BEFORE
THE OHIO POWER SITING BOARD

In the Matter of the Application of of Angelina Solar I, LLC, for a Certificate of Environmental Compatibility and Public Need	))))	Case No. 18-1579-EL-BGN

POST HEARING BRIEF OF THE CITIZENS OF PREBLE COUNTY, LLC, ROBERT BLACK, MARJA BRANDLY, CAMPBELL BRANDLY FARMS, LLC, MICHAEL IRWIN, KEVIN AND TINA JACKSON, VONDERHAAR FAMILY ARC, LLC, AND VONDERHAAR FARMS INC.

I. Angelina Solar's Lack Of Due Diligence And Failure To Communicate With The Persons Adversely Impacted By Its Solar Facility Have Resulted In An Incomplete Project Design.

Angelina Solar I, LLC ("Anglina") has submitted an application ("Application") for a certificate to construct and operate a solar-powered electric generation facility ("Facility") within an area of 934 acres (the "Project Area") in Israel and Dixon Townships in Preble County, Ohio. Company Exhibit 1, Application ("Applic."), pp. 1, 6.

The proposed Facility is not a typical, benign collection of solar panels that might be installed on the roofs of homes or in school yards. Angelina proposes to convert up to 827 acres, most of which is valuable farmland used for food production, into this industrial facility. *Id*. at pp. 1, 6, 91. Arrays of solar panels will be grouped into large clusters called "solar fields" that occupy 806 acres. Co. Exh. 6, Herling Testimony, p. 4, A.8, Lines 7-8; Applic., Exh. G, p. 1-4. The landowners in the Project Area have agreed to lease this land for Angelina's industrial facility for 40 years. Applic., p. 91.

This Facility threatens the quality of life and livelihood of nearby residents, including the Concerned Citizens of Preble County and its members who have intervened in this case

(collectively, the "Citizens" or "Concerned Citizens"). The Facility threatens to expose them to unsightly views, intrusive lighting, noise, crop and livestock destruction by wildlife, loss of wildlife, noxious and invasive weeds, flooding and wet fields, drainage tile damage, sedimentation of streams, crime, road obstructions, and other hazards.

The Citizens are 67 persons and companies that live, work, and own property in communities that will be harmed by the Angelina and Alamo solar projects if constructed. CCOPC Exh. 2, Direct Testimony of Rachael Vonderhaar ("Vonderhaar Testimony"), p. 2, A.6 and A.7. Fourteen of the citizens own and/or occupy land adjacent to the proposed Angelina Project Area. *Id*. at p. 3, A.11, p. 3, A.12, and Exh. A (map of their locations); Vonderhaar, Tr. 335:7-23.

The most troubling aspect of this case is the scarcity of information in the Application for evaluating these threats and for identifying measures to avoid or minimize these threats. To a large extent, the Facility's impacts are unknown, because the Application does not accurately or adequately evaluate them. While the conditions proposed in the Stipulation filed by some of the parties seek to fill in some of this missing information by requiring Angelina to submit 14 plans to the Staff after the certificate is issued, that approach is an insufficient substitute for informed decision-making on whether to grant the certificate and what conditions to include in it. This approach also is unlawful. Such a procedure delegates the certification responsibility of the Ohio Power Siting Board ("OPSB" or "Board") to its Staff and deprives the Citizens and public of their statutory rights to provide the Board with input on decisions that affect their lives.

This project has been plagued by Angelina's lack of transparency since its beginning stages. While Angelina discussed its plans early and often with local officials to enlist their support for the project and solicited landowners of farmland it wanted to lease, it made no effort

to inform the citizens who would bear the brunt of the harm from the project until such time as OPSB's rules required this communication.

Angelina had its first meeting with local officials in early 2017, when it met with the Economic Development Board. Herling, Tr. 38:2-7. [1] Angelina met privately with the Board's Staff in mid-2018 to discuss the project. Herling, Tr. 23:16 to 24:2. Angelina sent letters to some landowners from 2016 to 2018 asking them to lease their land for the project. Herling, Tr. 40:18 to 41:4. But, unless Angelina wanted to lease the landowners' land, it did not bother to provide them with information about the project until required by the Board's rules to do so in October 2018. Herling, Tr. 40:5-17, 41:2-4, 42:9-22. Thus, Angelina did not send letters or make other contact informing neighbors about the project before required by the Board's rules, except for letters sent to people with whom they wanted to negotiate leases.

Angelina's reluctance to communicate with the project's neighbors has resulted in an Application that is wholly deficient in the details necessary to identify and deal with the threats to the neighbors. A couple of examples illustrate this point. Because Angelina has not worked out arrangements with neighbors for screening their homes and land from the objectionable sight of mammoth arrays of solar panels and annoying exterior lighting, the Application contains no meaningful, enforceable commitments to protect the neighbors against these intrusions. And if Angelina had solicited advice from its farming neighbors, it would have known to include procedures in its Application to prevent the propagation of noxious and invasive weeds that could spread from the Facility to adjoining farm fields and natural areas. The result of Angelina's lack of due diligence is an Application filled with generic unenforceable promises instead of specific, legally enforceable commitments for mitigation. The large number of

[1] Citations to the transcript of the hearing are abbreviated as "Tr." following the last name of the witness whose testimony is being cited.

concerns raised by the Citizens is the inevitable outgrowth of Angelina's incomplete investigation of the project's adverse impacts, its failure to design and commit to mitigation for these impacts, and its lack of communication with the citizens affected by its project.

Rather than becoming more forthcoming with information, Angelina and the Staff have now collaborated on a scheme to insulate the public from involvement and input into the decision-making process altogether. Because the Application lacks the necessary detail on project threats and mitigation, these parties have proposed stipulated conditions that would allow them to fill the gaps with 14 post-certificate plans that will be proposed and approved in secret.

While the incomplete Application has deprived the neighbors of a complete evaluation of the project's harm, the adjudicatory hearing has exposed enough facts to determine that the project does not satisfy the criteria set forth in R.C. § 4906.10.

II. Angelina Solar's Application Is Incomplete And Lacks The Information Required By The Board's Rules.

Angelina's Application is incomplete, as it fails to provide much of the information about the project's impacts and proposed mitigation measures required by the Board's rules. The Board needs this information to determine whether the Facility will harm the public. Without this information, the Board lacks the authority to approve the Application and issue a certificate. A government agency cannot grant an approval based on an application that does not contain the information required by law. *Anderson v. Vandalia*, 159 Ohio App.3d 508 (2nd App. 2005).

The Board's rules require certificate applications to contain specific information in order to show whether the Project will harm the public. Angelina seeks to excuse some of its Application's failures to provide the required information necessary to identify the Project's potential harm by arguing that the Board can determine no harm exists without the information required by the rule. An example of this argument is Angelina's argument that the Board does

not need the water quality data required by rule to determine whether soil erosion from construction will pollute the streams, because the Project supposedly will involve only a small amount of grading. However, without the water quality data, the Board cannot tell how much sediment will be washed into the streams or whether this sediment will damage the streams. The Board must base its conclusion on data that it independently evaluates, not on a blanket assertion from a self-interested applicant that stream pollution will not be a problem. The Application contains so little empirical evidence on this issue and many other issues that the Board cannot make an informed judgment as to whether or not the Project represents the minimum adverse impact. The Application's compliance with the rules is necessary to provide this evidence, and Angelina has fallen well short of that goal in many ways.

A. The Application Fails To Provide The Information About The Project's Visual Impacts And Mitigation Measures Required By OAC 4906-4-08(D)(4).

OAC 4906-4-08(D)(4) provides:

> (4) Visual impact of facility. The applicant shall evaluate the visual impact of the proposed facility within at least a ten-mile radius from the project area….The applicant shall:
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> (a) Describe the visibility of the project, including a viewshed analysis and area of visual effect, shown on a corresponding map of the study area. The viewshed analysis shall not incorporate deciduous vegetation, agricultural crops, or other seasonal land cover as viewing obstacles.
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> ****
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> (e) Provide photographic simulations or artist's pictorial sketches of the proposed facility from public vantage points that cover the range of landscapes, viewer groups, and types of scenic resources found within the study area. The applicant should explain its selection of vantage points, including any coordination with local residents, public officials, and historic preservation groups in selecting these vantage points.
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> (f) Describe measures that will be taken to minimize any adverse visual impacts created by the facility, including, but not limited to, project area location, lighting, turbine layout, visual screening, and facility coloration. In no event shall these measures conflict with relevant safety requirements.

Emphasis added. The Application violates this rule in two respects. First, its simulations do not accurately portray the Facility. Second, it makes no commitments for mitigation measures that will be taken to minimize adverse visual impacts, even though the rule requires that the Application describe the "measures that will be taken." These deficiencies are more specifically addressed below.

The Facility, if approved, would impose a serious blight on the scenic views in Preble County. Figure 7, Sheets 1 and 2 of the viewshed analysis show that the solar equipment will be potentially visible for most of the area surrounding the Project Area. *See* the green colored area around the Project Area in these figures. Applic., Exh. I; Robinson, Tr. 187:16-21. And this figure is based on the assumption that no one can see the equipment if vegetation is higher than six feet tall, even though the panels may be as high as 15 feet. Robinson, Tr. 182:25 to 183:7, 189:1-6.

Answer 8 of Robinson's testimony states: "[f]ield review suggested that the Project will be clearly visible from nearby roadways and residences directly adjacent to the Project, particularly where the proposed panels are situated in open fields directly adjacent to public roadways that are void of screening vegetation." Robinson Testimony, p. 4, A.8. Even the Application admits that the visual effect will be "adverse" when largely unscreened and viewed in the immediate foreground. Applic., p. 88.

The project will potentially be visible from 82.26 % of the area within a half mile of the Project. Exh. I, p. 23, Table 1; Robinson, Tr. 185:7-11. This is of particular concern to the Citizens. Angelina's viewshed report advises that, within a half mile, "a viewer is able to perceive details of an object with clarity. Surface textures, small features, and the full intensity and value of color can be seen on foreground objects." Applic., Exh. I, p. 18. The Facility

equipment will potentially be visible from 41.8 % of the area between a half mile and one mile. Exh. I, p. 23, Table 1. The Facility equipment will potentially be visible from 30.78 % of the area between one and miles. Exh. I, p. 23, Table 1; Robinson, Tr. 185:12-15.

Fourteen of the citizens own and/or occupy land adjacent to the proposed Angelina Project Area. *Id*. at p. 3, A.11, p. 3, A.12, and Exh. A (map of their locations); Vonderhaar, Tr. 335:7-23. Some of the Citizens live directly across a road from planned solar fields. Vonderhaar, Tr. 362:1 to 363:6. Photographs attached as Exhibits B and C to Rachael Vonderhaar's Direct Testimony illustrate how close the Project Area is to some of the Citizens' properties. CCOPC Exh. 2, pp. 6-7, A.14. In Exhibit B, Shara Ridenour's house is depicted on the left side of the road, and a field in the Project Area is shown on the right side of the road. *Id*. In Exhibit C, the house of Earl and Sharon Stang is shown on the left side of the road, and a field in the Project Area is shown on the right side of the road. *Id*.

Other Concerned Citizens will be bordered on the sides or back of their land. *Id*., Vonderhaar, Tr. 362:10-14, 363:1-6; Vonderhaar Direct Testimony, Exh. A. Two Citizens, Steven Wyatt and Stephanie Longworth, own a home on a 3.2 acre parcel that will be bounded by solar panels on three sides. CCOPC Exh. 2, Vonderhaar Direct Testimony, p. 7, A.14 & Exh. A. Campbell Brandly Farms, in which Marja Brandly and Michael Irwin live and Vonderhaar Farms rents and farms, is bordered on three sides by the Project Area. CCOPC Exh. 4, Brandly Direct Testimony, p. 2, A.6 & p. 3, A.12. The Johnsons's house is right in the middle of the Project. Vonderhaar, Tr. 361:18-20. The Application provides for a setback of a miniscule 10 feet between the solar fences and the neighbors' property lines and a mere 100 feet between solar equipment and the neighbor's houses. Applic., p. 54. Even if the Project's fences are screened with plants, some of the Concerned Citizens will have unobstructed views of the solar panels

from the second floor of their houses, including the house in which Adam Vonderhaar resides. Vonderhaar Direct Testimony, p. 7, A.14.

Angelina attempts to disguise the Project's adverse visual impacts by emphasizing that people will not be able to discern the individual solar structures at distances of two and five miles away. Robinson, Tr. 203:4 to 204:18, 206:1-7. Mr. Robinson's direct testimony cites his report's conclusion that the Project will be visible from only 16.79 % of the area within five-miles, but neglects to mention that it will be visible to 82.26 % of the area within a half mile. Robinson Testimony, p. 4, A.8. Angelina's focus on faraway views is merely a red herring, since it is the exposure of closer neighbors to the objectionable views that particularly worry the Citizens, especially for persons living within a half mile of the solar equipment. Even in response to the questions of Angelina's counsel, Mr. Robinson admitted that the solar equipment will be highly visible to neighbors living within a half mile. Robinson, Tr. 206:6-11.

Thus, Angelina's own statistics reveal that its unpleasant views will be highly visible to the persons living near the Project. Angelina attempts to disguise how bad its solar equipment will look by violating the requirement in OAC 4906-4-08(D)(4)(e) to accurately portray the equipment's appearance. This rule requires Angelina to "[p]rovide photographic simulations or artist's pictorial sketches of the proposed facility from public vantage points." Angelina has chosen to provide photographic simulations for this purpose. However, Angelina's simulations disguise the true adverse extent of the solar panels' visual impact by depicting panels that are eight feet tall. Applic., Exh. I, Section 3.3.2, Figure 11. Robinson, Tr. 182:2-12. The Application allows Angelina to select panels that are 15 tall, so the Application has to analyze the impact of this worst-case scenario. Since the panels may be as high as 15 feet (Robinson, Tr. 182:25 to 183:7), the eight-foot simulations do not accurately portray the public's views of the

Facility's equipment and structures that will tower above the short plants. Robinson, Tr. 207:3-14. As Mr. Robinson admitted, the simulations should have shown the panels to be almost double the height as inaccurately depicted in the simulations. Robinson, Tr. 194:24 to 195:2. These simulations do not comply with the mandate in OAC 4906-4-08(D)(4)(e) for photographic simulations or artist sketches to show the Board and public what the Facility will look like.

Angelina tried to conceal the seriousness of its deception by asking Mr. Robinson if his report's conclusions would change if the simulations were based on 15-foot panels. Robinson, Tr. 205:15-17. He responded: "They would not, no. We're still introducing contrasting use into the landscape that, from an adjacent position, you would notice and it would be visible." Id., 205:18-21. That is, nearby neighbors will notice the solar equipment whether it is eight feet high or 15 feet tall. This statement misses the whole point of the simulation, which is supposed to show the actual extent of the adverse visual impact so the Board can determine whether the facility represents the minimum adverse impact under R.C. 4906.10(A)(3).

