

2012 PENNSYLVANIA STATEWIDE HIGH SCHOOL MOCK TRIAL COMPETITION

The Wisawe Chapter of Friends of Bog Turtles v.
ZenoPharma, Inc.

SPONSORED BY THE YOUNG LAWYERS DIVISION OF THE PENNSYLVANIA BAR ASSOCIATION

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Problem Questions & Contact Information

Questions concerning these case materials should be sent to David Keller Trevaskis at the Pennsylvania Bar Association (PBA). Case material questions will be answered by the Mock Trial Executive Committee. Questions regarding mock trial procedure, including any questions involving the Rules of Competition or Rules of Evidence, should be directed to your District or Regional Mock Trial Coordinators.

Answers to legitimate and non-repetitive questions will be posted periodically in a supplemental memo on the mock trial website www.pabar.org under the Young Lawyer's Division (YLD) link.

You may begin submitting questions anytime. The deadline for submitting questions is noon on January 18, 2012. The final update will be posted no later than January 21, 2012.

Questions must be sent in writing using one of the methods listed below. Please be sure to include return contact information in the event we need to reach you to clarify a question. **No questions will be considered unless submitted under this procedure**.

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Introduction and Acknowledgments

Welcome to the 2012 Pennsylvania Statewide High School Mock Trial Competition - the 28th year of one of the top secondary level academic competitions in the Commonwealth! The competition, which commenced in 1984, is sponsored by the Young Lawyers Division of the Pennsylvania Bar Association (PBA/YLD). It provides high school students with firsthand experience of the American judicial system. The Mock Trial Competition is one of a series of law-related and civic education programs conducted by the PBA to demystify the law for Pennsylvanians, including Freedom's Answer, I Signed the Constitution, Project PEACE, Law Day and Stepping Out for Seniors.

This year's case, *The Wisawe Chapter of Friends of Bog Turtles v. ZenoPharma, Inc.*, is a civil action in which the plaintiff seeks an injunction to prevent the defendant, owner of a pharmaceutical plant located in the town of Wisawe, Pa., from expanding its operations. Plaintiff argues that an endangered species is alleged to have been found on the land where the expansion is to occur.

The case was written by Jonathan A. Grode and Paul W. Kaufman. The pair co-wrote the 2011 mock trial problem and are currently writing the 2012 National High School Mock Trial Championship problem which will be held this coming May in Albuquerque, New Mexico. Mr. Grode (Temple University James E. Beasley School of Law – Adjunct Professor), who adapted and modified the 2007 mock trial problem and wrote the 2008, 2009, and 2010 mock trial problems, was also the primary author of the 2010 National High School Mock Trial Championship problem. Mr. Kaufman has been an author or editor of four mock trial cases, including the 2010 National case, was a four time Delaware state champion mock trialer in high school and is a current member of the National High School Mock Trial Championship Board of Directors. Jane E. Meyer, Esq., a prior Mock Trial Committee Chairperson and also a member of the National High School Mock Trial Championship Board of Directors, performed final

editing of this year's case in collaboration with Mr. Grode and Mr. Kaufman. Our sincerest thanks go out to Mr. Grode, Mr. Kaufman and Ms. Meyer for their tireless and enthusiastic creation and editing of this year's problem.

Mr. Grode thanks Yuah Jessica Choi, Esq. (Goldblum & Hess) for reviewing various drafts of the problem, Roberta West (LEAP Program Advisor Temple University) for her ongoing and tireless support, Mike Coll (Natural Lands Trust) for his role as environmental consultant and Jayne Bird, M.D. (Pennsylvania Hospital) for her role as medical consultant. Mr. Kaufman thanks his wife, Sarah, for her support, counsel, and unparalleled patience, and he thanks United States Attorney Zane David Memeger and Chief of the Civil Division Margaret L. Hutchinson for their remarkable support of high school mock trial in Philadelphia and throughout Pennsylvania. Mr. Kaufman and Mr. Grode dedicate this year's case to Vincent, Myrtle, Spot, Rocky and all other victims of communicable terrarium respiratory viruses.

The authors thank Steven Miano and Kenneth Warren of Hangley Aronchick Segal, Pudlin, and Schiller; Alexandra Daplito Dunn of the Association of Clean Water Administrators; Pamela Lazos of the Environmental Protection Agency; Dan Smith of the United States Department of Justice Environmental and Natural Resources Division; and William Gelles of the Pennsylvania Department of Environmental Protection for their assistance with the environmental law aspects of this case. Credit for the environmental law in this case should be given to them, but any errors or necessary distortions are ours alone. As a token of our gratitude, we have provided you with such degree of immortality as we are able. Both authors thank Carole Williams Green, wife of the late Hon. Clifford Scott Green, for providing the original inspiration for this case.

Thanks also go to Co-Chairs of this year's Competition, Traci Naugle, Esq. and Jennifer J. Walsh, Esq., for their efforts in organizing and implementing the many facets of this competition. The Mock Trial Committee would also like to express its appreciation to Hope Guy, Esq., current PBA/YLD Chair, and Jacob Gurwitz, Esq., the PBA/YLD Chair Elect, for their support of the competition. Additionally, the YLD thanks David Trevaskis, PBA Pro-Bono Coordinator for his continued involvement and experienced guidance in implementing the 2012 Mock Trial Competition.

Finally, we thank the hundreds of volunteers who annually contribute their time and energy to the overall organization and running of the program. Last, but certainly not least, we thank the PBA staff, headed by Executive Director Barry Simpson and Deputy Executive Director Fran O'Rourke, and the many PBA staff members who provide valuable time and talent throughout the mock trial season. Without their assistance, this competition would not be the tremendous success that it is each year. Special thanks go to Maria Engles, the YLD Coordinator, who serves as the main point of contact for the entire program.

We hope you find these materials interesting, and wish you all the best of luck!

Case Summary

On October 15, 2011, Skylar Cohen finally found redemption! Basking in the autumn sun, on property owned by the pharmaceutical giant ZenoPharma, Inc. in the small town of Wisawe, were three bog turtles. Before they skittered away, Skylar was able to photograph one of them. Or so Skylar says.

This case is about the balance between protecting the environment and promoting development. The turtles Skylar claims to have seen are extremely rare, and they are protected by the Endangered Species Act. The site of Skylar's alleged discovery was the very location where ZenoPharma produced its most prized and bestselling product, SutureStick, a revolutionary organic medical adhesive made from the algae growing in an old quarry on the property. A slate mining operation at the quarry had once been a primary source of jobs for the town, but the mine had closed down many years before, leaving Wisawe struggling.

Marlo Fernicker, a ZenoPharma scientist and Wisawe resident, discovered the algae's unique properties in 2001 and was tabbed by ZenoPharma to head the creation of Wisawe's SutureStick plant. By 2009, the plant was at full production, employing hundreds of Wisawe residents and leading an economic revival in Wisawe. But demand outstripped the capacity of the quarry and the plant, and efforts to synthesize SutureStick in a lab failed. Facing economic ruin, ZenoPharma seeks to expand both the quarry pit and its plant in order to increase the algae harvest, triple its revenue and create more jobs.

Within a few weeks of Skylar's discovery, a group headed by Skylar, Friends of Bog Turtles, filed a lawsuit in federal court claiming that ZenoPharma's quarry expansion would violate the Endangered Species Act. The Friends of Bog Turtles seeks a permanent injunction preventing the expansion from ever occurring. Plaintiff claims that an expansion will result in the loss of critical bog turtle habitat and displacement or other "taking" of bog turtles.

Plaintiff also argues that an expansion will pose a threat to public health because increased algae processing at the plant will lead to higher levels of cadmium, which may increase the propagation of the bacteria Mycobacterium Ulcerans (MU), an aggressive "flesh eating" organism. Plaintiff believes the expansion will allow MU to reach the Wisawe aquifer, the primary source of drinking and washing water for many Wisawe residents. Plaintiff also disputes defendant's claims as to the extent of ZenoPharma's economic impact.

ZenoPharma argues that no bog turtles have been found on the property and that the one photographed by Skylar was planted there. ZenoPharma also claims that even if no bog turtles live its property, it can still not be considered critical habitat for them because there are bog turtle colonies in other states and the economic and other impact of the plant's expansion would be so dramatic as to outweigh any harm to the turtles.

ZenoPharma also strongly denies that its plant or the quarry had anything to do with the MU infection, noting that no one has ever shown that the MU was present in the quarry water or connected with ZenoPharma at all. It notes that the levels of cadmium are well within EPA limits and that even the cadmium there might be naturally-occurring. ZenoPharma alleges that if the quarry cannot expand, it could be forced out of business, devastating the economy of Wisawe and depriving medical science of a powerful tool in its race to save lives.

A jury trial is set on two issues: whether the land in question is critical bog turtle habitat and whether the public interest favors conservation of the land or developing it.

At trial, Friends of Bog Turtles will present three witnesses: Skylar Cohen, its founder and the student who discovered the bog turtles on ZenoPharma land; Tal Kurtz, a former ZenoPharma executive who claims to be telling the real story about her/his former employer's business; and Paz Bobrow, an expert in environmental assessment and former Department of Environmental Protection employee who will testify that ZenoPharma's land is essential to the conservation of the bog turtle species, whether or not there are bog turtles on it.

ZenoPharma will call Marlo Fernicker, the self-described genius behind the development of SutureStick and the Wisawe production facility; Hadley McAdoo, Skylar Cohen's teacher and the head of the Wisawe City Council; and Brennan Nellie, an environmental engineer who will testify that ZenoPharma's land is not critical bog turtle habitat.

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF PENNSYLVANIA

THE WISAWE CHAPTER OF FRIENDS OF BOGTURTLES,)
Plaintiff, vs.)
ZENOPHARMA, INC.,)
Defendant)

COMPLAINT

- 1. The Friends of Bog Turtles ("FBT") is a non-profit entity headquartered in Wisawe Township, PA. FBT is dedicated to the protection of bog turtles (*Clemmys muhlenbergii*) and other endangered species in Pennsylvania.
- 2. The Wisawe Chapter of Friends of FBT is headquartered in Wisawe Township, PA. It has more than one hundred nominal members and thirteen dues-paying members, all but one of whom are residents of Wisawe Township.
- 3. ZenoPharma, Inc. ("ZenoPharma") is a Delaware corporation headquartered in Wilmington, Delaware. ZenoPharma has research and manufacturing facilities across the country, including in King of Prussia, PA.
- 4. Defendant operates the Wisawe SutureStick Manufacturing Plant located in Wisawe Township, PA.
 - 5. This Court has jurisdiction pursuant to 28 U.S.C. § 1331.
- 6. Venue is proper in this district because the events giving rise to this action occurred or will occur in this district, plaintiff is a resident in this district, and defendant has conducted business in this district and has availed itself of the protection of the law of this district.
- 7. Beginning in approximately 2002, defendant ZenoPharma began developing
 SutureStick, a medical device that relies for its manufacture on algae collected from a quarry in

Wisawe Township. This algae is processed by ZenoPharma at the Wisawe SutureStick Manufacturing Plant (the "Plant").

- 8. The quarry fills with rainwater and with groundwater from the Wisawe aquifer, which provides drinking water to residents of Wisawe Township. Some of that water returns to the aquifer, and pollutants in the quarry water seep into groundwater drunk by Township residents.
 - 9. ZenoPharma intends to expand the Plant into territory around the surrounding building.
- 10. The property onto which this expansion is planned to occur is home to a colony of bog turtles.
- 11. Bog turtles are a protected species within the meaning of the Endangered Species Act,16 U.S.C. § 1531 et seq.
 - 12. The planned expansion would destroy the habitat currently occupied by the bog turtles.
- 13. Such an expansion would therefore endanger those turtles, further risking the extinction of this proud species.
- 14. In addition, the planned expansion would result in a significant increase in the amount of algae being processed by the Plant.
- 15. The processing of the Plant already generates cadmium and other chemicals and/or pollutants.
- 16. The harmful byproducts of the algae processing, including but not limited to cadmium, remain in the quarry pit.
- 17. The planned expansion would increase the amount of harmful byproducts of the algae processing, including but not limited to cadmium, in the quarry.
- 18. The planned expansion would allow the harmful byproducts of the algae processing, including but not limited to cadmium, to reach the level of the Wisawe aguifer.
- 19. Members of the Wisawe community have become sick from drinking or washing with the tainted water, including but not limited to with rare skin conditions caused by Mycobacterium

- Ulcerans. Mycobacterium Ulcerans grows in the water because it has been tainted by the pollutants, which have made the conditions in the water more hospitable for it.
- 20. "Group 12" metals like zinc, mercury, and cadmium are associated with the growth and sustenance of Mycobacterium Ulcerans.
- 21. If the quarry pit is expanded and levels of cadmium in the quarry increase, it could increase the propagation of Mycobacterium Ulcerans in the quarry.
- 22. The planned expansion of the quarry could allow Mycobacterium Ulcerans to reach the Wisawe aquifer.
- 23. Many citizens of Wisawe receive water for drinking and washing directly from the Wisawe aquifer.

COUNT ONE - THE ENDANGERED SPECIES ACT

- 24. Plaintiffs incorporate by reference the foregoing paragraphs.
- 25. If the expansion is permitted to occur, critical bog turtle habitat will be lost.
- 26. If the expansion is permitted to occur, the bog turtles currently residing on this habitat will be forced from their homes or, more likely, killed.
- 27. The death of these bog turtles will do irreparable harm to their species and the environment of Wisawe, Pennsylvania.
- 28. Because the bog turtle is an endangered species, actions that lead to bog turtle deaths or loss of bog turtle habitat are forbidden by the Endangered Species Act, 16 U.S.C. § 1531 et seq.
- 29. The planned expansion poses a threat to public health because, among other reasons, it will lead to higher levels of Mycobacterium Ulcerans in the quarry and in the Wisawe aquifer.
 - 30. For the foregoing reasons, the request for an injunction should be granted.
 - WHEREFORE, plaintiffs respectfully move that the Court:
 - (a) Grant judgment in their favor;
 - (b) Enjoin defendants from expanding the Plant without further order of the Court; and

(c) Grant such other relief as is just and proper.

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Attorneys for Plaintiff

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF PENNSYLVANIA

THE WISAWE CHAPTER OF FRIENDS OF BOG TURTLES,)
Plaintiff, vs.)
ZENOPHARMA, INC.,)
Defendant.)

