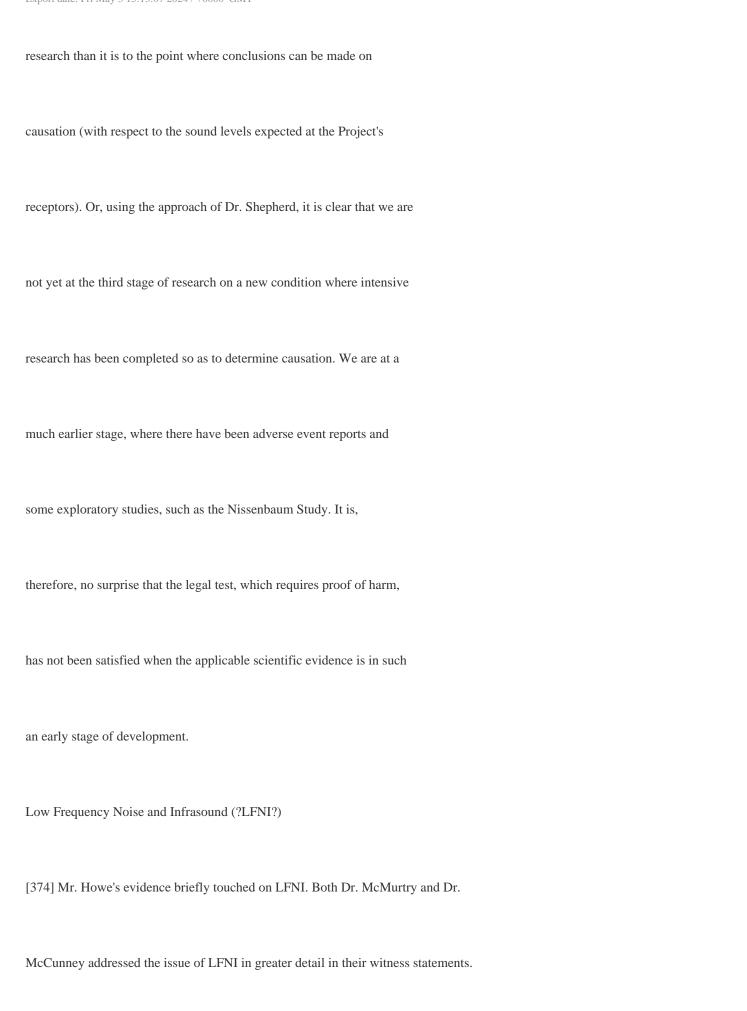
[371] If the intent of this evidence regarding annoyance is to support a generic approach to establish causation, i.e., where causation is not in relation to specific identified individuals, then it is clear that the epidemiological framework set out in the Bradford Hill criteria is relevant. Dr. Baines was qualified to give opinion evidence as an epidemiologist. As noted above, in para. 14 of her witness statement, she reviews these criteria and concludes that, in respect of wind turbines, none of these criteria have been fulfilled. The opinion evidence respecting the application of the Bradford Hill criteria is conflicting. Dr. McMurtry's analysis of these criteria is clearly at odds with the conclusions of Dr. McCunney, Dr. Moore, and Dr. Baines. While the Tribunal does not conclusively reject Dr. McMurtry's evidence, the Tribunal finds that it is not sufficiently compelling to lead the Tribunal to conclude that the opinions of Dr. McCunney, Dr. Moore, and Dr. Baines should be rejected. Consequently, in weighing this evidence,

the most that can be said is that the preponderance of this opinion evidence favours the

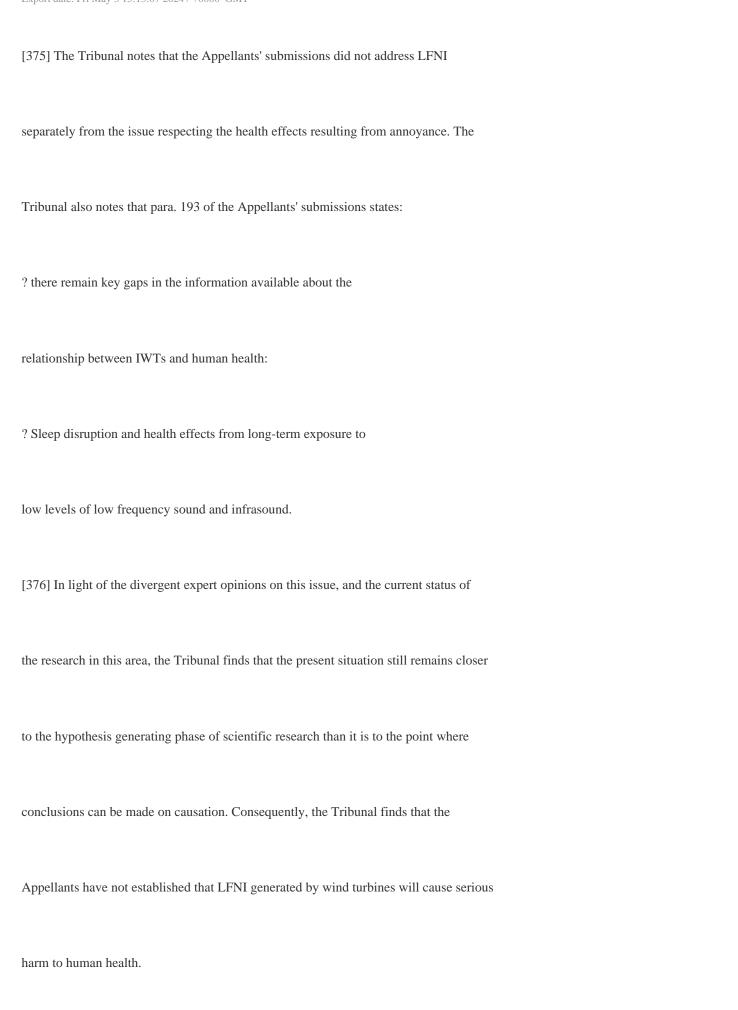
position of the Director and the Approval Holder. Based on these conclusions, the Tribunal finds that the evidence is inconclusive respecting whether industrial wind turbines would cause annoyance. Assuming that the evidence established that annoyance will be caused, the Tribunal also finds this evidence is inconclusive regarding the degree of annoyance which would be caused, and, in turn, whether such annoyance will result in adverse health effects. [372] The Appellants assert that the causal chain between annoyance, stress, sleep disturbance, and adverse health effects, is evidenced by the adverse health effects suffered by the post-turbine witnesses who testified in this proceeding. The Tribunal does not accept that this has been established by the Appellants. Instead, the Tribunal finds that, based on the evidence adduced in this proceeding, the symptoms reported by the post-turbine witnesses may be evidence of the causal chain between annoyance,

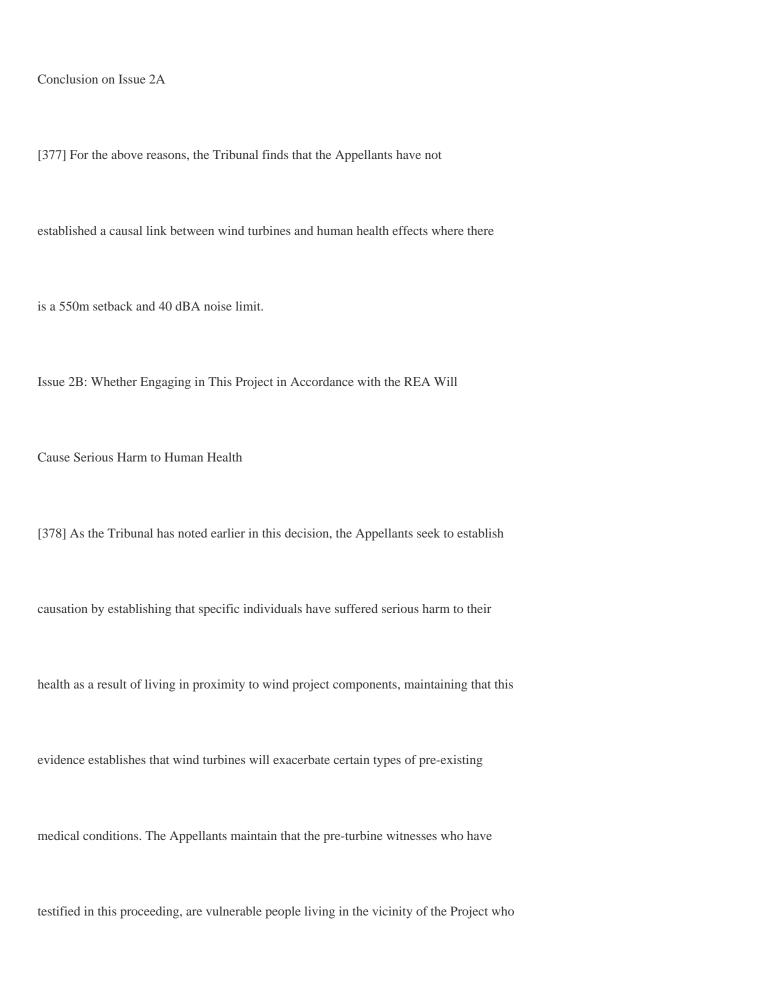
stress, sleep disturbance and adverse health effects. In this regard, the Tribunal notes
that the Appellants did not adduce any opinion evidence by a qualified health
practitioner to confirm that the symptoms reported by the post-turbine witnesses
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resulted from annoyance, manifested through a somatoform or other disorder or
condition.
[373] In summary, the Tribunal finds that the evidence is inconclusive on the issue of
whether wind turbine noise at 40 dBA or less, and other associated factors, such as
being predisposed against a wind turbine project, can be expected to cause annoyance
that will result in serious harm to human health for a small percentage of the population

that will be exposed to the Project under appeal. In this regard, Tribunal finds that the Tribunal's finding in Erickson, at para. 838, also applies here: 838. To summarize, the evidence in this Hearing on serious indirect harm was largely exploratory. The evidence on a lack of serious indirect harm was also limited (the evidence on a lack of serious direct harm is much stronger, however). The Tribunal is not giving significant weight to the latter and little to the former in reaching its conclusion. That is because the legal test itself tilts the balance in one direction. The onus is on one side (in this case, the Appellants). That side has provided evidence that the Tribunal finds to be exploratory in nature, even if given significant weight. Put another way (using the wording of Dr. Mundt), the present situation is closer to the hypothesis generating phase of scientific



The Tribunal has not found it necessary to include a synopsis of this evidence in this
decision, as they both testified in Erickson on this issue, and much of their evidence
adduced in this proceeding is as described in that decision. Regarding Dr. McMurtry's
evidence in this proceeding, he relies on his witness statement which was filed in
Erickson in 2011. In this proceeding, Dr. McCunney's witness statement further
addresses LFNI, providing reference to studies published after 2011. In summary, there
is a clear difference of opinion between them regarding whether LFNI generated by
wind turbines will cause harmful effects to humans.
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have such pre-existing medical conditions. The Appellants assert, therefore, that their

testimony respecting their pre-existing medical conditions is highly relevant to establish

a causal link between the proposed Project and ?the more likely than not probable effect

on those living near the Project?.