In addition, the Application does not describe the measures that will be implemented to minimize the Facility's adverse visual impacts as required by OAC 4906-4-08(D)(4)(f). All the Application does is generally list three types of visual mitigation <u>that are theoretically</u> available:

> Situations such as these will be accounted for in the development of a landscape plan for the Project, which will be included as part of the final design. A number of cost-effective options <u>are available</u> to address specific issues in limited circumstances. First, in some cases, full screening with short trees, native hedges or low-growing vegetation outside a portion of the fence <u>may</u> be employed. Second, portions of the perimeter fence <u>can</u> be designed with different materials or colors to enhance its visual appeal. Finally, native pollinator habitat outside a portion of the fence <u>can</u> provide a partial screen that "softens" the visual differences between the Project and the rural character of the area.

Applic., pp. 88-89. Emphasis added. Similarly, Application Exhibit I states that Angelina "is considering" pollinator-friendly plants to soften the Project's appearance, that it "anticipates"

using plants that are good for the environment, that it "is considering" the installation of shrubs and trees adjacent to neighboring residences, and that the landscaping plan "would consider" aesthetic properties. Applic., Exh. I, pp. 41-42.

Noticeably absent from this Application language are any commitments to actually mitigate the adverse visual impacts. Instead, the Application states only that one "may" or "can" implement these measures. Applic., pp. 88-89. Exhibit I refrains from any actual commitments, promising only to consider certain plants for screening. Applic., Exh. I, pp. 41-42. The Application defers any actual commitment to a future time when Applicant submits a post-certificate landscaping plan to the Staff. This plan has not been completed. Herling, Tr. 117:20-24. This lack of specificity in the Application violates the mandate in OAC 4906-4-08(D)(4)(f) that the Application describe the measures that "will be taken" to minimize adverse visual impacts.

Angelina's testimony illustrates why a post-certificate landscaping plan provides little assurance that the Facility's visual blight will be satisfactorily managed and why the Application must commit to specific visual mitigation.

First, neither the Application nor the Stipulation require Angelina to completely screen the neighbors' homes from the intrusive views of solar panels and fences. Such a condition is critical to the Citizens. As Rachael Vonderhaar testified, they are concerned that "[s]eeing hundreds of acres of solar panels near our properties and on nearby public roads will spoil the visual and aesthetic enjoyment of living and working there." Vonderhaar Testimony, p. 4, A. 13. Nevertheless, Angelina's viewshed consultant, Matthew Robinson, testified that his goal is never to install 100 % screening. Robinson, Tr. 199:8-12.

Second, the planting of "pollinator habitat" does nothing to block the view of solar equipment, since it consists of short plants that do not hide the solar panels or fences at all. Figure 13, Simulation 1, Sheet 2 of 4 in Application Exhibit I depicts what pollinator habitat looks like. Robinson, Tr. 194:12-23, 196:3-8. This vegetation is only four to six feet tall at maturity, and this simulation shows that it does not disguise the solar panels. Robinson, Tr. 196:9-19; Applic., Exh. I, Fig. 13, Simulation 1, Sheet 2 of 4.

Third, no impacted neighbor has any guarantee that visual mitigation will actually be provided. The Application does not identify the locations for the additional vegetative screening. A neighboring landowner cannot tell from the Application whether vegetative screening will be planted to block or mitigate the view of solar equipment from the neighbor's house. Only the yet-to-be-prepared post-certificate landscaping plan will provide this information.

Fourth, the Application contains no procedures or commitments for maintaining screening vegetation or any other visual mitigation measures, whatever they prove to be. Vegetation does little good if it is dead. A vegetation maintenance plan is not included in the Application, and it has not yet been created.

Submitting a post-certificate landscaping plan pursuant to a certificate condition is not a lawful substitute for a compliant Application that would give affected neighbors a fair opportunity to adjudicate the adequacy of the Applicant's screening plans. Matthew Robinson, who is "a large part" of the team that is designing the vegetation plan, stated that the impacted neighbors will not even be consulted about the plan's contents. Robinson, Tr. 200:5-11. In fact, he has started developing the plan, and he has not consulted with any neighbors. *Id.*, 201:10-12. The landscaping plan should have been included in the Application as required by OAC 4906-4-08(D)(4)(f).

Moreover, proposed Stipulation Conditions 11 and 18 are completely inadequate to provide for meaningful visual mitigation. Proposed Condition 18 only requires Angelina's landscaping plan to "describe the implementation and maintenance of pollinator-friendly plantings." As discussed above, pollinator habitat consists of short plants that provide no screening. As proposed, this condition requires no visual mitigation. Proposed Condition 11 is no better. It states that a landscaping plan must "address[] the aesthetic … impacts of the facility where an adjacent non-participating parcel contains a residence with a direct line of sight to the project area" with "measures such as fencing, vegetative screening or good neighbor agreements." This vague, wishy-washy condition is meaningless, as it contains no standard of performance that Angelina must meet. Instead of providing an enforceable goal, such as complete screening for neighboring residences, this condition does not more than state that Angelina and the Staff will later determine in secret, without Board or public input, what screening will be required.

B. The Application Fails To Provide The Information About The Visual Impacts Of Project Lighting And Mitigation Measures Required By OAC 4906-4-08(D)(4).

OAC 4906-4-08(D)(4) provides:

> (4) Visual impact of facility. The applicant shall evaluate the visual impact of the proposed facility within at least a ten-mile radius from the project area. ...The applicant shall:
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> (f) Describe measures that will be taken to minimize any adverse visual impacts created by the facility, including, but not limited to, project area location, lighting, turbine layout, visual screening, and facility coloration. In no event shall these measures conflict with relevant safety requirements.

Emphasis added. The Application violates this rule with respect to lighting.

The Application states that lights will exist at gates. Applic., p. 87. However, it provides no details about the actual locations of these lights, because Angelina has not decided where to

build the gates. The visual impact assessment of Angelina's consultant in Application Exhibit I does not fill this information gap, but simply notes that, other than at the substation, lights will located at "a few other select locations." Applic., Exh. I, p. 40. This has left the Citizens unable to determine whether their individual homes will be subjected to these lights. This lack of information violates the requirement in OAC 4906-4-08(D)(4) to "evaluate the visual impact of the proposed facility."

The Application also fails to make enforceable commitments for mitigation measures that will be taken to minimize adverse visual impacts of lighting, even though the rule requires that the Application describe the "measures that will be taken." Emphasis added. Angelina has not prepared a lighting plan. Herling, Tr. 118:3-5. The Application's narrative text hollowly promises to "reduce" the lights' off-site impacts, but it makes no commitment as to how it will perform this task or the amount of impact reduction that will be accomplished. Applic., p. 89. Instead, it generally describes the types of mitigation that "may be incorporated into the design" such as downward facing lights, side shields, and motion sensors. Applic., p. 89. This refusal to commit to specific mitigation appears to reject the statements in the visual impact assessment of Angelina's consultant that "security and work related lights will be shielded, downward facing fixtures" and that security lights will use motion sensors. Applic., Exh. I, p. 40. This lack of information violates the requirement in OAC 4906-4-08(D)(4) to "[d]escribe measures that will be taken to minimize any adverse visual impacts created by the facility, including … lighting."

The proposed Stipulation fails to address this lack of enforceable commitment. Proposed Condition 11 adopts the non-committal approach of the Application's narrative text rather than the committal approach of Exhibit I, requiring the future submission of a landscape and lighting plan that "addresses" the Project's lighting impacts. The condition does not fill in the

information missing from the Application to "describe measures that will be taken to minimize any adverse visual impacts " from lighting as required by OAC 4906-4-08(D)(4)(f). Nor does the condition provide an enforceable goal or standard to achieve. The condition just provides that Angelina and the Staff will work out the mitigation measures in a future secret deal.

Staff member Jon Pawley testified that nothing about the Project prevented Angelina from submitting the lighting plan with its Application. Pawley, Tr. 304:21-25. The Certificate cannot be issued without first including this information in the Application.

C. The Application Lacks The Decibel Data And Mitigation Measures For Operational Noise From The Inverters Required By OAC 4906-4-08(A)(3).

Angelina wants to construct its solar project in a quiet rural community, as it discovered when its acoustics consultant, Hessler Associates, Inc., measured the background sound level in the Project Area. Applic., pp. 1-2; Hessler, Tr. 242:11-19. The background sound level can mask the sound from a new noise source if the background sound is as high as the new sound. Hessler, Tr. 242:1-6. In the Project Area, the average background sound level in daytime is "extremely quiet" at "only 31 dBA."

OAC 4906-4-08(A)(3) describes the information that the Application must provide about the anticipated noise impacts from the Facility:

> (3) Noise. The applicant shall provide information on noise from the construction and operation of the facility.
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> (b) Describe the operational noise levels expected at the nearest property boundary. The description shall address:
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> (i) Operational noise from generation equipment. In addition, for a wind farm, cumulative operational noise levels at the property boundary for each property adjacent to or within the project area, under both day and nighttime operations. The applicant shall use generally accepted computer modeling software (developed for wind turbine noise measurement) or similar wind turbine noise methodology, including consideration of broadband, tonal, and low-frequency noise levels.

(ii) Processing equipment.

(iii) Associated road traffic

(c) Indicate the location of any noise-sensitive areas within one mile of the facility, and the operational noise level at each habitable residence, school, church, and other noise-sensitive receptors, under both day and nighttime operations. Sensitive receptor, for the purposes of this rule, refers to any occupied building.

(d) Describe equipment and procedures to mitigate the effects of noise emissions from the proposed facility during construction and operation, including limits on the time of day at which construction activities may occur.

Emphasis added. Angelina's Application is missing important noise information required by this rule for the inverters that Angelina plans to install in the solar fields. Angelina will construct up to 40 central inverters and an unknown number of string inverters. Herling, Tr. 75:8-22. Inexplicably, Angelina did not model the noise from inverters to determine how much noise would travel from them to neighboring land and houses. Bellamy, Tr. 312:20-22.

Inverters convert the energy from solar panels from direct current to alternating current so it can be transmitted in a collection line. Herling, Tr. 51:16-23; Applic., Exh. E, p. 12. During that process, the inverters generate a humming noise. 12. *Id*., pp. 12-13.

Accurately quantifying the decibel levels of the noise from Angelina's inverters is important due to the tiny setbacks set by the Application. While Angelina argues that it does not expect inverter noise to travel beyond 150 feet, neither the Application nor the proposed Stipulation requires inverters to be sited 150 feet from neighboring land or houses. Herling, Tr. 491:3-15; Hessler, Tr. 499:6-13. If certificated, Angelina's Project will be allowed to site an inverter a mere 25 feet from a neighbor's land and only 50 feet from a neighbor's house. These inverters will be operating in an "extremely quiet" rural area in which the existing average L90

noise level is only 31 dBA,with a range of 20 to 35 L90 dBA. Hessler, Tr. 260:8-19; Applic., Exh. E, p. 5 & p. 6, Table 3.0.1.

Angelina tries to excuse its lack of acoustics data for the inverters by representing in the Application that a solar facility "comes close to operating silently." Applic., p. 57. The Application further states that "the noise that inverters and their associated step-up transformers generate is inaudible at a distance of 50 to 150 feet from the source." Applic., p. 58. Mr. Herling also made this argument. Herling, Tr. 74:7-15. Angelina stated that this position is based on the report from Hessler Associates in Exhibit E of the Application (hereinafter referred to as "Hessler's Report"). Applic., p. 58; Herling, Tr. 245:10-18.

Hessler's Report actually states that "field measurements indicate that inverter sound fades to insignificance relative to normal background levels at a distance of 150 ft.," not 50 to 150 feet as stated in the Application's narrative. Applic., Exh. E, pp. 2, 15. Hessler Report also contends that inverter sound "is rarely audible at the perimeter fence of typical solar fields." *Id*.

The Application estimates that there will be a distance of 50 feet between the solar equipment and the project's "site property boundary," as "conservatively interpreted." Applic., p. 57. The Application's representation that Hessler's Report finds the inverter noise to be inaudible at 50 feet away is obviously intended to demonstrate that inverter noise will not reach the property line. However, the Application, including Hessler's Report, contains no noise data showing the amount of inverter noise that will travel 50 feet. This is especially troubling in light of the fact that the setback provided in the Application between the solar equipment, including inverters, and neighboring homes is only 100 feet. Applic., p. 54; Bellamy, Tr. 309:19 to 310:10.

Actually, neither the Application's narrative nor Hessler's Report contains any noise data to show the amount of inverter noise that will travel 150 feet. The statement in Hessler's Report, representing that "field measurements indicate that inverter sound fades to insignificance relative to normal background levels at a distance of 150 ft.," is based on a report for the Massachusetts Clean Energy Center (hereinafter referred to as the "Massachusetts Report"). Applic., Exh. E, p. 13; Hessler, Tr. 245:10 to 246:2; CCOPC Exh.1. The same is true of the statement in Exhibit E that "inverter sound is rarely audible at the perimeter fence of typical solar fields." Applic., Exh. E, pp. 2, 13. In fact, these statements are based solely on the Massachusetts Report, since this was Mr. Hessler's only information on inverter volume at the time he did his report.

While the Massachusetts Report is the basis for the Application's statement that inverter noise is rarely audible at the perimeter fence of typical solar fields, the only distances between inverters and perimeters that Mr. Hessler could find in the report were at least 400 feet, not 150 feet. Hessler, Tr. 246:3-10, 248:16 to 249:12. Even if the inverter sounds in the Massachusetts study faded out before reaching the perimeters at 400 or more feet, this fact does not help Angelina demonstrate that its inverter noise will dissipate before reaching neighborhood houses that may be only 50 feet away.

The Massachusetts Report did not identify the inverters' sound volumes at 150 feet away. CCOPC Exh. 1. Instead, it found only that the inverter sound at three study sites did not exceed the background sound levels at that distance. Hessler, Tr. 249:13 to 256:12. Thus, the high background sound at the Massachusetts sites covered up the inverters' noise. Hessler, Tr. 254:4-8, 255:11-15, 256:11-12. And at the sites studied in the Massachusetts Report, the background sound levels were considerably higher than the 31 L90 dBA average background sound level in Angelina's Project Area. In contrast, the L90 background sound levels in the Massachusetts

Report ranged from 41.0 dBA to 48.6 dBA at a distance of 150 feet from the inverters. Hessler, Tr. 249:13 to 256:12; CCOPC Exh. 1, pp. 9, 10, 17, 18, 25, 26. If the inverters' noise in the Angelina Facility is as loud as the background sound of 41.0 dBA to 48.6 dBA in the Massachusetts Report, it will be a serious nuisance in a community that has a background level of only 31 dBA. If Angelina's inverters produced noise at these levels, they would far exceed the background sound level available to mask their noise by 10 dBA to 17.6 dBA.

Mr. Herling testified that he anticipates that the inverters will be located in the interior of the solar fields. Herling, Tr. 76:14 to 77:2. However, the Application states that "[t]he Project will be designed to site the inverters within the solar fields to ensure they do not cause material, adverse impacts to any sensitive, off-site receptors." Applic., p. 58 (emphasis added). Stating only that the inverters will be located somewhere in the solar fields makes no commitment to keep the inverters at least 150 feet from the project boundary. They could be a mere 50 feet from the boundary and still comply with the Application's meaningless statement that they will be located "within the solar fields." Nor does the Application state that the inverters will be located at least 150 feet away from neighboring residences. Herling, Tr. 80:23-24. The Stipulation fails to correct this oversight.