ANSWER

- 1. Defendant ZenoPharma, Inc. ("Defendant") admits that Friends of Bog Turtles ("FBT") is a non-profit entity registered with the Pennsylvania Department of State. FBT's registration lists its headquarters as 14 Central Station Rd, Wisawe, PA 19919. By way of further response, that is also the home address of Skylar Cohen. Defendant lacks information sufficient to determine the truth or falsity of the remaining allegations. Accordingly, they are denied.
- 2. Defendant lacks information sufficient to determine the truth or falsity of these allegations. Accordingly, they are denied. By way of further response, upon information and belief, the Wisawe Township Chapter is the only active chapter of FBT and both it and FBT are substantially funded by Stull Medical Adhesives, Inc., defendant's direct competitor.
 - 3. Admitted.
 - 4. Admitted.
- 5. This paragraph contains legal allegations to which no response is required. To the extent a response is deemed required, the defendant does not contest jurisdiction.
- 6. This paragraph contains legal allegations to which no response is required. To the extent a response is deemed required, the defendant does not contest venue.
- 7. Denied as stated. Defendant admits that in 2002, its employees began research into the technology that would eventually be incorporated into SutureStick. Defendant admits further

that the technology was derived from algae found at a quarry in Wisawe and that the processing of algae occurs at defendant's Wisawe SutureStick Manufacturing Plant ("Plant").

- 8. Defendant admits that the Wisawe aquifer passes close to the quarry at the Plant and that pollutants in the quarry, both naturally-occurring and man-made, could reach the aquifer. Defendant expressly denies that such pollutants, if any, reach the aquifer in sufficient quantities to affect the groundwater. By way of further response, the Wisawe aquifer has been tested by both the Environmental Protection Agency and the Pennsylvania Department of Environmental Protection and has been found to meet all relevant legal standards for drinking water.
- 9. Admitted. By way of further response, the defendant has received all required building and environmental permits for the planned expansion.
 - 10. Denied.
- 11. This paragraph contains legal allegations to which no response is required. To the extent a response is deemed required, defendant admits that bog turtles are a threatened species and receive such protection as is afforded to threatened species.
- 12. Denied. By way of further response, there are no bog turtles on or near the Plant property.
- 13. Denied. By way of further response, there are no bog turtles on or near the Plant property.
- 14. Denied as stated. Defendant admits only that more algae would be processed by the planned Plant expansion.
- 15. Denied as stated. Defendant admits that cadmium is a byproduct of the algae processing. Defendant denies that the algae processing produces any pollutants other than cadmium, which is produced in very limited quantities entirely within the limits set by the Environmental Protection Agency (EPA) and Pennsylvania Department of Environmental Protection (DEP).

- 16. Denied. By way of further response, cadmium is a naturally occurring substance and, to the extent it is found in the Wisawe aquifer, it is there naturally. Defendant admits that cadmium may remain in the quarry pit in highly diluted form.
- 17. Denied. Defendant admits only that additional cadmium will be produced in the expanded facility. Defendant cannot say whether that will lead to a higher concentration of cadmium in the quarry.
- 18. Admitted in part. Defendant admits that it is possible that cadmium could reach the Wisawe aquifer, but defendant has taken steps to moderate this possibility. By way of further response, even if the cadmium produced by the plant were to reach the Wisawe aquifer, its level would remain within the guidelines set by the EPA and DEP.
- 19. Denied. By way of further response, defendant specifically denies that any residents of Wisawe have become sick from drinking the water of the Wisawe aquifer and specifically denies that any actions of the defendant have made the water of the Wisawe aquifer any less safe for humans.
- 20. Defendant is without information sufficient to form a belief regarding the truth of these allegations. They are therefore denied.
- 21. Denied. By way of further response, the alleged link between Mycobacterium Ulcerans and cadmium is entirely speculative.
- 22. Denied as stated. Defendant admits that the planned expansion allows water to flow between the quarry and the Wisawe aquifer. Defendant denies that there is Mycobacterium Ulcerans or any other demonstrably harmful biological or non-biological substance in the quarry.
- 23. Admitted in part. Defendant admits only that the original source of the drinking and washing water for some residents of Wisawe is the Wisawe aquifer. By way of further response, all or virtually all of this water is filtered and treated by the well equipment used to retrieve it and/or filter or treatment facilities inside individual residences.
 - 24. Defendant incorporates by reference its response to the foregoing paragraphs.

25. Denied.

26. Denied. By way of further response, there are no bog turtles on or near the Wisawe

Plant.

27. Denied. By way of further response, ZenoPharma cares deeply about the environment

and all the creatures and plants in it. ZenoPharma would not act were it displacing an

endangered or threatened species, and it gives liberally to environmental causes and has

received numerous environmental awards.

28. This paragraph contains legal allegations to which no response is required. To the

extent a response is deemed required, they are denied.

29. This paragraph contains legal allegations to which no response is required. To the

extent a response is deemed required, they are denied. By way of further response, the Plant

has been an unalloyed boon to the economy and culture of Wisawe. The public interest of

Wisawe strongly favors expansion of the Plant, which will bring hundreds of jobs and millions of

dollars to the local economy, which has no other large employer, as well as attracting dozens of

new businesses to serve those employees.

30. For the foregoing reasons, the request for an injunction should be denied.

WHEREFORE, defendant respectfully requests that the Court enter judgment in its favor and

against plaintiff.

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Altoona, PA 16601

Attorneys for Defendant

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IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF PENNSYLVANIA

THE WISAWE CHAPTER OF FRIENDS OF BOG TURTLES,)
Plaintiff,)
VS.)
ZENOPHARMA, INC.,)
Defendant.)

MEMORANDUM AND OPINION

Defendant ZenoPharma, Inc. ("ZenoPharma") moves the Court to dismiss the complaint against it for failure to state a claim. Plaintiff Friends of Bog Turtles ("FBT") moves for immediate summary judgment and/or judgment on the pleadings. Both motions will be denied.

The primary question of this case is whether the property onto which ZenoPharma seeks to expand is critical habitat for the bog turtle (*Clemmys (Glyptemys) muhlenbergii*), a species considered threatened by the federal government and endangered by Pennsylvania. ZenoPharma argues that no bog turtles have been found on the property and that, therefore, the property cannot be considered critical habitat. This argument fails for two reasons. First, the Endangered Species Act ("ESA") provides two pathways to the designation of a critical habitat, but only one requires the actual presence of bog turtles. See 16 U.S.C. § 1532(5)(A). Subsection (i) of § 1532(5)(A) relates to designations of areas where an endangered species is actually found, but sub-section (ii) specifically refers to "areas outside the geographical area occupied by the species at the time it is listed [as endangered]." Accordingly, even were ZenoPharma correct that no bog turtles live on its property, that would not decide the question. Secondarily, Friends of Bog Turtles ("FBT") has produced at least some evidence tending to show that there may be bog turtles on the property. This question is therefore a matter for trial.

ZenoPharma next argues that the habitat in question cannot be considered critical because the Secretary of the Interior or Secretary of Commerce have not designated the area in question as a critical habitat for bog turtles. See 16 U.S.C. § 1533(b)(2). The Court is well aware, as are the parties, that the Secretaries of Interior and Commerce have decided not to designate any land as critical habitat for the bog turtle, in order to prevent poachers from locating the turtles and in order to avoid a situation where, while the regulation was pending, property owners would destroy the habitat in order to avoid future litigation like this one. See 62 FR 59605-02, 1997 WL 678991 (F.R.), 50 C.F.R. Part 17, Tuesday Nov. 4, 1997. Thus, were the Secretaries' decision to function as ZenoPharma suggests and prevent any habitat from ever being designated as critical, it would render the ESA's protections mere hollow words.

FBT recognizes, to its credit, that the question of whether bog turtles are actually present is a matter of dispute that must be resolved at trial. But FBT argues that even if bog turtles are not present, the area is critical habitat for them and should be protected for that reason. However, the fundamental problem with FBT's argument is that it ignores the fact that when making a critical habitat determination, the Secretary must consider the "economic impact" of her/his decision. Indeed, "the Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as

part of the critical habitat..." 16 U.S.C.A. § 1533(b)(2). ZenoPharma claims that its plant is critical to the economy of Wisawe Township and that the Township and its residents would be irrevocably harmed were the injunction to issue. Thus, the Court cannot decide this question based solely on the characteristics of the land itself, and since the economic impact of the ZenoPharma expansion is disputed, this question must be tried.¹

In deciding whether to grant a permanent injunction, this Court must determine whether: (1) the moving party has shown actual success on the merits; (2) the moving party will be irreparably injured by the denial of injunctive relief; (3) the granting of the permanent injunction will result in even greater harm to the defendant; and (4) the injunction would be in the public interest. Gucci America, Inc. v. Daffy's Inc., 354 F.3d 228, 236 -237 (3d Cir. 2003), citing Shields v. Zuccarini, 254 F.3d 476, 482 (3d Cir.2001). Only if all four factors weigh in plaintiff's favor will an injunction be appropriate. That much, at least, is well understood.

However, FBT urges this Court to rule in advance of trial that if FBT can prove that the land in question is a critical habitat, the injunction will issue automatically. In other words, plaintiff argues that "[t]he traditional... injunction analysis does not apply to injunctions issued pursuant to the ESA," Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv., 422 F.3d 782, 793 (9th Cir. 2005), and it urges that this Court not consider factors (2), (3) or (4).Plaintiff reasons that:

- With respect to irreparable harm, "Environmental injury, by its nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, i.e., irreparable." Amoco Production. Co. v. Village of Gambell, 480 U.S. 531 (1987); United States v. Government of the Virgin Islands, 248 F.Supp.2d 420 (D.V.I. 2003) ("environmental harm and imminent risk to human health can only be viewed as irreparable"). Accordingly, plaintiff argues that any destruction of a critical habitat is irreparable as a matter of law.
- With respect to the balancing of harms, plaintiff argues that "under the ESA the balance of hardships always tips sharply in favor of endangered or threatened species." Marbled Murrelet v. Babbitt, 83 F.3d 1068, 1073 (9th Cir. 1996); see also Amoco Prod. Co., 480 U.S. at 545 (if environmental injury "is sufficiently likely... the balance of harms will usually favor the issuance of an injunction to protect the environment"). Accordingly, plaintiff argues that the economic harm to the defendant is irrelevant when a critical habitat is at issue.
- With respect to the public interest, plaintiff argues that "Congress has... [made] it abundantly clear that the balance has been struck in favor of affording endangered species the highest of priorities." TVA v. Hill, 437 U.S. 153, 194, (1978); see also Earth Island Inst. v. U.S. Forest Serv., 442 F.3d 1147, 1176 (9th Cir. 2006) ("Preventing environmental degradation and loss of resources is in the public interest"); The Lands Council v. McNair, 537 F.3d 981, 1005 (9th Cir. 2008) ("public interest in preserving nature and avoiding irreparable environmental injury outweighs economic concerns"). Accordingly, plaintiff argues that the public interest always favors endangered species.

¹ The parties have agreed to a temporary restraint on development pending this Court's decision. Accordingly, the Court need not address the issue of a preliminary injunction.

The Court cannot entirely agree with plaintiff. The Third Circuit has rejected the unyielding standard that plaintiff proposes. <u>See Hawksbill Sea Turtle v. Federal Emergency Management Agency</u>, 126 F.3d 461, 478 n.13 (3d Cir. 1997). Moreover, the Court is unwilling to substitute its judgment for the Secretary's without at least allowing ZenoPharma to raise any argument it could have made in the administrative process. However, although <u>Hawksbill Sea Turtle</u> rejected the standard the plaintiff proposes, the Third Circuit did not articulate a legal standard for making these decisions. Accordingly, this Court must now do so.

Plaintiff argues persuasively that environmental harms are irreparable by nature, and many courts have so found, including the United States Supreme Court. Thus, if plaintiff is able to succeed on the merits, it will have shown irreparable harm automatically as a matter of law.

Plaintiff has also persuaded the Court that Congress has decided to put its fingers firmly on the scales when harm is weighed as between endangered species and private landowners. No harm to ZenoPharma would outweigh the harm done to endangered turtles by the destruction of critical habitat, and the case books are littered with examples of highly valuable projects blocked by the ESA. Many times, the companies sponsoring those projects suffered severe economic harm, even bankruptcy. However, plaintiff is correct – when an endangered species is present, the harm to the defendant becomes unimportant.

However, the plaintiff had failed to persuade the Court that the public interest favors endangered species in all cases. Indeed, the Supreme Court in Winter and the Third Circuit in Hawksbill Turtle have made clear that this is simply not the law. While there is a per se public interest in protection of endangered species, it is not automatically enough to overcome all other public interests. Nor will the Court place limits on the kinds of arguments that ZenoPharma or FBT can make. The Third Circuit made clear in Gelles v. Almayer Silver Co., 987 F.2d 1895 (3d Cir. 1997), that economic interests can sometimes be paramount, and it made clear in Lazos v. Delaware Dept. of Transportation, 500 F.3d 22 (3d Cir. 2007), that they will not always be. This is a matter for trial.

The Court reaches this decision considering, as ZenoPharma urges, that the balance here is not just between endangered species and the public interest generally, but between endangered species and human life. ZenoPharma has claimed that it is product, SutureStick, saves lives. The Court takes no position on whether this claim is accurate. However, the majority of judges on the Hawksbill Sea Turtle panel found that where benefits to human life are alleged, the traditional injunction standard should be applied. This Court is bound by that decision, and therefore cannot hold as a matter of law that the public interest prong of the injunction test is automatically met even if there are bog turtles on the property at issue.²

Where plaintiff and defendant present competing claims of injury, the traditional function of equity has been to arrive at a "nice adjustment and reconciliation" between the competing claims, Hecht Co. v. Bowles, 321 U.S. 321, 329 (1944). Moreover, courts pay particular regard for the public consequences in employing the extraordinary remedy of injunction. Railroad Comm'n.v. Pullman Co., 312 U.S. 496, 500 (1941). Even if a statute is violated, then, an injunction is only appropriate when both the public interest demands it and the plaintiff is more harmed by the defendant's action than the defendant would be if not allowed to act.

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² The fact that plaintiff argues that ZenoPharma's expansion would be harmful to human health does not change that calculation. The jury may consider FBT's arguments about public health impacts as well and reach its own decision, but FBT cannot short-circuit that process.