[379] The pre-turbine witnesses each testified that they had or have a pre-existing

medical condition. They each expressed their concern that, due to their proximity to the

proposed wind turbines in the Project, they could experience a resumption or

exacerbation of their symptoms, or suffer additional adverse health effects. They each

produced medical records that they were able to obtain regarding their past medical

history. However, none of them presented opinion evidence from a qualified health

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pre-existing conditions. However, the Tribunal will address the evidence of one preturbine witness, as her evidence includes an assertion of direct causation, namely, that shadow flicker will cause her to experience epileptic seizures. For ease of reference, the Tribunal will refer to this pre-turbine witness as ?PTW?. Evidence of Witness PTW [381] PTW owns a 22 acre property in the Project area, and plans to retire in December 2013 and use this rural property as her primary residence. She believes the Project will cause serious harm to her health due to two health conditions: high blood pressure and epilepsy. She has been taking blood pressure medication for many years, having been hospitalized in the past due to high blood pressure. She testified that she monitors her blood pressure every day, and works hard to keep it at a reasonable level by, among other things, a daily fitness regime.

[382] She testified that she has suffered from epileptic seizures from the age of two.

PTW testified that she can recognize the onset of an episode with approximately two hours' warning, which has allowed her to live a fairly normal life. She states that each episode of an epileptic seizure is extremely physically taxing, and she fears ongoing damage to her health. She described episodes she has experienced, which she states have had a significant impact on her. She cites, for example, that a single seizure will leave her bedridden for days and take several weeks for a full recovery. Multiple seizures will require an even longer recovery process. [383] PTW has become attuned to triggers throughout her life, and finds that nausea is a trigger, as well as illness and fatigue. She states that she attempts to minimize the likelihood of epileptic seizures through lifestyle, including a regular exercise regime and Environmental Review Tribunal Decision: 13-070 to 13-075 Bovaird v. Director, Ministry of the Environment

associated with moving shadows.

[386] PTW filed a review of the literature on health impacts of wind turbines, in a paper

prepared by Knopper and Ollson (2011). She notes that the authors state ?in Ontario it

has been common practice to attempt to ensure no more than 30 hours of shadow

flicker per annum at any one residence? (page 6). She also notes that Germany has

regulations related to shadow flicker, and stipulates a maximum of 30 hours per year for

worst case scenario, and eight hours per year (30 minutes on any one day) actual

amounts of shadow flicker. She states that the United Kingdom (?UK?) takes the

approach of a minimum setback (9 or 10 times the rotor diameter of the blade, and or

10 times the tower height to the hub) to reduce shadow flicker. According to her

calculations, the UK regulations would result in Turbines T1 and T2 of the Project being

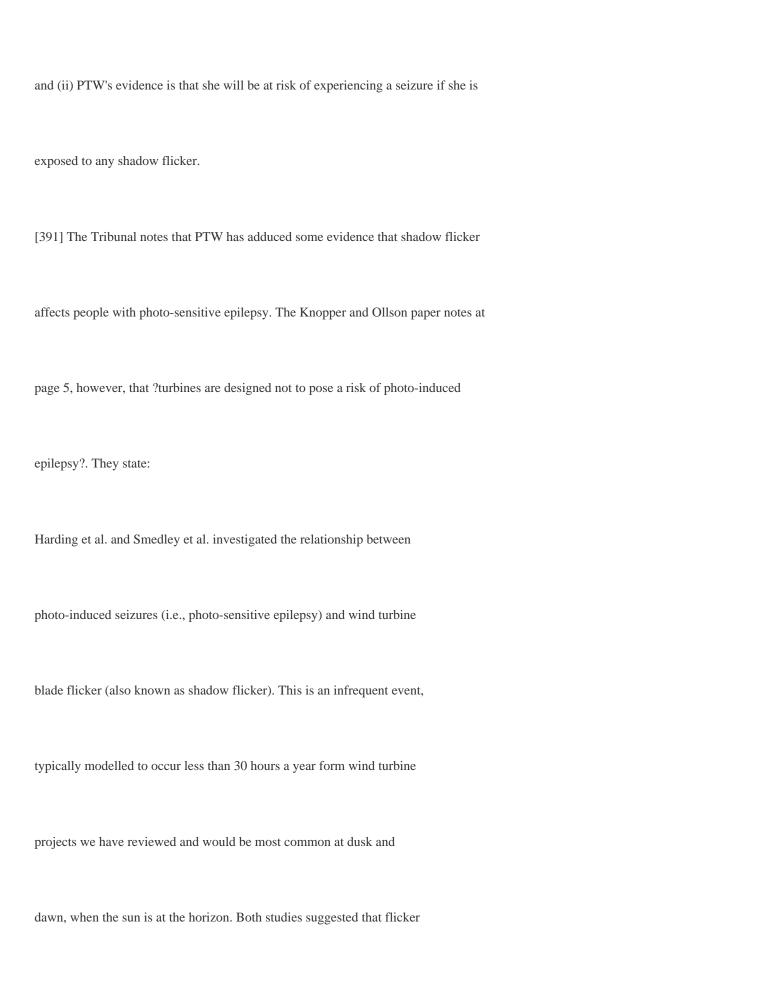
set back 850 m to 1,030 m from her home, were they to apply in Ontario.

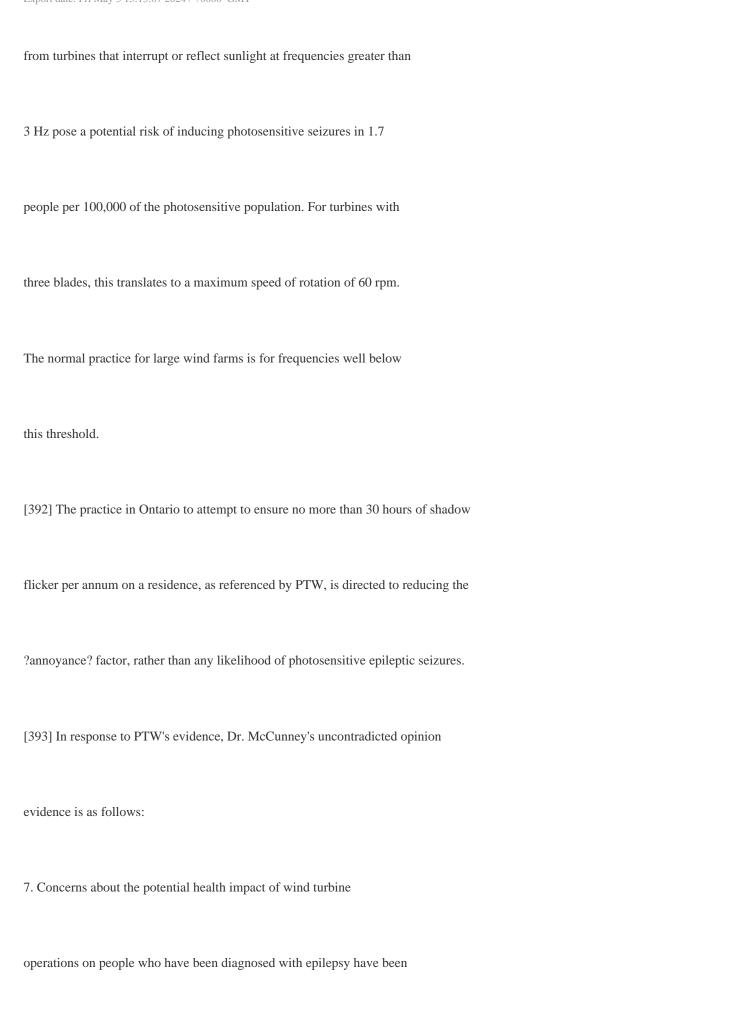
[387] Regarding shadow flicker, Steve Hilditch gave opinion evidence regarding the