Mr. Hessler also participated in this charade, stating that "I'm sure the inverters will be sited with a high degree of sensitivity to surrounding residences and place so as to maximize the buffer distances." Hessler Rebuttal Testimony, p. 4, A7. But he also admitted that nothing in Application or Stipulation requires Angelina to do so. Hessler, Tr. 499:6-13. Angelina's statements that the inverters will be placed in the middle of the solar fields or at least 150 feet from the boundaries are empty promises that cannot be enforced unless the certificate requires the inverters to be placed there.

In recognition of its failure to identify the sound levels expected from the inverters, Hessler's Report states that options exist for mitigation of inverter noise "should any problem arise" during operation. Applic., Exh. E, p. 2. These mitigation measures include cabinet damping and ventilation silencers. *Id*. at 13. But mitigating noise after it becomes a problem is a poor substitute for proper siting to prevent the problem ahead of time. By that time, it already will have harmed the neighbors exposed to the objectionable noise. Nor do post-construction fixes satisfy OAC 4-08(A)(3)(d), which requires the Application to proactively "[d]escribe equipment and procedures to mitigate the effects of noise emissions from the proposed facility during construction and operation."

Thus, the Application does not "[d]escribe the operational noise levels expected at the nearest property boundary," as required by OAC 4906-4-08(A)(3)(b). The Application does not even contain any data to show that inverter noise levels at 150 feet away will be suitable. Nor does the Application comply with OAC 4906-4-08(A)(3)(c), which requires the Application to "[i]ndicate the location of any noise-sensitive areas within one mile of the facility, and the operational noise level at each habitable residence, school, church, and other noise-sensitive receptors, under both day and nighttime operations." Emphasis added. The Application fails to identify the inverter noise levels at the residences and other noise-sensitive receptors within a mile of the Facility.

Angelina has no good excuse for failing to provide this data. Angelina claims that "[t]he precise make and model of the inverters for the Angelina project has not yet been selected so their sound emissions cannot be modeled or rigorously evaluated at this time." Applic., Exh. E, p. 13. However, Angelina could have modeled the sound levels from several inverter models that are typical of the inverter that ultimately would be selected, just as wind power applicants

for OPSB certificates typically do for wind turbine models. Without this information, OPSB cannot issue a certificate for the Angelina project.

D. The Application Lacks Effective Measures To Minimize Disagreeable Noise From Construction Required by OAC 4906-4-08(3)(d).

OAC 4906-4-08(A)(3) requires the Application to contain the following information about noise levels expected to occur during construction of the Facility:

> (3) Noise. The applicant shall provide information on noise from the construction and operation of the facility.
>
> (a) Describe the construction noise levels expected at the nearest property boundary. The description shall address:
>
> (i) Blasting activities.
>
> (ii) Operation of earth moving equipment.
>
> (iii) Driving of piles, rock breaking or hammering, and horizontal directional drilling.
>
> (iv) Erection of structures.
>
> (v) Truck traffic.
>
> (vi) Installation of equipment.
>
> ****
>
> (d) Describe equipment and procedures to mitigate the effects of noise emissions from the proposed facility during construction and operation, including limits on the time of day at which construction activities may occur.

Emphasis added.

The Application predicts that "numerous piles" will be driven into the ground to serve as posts for the solar panels. Applic., p. 57. The posts for the solar panels will be pounded by a pile driver or screwed by a drill rig truck into the ground. Herling, Tr. 258:5-24; Herling, Tr. 62:10 to 63:. The posts and pile driver are composed of metal, resulting in metal pounding on metal during post installation by pile driver. Herling, Tr. 62:19 to 63:10.

The Application admits that the pile driver and/or drill rig truck used to drive the posts into the ground will produce a noise that is 84 dBA or 85 dBA at a distance of 50 feet, which the Application represents to be "conservatively interpreted" as the distance to the project's boundary. Applic., p. 57; Hessler, Tr. 253:6-18. This is equivalent to the noise from a bulldozer. Applic., Exh. E, p. 14, Table 6.0.1; Hessler, Tr. 257:16-24. "There's no question that construction noise is going to be audible." Hessler, Tr. 259:23-25. This grating noise will be repeated about 45,300 times during construction, as about 45,300 posts will be installed. Applic., Exh. G, p. 7-4.

The Application states that the pile driving noise will be "temporarily produced." Applic., p. 57. Hessler's Report asserts that this activity will be "fairly short-lived in any particular location." Applic., Exh. E, p. 2. However, this assertion is wrong. Mr. Herling acknowledged that post installation will take three to four months. Herling, Tr. 63:14-20. He could not say how long post installation would occur near a particular neighbor's home, such as the 8000 posts that will be placed in the 120-acre field bordering one neighbor's house on three sides. Herling, Tr. 64:11 to 70:18.

Simply requiring Angelina to stop pounding the metal posts at dusk, as suggested by proposed Condition 10 of the Stipulation, will not provide the Facility's neighbors with adequate relief from this noise. Warning the neighbors in advance that the loud noises are about to start, as required by the same condition, also does nothing to relieve the neighbors of the sound. Pursuant to OAC 4906-4-08(A)(3)(d), OPSB should not issue a certificate without first instructing Angelina to devise more effective mitigation measures to address this noise.

E. The Application Lacks The Procedures Necessary To Comply With The Requirements In OAC 4906-4-08(E)(2) For Avoiding And Repairing Damage To Field Drainage Tiles.

OAC 4906-4-08(E)(2) provides:

> (2) Agricultural information. The applicant shall provide, for all agricultural land, and separately for agricultural uses and agricultural districts identified under paragraph (E)(1) of this rule, the following:
>
> ****
>
> (b) An evaluation of the impact of the construction, operation, and maintenance of the proposed facility on the land and the following agricultural facilities and practices within the project area:
>
> ****
>
> (iii) Field drainage systems.
>
> ****
>
> (c) A description of mitigation procedures to be utilized by the applicant during construction, operation, and maintenance to reduce impacts to agricultural land, structures, and practices. The description shall illustrate how avoidance and mitigation procedures will achieve the following:
>
> (i) Avoidance or minimization to the maximum extent practicable of any damage to field tile drainage systems and soils in agricultural areas.
>
> (ii) Timely repair of damaged field tile systems to at least original conditions, at the applicant's expense.

Emphasis added.

The vigilant monitoring, maintenance, and repairs of field drainage tiles are of utmost importance to a crop farmer. Oversaturated soil in the spring can delay planting of crop fields, which decreases crop yields. Vonderhaar Direct Testimony, p. 9, A.23. After planting, flooding can kill or damage growing crops. *Id*. Planted corn seeds or small corn plants will die if they are flooded for 24 to 48 hours. Vonderhaar Suppl. Testimony, p. 4, A.6. The seeds rot and the young plants suffocate under this condition. Vonderhaar, Tr. 410:19 to 411:5. Surface water flow can also damage downgradient fields with erosion. Vonderhaar Direct Testimony, p. 9, A.23.

Well-functioning tiles are critical for crop farming, because otherwise the fields will flood and will stay wet longer after precipitation. *Id*., p. 10, A.25. For example, a damaged tile must be replaced immediately to prevent damage to a newly planted corn crop. Vonderhaar

Suppl. Testimony, p. 4, A.6. Because much of the land in the Project Area slopes to the southeast, the tiles in this area drain to the southeast so that the water can flow downgradient to Four Mile Creek. Vonderhaar Direct Testimony, p. 10, A.25. Some tiles in the Project Area flow southeast into tiles on land owned by the Concerned Citizens. *Id*. This includes two main trunk tiles that flow into tiles on land owned by Vonderhaar Family ARC, LLC and Campbell Brandly Farms, LLC (which is land farmed by Vonderhaar Farms, Inc). *Id*.

The latter main tile is located in a low area of Campbell Brandly Farm's field north of Marja Brandly's house. Brandly Direct Testimony, p. 4, A.17. This tile is connected to a tile in the 79.494 acre parcel owned by Gary Stahlheber, which is part of the Project Area. *Id*. If the solar panels on that parcel increase the rate of runoff from rainfall into Mr. Stahlheber's tile, it would increase the amount of flow in Brandly Farm's tile and may keep Brandly Farm's land wet for a longer period of time. *Id*. This may decrease the crop yields on part of this field. *Id*.

Some of the Project Area slopes to the west and its tiles flow to the southwest and west into tiles on land owned by Kevin and Tina Jackson. *Id*. Their land drains to the Little Four Mile Creek that also flows to Acton Lake in Hueston Woods State Park. *Id*., p. 11, A.25. The tiles' function is to quickly move water from the surface and upper soil of the fields, in order to prevent flooding and soil oversaturation. *Id*. Without properly functioning tiles in the Project Area, the surface water flow from the Project Area onto the Concerned Citizens' downgradient fields would increase and flood and erode the Citizens' fields. *Id*.

Notwithstanding the tiles' importance, the Application does not comply with the mandate in OAC 4906-4-08(E)(2)(c)(ii) to provide for the "[t]imely repair of damaged field tile systems to at least original conditions." The Application states only that Angelina will "use commercially reasonable efforts" to repair tiles. Applic., p. 92. This implies that Angelina will

not repair damaged tiles if it deems the repairs to be too costly or difficult. Although Angelina may disclaim any such intent, there is a potential that Angelina, or whoever owns the Facility after Angelina builds it, may interpret this ambiguous term in the future to excuse the company from making repairs in the future. This does not satisfy the rule's mandate to repair all damaged tiles. A certificate should not be issued as long as the Application contains this vague language.

The timing of repairs also is a problem. The Application states that repairs will be made "promptly." Applic., p. 92. Proposed Stipulation Condition 16 muddles the meaning of this commitment by requiring tiles to be "promptly repaired no later than 30 days after such damage is discovered." Jt. Exh. 1, p. 8. The witnesses had various interpretations as to the meaning of this requirement. Ms. Vonderhaar believed that the stipulated condition would allow up to 30 days of flooding to occur, even if immediate repairs were necessary to save a flooded crop that otherwise would perish in 24 to 48 hours. Vonderhaar Suppl. Testimony, p. 3, A.6. Doug Herling opined that the allowance for up to 30 days does not define "promptly." Herling, Tr. 134:9-17.

If a certificate is issued, Condition 16 badly needs repair. The Citizens recommend the following sentence to express the condition's actual intent: "Damaged field tile systems shall be replaced as quickly as feasible, but in no event later than 30 days after the damage is discovered." Making this change is necessary to satisfy the edict in OAC 4906-4-08(E)(2)(c)(ii) for the "[t]imely repair of damaged field tile systems." If broken tiles are not replaced early enough to prevent damage, the certificate should require the Applicant to reimburse the damaged landowner for the resulting loss based on an estimate of loss provided by a Certified Crop Advisor.

The Application does not satisfy the requirement in OAC 4906-4-08(E)(2)(c) to provide procedures for avoiding and mitigating damage to field tiles. Some of the tiles in the Project Area have reached or are close to reaching their life expectancy and will need to be replaced completely when they fail. Vonderhaar Suppl. Testimony, p. 4, A.6. Although Angelina contends it could use a mini-excavator or even a hand shovel to dig out malfunctioning tiles between solar panels, a sizeable replacement of deteriorated tiles would require heavy equipment. Vonderhaar, Tr. 407:13 to 410:10. Procedures for these replacement activities will necessitate the temporary removal of solar panels to provide room for the equipment used to replace the tiles, but no such procedures are provided. Vonderhaar Suppl. Testimony, p. 4, A.6. The Application does not identify any procedures that will be used to determine whether tiles have been broken, damaged, or deteriorated during project operation, even though tiles reach the end of their usable lives over time. Applic., p. 91-92. Neither does the Stipulation.

In addition, the Application must provide a procedure for detecting tile damage caused by construction. A construction crew will not be able to tell that a tile has been broken if the posts for the panels are driven into the ground. Vonderhaar Direct Testimony, p. 11, A.26. Clay or plastic tiles offer little resistance to heavy pressure. *Id*. In fact, Ms. Vonderhaar has seen people crush plastic tiles with their feet. *Id*. The construction workers will not be able to hear the tiles break over the noise resulting from pounding the metal posts into the ground. *Id*. The Application must be amended to provide a procedure for detecting this tile damage at the time it occurs, rather than waiting for flooding to occur to look for the damage. Without such a provision, the Application does not comply with the mandate in OAC 4906-4-08(E)(2)(c)(i) to avoid damage to tiles "to the maximum extent practicable."

The Application also fails in another way to satisfy the requirement in OAC 4906-4-08(E)(2)(c)(ii) to provide procedures for the "[a]voidance or minimization to the maximum extent practicable of any damage to field tile drainage systems." Emphasis added. In order to avoid or minimize damage to the maximum extent practicable, Angelina must obtain the most accurate available information about the tiles' locations. Not all of the tile locations in the area are documented on available maps. Waterhouse, Tr. 145:10-20. To establish accurate and complete benchmark conditions for the existing drainage systems, Angelina must consult with all landowners (whether or not they are adjacent to the Project Area) whose land drains into the Project Area and all landowners whose land receives drainage from the Project Area to make sure all underground tiles and surface drainage ways are found. Vonderhaar Suppl. Testimony, p. 2, A.6. The upstream and downstream landowners may be aware of tiles in existence about which the Applicant and the owner of the land in the Project Area are not aware. *Id*. In situations where Angelina damages or blocks a tile, Angelina must consult with landowners whose land may be affected by the tile damage or blockage. *Id*. p. 3, A.6. Consultation with all potentially affected upstream and downstream landowners (both adjacent and non-adjacent to the Project Area) is essential to make sure that the Applicant and County Engineer have all of the information they need to address the problem. *Id*. This consultation also is necessary to make sure the tile repairs or replacement are effective to correct any drainage problem on the affected landowners' land. *Id*.

Remarkably, Angelina has been resistant to working with its neighbors to obtain the most accurate tile information. Angelina's tile consultant, Noah Waterhouse, is in the process of collecting information on the tiles' locations. Waterhouse, Tr. 138:21 to 139:13. He has not talked to adjacent landowners. Waterhouse, Tr. 139:20-24. He said that he would most likely

talk only to adjacent upgradient landowners about tile locations and then only if it looked like their tiles may extend into the Project Area. Waterhouse, Tr. 140:5 to 141:3. He probably will not consult with downgradient landowners. *Id*.

OAC 4906-4-08(E)(2)(c) requires the Application to provide procedures to avoid or minimize damage "to the maximum extent practicable," and meaningful consultation with affected neighbors is one such procedure. The certificate cannot be issued without first adding to the Application a consultation process with all upgradient and downgradient landowners to identify tile locations and a consultation process with all affected neighbors for tile replacements.