Accordingly, a trial is required. For the foregoing reasons, the Court finds that an injunction will issue if (1) the plaintiff succeeds on the merits of its ESA claim and (2) the public interest does not favor ZenoPharma's expansion.

As noted above, FBT can succeed on its ESA claim in either of two ways. First, it can show that there are actually bog turtles on the property at issue. If it does so, because bog turtles are so rare, this Court will conclude that, as a matter of law, any expansion would result in a bog turtle "taking," which is prohibited by 16 U.S.C. § 1538(a)(1)(B). In light of the clear intent of the ESA and the regulations implementing it, if the plaintiff shows that there are actually bog turtles on the property, the defendant will bear the burden of proving that the public interest in its expansion significantly outweighs the public interest in preserving the environment.

Alternatively, the plaintiff may show that the property in question is critical bog turtle habitat, even if no bog turtles live there. It may do so by showing that the property contains "physical or biological features essential to the conservation of the species." See 16 U.S.C. § 1532(5)(A)(i). However, because the Secretary would be required to consider the economic impact of a decision to designate the area as critical habitat, and because there is no allegation that the bog turtle will become extinct if the expansion is allowed, ZenoPharma may argue that the habitat should not be considered critical because the "economic impact" of such a decision outweighs the benefits of that designation. See 16 U.S.C. § 1533(b)(2). Moreover, for the same reason, if the plaintiff fails to prove that there are actually bog turtles present on the property, the defendant's burden to show that public interest favors it is far lighter, a mere preponderance. The Court notes that even this burden-shifting represents a significant concession to Congress's intent; in any other, non-environmental matter, plaintiff alone would bear the burden of proof. Although this may not be a perfect system, it represents a "nice adjustment and reconciliation" between the claims.

Under either theory, the parties may adduce whatever facts they choose in addressing the public interest prong of the permanent injunction standard, including whatever facts and opinions are admissible regarding both the public health and economic consequences of this decision. The Court will instruct the jury that they may consider any interest common to members of the local, state and national community that they in their collective wisdom find appropriate.

Accordingly, this Court enters the following:

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF PENNSYLVANIA

THE WISAWE CHAPTER OF FRIENDS OF BOG TURTLES,)
Plaintiff, vs.)))
ZENOPHARMA, INC.,)
Defendant.)

PRE-HEARING ORDER

AND NOW, this 14th day of December, 2011, after careful and expedited consideration of defendants' motion for summary judgment and/or judgment on the pleadings, it is ORDERED that the motions are DENIED for the reasons set forth in the accompanying memorandum.

A hearing on plaintiff's request for a permanent injunction shall be held as soon as practicable, and the Clerk of Court is ORDERED to empanel a jury to advise the Court as to the following issues:

- 1. Is the land onto which ZenoPharma intends to expand the plant and quarry a critical habitat for the bog turtle; and, if so,
- 2. Does the public interest favor allowing that expansion despite the potential destruction of critical bog turtle habitat.

It is FURTHER ORDERED that such hearing shall be a full, factual hearing, that the parties shall have the right to call up to three (3) witnesses in support of their claims. The parties shall promptly confer to reach stipulations and create a joint list of potential exhibits. The hearing will be conducted in accordance with the rules of procedure and rules of evidence as though it were a trial on the merits and the rules of procedure and rules of evidence will be strictly observed.

It is FURTHER ORDERED that trial shall be conducted in January, February or March of 2011, at such time as is convenient for the parties and for the Court.

BY THE COURT:
STEVEN T. MIANO. J.

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF PENNSYLVANIA

THE WISAWE CHAPTER OF FRIENDS OF BOG TURTLES,)
Plaintiff, vs.)
ZENOPHARMA, INC.,)
Defendant)

Stipulations

- 1. Jurisdiction, venue and chain of custody of the evidence are proper and may not be challenged.
- 2. All statements were notarized on the day on which they were signed.
- 3. The jury shall be advisory, but it shall otherwise function normally. Jurors will not be informed that their verdict is advisory, as it might tend to lessen the attention paid to the trial.
- 4. With the exception of Exhibit 2.1,all documents, signatures and exhibits, including premarkings, included in the case materials are authentic and accurate in all respects; no objections to the authenticity of the documents or exhibits other than Exhibit 2.1 will be entertained. The parties reserve the right to dispute any legal or factual conclusions based on these items and to make objections other than to authenticity.
- 5. Exhibit 1 is an accurate depiction of the property in question, and the markings on Exhibit 1 accurately depict the area into which ZenoPharma, Inc. plans to expand its plant and the quarry. The portion of Exhibit 1 labeled "Bog Turtle Sighting" accurately indicates the GPS coordinates where Exhibit 2.1 was allegedly taken. The defendant vigorously disputes that there was an actual bog turtle sighting at that location.
- 6. Bog Turtles (*Clemmys (Glyptemys) muhlenbergii*) are a threatened species nationwide and an endangered species in Pennsylvania.
- 7. With regard to Exhibit 2:
 - a. All four photos (Exhibits 2.1, 2.2, 2.3 and 2.4) were digital photos produced on a camera owned by Skylar Cohen. A forensic examination of the metadata embedded in the picture files reveal that they were original photos taken on October 15, 2011 at the following times: Exhibit 2.1 at 1:15 p.m., 2.2 at 2:07 p.m., 2.3 at 2:24 p.m., and 2.4 at 2:25 p.m.
 - b. Exhibit 2.1 is authentic in the sense that it is the photograph that Skylar Cohen claims to have taken on October 15, 2011. The defendant does not agree that Exhibit 2.1 represents a true and accurate image of the property or the turtle alleged to be on the property.
 - c. The digital photo in Exhibit 2.1 is that of a bog turtle.

- d. The digital photos in Exhibits 2.3 and 2.4 are of painted turtles.
- e. GPS readings tagged to the photograph show that the photo depicted in 2.1 was taken at the point indicated on Exhibit 1. As noted above, defendant disputes the authenticity of this photograph.
- f. GPS readings tagged to the photographs show that the photos depicted in 2.2, 2.3 and 2.4 were all taken from the defendant's property, generally on the south side of the quarry.
- 8. Exhibit 3 is an accurate depiction of a web banner advertisement for SutureStick from medical websites. Both Marlo Fernicker and Tal Kurtz are familiar with this advertisement.
- 9. Exhibits 4, 5 and 9 were produced by public officers or agencies and regard matters about which those agencies had a duty to report.
- 10. Exhibit 15 was distributed to senior ZenoPharma executives including Marlo Fernicker and Tal Kurtz. David P. Carney was ZenoPharma's Senior Vice President for Research and Development. Among his duties was reporting quarterly to the senior ZenoPharma executives on the status of ZenoPharma's research and development activities.
- 11. The Pennsylvania Department of Environmental Protection has issued all permits necessary for ZenoPharma's proposed expansion. On October 24, 2011, it conducted a preliminary investigation into the allegation that bog turtles were present on the property. After a three hour search, none were found. Accordingly, a more complete investigation was not pursued, and the DEP's original finding allowing the project to proceed was reinstated.
- 12. Skylar Cohen is the chief executive officer of Friends of Bog Turtles, and has been since s/he turned 18. Prior to that, the chief executive officer of Friends of Bog Turtles was Lydia Cohen, Skylar Cohen's mother.
- 13. Janus Freslavin and Tambera Blackwood's <u>Diseases and Conditions of Tropical Medicine</u>, (8th Ed. 2009) is a medical school textbook used in classrooms throughout the United States. "Tropical Medicine," as it is commonly known, is often consulted by experts in microbiology, infectious diseases, and internal medicine in their practices, particularly when they encounter unusual pathogens or diseases.

/s/ Kenneth Warren Plaintiff's Attorney /s/ Jayne Bird
Defendant's Attorney

Date: December 16, 2011

APPLICABLE LAW

The Endangered Species Act Generally

[W]ith respect to any endangered [or threatened] species of fish or wildlife listed pursuant to section 1533 of this title it is unlawful for any person subject to the jurisdiction of the United States to...

- (B) take any such species within the United States... [or]
- (G) violate any regulation pertaining to such species or to any threatened species of fish or wildlife listed pursuant to section 1533 of this title and promulgated by the Secretary pursuant to authority provided by this chapter.

16 U.S.C. § 1538(a)(1)

Critical Habitat (Definition)

The term "critical habitat" for a threatened or endangered species means—

- (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of this Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and
- (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

16 U.S.C. § 1532(5)(A)

Critical Habitat (Designation)

The Secretary shall designate critical habitat, and make revisions thereto, under subsection (a)(3) on the basis of the best scientific data available and after taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. The Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species concerned.

16 U.S.C. § 1533(b)(2)

The United States Fish and Wildlife Service has determined that the danger posed to bog turtles by administratively designating some habitat as critical habitat for them outweighs the value to the bog turtles such a designation would have provided. If habitat were to be designated as critical, that might lead poachers to that territory and could cause land owners to try and act quickly to destroy the habitat. Accordingly, the Fish and Wildlife Service has not designated any habitat as critical to bog turtles.

(62 FR 59605-02, 1997 WL 678991 (F.R.), 50 C.F.R. Part 17, Tuesday Nov. 4, 1997)

Bog Turtles

Bog turtles are one of the species listed as "Endangered and Threatened Wildlife" by the United States Fish and Wildlife Service pursuant to its authority under the Endangered Species Act, 16 U.S.C. § 1533. See 50 C.F.R. § 17.11(h). In Pennsylvania, bog turtles are an endangered species. See Pa. Code. § 75.1

Habitat loss is a major factor for the past and present decline of bog turtles throughout much of their range. Wetland habitats have been drained and filled for development, agriculture, road construction, and impoundments. These activities have also severely fragmented the remaining habitat and have created physical barriers to movement, thus isolating existing bog turtle populations from other such sites...

Due to prevalent habitat fragmentation, many remaining extant sites in Pennsylvania are small, isolated, and support few bog turtles; these sites are at great risk from collection, agricultural pollution, and vegetative succession...

In Pennsylvania, the bog turtle is listed as endangered. It is illegal to catch, take, kill, possess, import, export, sell, offer for sale, or purchase any individual of this species, alive or dead, or any part thereof, without a special permit. Bog turtle habitat receives some degree of protection under State wetland regulations which categorize wetlands that serve as habitat for endangered or threatened flora or fauna as "exceptional value wetlands."

(62 FR 59605-02, 1997 WL 678991 (F.R.), 50 C.F.R. Part 17, Tuesday Nov. 4, 1997)

[A]ctivities that the [United States Fish and Wildlife] Service believes could result in the taking of bog turtles include, but are not limited to:

- (1) Destruction or alteration of the species' habitat by activities that include, but are not limited to, draining, ditching, discharging fill material, excavation, impoundment, or water diversion, except as outlined in (4) above;
- (2) Destruction or degradation of wetland vegetation used by the turtles for nesting, basking, foraging, or cover; and

(3) Discharging or dumping of toxic chemicals or other pollutants into wetlands occupied by the species.

(62 FR 59605-02, 1997 WL 678991 (F.R.), 50 C.F.R. Part 17, Tuesday Nov. 4, 1997)

Restatement (1st) of Environmental Law¹

Division 5: Endangered Species

Chapter 4: Development Topic 5: Injunctions

Section 7: The Public Interest

As a general rule, because Congress has prioritized the protection of endangered or threatened species, the presence of an endangered or threatened species is itself sufficient to demonstrate that destruction of the habitat is contrary to the public interest. However, in exceptional cases, there may be contrary public interests that outweigh the general protection of the environment. In such cases, the burden is placed on the defendant to demonstrate that the public interest in the proposed activity "significantly outweighs" the general public interest in preserving the environment. Where the defendant can meet such burden, the proposed activity may proceed despite the risk of loss of life to the species or destruction of its habitat.

Where a critical habitat is threatened by development, but where it is alleged that no endangered or threatened species is known to be present there, at least one court has held that the traditional injunction standards apply, although the Court in that case held that the burden of proof shifted to defendant with respect to the public interest portion of the injunction standard if plaintiff was able to demonstrate that the land in question was critical habitat. See Friends of the Bog Turtle v. ZenoPharma, Inc., ___ F. Supp. 2d ____ (2011). The result of that case is not yet known.

Case Citations:

1. Winter v. National Resources Defense Council, Inc., 555 U.S. 7, 31-32 (2008): Where United States Navy credibly alleged that sonar training was necessary or helpful for military preparedness, public interest weighed in favor of allowing such training even where it could harm endangered species and/or the environment.

- 2. <u>Lazos v. Delaware Dept. of Transportation</u>, 500 F.3d 22 (3d Cir. 2007): Where planned highway would have destroyed habitat of Delmarva Fox Squirrel, public interest in protecting environment outweighed interest of public in new highway, even though roadway would have served isolated communities, would have cost millions of dollars to re-route, and had already cost \$3 million to plan.
- 3. Gelles v. Almayer Silver Co., 987 F.2d 1895 (3d Cir. 1997): Where evidence showed that silver mine was the sole significant industry in town of five hundred, employing half of residents directly and providing education and medical care facilities on site, public interest in allowing mine to survive outweighed danger to Alleghany woodrat posed by proposed mine expansion.

¹ Of the legal authorities cited in this section, only the Restatement of Environmental Law is fictional, as are several of the cases cited here.

In other words, "under the ESA the balance of hardships always tips sharply in favor of endangered or threatened species." <u>Marbled Murrelet v. Babbitt</u>, 83 F.3d 1068, 1073 (9th Cir. 1996).

Standard for Granting a Permanent Injunction

In deciding whether to grant a permanent injunction, the district court must consider whether: (1) the moving party has shown actual success on the merits; (2) the moving party will be irreparably injured by the denial of injunctive relief; (3) the granting of the permanent injunction will result in even greater harm to the defendant; and (4) the injunction would be in the public interest.

<u>Gucci America, Inc. v. Daffy's Inc.</u>, 354 F.3d 228, 236 -237 (3d Cir. 2003), <u>citing Shields v.</u> Zuccarini, 254 F.3d 476, 482 (3d Cir.2001).

JURY INSTRUCTIONS

Before the commencement of the trial and its conclusion, the judge will instruct the jury how to apply the law to the evidence. Hypothetically, if the judge in your mock trial case were to provide instructions to the jury, they would look something like these.

A copy of these instructions may not be used as an exhibit during the mock trial competition; however students may use these concepts in fashioning their case and making arguments to the jury.

PRELIMINARY INSTRUCTIONS

• Role of the Jury

Now that you have been sworn, I have the following preliminary instructions for your guidance as jurors in this case.