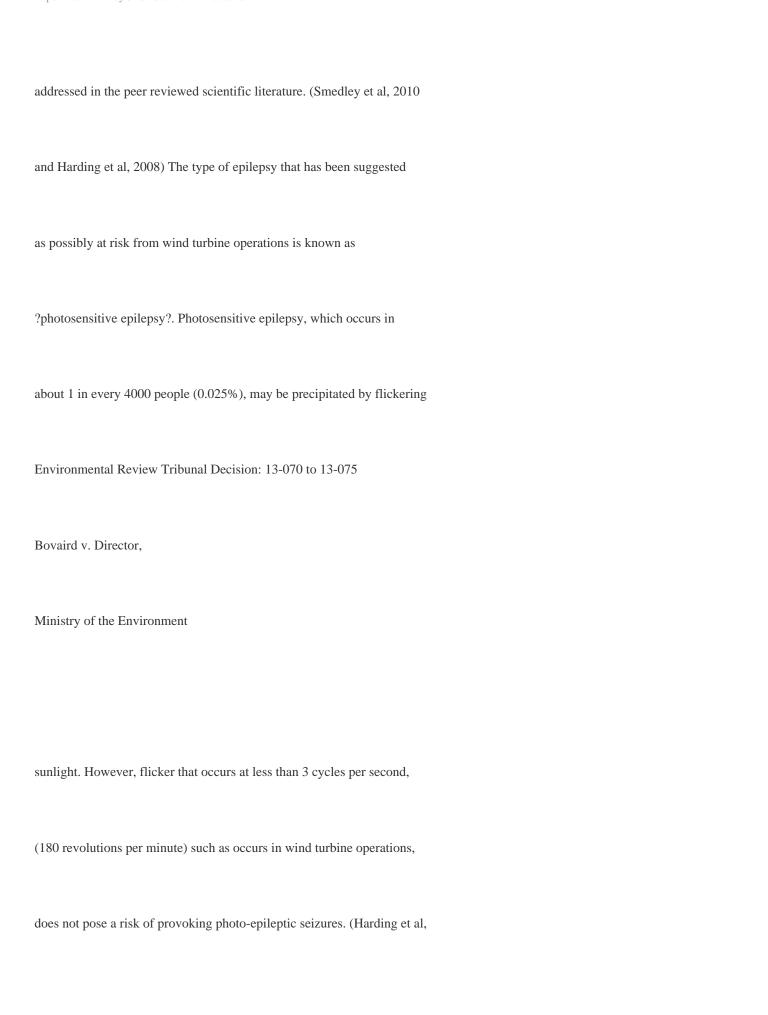
The Approval Holder also called Dr. McCunney to respond to PTW's health concerns.

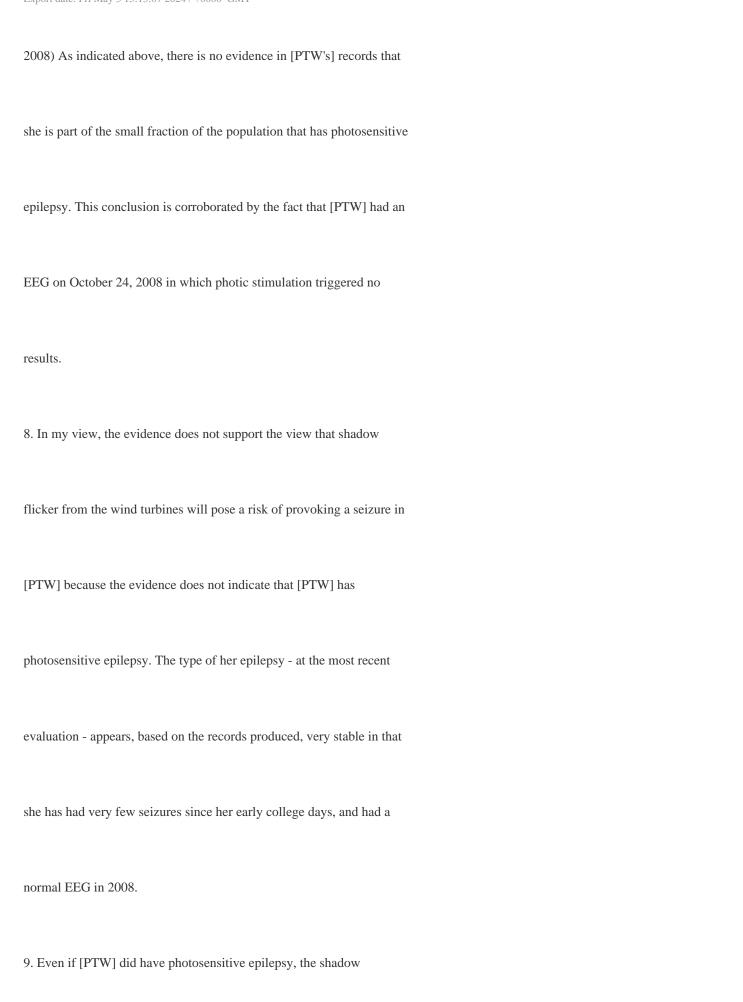
His evidence is described below.

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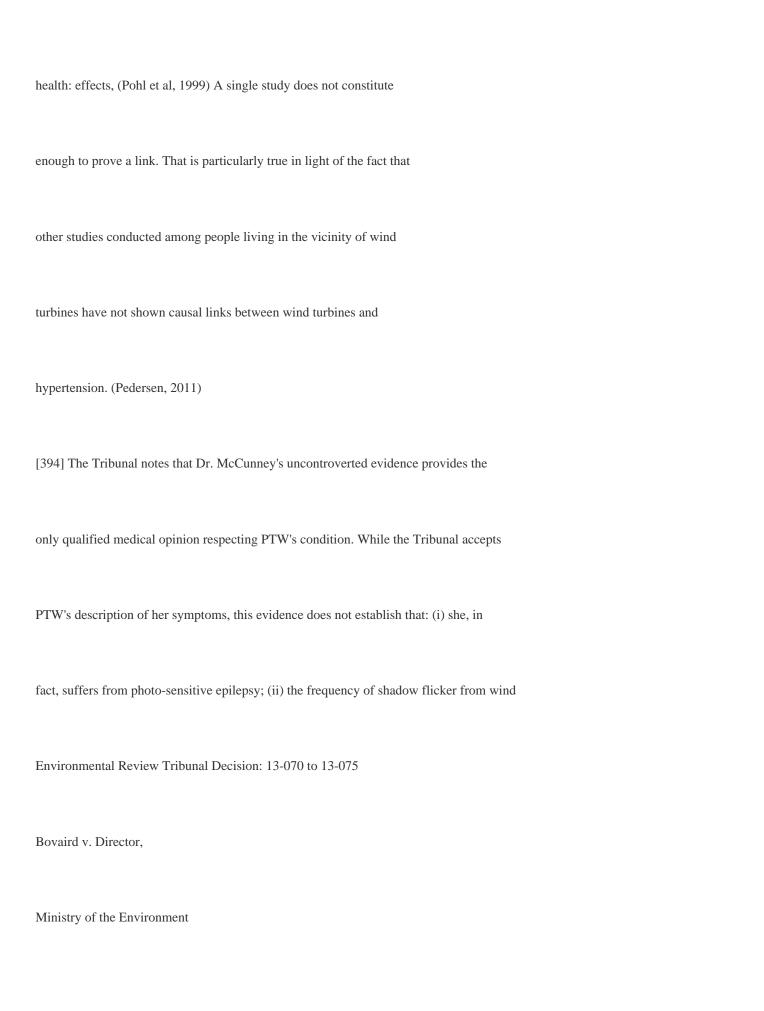






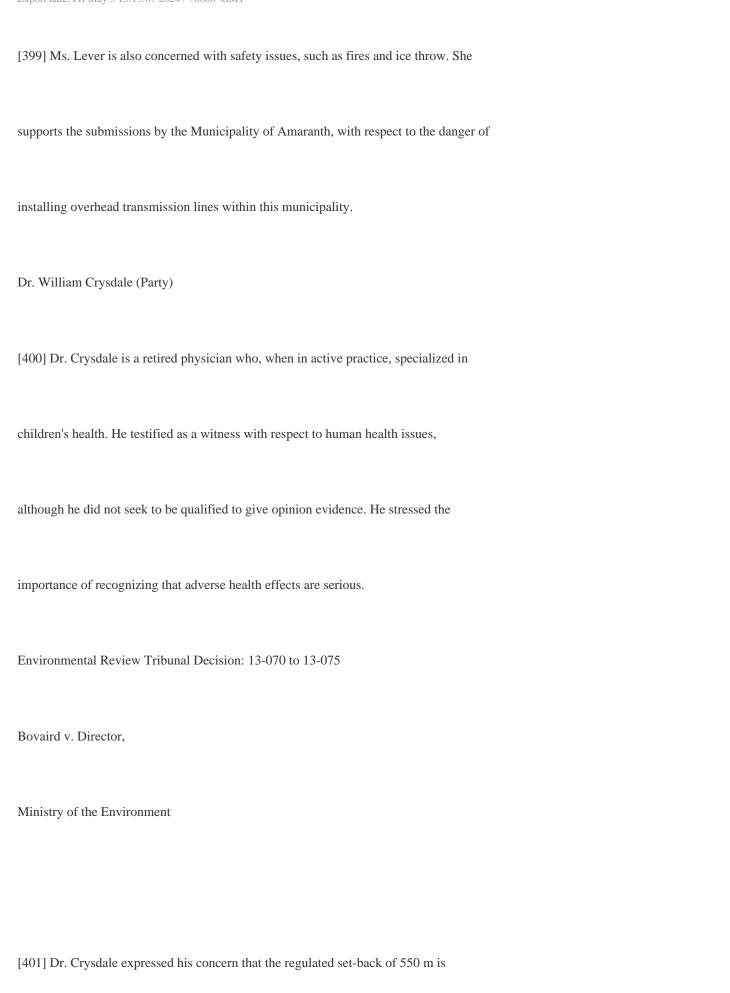
flicker from the wind turbines would not pose a significant risk of provoking a seizure. My opinion is based on a review of pertinent scientific studies (Harding, 2008; Smedley, 2010), and the technical Specifications for the GE turbines planned for the Dufferin wind farm which indicate that the rotating blade frequency will not exceed 16.18 revolutions per minute (rpm), which is less than 10% of the threshold proposed by Smedley et al as capable of provoking a photo-epileptic seizure. (Technical Documentation Wind Turbine Generator Systems GE 1.6-100-50 Hz/60 Hz and General Electric 2.75 MW Turbines) The turbine blades will not rotate at a sufficiently high frequency, i.e.> 3 cycles per second (180 revolutions per minute) to provoke a photo epileptic seizure. (Smedley et al, 2010) In a comprehensive report