In sum, the Application is noncompliant with OAC 4906-4-08(E)(2)(c) for six reasons: (1) the Application states only that Angelina will "use commercially reasonable efforts" to repair tiles, instead of providing for the "[t]imely repair of damaged field tile systems to at least original conditions;" (2) while the Application states that repairs will be made "promptly," proposed Stipulation Condition 16 conflates "promptly" with 30 days even where immediate repairs are essential to prevent crop damage; (3) the Application does not identify any procedures that will be used to determine whether tiles are broken, damaged, or deteriorated due to old age or other causes during project operation; (4) the Application does not identify any procedures for replacing damaged tiles, especially where a long segment has deteriorated due to old age; (5) the Application provide no procedure for detecting tile damage caused by construction, which cannot be heard over the loud noise of post driving; and (6) the Application does not require Angelina to consult with affected non-participating landowners to find and repair tiles.

F. The Application Does Not Describe Or Evaluate The Reliability Of The Project's Equipment For Preventing Criminal Access To The Facility As Required By OAC 4906-4-08(A).

OAC 4906-4-08(A) provides:

(A) The applicant shall provide information on health and safety.

(1) Equipment safety. The applicant shall provide information on the safety and reliability of all equipment.

(a) Describe all proposed major public safety equipment.

(b) Describe the reliability of the equipment.

****

(d) Describe the measures that will be taken to restrict public access to the facility.

Emphasis added. The Application contains little provision for security to prevent criminals from stealing wire and other recyclable components at the Facility. This makes the Facility an easy target that could attract criminals to the community where they might also harm the Citizens.

While this rule requires the Application to describe all proposed major public safety equipment, its reliability, and measures to prevent public access, the Application only identifies "fences with locked gates" and "warning signage." Applic., p. 55. These generic descriptions do little to satisfy the rule's objective for public safety.

Mr. Herling testified that each solar field will be fenced with locked gates. Herling, Tr. 90:8-18. The type of locks has not been decided. Herling Tr. 90:12-24. They typically have a keypad or padlock. Herling, Tr. 90:21-24. A thief can cut off padlocks with a bolt cutter. Herling, Tr. 90:25 to 91:5; Brandly, Tr. 428:8-9.

Mr. Herling thought the solar fields would be surrounded by chain link fence. Herling, Tr. 91:6-9. The Application states that "[f]encing is expected largely to be standard, chain-link material." Applic., p. 13. Thieves can cut through a chain link fence with a blowtorch. Herling, Tr. 91:14-21. In fact, Mr. Herling has seen chain link fences that have been cut. Herling, Tr. 91:20-21. "Padlocks and chain link fence are meaningless to them." Brandly, Tr. 428:8-9.

The solar Facility will be largely isolated. Mr. Herling testified that Angelina's personnel will conduct "periodic" security checks of the Facility. Herling Direct Testimony, p. 13, A.22. The Application does not specify the frequency of these security checks, and Mr. Herling could not say how frequently the security checks would occur. Herling, Tr. 91:22 to 92:2, 94:3-7. Most disturbingly, Angelina does not know whether it will have any security personnel in the Project Area at night to deter crime. Herling, Tr. 92:9-19, 94:8-10.

Based on the Application, these periodic safety checks will be rare. The Application states that "[o]nly a few operational personnel will be needed for the Project, and they will be present at any given location in the Project only occasionally." Applic., p. 75. "On most days, at any particular location at the Project, no operating personnel will be present." Applic., p. 75.

Solar facilities use copper wire in their construction. Herling, Tr. 94:18 to 95:1. Thieves steal copper wire to sell it. Herling, Tr. 95:2-4. While Mr. Herling has not heard of thieves stealing copper wire from operating solar facilities, he has never sited a solar facility near the Village of Fairhaven. Herling, 95:2-8. The Project's solar collectors and all other metal (electric wiring, structural supports, etc.) will all be located within a four-mile radius of Fairhaven. CCOPC Exh. 5, Mast Direct Testimony, p. 9, A.18.

Crime runs rampant in Fairhaven. The sheriff's reports over the past 5 years report that the township has experienced 30 grand thefts, 52 petty thefts, 30 property damage incidents, and 178 suspicious events. *Id*., p. 6, A.16, Lines 19-20. Drug transactions are constant. *Id*., p. 10, A.20; Mast, Tr. 460:19-25. The direct testimony of Walter Mast, the co-leader of the Neighborhood Watch Team, recounts a number of these crimes near his home, including a neighbor who was burglarized five times, a neighbor who had been murdered and burglarized, another nearby house that was mysteriously destroyed by fire, two other neighbors who were

burglarized, and a burglary and arson in one of Mr. Mast's own buildings. Mast Direct Testimony, pp. 5-9, A.14, A.15, A.16.

Many rural properties in the area have seen numerous thefts, as well. A home west of Fairhaven was recently robbed, a barn south of Fairhaven was broken into multiple times with $7,000 of tools missing, a farmer a mile to the east lost an electric generator, and a kind soul who gave several stranded Fairhaven residents a ride had $500 stolen during the short trip. *Id*., p. 9, A.16. Vehicles, lawn equipment, and metal objects simply and rapidly disappear. *Id*.

These criminals are opportunists, seeking vulnerable targets such as lightly guarded properties. *Id*., p. 7, A.16, Lines 3-5. They use bolt cutters to quickly dispatch with locks and fencing, windows and doors are kicked in or pried open with crow bars, and security cameras and security lighting have been shot out and/or stolen. *Id*., p. 9, A.17, p. 10, A.19. They use cutting torches to cut some items into undistinguishable forms for recycling. *Id*., p. 9, A.17. If a recyclable possession is stored inside a structure and an opportunity presents itself, ever so briefly, they steal it. *Id*. They use their trucks to take their stolen items to a recycling center less than 20 miles away. *Id*.

Walter Mast is not the only Concerned Citizen in the area to experience burglary firsthand. In 2016, a historic house at Campbell Brandly Farms was burglarized and burned down. CCOPC Exh. 4, Brandly Direct Testimony, p. 3, A.15. This historic farm is located about 1 ½ miles from Fairhaven. *Id*., p. 1, A.4 & p. 3, A.16. The Project Area is adjacent to this farm on three sides, so the Facility is within the zone that Fairhaven's criminals are known to visit. *Id*., p. 3, A.12.

Despite this existing criminal activity, Angelina has given little thought to how it will prevent criminal access to its Facility. Certainly, the Application lacks the detail necessary to

assure the public that the Facility will be designed and operated to prevent an increase in neighborhood crime. The Application provides no analysis of crime threats to its Facility, nor does it identify design features or operational practices to reduce criminal threats. As with many other potential problems for this Facility, the Application deprives the Board and the public of the information necessary to determine whether and/or to what degree the Facility will harm the public and what measures should be taken to address these threats. A certificate should not be issued without adding a thorough evaluation of this issue in the Application.

G. The Application Fails to Evaluate The Impact To Groundwater From Contaminants That Might Be Released From Solar Panels By Vandals And Disasters As Required By OAC 4906-4-08(A)(4).

OAC 4906-4-08(A)(4) provides:

> (4) Water impacts. The applicant shall provide information regarding water impacts.
>
> (a) Provide an evaluation of the impact to public and private water supplies due to construction and operation of the proposed facility.
>
> ****
>
> (c) Provide existing maps of aquifers, water wells, and drinking water source protection areas that may be directly affected by the proposed facility.

The Application does not adequately evaluate the impact to underground water supplies from contaminants that could be released from the solar panels by natural disasters or human destruction. The area wells are relatively shallow, so pollutants contaminating the wells, the adjacent creek, and Hueston Woods lake could occur quickly. CCOPC Exh. 5, Mast Direct Testimony, p. 10, A. 18.

The Application states that the "[s]uppliers of most solar panel[s] have demonstrated that their products pass U.S. EPA's 'Toxic Leaching Characteristic Procedure' qualifying them as routine waste" instead of hazardous waste. Applic., p. 38. A TCLP test is used to evaluate the

tendency of toxic metal contaminants to leach from the material into the soil or water. 40 C.F.R. § 261.24. Mr. Herling acknowledged that some solar panels on the market are not TCLP tested, so it is unknown whether they would pass the test. Herling, Tr. 99:11- to 100:24. Mr. Herling promised that Angelina would use solar panels that pass the TCLP test. Herling Direct Testimony, p. 16, A.28, Lines 11-13. However, the Application makes no such commitment. Herling, Tr. 100:25 to 101:5; Applic., pp. 38-39. Nor does the Stipulation require Angelina to use TCLP-compliant panels. Like so many of Angelina's promises in the hearing, this promise is unenforceable and meaningless without being included in the Application or Stipulation.

Consequently, the Citizens request that the Board require Angelina to perform a complete risk assessment (chemicals, weather, fire, theft, etc.) and review of the solar company's risk mitigation plans including training of fire and emergency personnel, etc. to ensure the risk mitigation plans adequately address all of the risks. CCOPC Exh. 6, Mast Suppl. Testimony, A.11. Angelina also should conduct an analysis of what wind speeds the solar panels can withstand including an assessment of how the panels are attached to the pilings. *Id*. These studies should be performed before the Board acts on the Application, so that the certificate, if issued, can include any protective conditions found by the studies to be necessary. *Id*. Drafts of the consultant(s)' studies should be made available for public comment prior to finalization. *Id*.

The Citizens are concerned that the Stipulation does not adequately protect soil and water from contamination that could occur if severe weather arises such as high winds, hail, and the recent tornadoes that hit Preble County and Montgomery County, a fire starts in the solar field, lightning strikes the field, or thieves break or damage the solar panels. CCOPC Exh. 6, Mast Suppl. Testimony, A.8. All of these events can release contaminants onto the ground and consequently into the ground water and into the surface water run-off. *Id*. Since literature from

Open Road Renewables states the solar panels contain "some chemicals," water and soil contamination are a major concern. *Id*. To ensure a safe water quality throughout the entire project duration, the Citizens request that the company managing the solar facility fund and jointly select with the Citizens an independent, third party company to analyze the entire chemical composition of the well water on farms adjacent to the solar farm and in Gasper and Washington Townships. *Id*. The testing should be conducted (1) prior to the start of any construction, (2) annually during every year of facility operation, (3) annually during decommissioning, site clearance, and the return of the land to productive farm use, and (4) at the end of all activity on the site. *Id*. The Stipulation should require the facility to immediate remediate any abnormalities in the chemical composition of the water and to supply replacement water to all impacted individuals so long as the water quality is impacted. *Id*. The Board also should require the Applicant to provide an accurate and complete listing of all water wells and their locations in the vicinity of the Project Area as part of the Application. *Id*.

H. The Application Does Not Provide Adequate Assurance Of Funding For Decommissioning.

The Citizens believe that the Stipulation does not adequately guarantee that enough funds will be available to decommission the solar project, clear all solar equipment from the Project Area, and return the land to farming. CCOPC Exh. 6, Mast Suppl. Testimony, A.9. While proposed Condition 29 requires Angelina to post financial security, it allows Angelina to select the means of financial security. *Id*. This lack of specificity could result in the selection of a security mechanism that may fail. *Id*. This issue would be resolved if Angelina were required to enter into an agreement with the State of Ohio in which the State would guarantee to fund any shortfall and return the land to farm production if Angelina fails to do so. *Id*.

The Citizens request that the Stipulation provide a deadline for decommissioning and restoring the Project Area to farming use. *Id*. The Citizens also request a deadline of one year after electrical production ends. *Id*. Unless adequate financial assurance for decommissioning is provided, the solar facility could become a zone of dilapidation just like the abandoned buildings of Fairhaven. Mast Direct Testimony, pp. 11-13, A.21.

I. The Application Does Not Contain Adequate Provision For Emergency Services As Required by OAC 4906-4-08(A)(1)(e).

OAC 4906-4-08(A)(1)(e) provides:

> (e) Describe the fire protection, safety, and medical emergency plan(s) to be used during construction and operation of the facility, and how such plan(s) will be developed in consultation with local emergency responders.

The Application contains only a three-sentence statement that Angelina will develop an emergency response plan for law enforcement, fire, medical and ambulance, with a brief list of the types of information that the plan will contain. Applic., p. 55. This is insufficient to safeguard the neighbors from crime, fires, and other emergencies. The Stipulation attempts to fill some of the gaps in the Application, but the Stipulation also fails to adequately protect the public.

Solar facilities use copper wire in their construction, and thieves steal copper wire. Herling, Tr. 94:18 to 95:4. Nevertheless, the Application fails to provide for protection against criminals who will be attracted to steal the Facility's recyclable materials. The county sheriff's department is already too understaffed to address the existing crime in Fairhaven. CCOPC Exh. 5, Mast Direct Testimony, p. 11, A.20. There are typically only two deputies on duty each shift to cover the entire county including the I-70 corridor, and their responses to potential thefts or break-ins at the Project could detract from the deputies' needed presence in other areas of the township and county. *Id*.; Vonderhaar Direct Testimony, p. 12, A.27. While the county

recently hired two additional deputies, this will not increase law enforcement's presence near the Project Area because one is a corrections officer and the other probably will just cover overtime work. Mast, Tr. 461:11-24, 464:22 to 465:2.

The deputies' responses to potential thefts or break-ins at the Project could detract from the deputies' needed presence in other areas of the township and county. Mast Direct Testimony, p. 11, A.20. Angelina has the burden of proof to demonstrate that its Facility will not increase the area's crime or exceed law enforcement's capacity to control the crime, and the company included no information on this issue in its Application.

Proposed Stipulation Condition 28 requires Angelina to pay for any specialized equipment necessary to fight fires or respond to emergencies at the Facility. The application does not provide for any funding of emergency services to compensate for the Project's potential demands.

The Application contains no analysis of the personnel needs that will result from the presence of the Facility, and without this information, the Application provides no assurance of the Facility's safety. Emergency services in Israel Township are already stretched thin. Vonderhaar Direct Testimony, p. 12, A.27. Israel Township does not have the financial resources to fund its own fire department, so it contracts with the Village of College Corner and the Village of Camden for fire fighting services. *Id*. Therefore, the Application also should commit to funding any additional fire and/or emergency response personnel necessary to adequately service the Facility.

The proposed condition also fails to provide sufficient training for fire and emergency response personnel on how to deal with the particular hazards for the Facility. Angelina should be required to prepare an emergency management plan prior to the Board's action on the

certificate, so that Angelina and emergency response personnel understand their responsibilities in an emergency and so that any necessary protective measures can be incorporated into the certificate. Vonderhaar Suppl. Testimony, pp. 4-5, A.7. In addition, although the condition provides for training sessions prior to Facility construction, it requires only periodic safety meetings thereafter. Jt. Exh. 1, p. 11, Condition 28. This arrangement fails to provide for adequate training. The volunteer firefighters and emergency responders serving the township have a high turnover rate. Vonderhaar Suppl. Testimony, p. 4, A.7. Mr. Herling, based on his own experience in a volunteer EMS, acknowledged that "[w]hether it's volunteer or otherwise, there's always turnover" in fire departments and EMS. Herling, Tr. 123:23-24. So the new personnel would not receive the safety training, but would only hear the information by word-of-mouth through safety meetings. Therefore, emergency training for local fire and EMS service providers should be held annually during the Project's construction and operation. Vonderhaar Suppl. Testimony, p. 4, A.7.