You will hear the evidence, decide what the facts are, and then apply those facts to the law that I will give to you.

You and only you will be the judges of the facts. You will have to decide what happened. I play no part in judging the facts. You should not take anything I may say or do during the trial as indicating what I think of the evidence or what your verdict should be. My role is to be the judge of the law. I make whatever legal decisions have to be made during the course of the trial, and I will explain to you the legal principles that must guide you in your decisions. You must follow that law whether you agree with it or not.

Moreover, although the lawyers may have called your attention to certain facts or factual conclusions that they thought were important, what the lawyers said is not evidence and is not binding on you. It is your own recollection and interpretation of the evidence that controls your decision in this case.

Neither sympathy nor prejudice should influence your verdict. You are to apply the law as stated in these instructions to the facts as you find them, and in this way decide the case.

Evidence

The evidence from which you are to find the facts consists of the following:

- 1. The testimony of the witnesses;
- 2. Documents and other things received as exhibits;
- 3. Any facts that are stipulated--that is, formally agreed to by the parties; and
- 4. [Any facts that are judicially noticed--that is, facts I say you must accept as true even without other evidence.]

The following things are not evidence:

- 1. Statements, arguments, and questions of the lawyers for the parties in this case;
- 2. Objections by lawyers;
- 3. Any testimony I tell you to disregard; and
- 4. Anything you may see or hear about this case outside the courtroom.

You must make your decision based only on the evidence that you see and hear in court. Do not let rumors, suspicions, or anything else that you may see or hear outside of court influence your decision in any way.

You should use your common sense in weighing the evidence. Consider it in light of your everyday experience with people and events, and give it whatever weight you believe it deserves. If your experience tells you that certain evidence reasonably leads to a conclusion, you are free to reach that conclusion.

There are rules that control what can be received into evidence. When a lawyer asks a question or offers an exhibit into evidence, and a lawyer on the other side thinks that it is not permitted by the rules of evidence, that lawyer may object. This simply means that the lawyer is requesting that I make a decision on a particular rule of evidence. You should not be influenced by the fact that an objection is made. Objections to questions are not evidence. Lawyers have an obligation to their clients to make objections when they believe that evidence being offered is improper. You should not be influenced by the objection or by the court's ruling on it. If the objection is sustained, ignore the question. If it is overruled, treat the answer like any other.

Also, certain testimony or other evidence may be ordered struck from the record and you will be instructed to disregard this evidence. Do not consider any testimony or other evidence that gets struck or excluded. Do not speculate about what a witness might have said or what an exhibit might have shown.

• Direct and Circumstantial Evidence

Evidence may either be direct evidence or circumstantial evidence. Direct evidence is direct proof of a fact, such as testimony by a witness about what that witness personally saw, heard, or did. Circumstantial evidence is proof of one or more facts from which you could find another fact. You should consider both kinds of evidence. The law makes no distinction between the weight to be given to either direct or circumstantial evidence. It is for you to decide how much weight to give. You may decide the case solely based on circumstantial evidence.

Credibility

In deciding what the facts are, you may have to decide what testimony you believe and what testimony you do not believe. You are the sole judges of the credibility of the witnesses. "Credibility" means whether a witness is worthy of belief. You may believe everything a witness says or only part of it or none of it. In deciding what to believe, you may consider a number of factors, including the following:

- 1. the opportunity and ability of the witness to see or hear or know the things the witness testifies to:
- 2. the quality of the witness's understanding and memory;
- 3. the witness's manner while testifying;
- 4. whether the witness has an interest in the outcome of the case or any motive, bias or prejudice;
- 5. whether the witness is contradicted by anything the witness said or wrote before trial or by other evidence;
- 6. how reasonable the witness's testimony is when considered in the light of other evidence that you believe; and
- 7. any other factors that bear on believability.

In deciding the question of credibility, remember to use your common sense, your good judgment, and your experience. Inconsistencies or discrepancies in a witness' testimony or between the testimonies of different witnesses may or may not cause you to disbelieve a witness' testimony. Two or more persons witnessing an event may simply see or hear it differently. Mistaken recollection, like failure to recall, is a common human experience. In weighing the effect of an inconsistency, you should also consider whether it was about a matter of importance or an insignificant detail. You should also consider whether the inconsistency was innocent or intentional.

After you make your own judgment about the believability of a witness, you can then attach to that witness' testimony the importance or weight that you think it deserves.

The weight of the evidence to prove a fact does not necessarily depend on the number of witnesses who testified or the quantity of evidence that was presented. What is more important than numbers or quantity is how believable the witnesses were, and how much weight you think their testimony deserves.

* * *

POST-TRIAL INSTRUCTIONS

Burden of Proof

This is a civil case in which the plaintiff seeks an injunction. An injunction is an order issued by the Court that forbids a party to do something or requires that party to do something. Here, the plaintiff has asked the Court to issue an order forbidding ZenoPharma, Inc. from expanding its SutureStick manufacturing facility at the property it owns in Wisawe, PA.

The Plaintiff FBT has the burden of proving its case by what is called the "preponderance of the evidence." That means Plaintiff has to prove to you, in light of all the evidence, that what it claims is more likely so than not so. To say it differently: if you were to put the evidence favorable to Plaintiff and the evidence favorable to Defendant ZenoPharmaon opposite sides of the scales, the Plaintiff would have to make the scales tip ever so slightly to its side. If the Plaintiff fails to meet this burden, the verdict must be for Defendant. If you find after considering all the evidence that a claim or fact is more likely so than not so, then the claim or fact has been proved by a preponderance of the evidence.

Here, the Plaintiff must prove two things. First, Plaintiff must prove that the expansion of the ZenoPharma manufacturing facility would violate the Endangered Species Act by destroying critical habitat for the bog turtle. The parties have stipulated, and I am instructing you now, that the bog turtle is a threatened species under federal law and an endangered species under Pennsylvania law.

Plaintiff can prove its case in either of two ways. If you find, after considering all the evidence in this case, that it is more likely than not that bog turtles actually live on the ZenoPharma, Inc. property, then you must find that ZenoPharma's expansion would violate the Endangered Species Act. Alternatively, you may find that the property into which ZenoPharma intends to expand is critical habitat for bog turtles, even if you find that no bog turtles actually live there, if you find that it is more likely than not that both (1) the property contains "physical or biological features essential to the conservation" of the bog turtle species and (2) the benefits of

designating the property as critical habitat are not outweighed by the economic and other impacts of designating the property as critical habitat.

If you find that the property is not critical habitat, that ends your consideration of this matter.

If you find that the property is critical habitat for either reason I have just discussed, then you must then consider whether the public interest favors the issuance of this injunction. In a moment, I will discuss how you determine the public interest in this case. For now, I will just instruct you that because Congress has determined that the protection of endangered species and the environment is a public interest, the defendant bears the burden of proving to you by preponderance of the evidence that other public interests outweigh that interest and any others that counsel against allowing the expansion.

In determining whether any fact has been proved by a preponderance of evidence in the case, you may, unless otherwise instructed, consider the testimony of all witnesses, regardless of who may have called them, and all exhibits received in evidence, regardless of who may have produced them.

You may have heard of the term "proof beyond a reasonable doubt." That is a stricter standard of proof and it applies only to criminal cases. It does not apply in civil cases such as this, so you should put it out of your mind.

Critical Habitat

During your deliberations, you will be asked to determine whether the plaintiff has shown by a preponderance of the evidence that there is a bog turtle or bog turtles actually present on the property onto which ZenoPharma plans to expand its plant and quarry. If you determine that there are turtles present, that decision means that the land is, as a matter of law, critical bog turtle habitat.

If, however, you determine that the plaintiff has not shown that there is a bog turtle or bog turtles present on the property, you will have to determine whether the land in question is, nonetheless, a critical habitat for bog turtles. A critical habitat is one that is essential for the conservation of the bog turtle species. It is not required that bog turtles be present on the property for you to determine that it is critical bog turtle habitat. However, the absence of bog turtles is a factor you may consider in reaching your decision.

In determining whether the land is a critical bog turtle habitat, you must also consider the economic impact, and any other relevant impact, of specifying that land as critical habitat. If you determine that the benefits of designating the property as critical bog turtle habitat do not outweigh the costs of these impacts, you must determine that the property is not critical bog turtle habitat.

Public Interest

If you determine that the property is critical bog turtle habitat, you will need to determine whether the public interest or interests in allowing defendant ZenoPharma to expand its plant outweighs the public interest in protecting bog turtles or the environment and any other public interest that weighs against allowing ZenoPharma to expand.

Because Congress has already decided that public policy generally favors the protection of endangered species and the environment, the defendant bears the burden of proving to you that public interest favors allowing it to expand. If you determine that there is actually a bog turtle or bog turtles present on the property, the defendant must show that the public interest in allowing it to expand substantially outweighs those interests favoring not allowing it to expand. If you determine that plaintiff has not shown that there are bog turtles on the land, but the land is nonetheless essential to the preservation of bog turtles as a species, the defendant must show only that the public interest in allowing it to expand outweighs, by however little, the interests that weigh against that expansion.

The term "public interest" has the broadest possible meaning, and it encompasses all aspects of the life of Wisawe, the Commonwealth of Pennsylvania, and the United States. Included in that term are, in no particular order, economics, public health, environmental quality, and any other interest you can imagine. The only limitation is that you may only consider those interests that affect all citizens equally. Therefore, you are not to concern yourself with the effect your decision would have on any one citizen or any sub-group of citizens. Public interests are those interests common to us all. For example, you may not consider the effect that your decision would have on Skylar Cohen, the Friends of Bog Turtles, or on ZenoPharma, Inc., except that you may consider any effect that your decision would have on those individuals insofar as that effect would be felt in the community as a whole.

Sympathy and Prejudice

Please keep in mind that this dispute between the parties is, for them, a most serious matter. They and the court rely upon you to give full and conscientious consideration to the issues and the evidence before you. Neither sympathy nor prejudice may influence your deliberations. You should not be influenced by anything other than the law as I have stated it to you and the evidence in this case, together with your own judgment and evaluation of that evidence.

All parties stand equally before the court, and each is entitled to the same fair and impartial treatment in your hands. Please keep in mind that you are bound by the law, and your sole job in this case is to be judges of the facts and of the public interest. This case does not concern whether you agree or disagree with laws that protect endangered species nor of your personal feelings concerning bog turtles. You may not substitute your judgment for that of the court or your elected representatives in Congress and the Pennsylvania legislature regarding the value that is placed on endangered species and environmental protection. You are, instead, to use your common sense and collective experience to determine the facts in this case and to balance the competing interests in accordance with the law with which I have just instructed you.

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF PENNSYLVANIA

THE WISAWE CHAPTER OF FRIENDS OF BOGTURTLES,) }
Plaintiff, vs.)))
ZENOPHARMA, INC.,)
Defendant.)
SPECIAL JURY	Y INTERROGATORIES
The jury is instructed to reach a ver-	gatories like these to the jury at the end of the trial. dict consistent with the answers it finds to the gatories may not be used as an exhibit during the
To the jury:	
following verdict form. At the conclusion o	by the trial judge, you are being provided with the f your deliberations, one copy of this form should be he court clerk. This will constitute your verdict.
Remember that you are applying a prepond	derance of the evidence standard to each question.
Question 1:	
	Bog Turtles has proven by a preponderance of the bog turtles on the property into which defendant and?
Yes No	
If your answer is "yes," proceed to 0	Question 1b.
If your answer is "no," proceed to Q	uestion 2.

Question 1b:

е		utweighs the public interest in protecting the bog turtle and the along with any other public interest weighing against allowing the
Υ	⁄es	No
	ou have finis he bottom of t	hed your deliberations. Please skip the remaining question and sign at his form.
Questio	n 2: [ONLY	ANSWER QUESTION 2 IF YOU ANSWERED "NO" TO QUESTION 1]
е	evidence that	at plaintiff Friends of Bog Turtles has shown by a preponderance of the the property onto which ZenoPharma proposes to expand its plant and all habitat to the bog turtle?
Υ	/es	No
If	f your answer	is "yes," proceed to Question 2b.
		is "no," you have finished your deliberations. Please skip the remaining ign at the bottom of this form.
G	Question 2b:	
tl q	hat the public quarry outweig	at defendant ZenoPharma has proven by a preponderance of the evidence interest or interests in allowing ZenoPharma to expand its plant and hs the public interest in protecting the bog turtle and the environment, other public interest weighing against allowing the expansion?
Υ	⁄es	No
Υ	ou have finisl	ned your deliberations. Please sign at the bottom of this form.
F	Please return t	o the courtroom.
Jury Fo	reperson	

Do you find that defendant ZenoPharma, Inc. has shown by a preponderance of the evidence that the public interest or interests in allowing it to expand its plant and quarry

List of Witnesses

The plaintiff and the defendant must call each of their respective witnesses. Both Cohen and Fernicker are permitted to sit at counsel table as representatives of the plaintiff and defendant, respectively.

For the Plaintiff, Friends of Bog Turtles:

Skylar Cohen: Wisawe High School Student; FBT Founder

• Tal Kurtz: Former Operations Manager of the SutureStick Plant

Paz Bobrow: Environmental Expert Witness

For the Defendant, ZenoPharma, Inc.:

Marlo Fernicker: ZenoPharma Vice President and Creator of SutureStick

Hadley McAdoo: Wisawe City Council Member; Wisawe High Teacher and

Environmental Club Advisor

• Brennan Nellie: Environmental Expert Witness

PRONUNCIATION GUIDE

McAdoo Mack-a-doo

Paz Bobrow Paaz Bō-brow

Wisawe Wiss-a-wee

My-co-back-tear-e-um | Ulse-er-ans

Crownopy Crown – ă - pē

Sympiocore Sim – $p\bar{e}$ – \bar{o} - core

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Statement of Skylar Cohen

My name is Skylar Cohen, and I'm 18 years old. Next fall, I will be joining Millersville University, where I will be majoring in environmental geology. Someday, I hope to fulfill my goal of becoming an environmental engineer or investigator for the Pennsylvania Department of Environmental Protection. Yes, my calling in life is protecting the environment, and I'm proud to admit that I'm evangelical about it. I'm a vegan, I do my best to eat only organic vegetables, and I'm a member of PETA and Greenpeace. People today are so selfish that they refuse to acknowledge that their actions will affect future generations. There is only one Earth, and we need to protect it. Change starts at home. For me, that's Wisawe, PA. In August 2011, when I discovered how ZenoPharma and Marlo Fernicker were treating Wisawe, I had to do something.