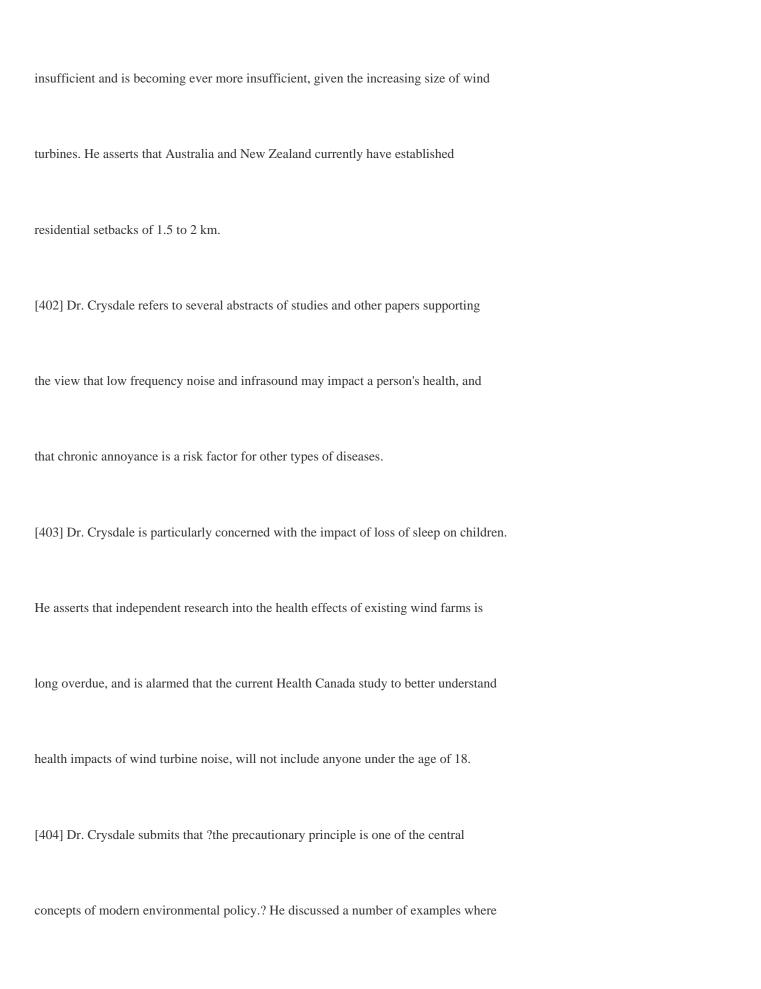
prepared for the state of Massachusetts, the expert panel came to a similar conclusion, finding that the scientific evidence suggests that there is no risk of seizure from shadow flicker caused by wind turbines. (MDPH, 2012) 10. Effect of shadow flicker on blood pressure. Apart from her concern about epilepsy, in her witness statement [PTW] also raised concern that shadow flicker has the potential to affect her blood pressure. There is insufficient scientific evidence to suggest that shadow flickering will cause blood pressure to elevate and cause hypertension, and in fact experts have concluded that shadow flicker does not cause any adverse health effects. (MDPH, 2012) As [PTW] herself has observed, there is only one German study that indicates that prolonged shadow flicker (more than 30 minutes) could result in stress--related

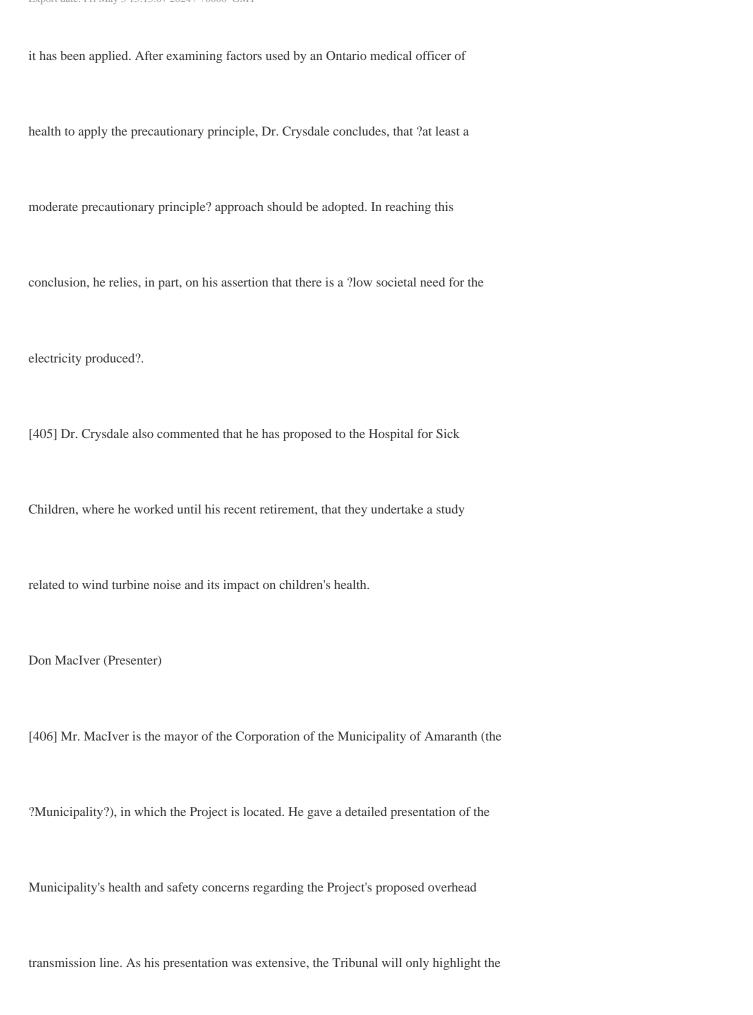


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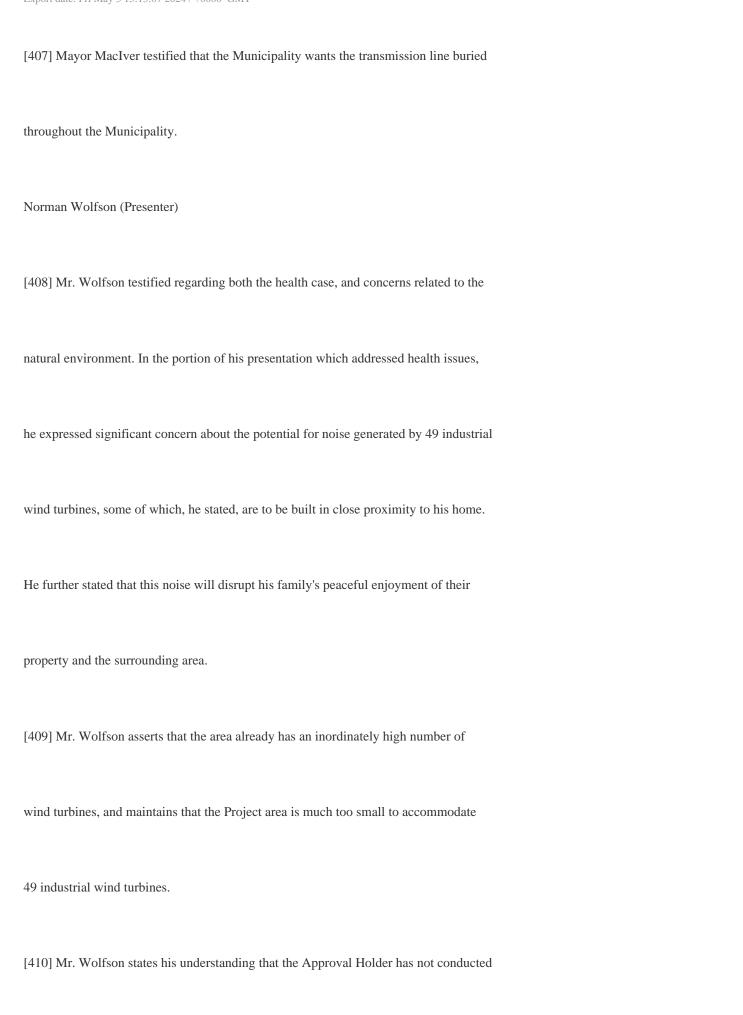
impact of wind turbine noise, and sleep disturbance on human health. She also spoke passionately regarding the social impact of turbine projects on communities. [397] Ms. Lever's evidence included a sophisticated multi-media presentation that included excerpts from the CBC television documentary, ?Wind Rush?, as well as video footage from community demonstrations, and of a case of turbine fire. She appended many of the scientific documents that were also referred to by Ms. Laurie. [398] Ms. Lever expressed concern about direct health effects from low-frequency noise and infrasound, as well as indirect effects from stress and sleep disturbance. She asserts that the current set-back distances are entirely insufficient, citing her understanding of set-back requirements in other jurisdictions, including Australia, New Zealand, and a number of US states. She maintains that, in all cases, they are well beyond Ontario's 550 m requirement.