J. The Application Fails To Determine Whether Solar Fences And Other Equipment Will Obstruct Motorist Visibility at Intersections.

The Facility's obstruction of motorists' views of cross-traffic at road intersections could be a problem at any intersection at which solar panels or fences are so close to the intersections that they obstruct motorists' views. CCOPC Exh. 2, Vonderhaar Direct Testimony, p. 9, A.21. It could be a particular problem at two intersections at which visibility already is challenging. *Id*. These locations are the intersection of State Route 725 and Fairhaven College Corner Road, and at the intersection of State Route 177 and Toney Lybrook Road. *Id*. The latter intersection is especially dangerous, because State Route 177 has a 55 mile per hour speed limit. *Id*.; Vonderhaar, Tr. 372:10-22.

The application provides for a 25-foot setback between the project perimeter and the public roads. Herling, Tr. 16-18; Applic., p. 54. The Stipulation would expand the setback by applying it to the rights-of-way instead of the edges of the roads. 132:21 to 133:1. Even though Angelina has the burden to prove that its Project will represent the minimum adverse impact, Angelina failed to introduce any evidence about how much this term expands the setback. Without that information, the Board lacks the information necessary to determine whether the Facility's fences and other equipment will obstruct motorists' views of dangerous cross-traffic at road intersections. The Application must be supplemented to supply this information.

K. The Application Does Not Provide For The Control Of Noxious and Invasive Weeds, Contrary To OAC 4906-4-08(E).

OAC 4906-4-08(E) provides:

> (E) The applicant shall provide information regarding agricultural districts and potential impacts to agricultural land.
>
> ****
>
> (1) Agricultural information. The applicant shall provide, for all agricultural land, and separately for agricultural uses and agricultural districts identified under paragraph (E)(1) of this rule, the following:
>
> ****
>
> (c) A description of mitigation procedures to be utilized by the applicant during construction, operation, and maintenance to reduce impacts to agricultural land, structures, and practices.

Although OAC 4906-4-08(E)(2)(c) requires the Application to contain mitigation procedures to prevent damage to agricultural land, the Application contains no procedures for preventing noxious or invasive weed species from spreading from the Facility to the neighbors' farmland.

Crop farmers continually have to fight against weeds that damage their crops by competing with the crops for water, nutrients, and space. CCOPC Exh. 2, Vonderhaar Direct Testimony, p. 7, A.15. Invasive plant species, if allowed to grow on the Project Area, will spread to their land, damage their crops, and increase their work to eliminate these weeds. *Id.*

The Concerned Citizens' farmers near the Project Area already experience these problems with noxious plant species: thistle, johnson grass, honeysuckle and especially pig weed. *Id*. The Project should be required to use only native seeds and plants that are certified to be free of noxious and invasive plant species and should be required to promptly eliminate any noxious and or invasive plants that appear in the Project Area so that they do not spread to nearby farm land. *Id*. Angelina also should not be allowed to plant any species whose roots can clog drainage tiles. *Id*., p. 7, A.16.

The Application states that Angelina plans to plant vegetation inside and outside of the solar fields. Applic., pp. 12, 75. However, the Application provides no procedures for ensuring that its plant seeds do not include weeds that can invade surrounding farm fields and natural areas. Nor does it provide for eradicating honeysuckle and other invasive or noxious plant species that may sprout in the Facility. Instead, it only states that operating personnel "may" use herbicides to control noxious weeds, without any enforceable commitment to do so. Applic., p. 75. Thus, the Application is deficient under OAC 4906-4-08(E)(2)(c).

Proposed Stipulation Condition 18 attempts to compensate for the Application's deficiency, but the proposed condition itself is deficient. The proposed condition would require Angelina to consult with the Ohio Seed Improvement Association to identify vendors who sell seeds certified to be free of seeds of noxious or invasive weeds. But Angelina has to plant seeds from these certified vendors only if "practicable", *i.e*., if this seed is available for the type of ground cover Angelina wants to plant. This weak condition gives Angelina a loophole whenever it wishes to use an alternative source of seed, even if it contains noxious and/or invasive weeds.

The Stipulation contains no procedures for controlling invasive and noxious weeds at the Facility. Proposed Condition 18 only requires Angelina to submit a post-certificate vegetation

plan outlining "the steps to be taken to prevent establishment and/or further propagation of noxious weed identified in OAC 901:5-37 during implementation of pollinator-friendly plantings." Jt. Exh. 1, p. 9. This approach has two failings. First, the weed controls required in the vegetation plan appear to be limited to the area in which pollinators are planted. Second, submitting a post-certificate vegetation plan to the Staff without scrutiny and public comment during the Application process does not satisfy Angelina's responsibility to include these procedures in the Application as mandated in OAC 4906-4-08(E)(2)(c).

L. The Application Does Not Provide The Data Required By OAC 4906-4-08(B)(1) To Evaluate The Project's Potential Adverse Impacts on Wildlife.

OAC 4906-4-08(B) provides:

> (B) The applicant shall provide information on ecological resources.
>
> (1) Ecological information. The applicant shall provide information regarding ecological resources in the project area.
>
> ****
>
> (c) Provide the results of a literature survey of the plant and animal life within at least one-fourth mile of the project area boundary. The literature survey shall include aquatic and terrestrial plant and animal species that are of commercial or recreational value, or species designated as endangered or threatened.
>
> (d) Conduct and provide the results of field surveys of the plant and animal species identified in the literature survey.

Emphasis added. Angelina performed only a partial literature search for animal life in the vicinity of the Project Area as required by OAC 4906-4-08(B)(1)(c), and did not conduct and provide the results of any field surveys for the animal species identified in the literature survey as mandated by OAC 4906-4-08(B)(1)(d). Performing a literature search is not a burdensome process; it simply entails a paper search for lists of species recorded to be existing in the general area and copying the lists into the Application.

Angelina provided a literature survey for only plant and animal species that are endangered, threatened, of concern, or of special interest. Applic., Exh. G, Appx. C. Cardno's summary of its "desktop" review of species reveals that Cardno did a literature search only for "[m]ajor species, including Federal and State-listed threatened and endangered species." Applic., Exh. G, p. 1-1. It did not provide a literature survey for all plant and animal life within at least one-fourth mile of the Project Area as required by the first sentence of OAC 4906-4-08(B)(1)(c). The second sentence of this provision, requiring species of commercial and recreational value and endangered or threatened species to be included in the literature survey, does not limit the scope of the first sentence. The failure to catalogue and evaluate all other species in the area would leave a huge gap in the Application's "information regarding ecological resources in the project area" contrary to OAC 4906-4-08(B)(1).

Angelina also failed to conduct the required field survey for animal species in accordance with OAC 4906-4-08(B)(1)(d). The Angelina representations on Pages 69 and 71 of the Application that it conducted these field surveys are false. Applic., pp. 69, 71. Cardno's summary of its field studies reveals that Cardno did a field survey only for "sensitive species assessment." Applic., Exh. G, p. 1-1. And those field studies were conducted during the month of November, after most birds have migrated south for the winter. *Id.*

Cardno's employees visited the Project Area only to conduct surface water delineation surveys and habitat evaluations. Rupprecht, Tr. 211:12-18, 212:3-9. Ryan Ruppecht, the Cardno witness who testified for Angelina, admitted that Cardno performed no bird, bat, or mammal surveys. Rupprecht, Tr. 214:2-10, 217:20-24.

Accordingly, the Application does not contain the complete literature survey on plant and animal species required by OAC 4906-4-08(B)(1)(c). It fails to include any of the field surveys

required by OAC 4906-4-08(B)(1)(d). While Angelina contends its Facility will not seriously harm wildlife, it has no data to support that claim. A certificate cannot be granted without the information necessary to determine the Facility's effects on wildlife and to identify mitigation measures necessary to address those effects.

M. The Application Fails To Provide Information Required By OAC 4906-4-08(B)(3) To Assess, Avoid, And Mitigate Impacts On Wildlife That Will Result In Crop And Livestock Damage On Nearby Farms.

OAC 4906-4-08(B)(3) provides:

> Operational ecological impacts. The applicant shall provide information regarding potential impacts to ecological resources during operation and maintenance of the facility.
>
> ****
>
> (b) Describe the procedures to be utilized to avoid, minimize, and mitigate both the short- and long-term impacts of operation and maintenance.…
>
> (c) Describe any plans for post-construction monitoring of wildlife impacts.

Emphasis added. Because Angelina did not conduct the literature search and fields surveys necessary to identify the plant and animal species in the area, the Application also fails to evaluate the Facility's potential impacts on these species during operation and the mitigation measures necessary to minimize that harm. These failures violate OAC 4906-4-08(B)(3).

In addition, the Application fails to evaluate the potential impacts on deer and coyote populations excluded from the Project Area by fencing the solar fields. Deer, coyotes, and other wildlife frequent the farm fields in and near the Project Area. CCOPC Exh. 2, Vonderhaar Direct Testimony, p. 8, A.18. Ms. Vonderhaar testified that she often sees deer, coyotes, and other animals in these fields, including the fields in the Project Area. *Id*., p. 8, A.18 & A.19. Marja Brandly and Michael Irwin have seen herds of up to 30 deer traveling through the area's farm fields, including the Project Area. CCOPC Exh. 4, Brandly Direct Testimony, p. 4, A.18. Deer walk through Campbell Brandly Farm's crop fields just about every day. *Id*.

The Project will be surrounded by fences that keep deer, coyotes, and other animals out of the Project Area. Vonderhaar Direct Testimony, p. 8, A.18. This will reduce the area available for these animals to roam and forage, which will force them to roam on surrounding lands where they will eat the Citizens' crops and calves, and on public roads, where they will be prone to vehicle collisions. *Id*., p. 8, A.18 & A.19. The deer already consume a great deal of corn in the farmers' fields there. Brandy, Tr. 427:19 to 428:1. The Vonderhaars in the past have lost calves to coyote predation, so this is a real concern for them and other residents. Vonderhaar Direct Testimony, p. 8, A.19.

The reduction of space for deer to occupy will pack them closer together, making the spread of disease easier among them. *Id*., p. 9, A.20. Lepto and Tuberculosis are two diseases common in deer that also infects cattle. *Id*.

Angelina's wildlife witness, Ryan Rupprecht, did not dispute that deer and coyotes may be present in and around the Project Area. Rupprecht, Tr. 225:16-18, 231:5 to 232:8. He testified that deer will not be able to use the Project Area for foraging once the project is fenced. Rupprecht, Tr. 223:1-7.

The Application contains no data on the size of the deer and coyote populations that use the Project Area for foraging and hunting. Consequently, the Application lacks the data necessary to determine whether wildlife displacement from the Project Area will damage the Citizens' crops or endanger their calves. Lacking this data, the Application also fails to determine what mitigation may be necessary to address this problem pursuant to OAC 4906-4-08(B)(3)(b). The Application also fails to provide for the post-construction monitoring of wildlife impacts to determine what damage the displaced animals are wreaking on the neighbors'

crops and calves as required by OAC 4906-4-08(B)(3)(c). No certificate can be issued until these corrections are made to the Application to comply with OAC 4906-4-08(B)(3).

N. The Application Provides No Data On The Quantity Of And Mitigation Measures For The Surface Water Draining From The Facility, Thus Violating OAC 4906-4-07(C).

OAC 4906-4-07(C) provides:

> (C) The applicant shall provide information on compliance with water quality regulations.
>
> ****
>
> (2) The applicant shall provide information regarding water quality during construction.
>
> (a) Indicate, on a map of at least 1:24,000 scale, the location of the water monitoring and gauging stations to be utilized during construction.
>
> (b) Provide an estimate of the quality and quantity of aquatic discharges from the site clearing and construction operations, including runoff and siltation from dredging, filling, and construction of shoreside facilities.
>
> (c) Describe any plans to mitigate the above effects in accordance with current federal and Ohio regulations.
>
> (d) Describe any changes in flow patterns and erosion due to site clearing and grading operations.
>
> ****
>
> (3) The applicant shall provide information on water quality during operation of the facility.
>
> ****
>
> (d) Provide a quantitative flow diagram or description for water and water-borne wastes through the proposed facility, showing the following potential sources of pollution, including:
>
> ****
>
> (vii) Run-off from soil and other surfaces.

Emphasis added. The underlined language requires the Application to quantify the amount of water that will flow off the Project Area during construction and operation. The Application contains none of this information. Angelina has not calculated the amount of water that will flow from the Project Area. Waterhouse, Tr. 149:23 to 150:12; Marquis Rebuttal

Testimony, p. 5, A.9; Marquis, Tr. 512:16-20. A hydrology study would identify the peak flows coming from the Project Area. Marquis, Tr. 517:5-10, 20-22.

Instead, Angelina shrugs off these requirements. The Application claims, without support from any data, that Angelina does not have to comply with this rule because Angelina does not anticipate "changes in flow patterns and erosion." Applic., p. 46. The Application asserts that the Project Area "already is level and very little, if any, grading will be needed." Applic., p. 46. That is, Angelina asserts that its activities will not increase the amount of stormwater flow from the Project Area.

The Application presents no evidence that its activities will not increase the flows from the site. While Angelina contends that it will plant vegetation in the solar fields to absorb more precipitation and decrease runoff, this does not address potentially increased flows during construction before vegetation is planted. Angelina's Route Evaluation Study reveals that construction will require the use of construction equipment such as "excavators, bull dozers, and wheel tractor-scrapers" that need to be transported to the site. Applic., Exh. D, p. 2, § 1.4. Since these machines are used to move dirt, their planned use appears to contradict Angelina's representation that little or no grading will occur. So the Application lacks the information necessary to ascertain how much grading actually occur. The Application does not contain a grading plan to show where grading will occur.

Angelina's Application also reveals that Angelina will likely increase the amount and speed of surface water flows during construction and operation. This information is contained in a report by Angelina's contractor, Hull & Associates, Inc., that is included in the Application. Applic., Exh. F. The report makes the following recommendations:

> Adequate surface water run-off drainage should be established at each solar array, access road, and the switchyard location to minimize any increase in the

> moisture content of the subgrade material. Positive drainage of each solar array site and access road location should be created by gently sloping the surface toward existing or proposed drainage swales. Surface water runoff should be properly controlled and drained away from the work area.

Id., p. 6. These recommendations indicate that Angelina will alter the Project Area's terrain to more quickly and thoroughly drain the land. This could increase the water burden on downgradient landowners. Certainly, Angelina has not conducted the study necessary to determine whether flows will increase.

Any increase in the amount or speed of stormwater flows from the Project would aggravate an already existing drainage problem. Much of the land in the Project Area slopes to the southeast, and this causes surface water to drain from the Project Area onto farm fields owned by Concerned Citizens including Vonderhaar Family ARC, LLC and Campbell Brandly Farms, LLC before reaching Four Mile Creek. *Id*., Vonderhaar Direct Testimony, pp. 9-10, A.23. Other Project Area land slopes to the west and drains onto farm fields owned/farmed by Kevin and Tina Jackson, and the water then flows into the Little Four Mile Creek *Id*., p. 10, A.23. The existing flows are already a problem, since the surface water flow that travels from the Project Area and through intervening land into Four Mile Creek is so great that storm water retention ponds were built by the Soil and Water Conservation District to intercept sediment-laden water to reduce the sediment filling Acton Lake in Hueston Woods State Park. Vonderhaar Direct Testimony, p. 10, A.24. If the Project causes more surface water to flow off-site or increases the rate of flow, this will erode the Concerned Citizens' fields, make them wetter, and damage their crops. *Id*.