Everyone in Wisawe heralded the ZenoPharma plant as a savior. Unemployment was high, and the community was suffering. Main Street was littered with empty store fronts. But desperate times do not always call for desperate measures. Sacrificing not only the health of the ecosystem, but also the health of the population is too great a price to pay for a few big box stores near the interstate and a shinier floor for the basketball team. Wisawe may have sold out, but I never will. They should have marketed the natural beauty instead. I always thought that an industrial product marketed as being 100% environmentally friendly was too good to be true.

When I was a freshman at Wisawe Central, in 2008, my father lost most of his leg to a bizarre infection caused by the "sticky stuff" he worked with at ZenoPharma. He was an algae collector there. He got this really bad rash on his right leg that turned into a big open sore. I took a photo of the infection because I'd never seen anything like it before. He ended up having surgery and a big chunk of his leg was removed. After that he couldn't walk without a walker and would get so tired sometimes, all he could do was watch TV. Even after the surgery, the pain didn't really go away. It obviously had to be something at the plant that caused him so many problems; how else was a guy in Wisawe going to get a tropical disease? Dad ended up having to take a job at the J-Mart as a cashier to make ends meet. He was humiliated, and he has never really been the same since. I think he is still really depressed.

Dad's worker's compensation claim against ZenoPharma was denied in 2009. Marlo Fernicker must have bought off the judge the same way s/he buys off everyone else. Ever since then, some people say that I have been trying to get back at the company. That couldn't be further from the truth: my father always told me never to carry a grudge, so I let it go a long time ago. That said, I do think his illness may have been what drives my curiosity in saving the environment. Because his condition was foreign to the area, I figured it must have been from something else that was not supposed to be here. Then I read an article from a former DEP employee named Paz Bobrow on the Earth First! website about para-environmental disruption. The idea is simple: if a place was able to retain its indigenous plants and animals, it would be less likely that someone would get sick. This not only made sense of what happened to my Dad, it also makes sense with bigger killers, like cancer. That's why maintaining a natural habitat is so important. So, I didn't target ZenoPharma because of what happened to my dad. It's just when you're the only game in town, you're gonna draw attention to yourself.

Early in my high school career, I joined the Environmental Science Club. I was looking for something to do and to make some friends. Instead I found much more. One day during the spring term in 2009, me and a couple of the other students in the class went down to the Suzy W's Pet Palace to make sure that Suzy, the owner, was treating the dogs and cats right. We had heard some rumors that she was abusing them. Instead, when we arrived, we noticed that Suzy had the cutest turtle you could ever imagine showcased. I saw that Suzy was asking for

\$750 for the turtle, which I thought was ridiculously high. Suzy told me that someone had found it southwest of town on the side of the road and brought it to her so it would not get run over. Suzy said she did some research and learned it was a rare breed called a bog turtle and that they were really valuable. I thought it was a nice story and did a write-up for our school paper. Well, I am not sure how it happened, but Pennsylvania Fish and Boating got ahold of my story and next thing we all knew, poor old Suzy was arrested for trafficking an endangered species! I was so taken by what happened that I started a small organization called Friends of Bog Turtles to spread awareness. I got a few of my friends to sign up, and we made a basic website. We even registered as a non-profit organization, but no one really gave us any money. Suzy even joined, and she offered her shop as a place for us to meet and talk about endangered species.

However, due to my exposing of the trafficker, Ms./Mr. McAdoo, the faculty advisor of the environmental club, named me President for my senior year. I wanted to do something special and change the town for the better, not just do another 5K run. Like I said, I was suspicious about ZenoPharma's "greenglue" marketing campaign. So, about a week before classes were set to start, I walked over to the SutureStick quarry for inspiration. As I approached the boundary fence, I noticed a surveyor pointing her theodolite at me. I called her over and asked what the project was about. She told me that the company was planning on extending the walls of the quarry because they wanted to harvest more algae for the glue. Right then, the manager of the entire facility, Marlo Fernicker, came over and asked why I was spying and accused me of being a trespasser. I told Marlo my name and that I was from the environmental club. S/He got visibly flustered. In this creepy and calm voice, s/he said that it was best if I left and let the workers do their jobs, but said that if I wanted to bring my "green buddies" down to the plant, s/he would be happy to show us their planet-friendly operation. I knew I was being patronized but thought it best to back down for now. Still, I felt that ZenoPharma was breaking some sort of law. Why else would Fernicker be so defensive?

During the first week of school, I suggested at our first club meeting on September 7, 2011 that we protest against the expansion right outside the plant. But when I brought it up, everyone thought it was an awful idea. I even heard another senior cough names under his breath at me like "quack" and "looney", and everyone else snickered. Not the reaction I was expecting for a new president. Ms./Mr. McAdoo told us that ZenoPharma was good for the town, and the expansion would mean more jobs and a stronger economy. S/He even said it wouldn't make a difference to the environment if they just made the hole a bit larger and added a new building. S/He said there was really no reason for a protest. I couldn't believe s/he was so flippant.

I decided I needed proof if I was going to convince the club that I was right. So, I decided that Saturday night I would head over to the quarry to see if I could find some evidence. It was kind of fun, like I was in one of those spy movies. I dressed all in black and carried a small, solar powered LED flashlight. Around 11 pm, I scoped the perimeter of the property but didn't see anything unusual. I knew I needed to get closer, so I decided to scale the fence near the eastern edge of the plant. I knew that it was against the law, but sometimes rules have to be broken for the greater good. Unfortunately, that was a huge mistake. As soon as I got over the fence, a floodlight turned on, and an alarm started sounding. I tried to make a break for it, but before I could take ten steps, I was tackled by ZenoPharma security.

About an hour later, I found myself in the Wisawe police station with my parents, some cop named Conrad and, believe it or not, Marlo Fernicker her/himself. Everyone was talking about me like I wasn't even there. Anyway, I remember Marlo saying something to my dad like since he was such a valued employee of the company for such a long period of time, ZenoPharma would drop the charges if I promised never to come within 100 yards of the property again. I

knew I was going to be applying to colleges soon, so I agreed to the deal. My parents carted me back to the house and I immediately went to my room to cry. My dad came up and sat outside my door. He told me not to fight the system, that life is easier when you play within the rules. It really hurt to see what ZenoPharma had done to him. He then said that a letter addressed to the Friends of Bog Turtles arrived in the mail earlier that day and slipped it under my door.

After I calmed down, I opened the envelope. My heart skipped a beat when I saw that gorgeous little bog turtle shell staring back at me from the sheet of paper inside. It was a couple pages of a report created by Paz Bobrow in conjunction with the planned expansion! The report essentially stated that while there was no conclusive evidence that bog turtles were present in the planned expansion area, the land was a prime natural habitat for the endangered species. I felt like I had just found the proof I was looking for to convince my classmates and Ms./Mr. McAdoo that I was right all along and that ZenoPharma had to be stopped. The report also said that expanding the quarry pit would introduce more quarry water into the town's aguifer and that potentially harmful contaminates could ultimately be consumed by people living in Wisawe! While that all sounded interesting, I was far more intrigued by the bog turtles. A while before when I was really into the whole Friends of Bog Turtles thing, I had read an article on greenphilly.com about how an entire road project was halted because environmentalists had discovered bog turtles on the desired route. I just loved the story about how such a small creature was able to stop the machine. The next day, I told my dad about this, and he remembered seeing one of his fellow algae testers fish a small turtle, with some bright spots out of the pit one day, but that was all he knew about turtles and ZenoPharma.

I was nervous, and at the same time excited for school that Monday, which was September 12th. All day I was running over and over again in my mind how I would address the club. When I finally got there, I started by describing the small bog turtle and its plight. This really got their attention. Everyone loves cute, defenseless little animals and bringing down Suzy W was a huge source of pride for the club. However, when I tried to make the link between the bog turtle and ZenoPharma, the hissing started again. I even pulled out the Bobrow report, explaining in vivid detail what I had to go through to get it, but still no one seemed to be on my side. Everyone was fooled by ZenoPharma's propaganda.

After the meeting, Ms./Mr. McAdoo pulled me aside and gave me a very stern lecture. S/He said that I had to stop going after ZenoPharma and that the Company means too much to the community for an insignificant student group to challenge it. Ms./Mr. McAdoo also said that s/he knew on a first-hand basis that ZenoPharma had a permit for the expansion, so the report I was holding couldn't be accurate. Finally, s/he told me that because I was interfering with the educational mission of the club by promoting criminal activity, I would no longer be President. Ms./Mr. McAdoo even suggested that I visit the school counselor to discuss my behavioral issues. I was completely devastated.

But I am resilient, and I wasn't going to let what seemed like failure stand in my way of success. I decided that I was going to take over where Bobrow left off. On September 15th, after school had ended for the day, I took my camera and a bag full of provisions and went on a mission to find bog turtles. I know I wasn't supposed to go within 100 yards of the property, but it wasn't like they had a restraining order against me. Fortunately, there wasn't anyone around the perimeter of the property. I searched until nightfall, crawling on my hands and knees across the marsh land, but I couldn't find any turtles. I tried again and again with no luck. But I didn't give up and returned as often as I could even though I did get a horrible case of poison sumac. At first, I stayed at the edge of the property, but when that didn't work, I went in further and further.

On October 15, 2011, my redemption day, I finally found them. I was combing the ZenoPharma property approximately 50 yards from the property fence, to the south of the quarry pit. There, underneath some tall grass, I saw them: three bog turtles basking in the autumn sun! I was so excited that I fumbled with my camera. By the time I got myself composed, two of the turtles had skittered off. These turtles move faster than you think! But I did get one awesome shot of the third turtle. I also noted my coordinates on this aerial map I printed from the internet and took a photo of the quarry pit to verify my location. I looked for the other turtles, but despite searching the area for several days, I never saw them again. As I was leaving, I noticed what I thought were more bog turtles out on the quarry itself and I carefully took two photographs of them.

Rather than going back to my classmates with what I found, I decided it was best to find a true believer. So I looked up Ms./Mr. Bobrow's contact information and emailed her/him with my findings. S/He turned out to be so nice and took every word I said as truth. S/He even said that because I had done such an excellent job, and since time was of the essence, there was no need for her/him confirm my findings in person. The one photo of the turtle in the grass was as real as it gets. Unfortunately, Ms./Mr. Bobrow was pretty sure the ones from the quarry itself were common painted turtles. From what I understand, Ms./Mr. Bobrow contacted the Pennsylvania Department of Environmental Protection the very next day.

Unfortunately, the wheels of government are often slow. Knowing that the only way to save the environment was to take action myself, I decided to pursue this injunction through the Friends of Bog Turtles. But litigation is really expensive. Bobrow offered to cut her/his rates, but FBT still could not afford it until it got a great \$15,000 donation from Jane Meyerson, from Animal Planet's *Jane of the Jungle*, to help pay for Bobrow's work. Bobrow later told me that s/he called Meyerson personally. How cool is that?! That took care of a third of FBT's costs, and the rest has been donated by various community and environmental groups, like the Nature Conservancy and the Natural Resources Defense Council. I know that Fernicker wants everyone to believe that I planted the turtles on the property in order to cause problems. While I want nothing more than to see them fail, I'd never cut a corner like that.

Skylar Cohen Signature

<u>December 6, 2011</u> DATE

Statement of Tal Kurtz

My name is Tal Kurtz and I am 44 years old. I currently serve as a community advisor to the town of Wisawe, where I proudly reside. Sure, a \$37,000 per year salary is a step down from the \$215,000 plus bonus I was making as Operations Manager for the ZenoPharma SutureStick plant, but if I wanted to save my soul, it was a small price to pay. My loving spouse was in full agreement with my decision, and our two children, ages 9 and 11, couldn't be happier to grow up in such a wonderful community. Really, the only thing that could make me happier is to see Marlo Fernicker stopped. That is why I am here today. I want the world to know what the SutureStick operation is really all about. I even passed up a lucrative severance agreement because it contained a gag order. SutureStick is not as green as everyone is lead to believe.

I started working for ZenoPharma in their sales and marketing department in 1989, after I got my marketing degree from Clarion University. It was a big move for me from rural Pennsylvania to the fast moving suburbs of Philadelphia. I didn't know anything about pharmaceuticals, but I had a nice smile and warm eyes, and that goes far in the sales game. Before I knew it, I was crisscrossing the country on a regular basis, visiting doctors' offices and hospitals by the dozens. During those first few years, I traveled so much that I really didn't feel like I had a home.

I met Marlo Fernicker during my third year with the company, at our annual holiday party. Marlo was standing by herself/himself in the corner, not talking to anyone. You see, Marlo was a researcher for the company and one of the smartest and most socially awkward people I have ever met. Marlo told me later that no one could relate to her/him. Somehow, we became fast friends. The best part was that Marlo was willing to take the time to explain to me the science behind our products. With that knowledge, my ability to sell increased exponentially, and I was off on my meteoric rise. In 2001, when I just turned 34, I became the youngest Vice President of Sales and Marketing in the history of the Company. I think Marlo was always a bit jealous. Being a lab rat isn't exactly a lucrative position, even though it is really important.

When Marlo made the breakthrough of a lifetime and discovered SutureStick in early 2002, I couldn't have been happier for her/him. Not only was s/he getting the credit s/he deserved, the world was given a potentially revolutionary advancement in science. Marlo decided to take me along on this adventure and got me moved laterally to the position of Operations Manager. I was happy because it meant stability and my spouse and I had just started our family, but I still should've seen the warning signs.

First off, even though ZenoPharma publicly stated that the business was going well, those of us inside the company knew that we were really lagging behind the competition. We didn't have that many products in the pipeline, and all of our best sellers were going to go generic in the next five to ten years. This caused senior leadership to make some rash decisions, most certainly including appointing Marlo as Executive Director of the soon-to-be-built SutureStick facility in Wisawe. Now Marlo may have been an extraordinary scientist, but s/he was not a leader. Really, it would have been far more natural for someone like me to take over that position rather than Marlo. I honestly thought Marlo would crack under the pressure, but instead it made her/him savage beyond recognition. It's sad what power does to people.