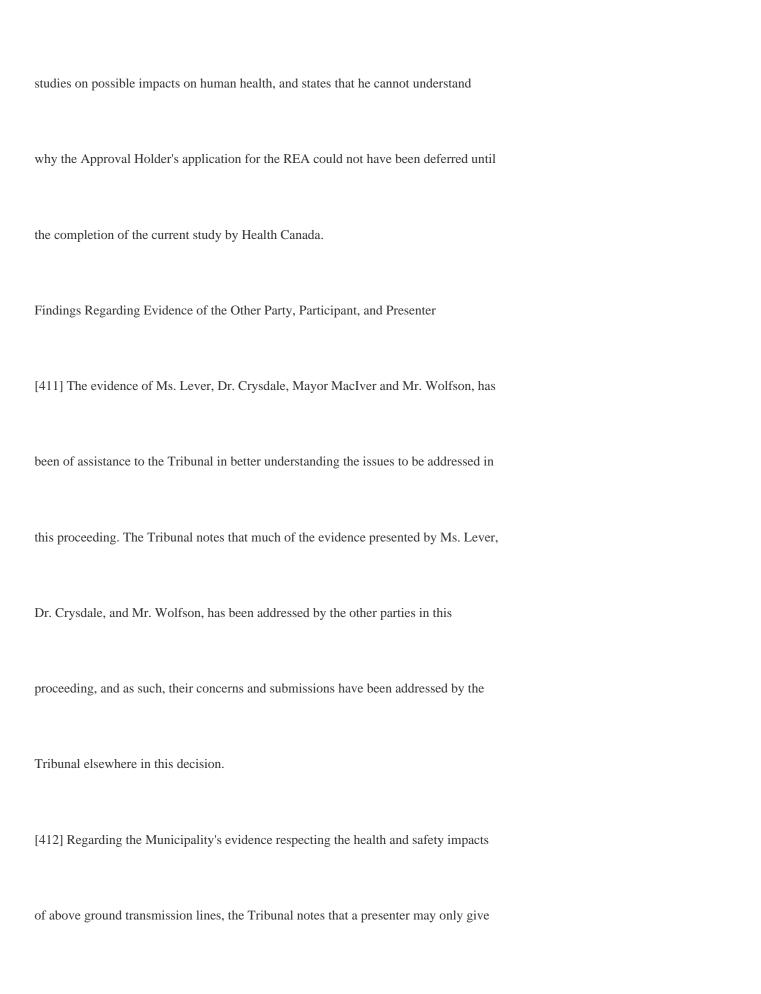






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evidence respecting the issues raised in the appeal. Some of the appeals, in referring
to adverse health effects, do state that it is more likely than not that they are caused by
a number of factors including stray voltage or electromagnetic fields. However, neither
the Appellants' evidence nor their submissions in respect of the Health Test, have
directly addressed this issue. Therefore, it is not entirely clear that this issue is before
the Tribunal. However, assuming that it is, the Tribunal notes that no expert opinion
evidence has been adduced to support the views expressed in Mayor MacIver's
presentation. Consequently, the Tribunal finds that Mayor MacIver's evidence does not
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establish that serious harm to human health will be caused by high voltage transmission

lines.
Conclusion on Issue 2B
[413] The Tribunal finds that the Appellants have not established that any pre-turbine
[413] The Thouhai finds that the Appenants have not established that any pre-turbine
witnesses will suffer serious harm to their health caused by the Project wind turbines.
[414] As noted above, the evidence in this proceeding does not establish a causal link
between wind turbines and either direct or indirect serious harm to human health under
the conditions improved in the DEA requiring a cethod, distance of 550 m and a
the conditions imposed in the REA requiring a setback distance of 550 m, and a
maximum noise level of 40 dBA.
[415] Consequently the Tribunal finds that the Appellants have not established that
engaging in the Project in accordance with the REA will cause serious harm to human
health.
Issue 2C: Whether Ms. Laurie should be qualified to give opinion evidence

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[416] The Appellant, Mr. Sanford, called Ms. Laurie as a witness to give opinion evidence respecting the issue whether engaging in the Project in accordance with the REA will cause serious harm to human health. As noted earlier in this decision, Mr. Sanford requested that she be qualified as ?a physician with experience in the delivery of health care.? In an oral ruling, the Tribunal refused Mr. Sanford's request, indicating that its written reasons for this disposition would follow. The Tribunal's reasons are provided below. Ms. Laurie's Education, Training, and Experience [417] The factual evidence regarding this witness' education, training, and experience in support of the requested qualification is not in dispute. Ms. Laurie obtained a Bachelor of Medicine, Bachelor of Surgery in 1995 from Flinders University, South Australia, and subsequently practiced, and obtained a Fellowship with the Royal Australian College of General Practitioners (?RACGP?) awarded in 1999, and Fellowship

with the Australian College of Remote and Rural Medicine (?ACRRM?) in March 2000.
She stopped practicing medicine in April 2002 due to personal circumstances. Ms.
Laurie testified that in order to practice medicine, and more specifically, to diagnose and
treat patients, Australian law requires that she must be registered with Australian Health
Practitioners Registration Authority (?AHPRA?). She indicates that she let her
registration lapse approximately two and half years after she ceased practicing in 2002.
Ms. Laurie indicates that it is her intention to re-register with AHPRA. However, she
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stated that she must complete some self-study, particularly to update her knowledge

respecting medication regimes, before she will be ready to re-apply. She confirmed that, to date, she has not done so. In light of these circumstances, Ms. Laurie confirmed that she cannot diagnose patients or prescribe medication for them. [418] As a result of a complaint filed with the AHPRA in 2013 that her current activities (discussed below) constituted practice as a physician, she voluntarily agreed not to use the title/honourific ?Doctor? or ?Dr.?. She states that she has done so, in order to avoid any potential misunderstanding by members of the public regarding her status as a practicing physician. Documentary evidence respecting the complaint was adduced in evidence and marked confidential, i.e., it is not included in the public record in this proceeding. Ms. Laurie was cross-examined on this evidence. The Tribunal finds that this evidence supports Ms. Laurie's assertion that the AHPRA did not make any finding in respect of the complaint made against her.

[419] In terms of her other professional training and experience, Ms. Laurie

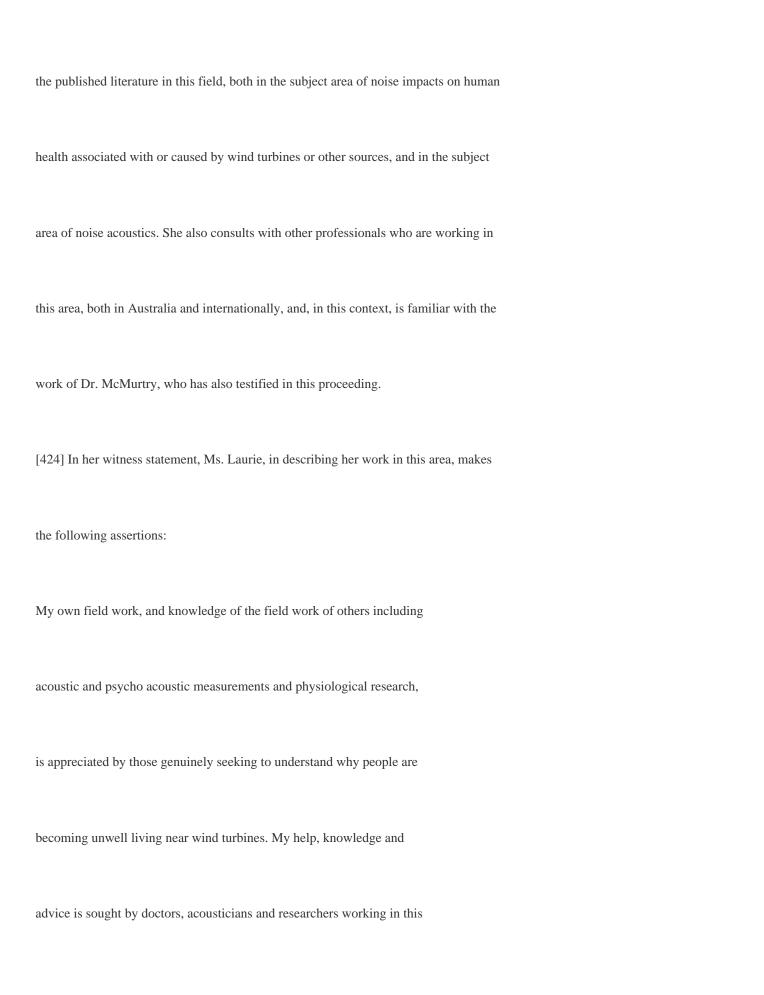
acknowledges that she has no training or experience in conducting medical or scientific research. She further acknowledges that she also does not have any training or experience in research methodology and design, other than some undergraduate exposure when obtaining her medical degree, and does not have post-graduate experience in this area. She acknowledges that she is not a qualified acoustician, and she has no experience or training in acoustics generally, or, in particular, pertaining to noise generated by industrial wind turbines, although she has reviewed publications in the subject area of acoustics, and has consulted with acousticians. [420] Ms. Laurie testified that she first became interested in the potential health impacts of industrial wind turbines, specifically resulting from noise generated by industrial wind turbines, in 2010, when a wind project was proposed to be a situated near her home (but subsequently never built). Since that time, she accepted an