Any increase in flow or flow velocity from the Project Area would also exacerbate the drainage problem in the Village of Fairhaven. The portion of Fairhaven along Four Mile Creek and all of Mr. Mast's property are within a 100-year floodplain. Marquis Testimony, p. 4, A.8;

Marquis, Tr. 518:11 to 519:2. This means that these areas are already prone to flooding. Marquis, Tr. 518:24 to 519:5.

Four Mile Creek, about 100 feet west of Mr. Mast's house (a historic inn), overflows its banks every year. CCOPC Exh. 5, Mast Direct Testimony, p. 3, A.11. Flooding occurs both during very heavy rains for short periods as well as during three to seven day periods of fairly steady rain. *Id*. During heavy rains, the area floods within hours. *Id*. During the periods of steady rain, it rises continuously until cresting near the end of the rain. *Id*. The flooding is terrifying with huge full-grown trees, roots and all, rushing downstream in a mighty roar. *Id*. During Mr. Mast's ownership, a deluge caused an almost immediate increase in water level until it was a half inch below the door thresholds. *Id*. Had it risen another inch, the whole first floor would have been inundated. *Id*., pp. 3-4, A.11. The entire crawl space and cellar were completely filled with water. *Id*., p. 4, A.11. On other occasions, the water level rises steadily and methodically. *Id*. This year so far, flood waters from prolonged rains have caused the creek to significantly overflow its banks twice. *Id*. Historically, floodwaters have been 10 inches and 20 inches above the floor on separate occasions. *Id*.

Even the highest elevation land in the northeast section of the village floods regularly. *Id*. Mr. Mast has seen water over the road at the inn, so both sides of the road at the south end of the village flood. *Id*. In the areas farther north, where there is higher land, the creek does not cross the road but it blocks the water from flowing effectively through the culverts under the road. *Id*. The road, which is higher than the surrounding yards, acts as a dam and the rain fills much of eastern section of the village with water. *Id*. Often, after a storm, a portion of the northeast section of the village looks like a lake. *Id*.

Mr. Marquis contended that the Angelina Project Area contributes only 2% of the watershed flowing into Mr. Mast's land and Fairhaven. Co. Exh. 21, Marquis Rebuttal Testimony, p. 5, A.9. He said that this means the Project will not increase the flood risk to these areas. *Id*. He noted that water from the Project Area enters Four Mile Creek both upstream and downstream of Fairhaven, including Acton Lake. Marquis, Tr. 510:1-7. Mr. Mast agreed that water flowing off the Project would enter the Four Mile Creek both upstream and downstream of Fairhaven. CCOPC Exh. 5, Mast Direct Testimony, p. 4, A.11. In fact, he identified concerns about the Project increasing flooding in all of these areas, not just upstream of his house in Fairhaven. *Id*., p. 3, A.11, Lines 14-16. Rachael Vonderhaar testified that these flows are already a problem, since the surface water flow that travels from the Project Area and through intervening land into Four Mile Creek is so great that storm water retention ponds were built by the Soil and Water Conservation District to intercept sediment-laden water to reduce the sediment filling Acton Lake in Hueston Woods State Park. Vonderhaar Direct Testimony, p. 10, A.24. Thus, Mr. Marquis' opinion that most of the Project Area's flow enters the creek downstream of Fairhaven, including Acton Lake, is no comfort at all.

With respect to flooding in Fairhaven and his home, Mr. Mast noted that <u>any</u> increase in the amount and speed of water flow prior to Fairhaven would cause increased flooding in Fairhaven, since there is no safety margin. *Id*. The farmland upstream of Fairhaven must absorb every drop of water possible, or the entire Village of Fairhaven is in peril. *Id*. This reality is illustrated by the incident in which one more inch in the water level would have flooded the entire first floor of Mr. Mast's home. *Id*., pp. 3-4, A.11. Consequently, even if only a small part of the Project Area feeds the water level upstream of Fairhaven, it will harm Mr. Mast and other Fairhaven residents if it increases flood levels by <u>any</u> amount.

Mr. Marquis asserted that vegetation and other characteristics of the solar facility will prevent any increase in surface water runoff from the Project Area. Marquis, Tr. 522:14 to 523:22. However, Mr. Mast, an engineer with a Masters Degree in Engineering and 31 years of experience including construction management, farming, and surface water issues, disagreed with that position. CCOPC Exh. 5, Mast Direct Testimony, p. 1, A.2; CCOPC Exh. 6, Mast Suppl. Testimony, A.6; Mast, Tr. 474:1-3. He observed that the solar fields will increase surface water runoff for the following reasons:

- The solar panels will block rain from contacting the earth directly below the panels. This will reduce the amount of soil that is fully saturated. If you have ever stood in a barn and looked out an open door at the rain, the soil floor on the interior of the barn does not become fully saturated and hardly becomes wet. Neither will the soil under the panels and thus the soil will not absorb as much water as the current farmland where all land is exposed directly to the rain.
- The direction of the wind and rain will also be a variable. A rain from the south will not contact as much of the ground under the panels due to the panel slope as a rain from the north. Hence, less soil will be saturated during a rain from the south.
- Direct solar radiation will not contact the ground and grass under the panels and hence not dry the soil and increase the amount of water the soil can absorb in the future. If you want something to dry quickly, place it in direct sunlight, not in the diffuse light under a tree.
- The solar panels will deflect winds upward when the wind is from the west through the south to the east. Winds help dry the soil and the entire solar field will have less air

motion near the ground to dry the soil. Stand behind a car during a windstorm and you will observe that most of the air goes over the car.

- Dew condenses on cool surfaces. The glass and metal framework of the solar panels will cool more quickly than the surround ground because of their thermal conductivity and cause more dew to condense and thus increase the amount of moisture in the soil. This will reduce the amount of water the soil can absorb in a rainstorm.
- Given the tremendous number of solar panel support piles that will need to be driven or rotated into the ground, it is highly probable that some drainage tiles will be broken during the installation. It will not be possible to even determine when a tile has been broken during the construction. Broken tiles will prevent the field from draining and thus reduce the amount of water that can be absorbed during a heavy rain.
- The 150-acre solar field with waters entering Four Mile Creek north of Fairhaven (acreage provided by Open Road Renewables employee Doug Herling) drains to a culvert under State Route 177 east of the field. The field also slopes to the north and south to a swale that cuts across the field. This sloping surface reduces the potential for water to flow uniformly and evenly under all of the panels and hence reduces the amount of water absorbed by the soil.
- Corn and soybeans require large amounts of water in periods when most grasses tend to become more dormant. I have a farm field with a row of trees along the north edge of the field. The trees do not shade the area farmed since the trees are to the north of the field. The corn and soybeans near the trees have the same amount of fertilizer and sunlight as the rest of the field. Grasses grow fine under the trees, but corn and soybeans wither in

the area of the tree root base because they require more water than grass during the critical growing season.

- Tilling the soil in preparation for spring planting and even the slicing of the soil during no till allows more of the soil surface to be exposed to the drying effects of the sun and wind. Grasses around the panels will tend to retain the moisture. Thus, winds dry the soil more when the earth is being farmed so more water can be absorbed during a rain.
- The ground under the lower edge of the panels will experience large amounts of water during heavy rains. Over time, a small channel will form and become a means for rain to runoff more quickly. This fact can be observed under the eaves of any building with no gutters.
- Dew on grass takes longer to dissipate than dew on concrete, asphalt, or bare soil. Faster dew dissipation means less moisture in the soil. More moisture means a higher relative humidity which reduces the amount of moisture air can capture. Consider how long you must wait on mornings of a heavy dew before you can mow the grass.
- Rows of corn and soybeans provide space between the rows for air to flow near the soil surface while grasses tend to be matted to the soil. This air flow tends to dry the soil and increase its potential to absorb more water during a rain.
- Sloping land makes it impossible to predict where the water flowing off the south edge of the solar panels will go. Even in a sloped paved parking lot, most of the area under cars is often dry after a rain.

Id., A.6. For these reasons, Mr. Mast advised that the Project's threat to flood downstream areas was high enough to justify the inclusion of storm water retention basins or ponds and/or other measures in the Stipulation. *Id*.

The disagreement between Mr. Mast and Mr. Marquis illustrates why it is important for Angelina to comply with the requirements of OAC 4906-4-07(C). The Board should not, and does have to, resolve such a dispute between experts, because Angelina's compliance with this rule would show who is correct. OAC 4906-4-07(C)(2)(b) requires "an estimate of the … quantity of aquatic discharges from the site clearing and construction operations" in the Application. Emphasis added. OAC 4906-4-07(C)(3)(d)(vii) requires the Application to contain a "quantitative flow diagram or description for water … through the proposed facility … including … [r]un-off from soil and other surfaces" during facility operation. Emphasis added. The Application's compliance with these requirements would inform the Board as to whether stormwater retention basins or other devices or practices are necessary to protect Fairhaven, Mr. Mast's home, and areas further downstream from increased stormwater flows from the Facility. The Application does not quantify the stormwater flowing from the Project Area during construction or operation, depriving the Board of the information necessary to make judgments about this issue.

To comply with OAC 4906-4-07(C), Angelina needed to perform a hydrology study to quantify the flows from the Project Area. Despite the necessity of this study, Angelina has not done it. Waterhouse, Tr. 149:23 to 150:12; Marquis Rebuttal Testimony, p. 5, A.9; Marquis, Tr. 512:16-20. The Stipulation contains no requirement for a hydrology study, nor would such a requirement cure Angelina's failure to quantify surface water flows in the Application.

Without a hydrology study, OPSB has no way of knowing whether the Facility's construction and/or operation will cause drainage and flooding problems in neighboring properties. Drainage swales are common in fields to be used for solar panels in the Project Area. Applic., Exh. G, p. 6-2.

Angelina's Application violates OAC 4906-4-07(C)(2)(by failing to quantify surface water flows during construction and operation of the Facility. Angelina plans to conduct a hydrology study and prepare storm water pollution prevention plan ("SWPPP") that will quantify storm water flows and prevent flooding (Waterhouse Direct Testimony, p. 3, A.7; Waterhouse, Tr. 149:10-22), but the SWPPP will not be prepared until after certificate issuance under Stipulation Condition 16. Without this data, the Application does not and cannot identify any mitigation measures that may be necessary to protect neighbors from flooding and drainage problems caused by Angelina's activities as required by OAC 4906-4-07(C)(2)(c) (requiring the Application to "[d]escribe any plans to mitigate the above effects in accordance with current federal and Ohio regulations"). The Board cannot issue a certificate based on such a deficient application.

O. The Application Provides No Data On The Quality Of And Mitigation Measures For The Surface Water Draining From The Facility, Contrary To OAC 4906-4-07(C).

OAC 4906-4-07(C) provides:

> (C) The applicant shall provide information on compliance with water quality regulations.
>
> (1) The applicant shall provide information regarding preconstruction water quality and permits.
>
> (a) Provide a list of all permits required to install and operate the facility, including water pollution control equipment and treatment processes.
>
> ****
>
> (d) Describe the existing water quality of the receiving stream based on at least one year of monitoring data, using appropriate Ohio environmental protection agency reporting requirements.
>
> (e) Provide available data necessary for completion of any application required for a water discharge permit from any state or federal agency for this project. Comparable information shall be provided for the proposed site and any proposed alternative site(s).

(2) The applicant shall provide information regarding water quality during construction.

(a) Indicate, on a map of at least 1:24,000 scale, the location of the water monitoring and gauging stations to be utilized during construction.

(b) Provide an estimate of the quality and quantity of aquatic discharges from the site clearing and construction operations, including runoff and siltation from dredging, filling, and construction of shoreside facilities.

(c) Describe any plans to mitigate the above effects in accordance with current federal and Ohio regulations.

(d) Describe any changes in flow patterns and erosion due to site clearing and grading operations.

(e) Describe the equipment proposed for control of effluents discharged into bodies of water and receiving streams.

Emphasis added. The emphasized language above requires the Application to submit information about the quality of surface water flows from the Project Area during construction and operation, such as sediment from erosion carried into the streams. The Application contains none of this information.

1. The Application Does Not Identify The Changes In Flow Patterns And Erosion Due To Site Clearing And Grading Operations As Required By OAC 4906-4-07(C)(2)(d).

OAC 4906-4-07(C)(2)(d) states that an application must "[d]escribe any changes in flow patterns and erosion due to site clearing and grading operations") (emphasis added). Rather than providing the required data, Angelina defies this requirement. The Application claims, without support from any data, that Angelina does not have to comply with this rule because Angelina does not anticipate "changes in flow patterns and erosion." Applic., p. 46.

To the contrary, Angelina states that grading will be conducted to create a finished grade slope suitable for the substation, roads, racking installation, and storm water management.

Applic., Exh. G, p. 1-5. These modifications in slopes will change the Project Area's flow patterns, none of which are identified in the Application.

Moreover, Angelina advises that "soil erosion and sedimentation control measures will be installed within and along the proposed construction area, equipment laydown areas, access roads, and other work areas, as applicable, in accordance with approved Preble Soil & Water Conservation District's soil erosion and sediment control (SESC) Plans." Applic., Exh. G, pp. 1-4 to 1-5. The Application further promises to employ best management practices ("BMPs") to minimize sedimentation and erosion. *Id*., p. 1-5. These statements about the necessity for erosion and sedimentation controls betray Angelina's realization that the Project will cause erosion and sedimentation into the vicinity streams. The Application fails to describe these changes in erosion in any fashion.

These erosion and sedimentation controls will be necessary in a substantial area, becasuse Project construction will disturb the soil in a significant area. U.S. Environmental Protection Agency regulations require a storm water discharge permit for any construction project that disturbs one or more acres of soil. 40 C.F.R. § 122.26(b)(14)(x) & (b)(15). EPA's regulation classifies the disturbance of one to five acres of clearing, grading, and excavation as a "small construction activity" that merits the regulation of stormwater dischargers. 40 C.F.R. § 122.26(b)(b)(15). In contrast, Angelina's construction will disturb almost 58 acres of soil, including 6.78 acres for temporary roads, 12.02 acres for permanent roads, 13.58 acres for temporary laydown areas, 5 acres for a permanent laydown area, 15 acres for installing collection lines, 3 acres to build the substation, 1 acre to install the solar panel posts, and 0.35 acre to build the inverter pads. Applic., p. 7-3, Tables 7-2 and 7-3.

Thus, Angelina has failed to describe the changes in flow patterns and erosion due to site clearing, excavation, and grading operations over this substantial acreage. OPSB cannot approve an Application that violates OAC 4906-4-07(C)(2)(d).

2. The Application Does Not Provide The Information On Water Quality Required By OAC 4906-4-07(C)(1)(d) & (e) and 4906-4-07(C)(2)(b), (c), (d), & (e).