Of course, I didn't realize it at first, and I went about business as I saw fit. One of my first initiatives was to hire as many locals as possible to fill our vacant low-skill positions. This made me very popular in town and jump-started my love affair with Wisawe. It was clear to anyone who visited there that the town was struggling, and I thought it was our duty to help. Unemployment was high and the pay was generally low. Marlo couldn't have cared less, but to

me it was very important. When we received FDA approval for SutureStick in early 2007, I really stepped up my "employ local" plan. That's when I hired Steven Cohen as an algae tester. I only mention Steven because if it weren't for him, I may have never realized how calloused and insensitive Marlo had become. Everything seemed great on the surface, just like the magical algae itself. I was so used to believing everything Marlo said that I just took it at face value. When Marlo said that the SutureStick process was 100% natural and completely green, I believed it. I started a massive marketing campaign that I nicknamed "operation greenglue" plugging into the growing consumer desire to save the environment.

By the beginning of 2008, we were at the top of our game. That year, we grossed over \$100 million and employed more than 230 people at the Wisawe plant. I was very proud of the fact that about 60% of them were from Wisawe. I even won an industry award for the best marketing campaign of the year. However, Marlo was not satisfied. The rest of her/his science buddies back at HQ still couldn't get the algae to grow synthetically, and we were already beginning to max out production at the Wisawe plant just as demand was growing. During our strategy meetings, Marlo would lament the future instead of enjoying the present. To me, her/his concerns seemed irrelevant and counterproductive. All of the feedback we were getting from the medical community was that our product was the best surgical adhesive out there. If our reputation continued to grow, then we could charge more for SutureStick. It's simple economics really. But Marlo didn't understand; s/he was obsessed with making and selling more.

However, when Steven Cohen contracted his strange flesh eating bacteria, I began to re-think my priorities. It was September 23, 2008. I was making my normal rounds of the facility. Out by the quarry pit, I noticed Steven taking algae samples. He was wearing shorts and socks pulled halfway up his calves. Right above his sock, I noticed this strange rash. It was pretty gruesome really. It was an ulcer with some yellow puss oozing out of it. I told him that he should get it checked out, but like most of the locals, Steven was a bit stubborn and said it was nothing. Two days later, the lesion had quadrupled in size and Steven was in the hospital with tremendous pain. Later I found out that he had to have a chunk of his leg removed. He couldn't return to work. I felt awful. All the money in the world really didn't matter if we were maiming our people in the process. I sure don't support blood diamonds, and feel the same way about blood algae. I was certain that something in the algae caused the ailment. What else could it have been? When I visited Steven in the hospital, I told him that our insurance would cover all of his medical bills and that our worker's compensation plan would help him out financially for a while.

I immediately went to speak with Marlo about the possibility that the algae was causing the disease, which I learned from Steven's doctor was called mycobacterium ulcerans and is unheard of in the United States. Steven's doctor had taken a complete medical history, and she was certain that the only places that Steven could have come into contact with the MU were the algae and the quarry water. The doctor was very worried that other workers could be exposed, although she had never seen a case of MU in Wisawe before. Unfortunately, Marlo wasn't having any of it. S/He was so worried about how this news could affect SutureStick's reputation that s/he decided to challenge the worker's compensation claim behind my back. I tried to order some testing on the company's budget, but I learned that there is no test that will tell you whether water or algae has MU in it. Still, from that day forward, Marlo refused to drink water from any faucet at the plant and never touched the algae with her/his bare hands again.

When Marlo won the workers' compensation case in 2009, s/he came to my office jumping up and down repeating over and over how we had saved ZenoPharma from tremendous embarrassment. I was livid. I yelled at Marlo, thinking that if I spoke loud enough I could get through her/his ever-thickening skull. I told her/him that we should cut Steven a check for

\$250,000 to make up for it, but Marlo was certain it would be seen as an admission of guilt no matter what language our lawyers could have worked out. I felt completely helpless and decided right then and there that I would only speak to Marlo when it was absolutely necessary.

Over the next couple years, I was just going through the motions at work. Some days I wouldn't do anything but surf the web and watch the clock until quitting time came around. I was depressed, and our little plant was essentially on cruise control anyway. Fortunately, none of the other workers came down with the same virus that plagued Steven. But I did hear a strange story one night in 2010 at my favorite local watering hole, the Slate Shack. Some deer hunters were nestled in a deer stand not too far from the SutureStick plant and they bagged a ten point buck, but when they went to collect the body, the deer was covered in ulcers that oozed a yellow liquid. To me, this was far more than just mere coincidence.

In February 2011, Marlo came to my office. S/He had gotten the okay from headquarters to expand the size of the quarry pit and the plant in the hope of increasing production for the following year. It was a desperation move. I had seen an internal memo in January 2011 from a Senior VP explaining that ZenoPharma was in big trouble. Not only was the synthetic SutureStick project still stumbling, but our last three big selling drugs were going to be subject to generic competition in 2012. What was even more troubling was the report's mention of the fact that long term testing of SutureStick suggested that those who had used the product in heart surgeries had begun to experience some negative side effects, including abnormal chest pain associated with inflammation of the suture site. I asked Marlo about this, but s/he mumbled something about it just being conjecture for liability purposes and moved on. I knew better: we had moved too fast, and now everyone was paying the price. The human element aside, what if the expansion destroyed whatever in the quarry made the algae special in the first place?

Obtaining the construction permit required us to get clearance from the Pennsylvania Department of Environmental Protection. I was supposed to obtain these permits for the company. I decided to take this task very seriously since it was my first opportunity to really affect the way the company operated in quite some time. It sort of pulled me out of my deep depression. I decided to hire one of the most well respected environmentalists in the area to conduct our environmental impact analysis, Dr. Paz Bobrow. Bobrow worked efficiently and combed the expansion area in great detail for a number of weeks before finally turning her/his report in to me on April 14, 2011. I was pleased with the level of detail and intrigued to read that s/he thought that the planned expansion area was a prime location for a colony of bog turtles to reside. Paz suspected there might be a colony living there now but hadn't been able to prove it. S/He thought they might still be underground from the winter.

I had never heard of a bog turtle before, but quickly got myself up to speed. Bog turtles are an endangered species in Pennsylvania. Paz's report suggested that the expansion plan should not proceed because this area was so important to the population of this dying species. Of equal interest to me was Paz's astute observation that the planned expansion would force quarry water to reach the aquifer, allowing contaminants from the plant to reach the local water supply. This means that whatever had made Steven Cohen sick could make the whole town ill. I faked a sense of disappointment and emailed the report to Marlo later that day.

It wasn't until a few months later that I heard anything about the Bobrow report or the expansion. On Friday, September 9, 2011, Marlo blasted an email to the entire plant notifying us that construction was due to start in early November, right after the end of the algae harvest season. I think Marlo was intentionally keeping me out of the loop, so I decided to pay her/him a visit. Marlo told me that s/he fired Bobrow and hired her/his own consultant, Brennan Nellie.

Nellie's report made no mention of bog turtles or any other endangered species, and it was used to secure the required permits. I was shocked and stared right through Marlo. That's when I really took notice of the huge terrarium located behind Marlo's desk. For years, Marlo had boasted about the terrarium and how s/he had perfectly recreated the habitat surrounding the quarry pit using actual samples s/he took from the property. Right there in front of my eyes was all the evidence you would ever need that Marlo was manipulating the truth. Sitting on a small log in the terrarium was a bog turtle! I could tell immediately, because I remembered reading that bog turtles have this yellow splotch on their heads. How could Marlo deny the fact that bog turtles were thriving on the property when s/he had collected one her/himself? I asked her/him what kind of turtle was in the terrarium, and Marlo stumbled from the unexpected question. Marlo said, "well that, my friend, is a bo... box turtle, what I mean to say is that, that's a box turtle." Talk about an almost Freudian slip! If only my eyes hadn't lit up, I think s/he would have out and out admitted it!

That was the last straw. I threw my hands up in the air and yelled, "I quit, take your plant, take your glue and stick it! If you don't care about the environment, then I don't care about you, this company or this job! The horror! The horror!" I know it was a bit over the top, but the sentiment was 100% correct. Marlo was a monster who had manipulated everything, and the Wisawe community is paying the price. I went back to clean out my office. I shredded everything that I was supposed to under company protocol, with two exceptions. I kept Bobrow's executive summary, which is all I had left of her/his report, and also took a printout of the January 2011 ZenoPharma report that outlined the concerns HQ had about the Company and SutureStick. You never know when something like that will come in handy. I didn't know what to do with Bobrow's report so I looked online for a group that could help. That is when I learned about the Wisawe Chapter of the Friends of Bog Turtles. I shoved the report in a blank envelope and dropped it off the next day at the address listed on the website. If any group would know what to do with that information, it was these guys.

I really do hope that between what I have said and what Bobrow and Skylar have done, Marlo and ZenoPharma can be stopped. Sometimes, David should defeat Goliath, especially when people's health and the environment are at stake!

7al Kurtz	December 7, 2011
Signature	DATE

Statement of Paz Bobrow

My name is Paz Bobrow, I am sixty-one years old, and I am the president and Chief Executive Officer of my own consulting business, Planet Protectors, LLC, or "PPL" for short. PPL provides comprehensive environmental assessments for government, private industry, and litigation. Please note that I said "comprehensive." Anyone can provide an environmental assessment that complies with the bare minimum the law requires. But some companies want more than just the thin analysis of endangered or threatened species that have actually been found. If you truly care about the environment, you care not just about those species you see, but those that might be present. Critical habitat is destroyed every single day in this country. Right now, an endangered or threatened animal somewhere in this Commonwealth is watching its home be destroyed by a developer, its favorite food get out-competed by a genetically engineered crop, or its precious, life-giving swamp be drained by a corporation.

That is why PPL doesn't just assess what animals can be specifically identified on a property, it assesses whether the property could become a home for endangered or threatened species. Even Congress recognized that an endangered animal doesn't need to be present for habitat to be critical to its survival. Our proprietary software, called NestFinder, contains habitat parameters for every endangered and threatened species in the world. I get most of the data on the animals from old encyclopedias, from fish and wildlife databases, or from the internet. So, after we perform extensive environmental testing and assessment, we plug those into the system and – voila! –it generates a list of every species - threatened, endangered or otherwise – that could use that land as a habitat. It's a revolution in environmental assessments. Or at least it will be, once I get it to work. Right now, I still do most of the calculations and searches by hand. I'm PPL's sole employee, although we have outsourced the receptionist position.

I have given the lawyers a copy of my résumé, which explains my career in greater depth. I graduated from Oberlin College in 1972. After a few years in wildlife preservation, I went back to school and got a masters' degree in Zoology from Penn State. Not long thereafter, I was hired by the Pennsylvania Department of Environmental Protection, the "DEP." It was a great opportunity, although over time I began to clash with my bosses. The more I thought about things, the more I came to realize that the environment was a sacred realm that had to be zealously quarded from human invasion. Unfortunately, the DEP was not as aggressive in its view as me. After a few suspensions for insubordination I got into a fight with the Lieutenant Governor and was charged with disturbing the peace. The DEP and I agreed to go our separate ways. Of course, I threatened to sue. I have a First Amendment right to join whatever organizations I wanted. Even if some other people in those organizations advocated violent means to protect the environment, I did not. And I was only convicted of trespass once, when I was on annual leave protesting a new mine in Boulder, Colorado. I gladly paid the small fine in order to make my voice heard. Ultimately, the DEP and I settled. They paid me not to come to work for a year until my pension vested, and I retired early. The next few years were great. Following advice from a fellow environmentalist, I even went without shoes for a year! What an amazing way to experience Gaia... the freezing snow between your toes, the burning desert under your feet! Ironically, while out on one of my walks, I sliced the bottom of my foot on a broken piece of glass, and the ER doctor used SutureStick to close my wound. It worked so well that I wasn't surprised to be told it was an organic product. Now I know better.

But all good things must come to an end, and my pension wasn't stretching quite as far as I thought. You have to understand that even though my term at DEP was occasionally rocky, it was also very productive. I performed thousands of environmental assessments for DEP and drafted dozens of environmental impact statements. I also served as an investigator and lead

investigator for over fifty enforcement actions, including nearly a dozen Endangered Species Act litigations. I have been in court on environmental matters more than all but a half dozen or so Pennsylvanians, and I knew I could leverage that. Since founding PPL, I have done over one hundred environmental assessments and have prepared six environmental impact statements. I have testified in court on nine occasions, and my deposition has been taken in five or ten others. I've been qualified as an expert seven times, although twice the court declined to qualify me. Neither of those was in Pennsylvania, and I have testified here twice in private practice and dozens if not hundreds of times in my life. As you can see, although I might be a bit "granola" in my private life, I know how to separate my personal views from my professional responsibilities.

At first, PPL was very successful, and money came in from companies, governments, and friends I had made over the years at DEP. But over time, that income stream dried up, and PPL's clientele began to shift. Today, PPL works mostly with small groups and individuals, often those who are in litigation or who are considering it. We have worked for defendants from time to time, but the majority of the work we do – probably 75 or 80% – is for environmental plaintiffs.

When Tal Kurtz called me to discuss performing an environmental assessment for ZenoPharma, I was overjoyed. Not only was this the first corporate client to call in over a year, but I knew that ZenoPharma's Wisawe plant was highly profitable, so they would be able to afford the kind of comprehensive environmental assessment I love to perform. I faxed Kurtz a contract, fired up my biodiesel sedan, and headed to Wisawe immediately. I spent nine days on the property – three in the offices reviewing the expansion plans, two taking soil and water samples, and four personally walking the entire area, taking pictures and notes on the flora and fauna. I also spent three consecutive nights on the property, so that I could see the nocturnal life of the ecosystem as well. You can bet you won't get that from the likes of Brennan Nellie!

Bog turtles are one of Pennsylvania's greatest ecological resources. They're about four inches around, and not even Donatello in all his glory could have held a candle to the sculpture that is their shell. Not only that, but bog turtles have a real personality! They're perfect pets... or would be, if they were not threatened species. Not that that has stopped pet store owners, you understand. A bog turtle can be worth a thousand dollars or more, and poaching is such a huge problem that the DEP, Department of Fish and Boating, and Nature Conservancy won't even release the lists of their known habitat. The Secretary of the Interior even decided not to list the turtles' homes as "critical habitat" because of the fear that poachers would use those designations as treasure maps - whenever word leaks out about a bog turtle sighting, the unscrupulous are soon there, hunting for a four inch payday. I understand that there are only 65 such sites or so in the entire Commonwealth, and only 22 of them are thought to still support bog turtle colonies. There are more in other states, but the bog turtle is nearly extinct here.