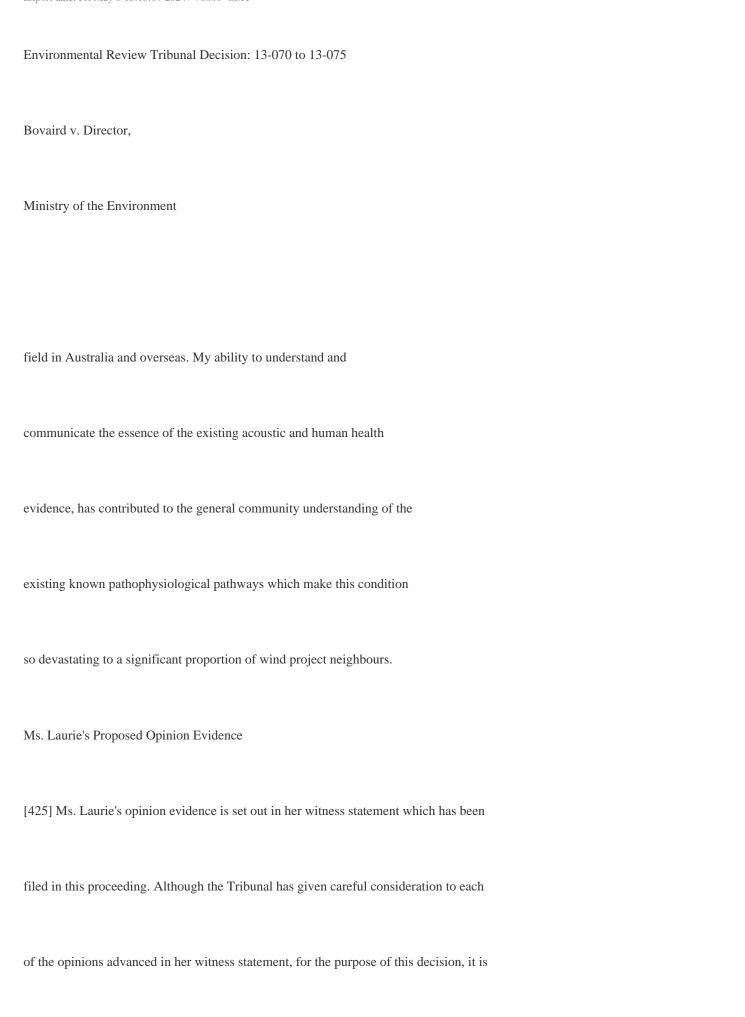
This page was exported from - <u>Shelburne Free Press</u> Export date: Fri May 3 15:13:07 2024 / +0000 GMT invitation to be the medical director of foundation known as the Waubra Foundation, a volunteer position, which has subsequently changed to her current volunteer position as Chief Executive Officer, Ms. Laurie testified that the Waubra Foundation was formed in March 2010 to facilitate research into the adverse health impacts being described by neighbours to wind developments in Australia. She also stated that this Foundation has a particular interest in the role of low frequency industrial noise from any source, and resultant health problems. [421] The majority of Ms. Laurie's work experience related to health impacts of industrial wind turbines, comes from her work for the Waubra Foundation which is a full Environmental Review Tribunal Decision: 13-070 to 13-075 Bovaird v. Director,

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time volunteer position. In summary, Ms. Laurie testified that she has not approached communities to conduct surveys, and that she has not conducted formal structured research. She states that she conducts an ongoing survey, where, to date, she has spoken with approximately 130 people in Australia who live in the vicinity of industrial wind turbine projects. She indicated that these people have identified themselves to her, by contacting her directly, or indirectly by contacting the Waubra Foundation. She explains that these persons describe their symptoms to her and request information. She maintains that, when speaking with these people, she does not provide an individual diagnosis. She states that she has not ever taken a formal medical history, which is what a registered medical practitioner would do. She asserts that, instead, she provides information which people can choose to take to their health care practitioner, if they wish to do so, and that, sometimes, their practitioner will contact her for

information. Ms. Laurie states that she is interested in learning about their problems, so she can provide information to enable them to assist their own practitioners in working out whether or not their symptoms are related in any way to a source of noise, whether the source is an operating wind turbine, or some other source. [422] Ms. Laurie explained that the Waubra Foundation is solely concerned with the human health consequences of exposure to operating industrial wind turbines and other sources of infrasound and low frequency noise. She states that she does not oppose industrial wind projects per se, but is concerned about the current practice of siting wind turbines in locations where, in her view, they are likely, on the basis of current knowledge, to cause harm to human health. [423] Apart from interviewing self-identified individuals as described above, Ms. Laurie states that she also works with acousticians to advance multi-disciplinary research which she asserts is needed. She further testified that she has conducted reviews of