OAC 4906-4-07(C)(1)(d) & (e) and 4906-4-07(C)(2)(b), (c), (d), & (e) require applicants to describe the quality of the expected stormwater flow whether or not a flow increase is anticipated. Angelina has not complied with any of these requirements.

As explained in Section II. O. 1. above, the Application reveals that soil disturbance will occur during Project construction on almost 58 acres of soil. The Application acknowledges that soil erosion and sedimentation control measures are necessary for these areas. Applic., Exh. G, p. 1-4. In addition, Angelina acknowledges that its Project construction necessitates an Ohio EPA construction stormwater permit that "requires development of a proposed storm-water pollution prevention plan ('SWPPP') for erosion control and storm-water management." Applic., p. 45. This plan is designed for erosion control and stormwater management to protect surface waters from sediment pollution. Herling, Tr. 109:1-4. So stormwater from the Project Area obviously will flow into nearby streams. OAC 4906-4-07(C)(1)(d) & (e) and 4906-4-07(C)(2)(b), (c), (d), & (e) require Angelina to provide water quality data so the Board can evaluate the impact of these discharges.

Stipulation Condition 16 requires Angelina to submit the required SWPPP, but only after a certificate is issued. This plan has not yet been prepared. Herling, Tr. 109:2-9. For this reason, the Application is missing much of the information required by OAC 4906-4-07(C).

A SWPPP describes the practices that will be followed to control erosion and avoid the release of sediment into streams. Waterhouse, Tr. 148:12-18. The BMPs contain BMPs that can include silt fences or retention basins to intercept sediment before it reaches a stream. Waterhouse, Tr. 148:19 to 149:9. However, the Application does not identify the BMPs, equipment, or any other measure that will be taken to mitigate the effects from the quality of aquatic discharges from site clearing and construction operations, in violation of the mandate in OAC 4906-4-07(C)(2)(c) and (e).

According to Mr. Waterhouse, data needs to be collected and included in a SWPPP to design the BMPs. Waterhouse, Tr. 149:10-13. This data includes a hydrology study consisting of a hydrology or hydraulics model to quantify the runoff to size the BMPs. Waterhouse, Tr. 149:14-22. However, the Application contains none of this data, even though OAC 4906-4-07(C)(1)(e) requires the Application to "[p]rovide available data necessary for completion of any application required for a water discharge permit from any state or federal agency for this project." While Angelina may point out that only the "available" data needs to be provided under OAC 4906-4-07(C)(1)(e), Angelina has not bothered to find out what data is available for that purpose. Not also that the water quality data required by the other provisions of this rule are not limited to "available" data. *See* OAC 4906-4-07(C)(1)(e) and 4906-4-07(C)(2)(b), (c), (d), & (e).

OPSB's rule requires the Application to contain pre-construction data and post-construction data on water quality so that the water quality effects of the Project's construction on the receiving streams can be assessed. The Application contains neither pre-construction nor post-construction data. The Application does not describe the existing water quality of the receiving streams based on at least one year of monitoring data using appropriate Ohio

environmental protection agency reporting requirements as required by OAC 4906-4-07(C)(2)(d). OAC 4906-4-07(C)(1)(e) requires the Application to "[p]rovide an estimate of the quality … of aquatic discharges from the site clearing and construction operations." The Application contains no information about the quality of these discharges.

The Application does not contain the information about how Angelina will prevent harm to the receiving streams from its stormwater discharges. The Application lacks a description of Angelina's plans to mitigate the water quality effects of its discharges as required by OAC 4906-4-07(C)(2)(c). Contrary to OAC 4906-4-07(C)(2)(a), the Application does not contain a map indicating the locations of water monitoring and gauging stations to be utilized during construction. And the Application does not describe the equipment proposed for control of effluents discharged into bodies of water and receiving streams as required by OAC 4906-4-07(C)(2)(e).

Because the Application lacks the information required by rule to evaluate the quality of water from the Facility during construction, OPSB cannot issue the certificate based on this Application. Without this data, the Application does not and cannot identify any mitigation measures that may be necessary to protect neighbors' and the public's surface waters as required by OAC 4906-4-07(C)(1)(d) & (e) and 4906-4-07(C)(2)(b), (c), (d), & (e). The Board cannot issue a certificate based on such a deficient application.

P. <u>The Application Contains No Estimate Of The Volume Of Solid Waste And Debris Generated During Construction, Or The Debris' Disposal Destination, As Required By OAC 4906-4-07(D)</u>.

OAC 4906-4-07(D) provides:

> The applicant shall provide information on compliance with solid waste regulations.

****

(2) The applicant shall provide information regarding solid waste during construction.

(a) Provide an estimate of the nature and amounts of debris and other solid waste generated during construction.

(b) Describe the proposed method of storage and disposal of these wastes.

Emphasis added. The Application does not provide an estimate of the amounts of debris and solid waste that will be generated during construction, or its destination of disposal.

The Application acknowledges that project construction will generate package-related materials, such as crates, nails, boxes, containers, and packing materials, damaged or otherwise unusable parts or materials, and occasional litter and miscellaneous debris generated by workers. Applic., p. 49. These wastes are "solid wastes" as defined by R.C. 3734.01(E) and as contemplated in OAC 4906-4-07(D)(2)(a). The Application also states that one or more old buildings may be demolished. Herling, Tr. 109:18 to 110:8; Applic., p. 78. These wastes are "construction and demolition debris" as defined by R.C. 3714.01 and thus are "debris" as contemplated in OAC 4906-4-07(D)(2)(a).

The Application fails to comply with OAC 4906-4-07(D)(2) in two respects. First, as Mr. Herling admitted, the Application does not estimate the amount of solid waste, including demolition waste, that the Project will generate. Herling, Tr. 109:10-17. Nor does the Application estimate the amount of debris that will be generated by demolishing the old buildings. Herling, Tr. 9-13. Second, although the Application states that the types of solid wastes listed on Page 49 of the Application will be dumped at a municipal landfill, the Application does not explain what will be done with the demolition waste from the old building(s). Applic., p. 78.

Q. <u>The Application Contains Inadequate Detail To Explain How Its Construction Traffic Will Avoid Interference With Local Farming Operations, School Buses, And Other Public Road Traffic</u>.

OAC 4906-4-06(F)(4) provides:

> The applicant shall list all transportation permits required for construction and operation of the project, and <u>describe any necessary coordination with appropriate authorities for temporary or permanent road closures, lane closures, road access restrictions, and traffic control</u> necessary for construction and operation of the proposed facility.

Emphasis added. The Applicant has failed to comply with this rule.

The anticipated interference by Angelina's construction traffic with farming activities is a major concern for the Citizens. Angelina seeks to site its solar fields in the midst of a rural farming community. The area's farmers have to move large combines, sprayers, and planters on county roads. CCOPC Exh. 4, Brandly Direct Testimony, p. 5, A.19. There are no superhighways in Israel Township, just narrow two-lane roads, that make passing another vehicle risky if not impossible. *Id*. The residents of Israel Township are courteous and always cede the right of way to itsfarmers. *Id*. The large equipment used to construct the Project could create unsafe conditions when it encounters large farm equipment on the narrow roads. *Id*. The construction of Angelina Solar will imp eril the farmers' safety. *Id*.

Angelina will construct the access roads inside the Project Area to be 25 feet wide during construction to allow for two-way traffic for deliveries and personnel movement. Herling, Tr. 103:1-15. In contrast to these access roads, all of the eight public roads to be used for the Project's deliveries are much narrower. Bonifas, Tr. 162:1-9. One road is only 13 feet wide, and the rest of them are 15 or 17 feet wide. Applic., Exh. D, p. 3, Table 1.

About 1,700 to 1,800 loads of equipment and construction materials will be brought into the Project Area to build the Facility. Applic., Exh. D, p. 7. At this time, Angelina has done so

little planning that it cannot even identify the width of the equipment that will be transported to the construction area. Herling, Tr. 104:3-14. However, the Application observes that some loads of solar equipment will be oversized and overweight, and Angelina admitted this fact during the hearing. Applic., Exh. D, pp 8; Bonifas, Tr. 162:10-16. Due to the narrowness of the roads near the Project Area, oversized loads will hang over the midway point of any area road used to deliver these loads. Bonifas, Tr. 163:20 to 164:14. Oversized solar equipment loads typically need an escort vehicle and a flagger to restrict the road to one-way traffic, thus stopping traffic coming from the opposite direction. Bonifas, Tr. 167:19 to 168:9. This will interrupt the movement of farm machinery on that road until the solar delivery truck passes. *Id*.

While the transportation problem has been defined, the Application does not explain how the problem will be addressed. The Application and Stipulation do not explain how Angelina will protect the farmers' access to the public roads during planting and harvesting seasons.

Thus, the Application does not contain the information required by OAC 4906-4-06(F)(4), which mandates the Application to "describe any necessary coordination with appropriate authorities for temporary or permanent road closures, lane closures, road access restrictions, and traffic control necessary for construction and operation of the proposed facility." Instead, proposed Stipulation Condition 25 allows Angelina to study these issues later and report back to the Staff in the form of a Transportation Plan and a Traffic Management Plan.

However, the Traffic Plan and Transportation Plan have not yet been prepared. Herling, Tr. 121:22-25; Bonifas, Tr. 166:4-7, 168:10-12. Angelina failed to complete these tasks before filing the Application. As a result, the Application lacks the information mandated by OAC 4906-4-06(F)(4).

R. <u>Summary</u>

On February 1, 2019, Tamara Turkenton sent a letter to Angelina notifying the company that the Application "has been found to comply with Chapters 4906-01, et seq., of the Ohio Administrative Code (AOC)." *See* the Board's docket for this case. This letter explained the import of this conclusion as follows:

> This means the Board's Staff has received sufficient information to begin its review of this application. During the course of its investigation, the Staff may request additional information to ensure a full and fair assessment of this project.

This letter does not serve as a completeness review under OAC 4906-3-06(A). This rule provides that "the chairman shall examine the certificate application to determine compliance" with the Board's rules. Emphasis added. The February 1 letter was not issued by the chairman of the Board, but was issued in the name of Tamara Turkenton in her capacity as the Director of Rates and Analysis of the Public Utilities Commission of Ohio. And her signature was stamped, so she may not have even reviewed the letter or the Application.

The text of the letter itself does not indicate that the Application is complete. The letter qualifies its finding by noting that the finding simply means the Staff has enough information to start its review of the Application, and that additional information may be necessary. As shown in the Board's recent decision to defer its decision following the conclusion of the adjudicatory hearing on the application in Nestlewood Solar I LLC, Case No. 18-1546-EL-BGN, the Board must not issue a certificate without the information necessary to determine whether the proposed facility represents the minimum adverse impact.

In Angelina's case, the Application does not contain the information required by the Board's rules. As constituted, the Application does not provide the Board with a basis for issuing a certificate or for identifying and designing mitigation protections for the public. While R.C. 4906.10(A) may require the Board to base its certification decision "upon the record" that

includes evidence introduced at the hearing, the necessary information must be included in the Application so that the parties have a fair opportunity to evaluate it in preparation for testing it at the hearing. Moreover, in this case, Angelina did not supply the required information at the hearing, either. If the chairman had found the Application to comply with the Board's rules, such an action would violate the Board's own rules. Since the Application is incomplete, the Board should deny Angelina's application for a certificate.

III. The Board Cannot Delegate Its Authority And Responsibility For Certification Decisions To The Staff.

A decision of the Supreme Court of Ohio allowed the Board, in that case, to issue a certificate requiring the applicant to make six submittals for Staff approval after issuance of the certificate.[2] *In re Application of Buckeye Wind, L.L.C.,* 2012-Ohio-878, ¶¶ 28-30, 131 Ohio St.3d 449, 456–57. The lead opinion in that case opined that it may not be practical to hold a hearing on every infinite detail of construction, such as "whether white or gray screws are used in the control room." *Id*. at ¶ 30. This opinion stated that, "[i]n this case, we conclude that the board reasonably drew the line regarding the issuance of the certificate and the imposition of its conditions." *Id*.

Three justices joined in that portion of the decision, with another three justices dissenting. A fourth justice concurred only in the judgment. The dissent disagreed with the rationale and result of the lead opinion, on several grounds.

First, the dissent observed that the post-certificate conditions denied the appealing citizens of their only opportunity to be heard, and this violated the law:

> The law requires otherwise. The legislature has required the board to settle issues like this up front on a public record, and it specifically guarantees affected citizens the right to participate in the review process and to have their

[2] The certificate in that case required more than six post-certificate submittals, but only six were brought to the Ohio Supreme Court's attention.

> voices heard. *See* R.C. 4906.07 (requiring that the board hold public hearings), 4906.08(A)(3) (neighboring citizens are entitled both to party status and to call and examine witnesses), 4906.09 (requiring the board to keep a record of its proceedings), 4906.10(A) (requiring the board to make all substantive determinations before authorizing construction), and 4906.11 (requiring the board to issue a written opinion stating the reasons for its decisions). Issues are not to be settled *after* construction is approved, much less by unaccountable staff members without public scrutiny or judicial review. Yet that is precisely what the board, and now the lead opinion, has allowed.

Id. at ¶ 53.

Second, the dissent found that the lead opinion did not offer any workable response to the denial of the citizens' right to a public hearing. The dissent found this situation objectionable, for several reasons. It noted that the Staff's post-certificate decisions are made in secret without input from the public and without subsequent review by the Board or the Ohio Supreme Court. *Id*. at ¶¶ 55-56. The affected citizens have no process or opportunity to provide input into the Staff's post-certificate approvals. *Id*. at ¶¶ 57-63. Even if they did have a mechanism to challenge the Staff's decisions, such a remedy would not justify disregarding their right to a hearing. *Id*. at ¶ 61. R.C. 4906.10(A) prohibits the Board from issuing a certificate unless the Board makes the required findings and determinations to resolve the issues. *Id*. at ¶ 64. The Board cannot delegate these issues to its Staff. *Id*. at ¶¶ 64-65.

Third, the dissent noted that the lead decision rendered ineffectual the laws designed to protect the interests of citizens living near proposed utility projects:

> The outcome of this decision is unfortunate for anyone living near the site of a proposed high-voltage transmission line, electric substation, high-pressure gas pipeline, or generation plant. If the board runs into an issue that for whatever reason it does not want to deal with—or if it simply prefers to resolve an issue without the discomfort of public participation and judicial review—it now has a broad off-ramp. Approve the project now; work out the details with the company later. The public retains a formal right to participate, but it is up to the board whether that right amounts to anything more than a formality.

> This is not alarmist but precisely what happened in this case. If, as it did in this case, the power siting board can delegate the very *siting* of facilities—its core duty, the duty from which the power siting board derives its name—it can delegate anything and everything. The lead opinion identifies no enforceable limits on the board's power to delegate but apparently trusts that the board will exercise its new discretion wisely. One can hope that the lead opinion's trust proves well founded, but in my view, the public's business should not be left to the unreviewable discretion of appointed staff members who are not accountable to the public. The board's decisions should have to see and bear the light of day.

Id. at ¶¶ 66-67 (emphasis in original). The Citizens incorporate by reference the statements of the dissent in *Buckeye Wind*.