Although I of course put all of the data into NestFinder, even a casual student of the environment could have told you that the ZenoPharma property was bog turtle heaven! Bog turtles flourish in a precise range of dampness, and that's what the natural runoff from the quarry provides. The turtles also like to have a mosaic of wet and dry areas, and the ZenoPharma property had that, too. Many of their favorite plants were also there, like cattails, rushes, jewelweed, and tussock sedge. Even the algae would, according to NestFinder, be perfect food for them. It was about the best habitat you could imagine for bog turtles.

In fact, it was so good that I was stunned not to actually see any bog turtles or bog turtle scat there. And I was looking! Of course, I did my assessment in April, so maybe they had not come out from over-wintering yet, though it was an unusually warm spring with air and water temperatures in excess of 50 degrees for the better part of the month. However, even without

sighting an actual bog turtle, I knew within a reasonable degree of scientific certainty that the property contained physical and biological features essential to the conservation of bog turtles. In thirty years doing environmental assessments, I have never seen a better bog turtle habitat.

What I suspected would be the case was proven by Skylar Cohen. Skylar reached out to me in October 2011, and I was excited to see that s/he had found a bog turtle on the property. Of course, I didn't take the findings at face value. When I received the photos, I sent them immediately to a friend who specializes in computer forensics. She reported back that the photos had not been altered and that the GPS tags were legitimate. I confirmed that the GPS tags corresponded to the ZenoPharma property and checked my own notes to confirm that the vegetation was consistent with that area. It was, as best I could tell, although I was denied permission to return to the property myself to see if I could verify the specifics. I'm well aware that some unscrupulous people have "planted" bog turtles in order to try and stop development, and that possibility cannot be entirely foreclosed, but I have spoken at length with Skylar. S/He's not that kind of person. Besides, the findings just showed what I already knew: when you find habitat that is that good for bog turtles, if you look long enough, you'll find them.

It is my opinion, within a reasonable degree of scientific certainty, that the ZenoPharma expansion endangers critical bog turtle habitat for three reasons. First, the proposed expansion would greatly increase the plant's "footprint," meaning that it would take up lots more space. We know from Skylar's photos that there are bog turtles on that land who would be displaced or killed. In addition, the processing will create run-off that could change the very specific mix of wet and dry that bog turtles need. Second, the expanded plant would be processing much more of the algae, creating more heat pollution in the quarry water. If you change the water's temperature quickly, some things living there may not be able to adapt and might die out. The bog turtles might rely on those plants for food. Finally, ZenoPharma will be hiring more people and putting in an employee cafeteria. That means more trash, and thus more scavengers like mice and raccoons, which love the taste of bog turtle eggs and baby bog turtles. ZenoPharma's plan is tailor-made to ruin what could be the largest bog turtle cluster in Pennsylvania.

But the danger to bog turtles isn't the only thing wrong with the expansion. By digging out the new part of the quarry, ZenoPharma will mix the quarry water with the Wisawe aquifer to an unprecedented degree. That's a bad idea generally, but it's even worse if, like ZenoPharma, you're dumping chemicals into that quarry water. As part of my comprehensive assessment, I sample the water and the soil. Although the quarry water is well within the EPA's limits, and probably would be even with the planned expansion, the cadmium levels are way above normal. At least I think they are. The water was never tested before I tested it, so there's no way to be certain about the baseline natural levels.

Any time a company is dumping unnatural chemicals into an ecosystem, it risks other effects, which I call "para-environmental disruption." Because every disruption in the ecosystem has consequences, you can just look for the consequences, and if you find them, you know something is wrong, like a doctor looking for symptoms in order to realize that a disease is present. If I find abnormalities, then, they probably indicate a para-environmental disruption. I wrote a paper on this that was published on www.planetearthfirst.com, and I'm trying to get it published. So far, I've been shut out by the traditional, peer reviewed, scientific journals.

When I asked around town, looking for telltale abnormalities, I found that four different Wisawe residents have experienced some kind of necrotic skin condition in the three years since the plant got up to full production. Four! In a town of only 10,000! According to the Centers for Disease Control, the usual annual rate of necrotic skin conditions is only 6 per 100,000. That

means that Wisawe's rate is about twice what it should be. It sounded like a classic case of para-environmental disruption, and I told Tal that. That's when I learned about Steven Cohen's condition. I mean, Mycobacterium Ulcerans?!! There's never been a reported case of that in the United States. Now, there is no test that can be used to determine whether MU is in the water or not, but Steven Cohen worked at that laboratory every day. I looked into it, and according to Freslevin and Blackwood's Tropical Medicine, MU is often found in developing countries when there's new construction. Tropical Medicine also says that MU grows more vigorously in solutions containing elevated concentrations of zinc and mercury. Not much is known about exactly how ZenoPharma processes the algae, but we know it produces cadmium. Cadmium is a "group 12" metal, just like zinc and mercury, so it's likely that cadmium has the same effect. Tropical Medicine also says that MU lives in water of 60° to 75° F. ZenoPharma records show that the quarry water stays in that range year round. Although I can't say how the MU got into the water in the quarry, or even for certain that it's there, elevating cadmium levels might make the environment even more hospitable for MU. The danger is obvious. While most residents use some sort of filtration system on their well water, not all of them are equipped to remove bacteria such as MU. If more of the quarry water mixes with the aquifer, thousands of people could be exposed to MU and other potentially harmful substances.

I bill \$250/hr. for an environmental assessment, and I worked 10 hours per day for 9 days, plus three full 8 hour nights. Plus, it took me an extra week working full time to analyze the data and prepare my forty page report. I didn't realize, until Skylar Cohen contacted me, that those you-know-whats didn't even use it! Instead, they hired some wet-behind-the-ears kid to throw something together. Still, if ZenoPharma had never hired Brennan, Skylar never would have gone looking, and we would have missed the bog turtles living at the SutureStick facility. The bright yellow marking on the head of the specimen in Skylar's photo, right behind its ears, is the telltale sign of a bog turtle. Sadly, I cannot say the same for the rest of Skylar's conclusions. First, there are no turtle droppings in the photos. Second, the turtles in the the quarry lake photos are not bog turtles. They are just common painted turtles. I wish they were bog turtles then we would've been able to close the entire plant down! But they're not. Still, I gave FBT a nice discount rate, \$200/hr., half my usual rate for litigation work. I've billed over 50 hours on this case reviewing my report, preparing FBT's attorneys for court, and drafting this statement.

 It's impossible to know for certain whether the other two turtles Skylar saw that day were bog turtles, but I would bet they were. Skylar is an unusually keen observer. Regardless, it's commonly accepted in the environmental science community that for every one of an endangered species like the bog turtle that you see, there are three to five more in the same habitat. That means that there might be a dozen or more bog turtles, all living right in the vicinity of that plant, which would represent one of the largest clusters ever discovered in the all of Pennsylvania. I immediately contacted the DEP, but they just sent someone out for a couple hours to look around and then gave up. Maybe the DEP investigator didn't realize that bog turtles hibernate during late October. They were probably a foot or so below, buried in mud, waiting for winter. I would not have made such an amateur mistake.

I know there are a lot of economic factors at play here, and I'm well aware that a designation of critical habitat must consider economics. But unemployment and the recession are temporary issues. Once the turtles are gone, they will never come back. And how about when Steven Cohen isn't the only one with a flesh-eating bacterium? ZenoPharma must be stopped.

Paz Bobrow Signature <u>December 6, 2011</u> DATE

Statement of Marlo Fernicker

My name is Marlo Fernicker, and I am a Vice President of ZenoPharma, Inc. I am also the Executive Director and Research Coordinator for ZenoPharma's manufacturing facility for SutureStick. That facility is located in Wisawe, Pennsylvania, where I have lived for the past sixteen years on a quiet street on the outskirts of town. I graduated Drexel University with degrees in biomedical engineering and biology. Several years ago, I received an Executive MBA from Villanova University. I am fifty-two years old.

When I first moved to Wisawe, it was a sad, dying town. Since then, I have been excited to watch it come alive again, much like the thousands of people who the hard working employees of ZenoPharma have helped with SutureStick. But I am not going to stand on some high horse and say that I, or ZenoPharma, is above reproach just because we've created a few jobs and are selling a product that helps people. We have to follow the law, just like everybody else. But what we have here is one person with her/his own personal vendetta trying to disrupt progress based on nothing more than a vivid imagination and some clever manipulation of the legal system. I can understand why Skylar is upset, and I've tried to cut her/him a break or two, but the bottom line is that I simply don't believe that s/he found a colony of bog turtles on the property. Besides, Wisawe is on life support. Now is not the time to pull the plug.

I remember the day I discovered the magic that existed in my own backyard. It was September 14, 2001, just three days after the terrorist attacks. At that time, I was working at ZenoPharma's facility in King of Prussia, PA as a research director. On my way to work, I would drive by the dilapidated old quarry pit located on the outskirts of town. That day, I decided to park my car on the side of the road and take a closer look at the layers of differently colored earth exposed by the pit. I couldn't help but notice the lime green algae forming a thick surface over the quarry water. It was unlike anything I had ever seen. I decided to take a sample back to the lab to figure out exactly what it was. What was immediately apparent was that this stuff was extremely sticky. In fact, I had to use an some old newspaper I had in my trunk to get the clump I had grabbed off of my hands before I could even touch my steering wheel.

That was when it hit me. My research team had been working for years trying to develop an adhesive to be used in surgical procedures. This is a very significant issue – using surgical staples or even sutures increases the risk of infection, retards healing and can lead to more visible scars. We at ZenoPharma knew that if a chemical could be synthesized that would close surgical wounds and would degrade naturally, it would be a blockbuster. The algae showed promise in early testing, and I was able to convince ZenoPharma to give me a small lab. Initially, I purified the algae through a filtration system and then ran it through a massive centrifuge to remove most of the water. Then I blended the dense material left behind into a paste before finally removing all other contaminants through a novel heating technique that I invented. But I could not get the balance right; it was always too sticky to use. Then I remembered the newspaper, and I figured out that the *Wisawe Times* uses cadmium in its inks. Sure enough, adding a little cadmium to the mixture made the balance just right, and SutureStick was born.

SutureStick is 10 times stronger than any commercially available medical adhesive: to break the bond it forms on a piece of glass takes an amazing 120 N/mm², which is the same amount of downward force as six elephants balancing on a silver dollar! I was also able to create a solvent using Lysozyme, which is produced in saliva and tears, so everything associated with SutureStick is 100% organic.

 In early 2003, I approached my bosses with SutureStick. I was lauded as a genius, and who was I to disagree? The Company quickly purchased the old Campbell slate quarry the next day. Within a month, I was made a Vice President, given shares in the Company and placed in charge of the plant that was to be built there to harvest and refine the algae. To start the process of gaining FDA approval and creating the plant, I was allowed to assemble my own team of experts. Among those who first made the move to Wisawe with me was Tal Kurtz. When I was at ZenoPharma HQ, Tal was responsible for sales and marketing, and we were as tight as two coworkers could be. I made Tal the plant's operations manager. Tal took to the job better than I would have imagined. I mean, I had been living out in Wisawe for years and hardly knew anyone, but Tal instantly became the face of the company in town.

By 2007, we had FDA approval, twelve patents, and had entered full production mode. That year, we grossed nearly \$110 million in revenue and were viewed by HQ as the future star of the company. At that point, we employed over 250 people, the majority of whom were Wisawe residents. We even received a huge tax break from the Commonwealth for being so "green." Meanwhile, SutureStick orders were coming in faster than they could be filled. By late 2008, SutureStick had been used in over 100,000 procedures worldwide, including as both a surgical and dental adhesive, and it had even been used in emergencies to close wounds on the battlefields in Iraq and Afghanistan. However, when I tried to stimulate the algae's growth in the lab, it would not reproduce, and we have never been able to create any other chemical in the lab that gives the same result. As a result, we can only use as much algae as we can harvest from the quarry. And of course, we can't harvest all of it, or there would be none left to grow the following year. My calculations at the time showed that we would max out productivity in 2011 with revenue somewhere in the \$250 million range, which is nice, but tiny for a medical device.

 Right around that time things between Tal and I got a bit strained. Steven Cohen, one of our local algae testers, came down with this strange illness, some kind of flesh eating bacteria. It was so bad that he lost a portion of his leg and had to quit. I felt kind of bad for him, but I challenged Steven's workers compensation claim. We ended up winning because Steven couldn't prove that the bacteria were present in the algae or quarry water. What a relief! The bad press from that could have killed SutureStick. But Tal was furious. S/He felt that not only had I gone behind her/his back, but that I had turned my back on the locals. Tal wanted to cut Steven a check for over two hundred grand! I vetoed the move, thinking that it would be the same as admitting guilt. I remember Tal screaming at me that I needed to be stopped before the entire town was ruined and more workers had their flesh fall off of their bones. Frankly, there is really no room for that kind of drama in running a business. It's not like anyone else was getting sick. There was simply no scientific connection between our plant and Steven Cohen's MU case. I did order bottled water for the plant, though, and I never again touched the algae. Better safe than sorry, you know.

In February 2011, we reached our production capacity. Just prior to that, I received a report from ZenoPharma's head of research and development stating that the SutureStick development team was still five years or more away from being able to produce the algae in a laboratory setting at levels that would match our current demand. To make matters worse, the company's biggest drugs were about to go off patent. There was also some mention of problematic longer term data on the effectiveness of SutureStick, but I wasn't too concerned with that because the report stated it was all within the margin of statistical error. Bottom line: the company was relying on SutureStick and, without it, ZenoPharma was a prime target for a corporate takeover or, worse, bankruptcy. I was speaking with the President of the company daily, and we decided that the best way to increase production in the short term was to expand the size of the quarry facility so that we could grow more algae. Of course, it wouldn't have

made much sense to expand the facility without expanding the amount of available algae. Because no one knows why exactly this algae grows in this quarry, we could not just create more surface area. We had to make the quarry expansion as nearly identical as possible to the existing quarry. That meant digging the expansion to the same depth as the existing quarry pit, even though that would put the pit in greater contact with the aquifer. If my calculations were correct, this expansion would allow us to triple our revenue and double the size of our staff.