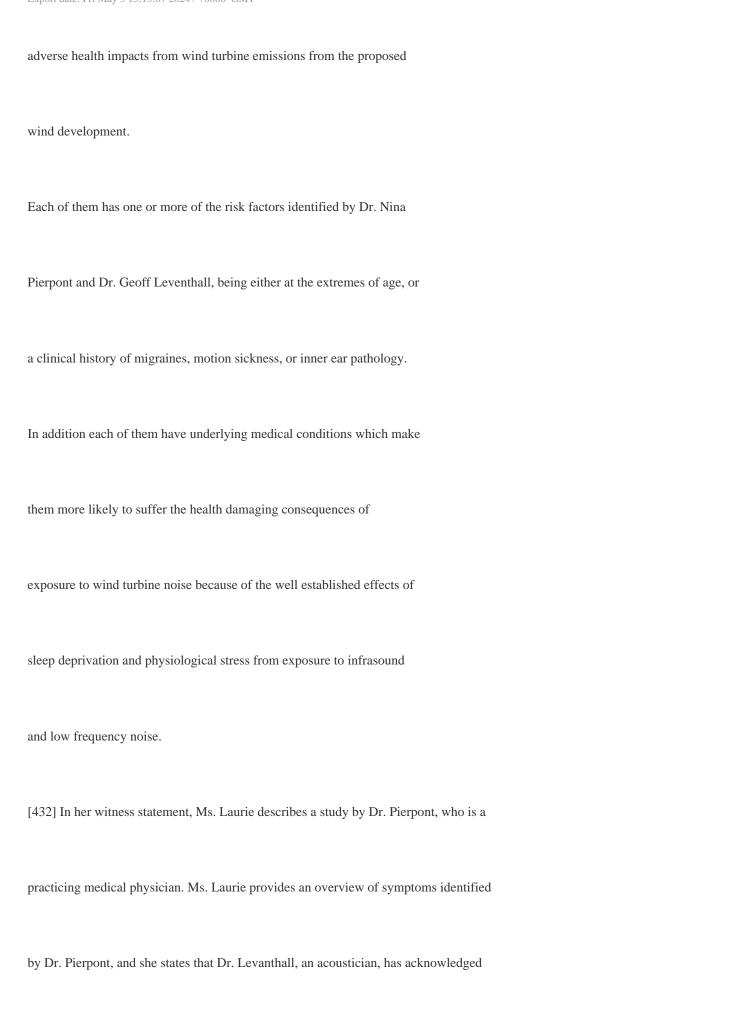




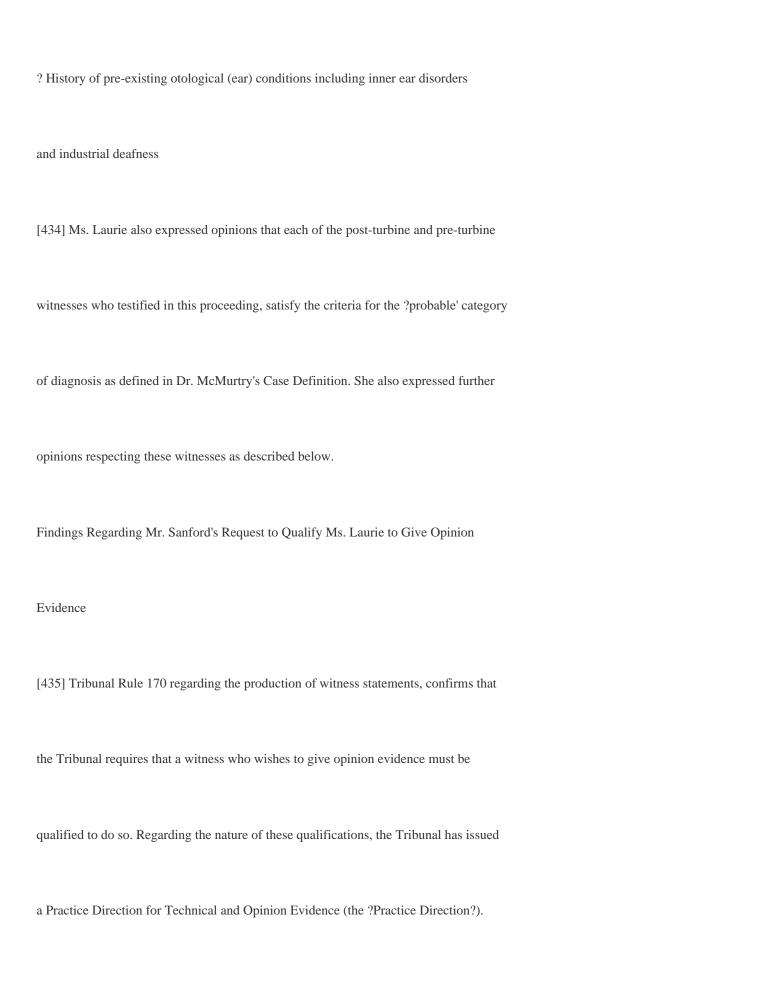


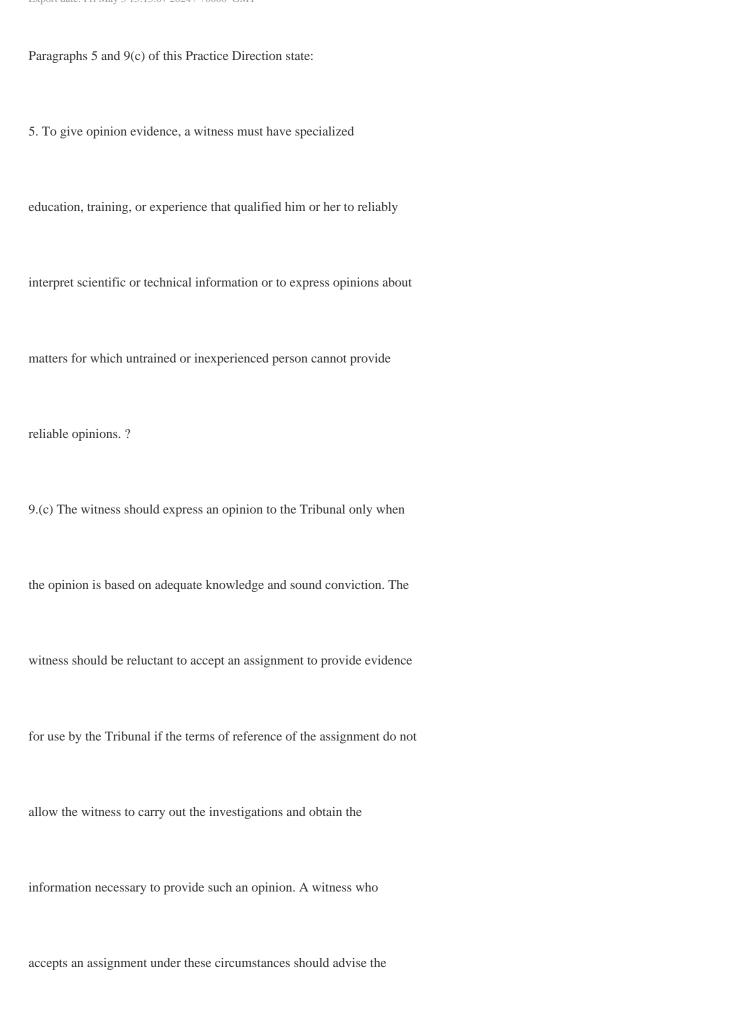
witness statements from the people named in her witness statement, and comment on:
a) whether they conform with Dr. McMurtry's case definition (described
previously in this decision); and
b) whether they are in accordance with her own knowledge of the range and
pattern of health problems being reported by residents living near industrial
wind turbines.
[429] In this regard, Ms. Laurie also reviewed medical records provided by these
witnesses and questionnaires completed by them, and conducted a telephone interview
with each of the witnesses who testified in this proceeding.
[430] In her concluding remarks regarding the post-turbine witnesses, Ms. Laurie
states:
Despite the individual differences between these witnesses with respect
to the type, range and severity of the symptoms experienced, the speed

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that these symptoms have been known to him to result from exposure to environmental
low frequency noise. These symptoms are:
? Sleep disturbance and sleep deprivation
? Headaches
? Tinnitus (ringing in the ears)
? Ear Pressure
? Dizziness
? Vertigo
? Nausea
? Visual Blurring
? Tachycardia (fast heart rate)
? Irritability





Tribunal of the limitations that the terms of reference place on his or her ability to provide the information necessary to assist the Tribunal in making a sound decision. [436] The Tribunal notes Rule 170(d) requires that a witness who proposes to give opinion evidence, must complete Form 5, which requires that the witness acknowledge that the witness' evidence will be fair, objective and non-partisan. Therefore, it is clear that the witness' duty in this regard, is provide opinions which will assist the Tribunal to make a sound decision. [437] The requirement set out in para. 5 of the Practice Direction, reflects the law of evidence that, in order to give opinion evidence, a witness must have acquired special or peculiar knowledge through study or experience that is beyond the knowledge of the Environmental Review Tribunal Decision: 13-070 to 13-075

a basic threshold of reliability. As noted in Mohan (at page 25), where the proposed

opinion evidence advances a novel scientific theory or technique, such evidence is to be subjected to special scrutiny to determine whether it meets the reliability threshold. [439] Clearly, the obligation of the expert witness is to provide opinions which are not subject to any limitation or deficiency which causes the Tribunal to question their reliability. In this regard, the Tribunal observes that para. 9(c) of the Practice Direction, is an example of such scrutiny. The underlying rationale for paragraph 9(c) is that opinion evidence which is proffered subject to restrictions or conditions, will limit its assistance to the Tribunal in making a sound decision. [440] In this case, the terms of reference of Ms. Laurie's retainer do not place any limits on her ability to provide the information necessary to assist the Tribunal in making a sound decision. Instead, Ms. Laurie herself stipulates the limitation that her opinion evidence cannot and does not include diagnostic opinion.

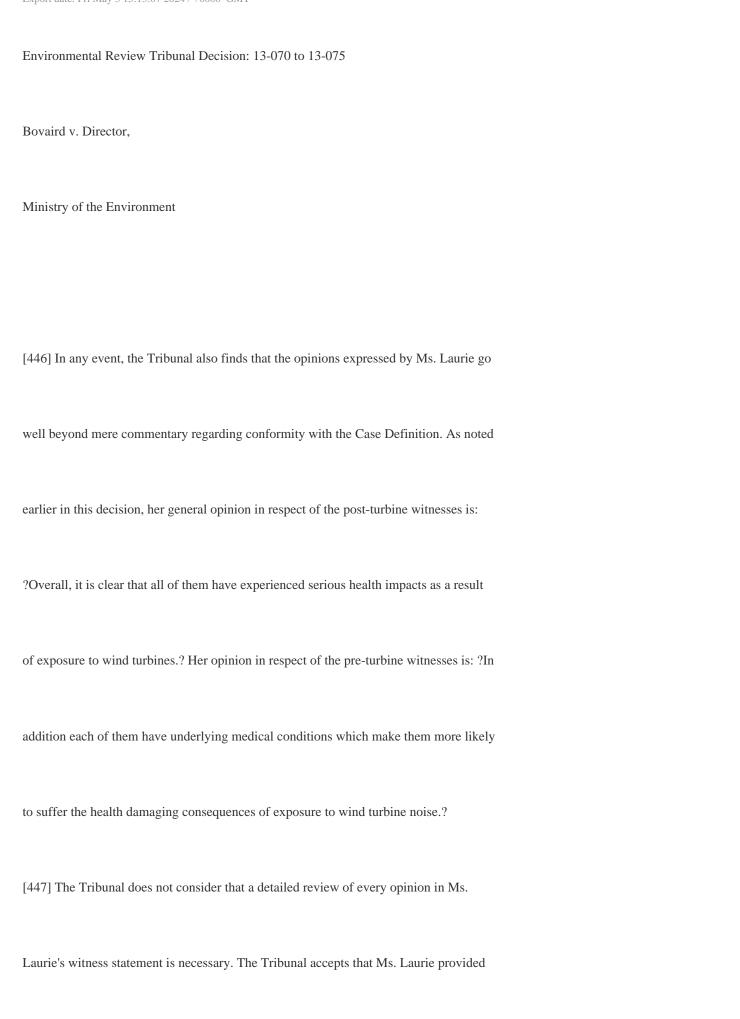
[441] The Tribunal accepts that Ms. Laurie, in her curriculum vitae and her oral
testimony during the qualification phase of her testimony, clearly indicates this limitation.
However, such acknowledgment, in and of itself, does not mean that the opinions she
proposes to advance are sufficiently reliable to assist the Tribunal in making a sound
decision. The Tribunal's decision in this regard is discussed below.
[442] The Tribunal has reviewed Ms. Laurie's proposed evidence in detail. For
reasons described below, the Tribunal finds that Ms. Laurie, in expressing her opinions
either:
? makes a diagnosis;
? applies diagnostic interpretation of pre-existing medical conditions to reach
conclusions that exposure to operating industrial wind turbines has
exacerbated such conditions, or has resulted in additional health problems; or
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? as in the case of the pre-turbine witnesses, includes the application of
diagnostic interpretation to formulate opinions as to the likelihood that these
individuals will suffer health damaging consequences if exposed to an
operating industrial wind turbine.
[443] The Tribunal has addressed Dr. McMurtry's evidence previously in this decision.
However, for the purpose of determining whether Ms. Laurie should be permitted to give
opinion evidence in this proceeding, it is sufficient to note that Dr. McMurtry has clearly
identified that the deployment of the diagnostic criteria set out in the Case Definition
should be conducted by a health care practitioner licensed to take a history and make

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[445] In addressing this aspect of Ms. Laurie's evidence, the Tribunal first repeats its

earlier finding made in respect of Dr. McMurtry's opinion evidence. The purpose of opinion evidence is to assist the Tribunal in making its decision respecting the statutory test under the EPA, which is a legal determination. Consequently, the nature of the proposed opinion evidence is to be assessed in this legal context, and not the context of how a health practitioner may differentiate between commenting on conformity with the Case Definition and making a diagnosis. In the legal context, the Tribunal finds that any such differentiation is artificial. An opinion that the diagnostic criteria set out in the Case Definition are satisfied is a medical diagnosis. As Dr. McMurtry noted in his update to the Case Definition, a ?probable' diagnosis ?indicates that AHE/IWT [adverse health effects in the environs of industrial wind turbines] more likely than not are the cause of the complaints. AHE/IWT is the working diagnosis. Other diagnostic possibilities continue to exist and should be considered in the differential diagnoses.?