In Angelina's case, the Stipulation tries to fill the large and numerous information gaps in the Application with a multitude of post-certificate plans to be evaluated only by the Staff without public review and comment and without the Board members' participation. This is not the process envisioned by the General Assembly when it enacted R.C. Chapter 4906.

The Stipulation would allow Angelina to submit 14 major plans to provide for mitigation of the Facility's impacts on the public. These submittals include the following: (1) detailed engineering drawings of final project design under Condition 3; (2) any changes to project layout after the submission of final engineering drawings under Condition 4; (3) a Phase I cultural resources survey program under Condition 9: (4) a modification or mitigation plan for avoiding cultural resources or minimizing impacts on them under Condition 9; (5) a landscape and lighting plan under Condition 11; (6) a public information program under Condition 12; (7) a complaint resolution process under Condition 13; (8) a Storm Water Pollution Prevention Plan under Condition 16; (9) a vegetation management plan under Condition 18; (10) a construction access plan under Condition 22; (11) a final traffic plan under Condition 25; (12) a transportation management plan under Condition 26; (13) road use agreement(s) under Condition 26; and (14) a comprehensive decommissioning plan under Condition 29. Jt. Exh. 1,

pp. 6-11. Rather than merely identifying the color of the screws in the control room, these plans provide for design and operational procedures that go to the core of how the Facility will be constructed and operated. This goes well beyond the activities that the lead opinion in *Buckeye Wind* let pass.

OPSB does not notify the public when plans of this nature are submitted to the Staff. Butler, Tr. 292:12 to 294:15. Drafts of these plans are not subject to public review. Butler, Tr. 295:7-14.

In addition, the Stipulation calls for a pre-construction meeting that is not open to the public. *Id*., p. 6, Condition 2. This will be a private meeting of Staff and the applicant that excludes the public except for law enforcement and emergency responders. Conway, Tr. 321:24 to 322:8.

The scarcity of the Application's analysis of the hazards and damage threatened by the Angelina solar project has deprived the Citizens thus far of their right to comment on and test the project's impacts and the proposed certificate conditions. For the same reason, the Staff and the Board have not had the information necessary to make informed decisions about issuing a certificate for this project. The Stipulation does not seek to correct this situation. The Board should not issue a certificate based on this inadequate record, but instead should reopen the Application with instructions to supply the missing information to allow the Board to make an informed decision.

These plans should be added to the Application before the Board decides whether to issue a certificate, not afterwards. Otherwise, the Board will abdicate its duty to make the required findings and determinations to resolve the issues as required by R.C. 4906.10(A), and unlawfully delegate its responsibility to the Staff. This practice would deprive the Citizens of their statutory

right to call and examine witnesses at the hearing under R.C. 4906.08 and otherwise participate in the adjudicatory process as noted in Paragraph 53 of the dissent in *Buckeye Wind*. And it would deprive the Citizens of their right to procedural due process under the Fourteenth Amendment of the Ohio State Constitution and Section 16, Article I of the Ohio Constitution, which require that administrative proceedings comport with due process. *Mathews v. Eldridge* (1976), 424 U.S. 319; *LTV Steel Co. v. Indus. Comm'n* (2000), 140 Ohio App.3d 680; *Egbert v. Ohio Dep't of Agriculture* (2008), 2008-Ohio-5309. At its core, "due process insists upon fundamental fairness, and the requirement to conduct a hearing implies that a fair hearing must occur." *Lassiter v. Dep't of Social Serv.* (1981), 452 U.S. 18, 24; *Clayman v. State Med. Bd.* (1999), 133 Ohio App.3d 122, 127, *citing State ex rel. Ormet v. Ind. Comm'n* (1990), 54 Ohio St.3d 102, 104. *Also see Seitz v. All Creatures Animal Hosp.* (Nov. 15, 1985), Ashtabula App. No. 1192, 1985 WL 3679.

If the Board decides to follow this procedure, it should at least take steps to remove some of the secrecy from the Staff's decision-making on the post-certificate plans and the Staff's oversight of the Facility's operations. These steps should include the following:

1. Angelina should be required to post notices of and copies on its website of all permit applications, permits, plan submittals, and other correspondence to and from public agencies about the design, construction, and operation of the Project and provide the public with a mechanism by which the public can obtain more information about and comment on issues associated with these actions.
2. Any facility requests for permits and other governmental action should be posted on Angelina's website at least 15 days prior to submission to the government so that the public can provide Angelina and the pertinent government agency with

comments on the proposals. These notices should identify a contact person and email address for Angelina and for the government official who is the contact person for Angelina, so that the public can submit comments to them.

3. Notice of the pre-construction meeting and other meetings between Angelina and the Staff about the Project should be posted on Angelina's website at least 14 days prior to the meetings and should be open to the public.

4. Angelina also be required to send all notices described above to the owners and occupants of land adjoining the Project Area.

5. Angelina's complaint summaries should be posted on the Applicant's website. Currently, Angelina does not intend to provide the public with access to these reports by posting them on its website or by any other means. Herling, Tr. 119:9-12. While Mr. Herling sought to excuse Angelina's intent to hide its problems from the public by arguing that some complainants would not want to make their complaints public (Herling, Tr. 126:19 to 127:4), Angelina could easily overcome that objection by giving the complainants the option to have their names redacted from the publicly disclosed report.

These actions will by no means compensate for the Board's failure to require the necessary information in the Application and subject it to hearing. But it at least would inject some transparency into the Staff's decision-making.

IV. <u>The Proposed Stipulation Cannot Be Used To Delegate The Board's Authority And Responsibility For Certification Decisions To The Staff, Nor It Does Provide For A Facility That Represents The Minimum Adverse Environmental Impact</u>.

As a practical matter, Rachael Vonderhaar's testimony aptly summarizes the Stipulation's ineffectiveness in addressing the problems in Angelina's Application and Project. Asked whether the Stipulation addressed the Citizens' concerns, she responded:

> No, it has not even attempted to address in any manner most of the concerns we expressed in our testimony. Even where the Stipulation provided conditions related to some of our concerns, it only partially addressed the problems we identified.

CCOPC Exh. 3, Vonderhaar Suppl. Testimony, p. 1, A.4.

From a legal perspective, the Stipulation, if accepted, would grant a certificate for the Facility based on an Application that violates the Board's rules in a multitude of ways as described herein. The Board cannot circumvent its own rules by approving a deficient application. Nor can it accept a Stipulation that proposes to approve a Project that does not meet the statutory criteria under R.C. 4906.10 for representing the minimum adverse environmental impact under R.C. 4906.10(A)(3) and serving the public interest, convenience, and necessity under R.C. § 4906.10(A)(6). For these reasons, the Stipulation violates important regulatory principles and practices and is contrary to the public interest.

The Stipulation would provide for an unlawful and unconstitutional delegation of power to the Staff for the reasons explained in Section III above. Most of the Stipulation's supposed accomplishments touted by Angelina and the Staff are future submittals of plans that should have been included in the Application, but which now are proposed to be delivered after certification by Angelina and approved in secret by the Staff. The Stipulation mostly just postpones, until after certification, Angelina's evaluations of the Facility's potential threats to the public and the Angelina's identification of mitigation measures work that should have been included in the Application.

The Stipulation also is carelessly worded to provide loopholes by which Angelina can avoid its responsibilities. Those loopholes are identified in Section II above. The deficiencies in the stipulated conditions are described in Section II above and some of them are briefly recapped in the paragraphs below.

First, the Board cannot tell whether measuring the setback from a road's right-of-way instead of the road's edge under Condition 3 addresses the concern that limited visibility at crossroads will cause traffic accidents, because no witnesses identified the amount of space this adds to the setbacks or the amount of space necessary to view the crossroads.

The lack of knowledge about the distance of this setback also makes it impossible to know whether the number of extra plants can be added to the setback under Condition 18 is meaningful, or negligible.

Although Angelina represents that inverter noise will not travel more than 150 feet, the Stipulation contains no requirement that the inverters be sited at least 150 feet from neighbors' houses and land. Moreover, there is no evidence that a 150-foot setback would be sufficient, since the Application contains no measurements or modeling of noise levels at a distance of 150 feet from the inverters.

While Condition 10 prohibits noisy construction activities after dark, the neighbors will still be subjected to 10 hours of pounding pile driving per day for five days a week and 12 hours or more of other loud construction activities.

Condition 11 promises a landscape and lighting plan, but the lack of detailed requirements provides no assurance to the neighbors that it will give them any relief from ugly solar equipment views and intrusive lights. Although the Application promises to work with neighbors to identify the locations best suited for "landscaping treatments" (Applic., p. 89), it

provides the citizens with no means to guarantee that Angelina will satisfactorily mitigate the visual impacts. In fact, Mr. Robinson's testimony almost guaranteed incomplete relief to the neighbors by predicting that complete screening from objectionable views will not be provided.

Condition 11 also promises a fence repair plan, but again no details are available to enable an evaluation of its effectiveness.

Rather than addressing all of the Project's threats to the public through an adequate Application and Stipulation, the Board falls back on the complaint resolution process required by Condition 13 to stop damage caused by the Board's negligence in the certification process. The complaint resolution process is not even included in the Application or Stipulation, but is left to Angelina's later judgment.

Condition 16 contains ambiguous language that casts doubt on how soon Angelina is required to repair its damaged field tiles, which could threaten downstream crops. The condition does not require Angelina to work with affected non-participating landowners, which restricts the effectiveness of the tile location and repair activities. The conditions suffers from other deficiencies described in Section II above.

Condition 18 requires a vegetation management plan, but the condition contains no prescriptions about what and how much trees and other vegetation can be destroyed or damaged.

Condition 18 offers Angelina a giant loophole to avoid the requirement that weed-free seed be used for the Facility's plantings, a loophole that Angelina refuses to relinquish.

Condition 18 requires growing noxious and invasive weeds to be removed only from the Facility's pollinator habitat, and not from the rest of the Facility.

Conditions 25 and 26 allow Angelina to develop the traffic plan, transportation management plan, and road use agreement after the certificate is issued, which insulates the plans from public and Board evaluation during the hearing process.

Condition 28 lacks adequate training for first responders who join the emergency crews after the initial emergency training sessions are finished. The condition provides no funding for extra emergency response personnel that may be needed to handle the extra demands posed by the Facility, especially law enforcement personnel.

The language of Condition 29 does not provide sufficient funding for decommissioning, for the reasons expressed in Section II above.

Section II provides additional descriptions of the Stipulation's inadequacies.

The scarcity of the Application's analysis of the hazards and damage threatened by the Angelina solar project has deprived the Concerned Citizens of their right to comment on and test the Project's impacts and the proposed certificate conditions. For the same reason, the Staff and the Board have not had the information necessary to make informed decisions about issuing a certificate for this Project. The Stipulation does not seek to correct this situation. The Board should not issue a certificate based on this inadequate record, but instead should reopen the Application with instructions to supply the missing information to allow the Board to make an informed decision.

Although Angelina and Staff will tell the Board that it should defer to the Stipulation and approve the Project with the Stipulation's conditions, a Stipulation signed by allied parties is not entitled to deference. If it were, any two or more aligned parties (*e.g.*, two Concerned Citizen intervenors) could sign a Stipulation over other parties' objection and obtain the Board's blessing for it. The parties signing the Stipulation do not have to live next door to the Project's hazards,

so they do not represent the Concerned Citizens' interests and that fact is reflected in the Stipulation's failure to address these hazards. It is the Board's statutory responsibility to make sure Angelina has provided a complete and honest assessment of the Project's hazards and has designed the Project to reduce those hazards to a minimum. Adopting the Stipulation will not fulfill this responsibility.

V. The Angelina Solar Project Does Not Constitute The Minimum Environmental Impact And Does Not Serve the Public Interest, Convenience, And Necessity.

Angelina does its best to "green-wash" this project, portraying it as benign and environmentally beneficial. The record in this case shows a very different project -- a major industrial plant spread over a rural residential landscape on a vast scale that will harm the community as described in Section II above. Angelina has the burden of proof to demonstrate that its Project as designed in the Application will represent the minimum environmental impact and that it will serve the public interest, convenience, and necessity. The Citizens do not have the burden to produce evidence that the Project will harm the public, although it has done so in many instances.

Angelina has failed to prove its burdens in the following respects:

The solar equipment will spoil the neighborhood's scenic views.

The unsightly solar equipment will be located in close proximity to neighboring residences and land, and Angelina has not provided meaningful assurances that these views will be adequately mitigated through screening.

The Project lighting may be annoying and intrusive to neighbors, and the Angelina has failed to demonstrate how it will prevent this from occurring.

The inverters may produce annoying and intrusive noise that reach neighboring homes and land.

Post installation will produce noise that is loud, bothersome, and long lasting.

The Project's provisions for preventing and replacing damaged field tiles are inadequate and could result in the flooding of neighboring land and damaged crops.

The unguarded recyclable materials in the solar equipment will attract criminals to the area to plunder them, and these criminals may also harm the neighbors while in the area.

Solar panels damaged by vandals or disasters may leak contaminants into the groundwater, thus polluting the neighbors' wells.

Due to inadequate provisions for funding decommissioning, the expired solar equipment may be a blight in the community if not removed.

The Project may be a drain on emergency services that it may consume, thus depriving the residents of adequate emergency services.

The solar equipment may obstruct motorists' views of cross-roads at intersections. .

The Project does not provide adequate controls for noxious and invasive weeds.

The Project will harm the area wildlife.

The Project will force deer, coyotes and other wildlife to congregate in the neighbors' fields and yards, and damage the neighbors' crops and livestock.

The Project may increase stormwater runoff and flood the neighbors' fields and homes, including those in Fairhaven.

Erosion from Project construction may pollute the streams.

The Application lacks sufficient detail about solid waste and debris generation and disposal to demonstrate that the waste and debris will be properly handled.

Project construction will clog the neighborhood roads and delay the movement of farm equipment.

Section II above describes these and other harms and potential harms in more detail.

Consequently, the Board cannot find that the Facility "represents the minimum adverse environmental impact" under R.C. 4906.10(A)(3) and serves the public interest, convenience, and necessity under R.C. § 4906.10(A)(6). For those reasons, OPSB should deny Angelina's request for a certificate.

VI. Conclusion

For the reasons expressed above, the Board should deny Angelina's application for a certificate.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The Ohio Power Siting Board's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to this case. In addition, I hereby certify that, on October 18, 2019, a copy of the foregoing document also is being served by electronic mail on the following: Michael Settineri at mjsettineri@vorys.com, MacDonald Taylor at mwtaylor@vorys.com, Kathryn West at kwest@prebco.org, Dylan Borchers at dborchers@bricker.com, Chad Endsley at cendsley@ofbf.org, Thaddeus Boggs at tboggs@fbtlaw.com, and Jodi Barr at Jodi.barr@ohioattorneygeneral.gov.

/s/ Jack A. Van Kley
Jack A. Van Kley

Summary: Brief Of Concerned Citizens of Preble County, et al. electronically filed by Mr. Jack A Van Kley on behalf of Concerned Citizens of Preble County, LLC