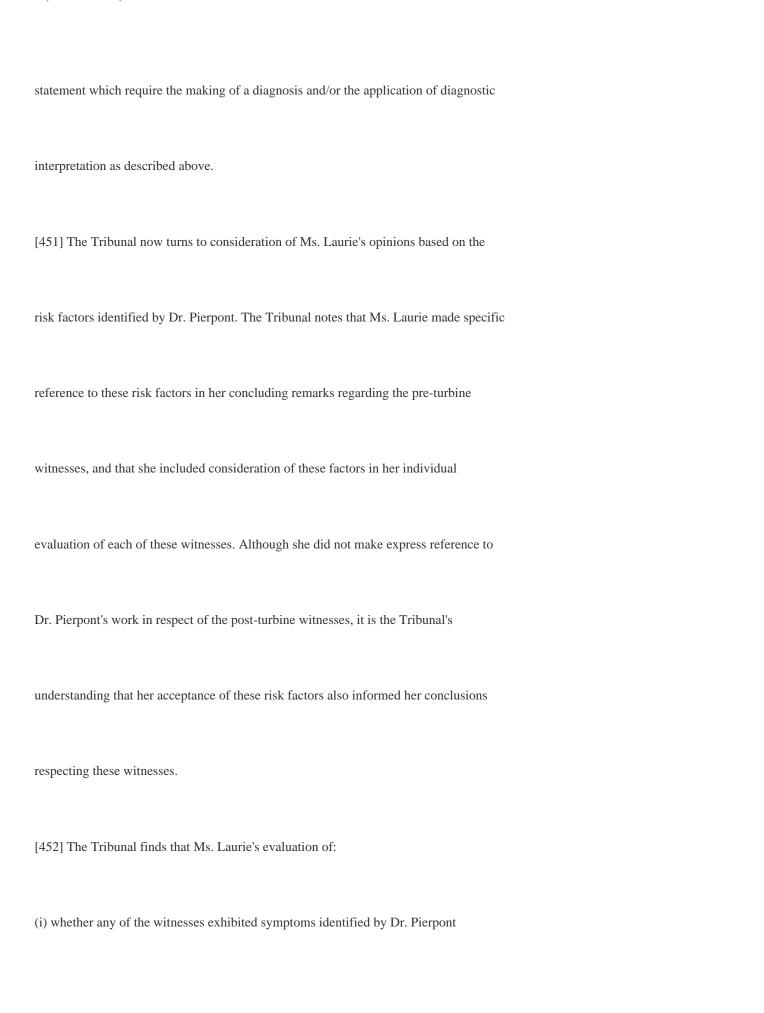
a fair overview of her opinions when providing what she describes as her overall
conclusions. The Tribunal will, however, provide one example. In respect of the pre- turbine witness identified earlier in this decision as PTW, Ms. Laurie states:
For someone like [PTW] with epilepsy, known by her to be triggered by
sleep deprivation, she is rightly very concerned about the impact of wind
turbine noise on her health, and her ability to live on her property,
specifically because of the likely impact on her sleep, and therefore on
her epilepsy
Sleep deprivation is known by clinicians generally to lower the threshold
for seizures,
She will have no control over the wind turbine infrasound and low
frequency noise emissions she is exposed to inside her home if the
project proceeds. In particular, there is no way of successfully preventing

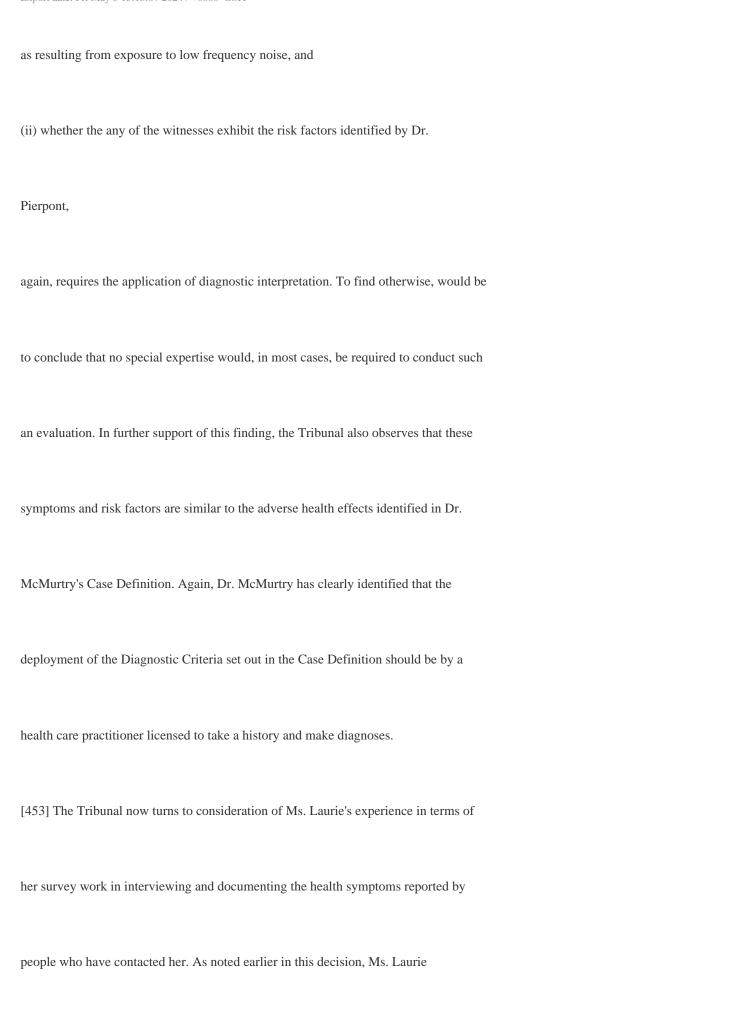


[450] The above analysis and findings address the opinions in Ms. Laurie's witness

witness, while, at the same time, the witness stipulates that she cannot provide such

diagnostic opinion.





acknowledges that she has no training or experience in conducting medical or scientific research, nor has she any training or experience in research methodology. She states that her only training in research design has been some undergraduate exposure while obtaining her medical degree, but she provided no specific particulars of the education or training that she received. She acknowledges that she does not have post-graduate experience in this area. The Appellant, Mr. Sanford, did not seek to qualify Ms. Laurie Environmental Review Tribunal Decision: 13-070 to 13-075 Bovaird v. Director, Ministry of the Environment as an expert in these areas. The Tribunal finds that, based on Ms. Laurie's acknowledgements, she cannot be qualified to give opinion evidence in these areas.

Consequently, the Tribunal finds that Ms. Laurie is not qualified to give her proposed opinion evidence based on expertise in medical or scientific research or research methodology and design. However, for reasons discussed below, this does not preclude her from describing the results of the survey work she has done, including making comparisons to the similarity of the results from this survey work to the results of similar surveys conducted elsewhere. [454] The Tribunal now turns to another aspect of Ms. Laurie's witness statement, namely her review of published literature on the subject of the health impacts from noise exposure from a variety of noise sources, industrial wind turbines in particular. In her witness statement, she summarizes information from some of these publications, which includes publications in the subject area of noise acoustics. In her testimony, Ms. Laurie has acknowledged that she has no expertise as an acoustician. However, she has also stated that she consults with other experts in the areas of acoustics and

psycho acoustic measurements, to promote a multi-disciplinary approach in order to contribute to the general community understanding of what she asserts are ?the existing known pathophysiological pathways which make this condition so devastating to a significant proportion of wind project neighbours.? Although she has undertaken self-study to inform herself on the issue of noise acoustics, Ms. Laurie did not suggest that her self-study is sufficient to qualify her to express expert opinion on noise acoustics. Consequently, the Tribunal finds that she is not qualified to give opinion evidence in the subject area of noise acoustics, and, in particular, opinions regarding the noise to be generated by the industrial wind turbines in the Project, and the noise levels at sensitive receptors in the Project area. [455] The Tribunal accepts that it is appropriate for Ms. Laurie to consider existing published research or other literature in formulating her opinions. However, the Tribunal has already found that Ms. Laurie cannot be qualified to give opinion evidence based on formal medical or scientific research, or research design and methodology. The Tribunal has also found that she cannot be qualified to give opinion evidence requiring diagnostic opinions, or the application of diagnostic interpretation to formulate conclusions on the potential health impacts of exposure to operating industrial wind turbines. This raises the question whether she can be qualified to give her proposed opinion evidence on the basis of the experience she has obtained through self-study of the published research and other literature. The Tribunal accepts that the time Ms. Laurie has devoted to this aspect of her work experience is not insignificant. However, Environmental Review Tribunal Decision: 13-070 to 13-075 Bovaird v. Director, Ministry of the Environment

Ms. Laurie's evidence does not indicate that she has conducted a comprehensive
review of all literature, nor that she has the expertise to assess the sufficiency of the
research methodology in individual research studies. Consequently, the Tribunal finds
that her self-study of the published literature, as described in her witness statement,
even if considered in conjunction with her survey of self-identified participants, is not
sufficient to meet the basic threshold of reliability necessary to assist the Tribunal in
making a sound decision.
[456] In summary, the Tribunal has found that the Appellant, Mr. Sanford has not
established a basis on which Ms. Laurie can be qualified to give her proposed opinion
established a basis on which Ms. Laurie can be qualified to give her proposed opinion

information she has obtained from the survey work that she has conducted. It may be less clear whether other aspects of her evidence are strictly fact evidence. However, the Tribunal notes that the Practice Direction recognizes that a witness who provides technical evidence may, to some extent, interpret information that is essential to the Tribunal's understanding of the issues. In this regard, the Tribunal finds that Ms. Laurie's training, education and experience is certainly sufficient to qualify her to provide this level of interpretation. Accordingly, the Tribunal is prepared to hear her evidence regarding the similarity of health complaints obtained through her survey work, as compared to the health complaints reported in similar surveys conducted elsewhere in Australia and other jurisdictions. [458] Similarly, the Tribunal has allowed her evidence respecting her review of published research and literature to be submitted, as set out in her witness statement, subject to the important caveat that none of the articles, studies, or reports attached to,

or described in her witness statement are being accepted as proof of the opinions and conclusions stated therein. This part of Ms. Laurie's witness statement has been accepted solely on the basis that it describes some of the current body of research and academic or other informed discussion which has been published in this field. In this regard, the Tribunal notes that the other parties did not object to the receipt of this part of Ms. Laurie's evidence, subject to this caveat. [459] Finally, the Approval Holder and the Director opposed Ms. Laurie's qualification on the grounds of bias. As stated earlier in this decision, the Tribunal, in its oral ruling, confirmed that the Tribunal would consider the evidence and submissions of the parties Environmental Review Tribunal Decision: 13-070 to 13-075 Bovaird v. Director, Ministry of the Environment

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respecting the issue of bias, as it relates to the weight to be given to Ms. Laurie's	
evidence.	