In order to obtain the permits for construction, we were required to submit an environmental impact assessment to the Pennsylvania Department of Environmental Protection. I let Tal take the lead on this, which proved to be a mistake. Tal hired Paz Bobrow. Bobrow explored the proposed expansion site, which I had designated as the 150,000 sq. ft. area on the south end of the quarry pit. In mid-April, Bobrow produced one of the most absurd things I had ever read. The entire report was about bog turtles. Bog turtles: the one animal everyone knows will kill a development project! It went into detail about how the marsh land south of the quarry pit was their perfect habitat. That alone was silly, but the kicker was that the report didn't say anything about actually finding any turtles on the property. I can understand respecting endangered species - I give \$200 every year to the Nature Conservancy - but I would think there would actually have to be a turtle there to be endangered! Look, I love the environment, and for years I have kept a terrarium in my office filled with specimens I collected from the land around the plant, including a box turtle. But, an endangered species finding would most likely mean the end of the expansion and quite possibly the end of ZenoPharma! The report also claimed that expanding the quarry would taint the aquifer and harm the local population. It was absurd. We all knew from Steven Cohen's worker's compensation claim that there was nothing wrong with the water in the quarry pit. It was as safe to drink as any other water in the area. So, naturally, I shredded the report and fired Bobrow. Of course, I decided to not tell Tal; s/he was the one who hired the tree-hugging hippie in the first place.

Instead, I retained Brennan Nellie, an environmental consultant from Philadelphia, sometime in early May 2011. Brennan was a good kid who graduated from Yale but couldn't find a job. I knew s/he would be hungry for the work and would do right by us. Brennan was able to produce the document we needed in a few days and didn't mention the bog turtle anywhere in her/his report. S/He also confirmed my assertion that the aquifer would not be harmed. The City Council and DEP signed off in a heartbeat once they read that report.

On September 1st, I was finally able to get all of the permits in place and the surveyors out there to plan the project. I was walking around the grounds that day when I noticed one of the surveyors talking to someone standing on the outside of our property fence. I feared it was a corporate spy or someone who would chain her/himself to a bulldozer, so I confronted her/him aggressively. However, as soon as s/he introduced her/himself as Steven Cohen's kid, working on some environmental project, I relaxed. I offered to take Skylar and the other students in the club around the plant. No one is prouder of our green processes than I am!

Right around closing time the following Friday, Tal confronted me about the Bobrow report. Tal was furious that I had fired Bobrow and questioned my motives for doing so. I told Tal that that was yesterday's news and that I had taken care of the problem. Tal stared off into the distance for a minute and then suddenly stood up, looked me right in the eye and exclaimed, "I quit, take your plant, take your glue and stick it! The horror! The horror!" I called security immediately, and they shadowed Tal as s/he packed a few boxes, shredded some papers and departed. I categorically deny ever talking with Tal about my terrarium, much less about the bog turtle s/he mistakenly claims I possessed. I've only ever had box turtles in the terrarium. Tal must have confused box turtle with bog turtle. S/He never was one for science.

The next night, I was awakened by a call from Sergeant Conrad down at the Wisawe police station. Apparently, security caught Skylar Cohen trespassing on ZenoPharma property. I went to the station, but I decided not to press charges. I guess I felt bad about what happened with Tal the day before and, of course, for Steven, who was there. I should've known better and at least sought some sort of restraining order. After all, Skylar was 18. Instead, I let the little troublemaker go.

In October, I got a call from an Officer Dunn at the DEP stating that my licenses were under review and that permits could be pulled because a cluster of up to 15 bog turtles were reported in the area where the expansion was planned. Officer Dunn gave me the exact location and said that she would be out there on Monday the 24th to take a look. To see exactly what I was dealing with, I went out to the supposed spot with Dunn. We must have been out there for five hours, and I can confirm that no turtles, turtle holes or even turtle droppings were found. I figured out that the review process would take months, so I decided to forge ahead with breaking ground and deal with the fallout, if any, when it occurred. By then, the hole would be dug and there would be nothing anyone could do about it. That's the cost of doing business, you know. But thankfully DEP finished its investigation right away and cleared us to proceed.

Unfortunately, Skylar filed this bogus injunction against me. At first, I didn't understand how the so-called "Friends of the Bog Turtle" could afford the lawyers they hired. But then I saw Jane Meyerson's name in Skylar's statement. It all makes sense now. Sure, everyone thinks she's great for cavorting with baby gorillas or whatever on TV, but where does she get the money to fly off to Kenya all the time? She's also the chairman of her family's business, Stull Medical Adhesives, which she inherited. Stull is our toughest competitor! Now construction is halted, and ZenoPharma is in the red and running out of operating capital. Skylar Cohen is being played. S/he set this turtle thing up as some sort of elaborate hoax to get revenge on me because of what happened to her/his dad, but now, it appears that Stull is calling the shots.

I think Skylar found the turtles somewhere else or got them from Jane or one of her/his other environmentalist buddies and planted them on ZenoPharma property or photo-shopped it or something. How can anyone tell from that one single photo that this turtle was found on our land? I guess it doesn't matter, though. Whatever s/he did for whatever reason, there is way too much at stake for way too many people to let a PETA wannabe stop ZenoPharma from saving lives and the town of Wisawe. You have to understand what the town was like a few years ago. If we cannot expand the plant, we may not be able to keep ZenoPharma in business. If there's no ZenoPharma plant, hundreds of jobs will be lost and things will quickly go back the way they were: no money, no hope. I'd bet even the J-Mart wouldn't last more than a year or two, much less the newer stores that just opened here. We have to do whatever it takes to see that the plant expands, not just for ZenoPharma, but for Wisawe.

Marlo Fernicker

DATE

Signature

Statement of Hadley McAdoo

My name is Hadley McAdoo, but most folks just call me "Coach," or at least they did before I just resigned. Those allegations about me taking payments from Penn State boosters to steer my players there were absurd, but when the NCAA hearing panel found me guilty of lying to investigators under oath, that really hurt my reputation around town. People had thought that I was totally honest, and I always have been, but now they don't trust me with their kids. I guess the court of public opinion is the only one that matters. A few old-timers have gone back to calling me "Genie," short for "Genesis," because I was where all the plays began. It's a nickname I earned when I set the single game, single season, and career assists marks at Elizabethtown College. That record has stood for three decades. I'm now fifty-two years old..

1 2

When I graduated college in 1981, I had a degree in Communications and a Business minor, but I didn't have a business other than basketball. I didn't know what do with myself and had to move in with my parents in Wisawe to figure things out. That is when I heard that the Chamber of Commerce had a marketing position opening up. I knew they could not turn down the Genie, and I was right. So I spent two years trying to convince businesses to come to Wisawe. Unfortunately, the only one I landed was a J-Mart, but everybody welcomed a real "big box" business in town. Of course, I also coached basketball for the Wisawe Central JV as a volunteer. That's how I knew that Coach Willard was retiring from the school before everyone else did. I went to a couple of night school classes and was certified as a teacher. It was a lot easier back then than it is today. I don't know if I was the best history and econ teacher who applied, but when Coach's announcement was made public, my résumé floated right up to the top of the pile. I don't feel bad about it – no kid's ever complained that my class was too hard, and a couple dozen of the trophies in the case are mine. Plus, I came up with the idea to sell advertising on the gym walls. When you're winning, that real estate is valuable.

So I guess you can see I have a head for business. Well, you're not the only one. The Chamber saw that, too, and after my third District title, they decided that I'd make a good candidate for City Council. It's a close-knit community, and the five City Council members are responsible for running it. We don't even have a mayor. I can't say that I minded the extra income. I have been on Council for sixteen wonderful years, and for six as the Chair. My focus remains simple: business development. I may not have a Ph.D. in Economics, but I understand what it takes to run a business in the real world and what business means to a small community searching for an identity. For twelve of my sixteen years on Council, I was the Chair of the Local Business sub-committee, and I traveled around the country looking for opportunities to bring businesses here. I took a bunch of classes offered by the National Association of Mayors, and I even got half-way to an M.B.A. in small business administration from the University of Phoenix online program before I realized I wasn't learning much more than I already knew. Even though I am slowing down a bit, I still feel my Council work is my greatest contribution to the community.

Anyway, I've been involved in just about everything that's happened in this town in the past decade or two in one way or another. But honestly, until about 2004, there wasn't much happening. I hate to say it this bluntly, but this town was dying. Slowly. For nearly one hundred years, one big business kept us on the map – Campbell Mining, which ran the slate quarry – and the rest of the town existed to support the mine. Campbell employed nearly five hundred miners in its heyday, plus the executives, support staff, and everyone else. And that's just the folks whose paychecks Campbell signed. That barely scratches the surface of what the company meant to this town. It's like I teach my kids in AP Economics: the folks employed by a company are "direct jobs," but those "direct jobs" support many more "secondary" jobs. For example, if you have five hundred miners, you have maybe four hundred families. Those

families need medical care, which means jobs for nurses and doctors. They need housing, which means jobs in construction, real estate and banking. They need food, which means supermarket jobs and trucking or rail jobs to get the food here. Plus you need car sales, car repairs, police, lawyers, judges, prisons... heck, even education is driven by population.

Someone famous once said that the business of America is business. That's darn right. Creating jobs is what City Council is there to do, and, like I said, I am happy to be a part of it. But there ain't many towns that can sustain losing their number one employer, especially if that employer offers blue-collar jobs that don't need a ton of training. And for 100 years, that was the quarry. This town was nothing more than a tavern and a general store before 1875, when old Pappy Campbell found slate up in the hills. Beautiful stuff, that slate. Well, Campbell Mines put Wisawe on the map, and more importantly, it employed practically the whole town. At first it was just men in the mines, but as the company grew, it started hiring women, first as secretaries and then into administration. Heck, Ellie Campbell was the first female comptroller in the state!

Then the slate started to run out, and the economy turned. Once people didn't have the money to afford Campbell slate, and once Campbell ran out of the really gorgeous stuff, that was it. By the mid-1970s, the quarry was letting people go, and in 1979, Joey Campbell went up there one night, put a padlock on the fence, and flat disappeared. That was the end for Campbell Mines, and it was just about the end of Wisawe. The town hung on, mostly the older folks living off their pensions or savings, but the difference between dying slow and dying fast is just the hands on a clock. By 2004, Wisawe had nearly 15% unemployment, 9.3% of which was long-term.

Someone upstairs sure does have a funny sense of humor though. Who would have thought that the town would get saved by that sticky junk that would ruin all the kids' clothes when they jumped the fence to swim in the old quarry pit? I guess Marlo Fernicker, that's who. I knew Marlo a little from campaigning, but I never thought much of her/him, not then at least. Of course, I have gotten to know her/him really well in the years since. Not really as friends, but I guess more as partners. Marlo's the one with the cash that keeps the town's registers ringing, and s/he who pays the piper calls the tune. Anyway, Marlo walks into the Council one day and s/he's talking about a plant that would employ over two hundred people, and they wanted Wisawe folks to build it for them. Well, not the design or supervision, we don't have the expertise for that. But hauling the materials and construction, you know, the lower down stuff. Ultimately, only about 150 Wisawe residents wound up working there permanently, but another forty or fifty people moved to town with the company. Most of our residents got the low-tech jobs, like cleaning the floors or harvesting the algae, but when you're dying of thirst, you don't complain when someone hands you a glass of water that is only half full.

The United States Department of Labor, Bureau of Labor Statistics studies employment trends carefully in order to understand just how important primary employers are to communities like Wisawe. Their system is called RIMS, which stands for Regional Industrial Multiplier System. They have found that a single direct job can be responsible for creating as many as five secondary jobs based on the industry. BLS measures this in dollars spent, but it is easy to translate back into actual jobs. This is why having a ZenoPharma manufacturing plant in Wisawe is such a big deal. We only have a population of about 10,000, of which maybe 15% are retirement age and another 15% or so are not yet old enough to work full-time. According to RIMS, for every 100 people that are employed by ZenoPharma, as many as 500 secondary jobs are created. Just take a look at the recent employment statistics for Wisawe and you'll see.

For all my training in business development, even I couldn't have guessed how ZenoPharma would have changed the town. It's not just the jobs, it's the idea of it. We weren't some old,

dying mine town anymore; we were "the new face of biotechnology." You like that? It was my slogan. ZenoPharma changed the town completely, even if a bunch of the old businesses did go under. It ushered in a new era of national chain stores and renewed energy. Our test scores went up, although some of that was the ZenoPharma scientists' kids. Marlo Fernicker even paid to redo the locker rooms and re-surface the basketball court her/himself. I tell you, it was like a gift from the heavens to us. And then the manna kept falling! In September 2011, ZenoPharma announced that it was going to expand the facility, tripling its production. We were all smiles. Half of Council worked with ZenoPharma one way or another, but that wasn't surprising – it seemed like half the town was associated with them as well.

These days, the economy is really humming in Wisawe. According to the 2010 stats we have an unemployment rate right around 5%, which is way below the national average. Some of that is the jobs that ZenoPharma directly created, but a lot of it is from secondary jobs and new industry. Using the money that the ZenoPharma plant has already brought, we have developed an eco-tourism center, taking people up into the beautiful hills around town for hiking trips and cross-country skiing in the winter. Usually tourism requires more of an educated populace than we have, but more of our kids are going to college than ever, and lots of them are coming home, and not to work at the plant. We've even landed two or three other start-up companies, and next week I'll be cutting the ribbon on one that is expanding and will be providing a dozen new jobs. It's definitely not like the old days when this was just a one business town.

It is for all of these reasons that I couldn't believe it when Skylar Cohen started all this trouble aimed at ZenoPharma in 2011. I knew Skylar well from the environmental club at school. It's not that I'm some green freak; far from it. But each club for which you're the advisor gets you a few hundred extra bucks in your paycheck. I'd just show some videos or have a guest speaker about some trees or some cute bunny, and once a semester we had a recycling drive or something. It was easy money! I'd been doing it for a year or two when Skylar joined, and I could see s/he was really into it. I supported her/him, especially when Skylar and a few of her/his classmates were able to stumble upon the local pet shop owner and her illegal poaching operation. Sure it was a bit of dumb luck, but it generated press for the town which reached the national media. It didn't hurt that those little turtles were so darn adorable. As a result, when Sklyar became a senior, I helped make her/him President of the club, to bolster her/his college applications.

During the club's first meeting in September 2011, Skylar's agenda became very clear. Skylar wanted to make the group - how was it s/he put it? - "an army of action, not of words." At first, the kids loved it, but even they quickly turned, especially when Skylar started attacking ZenoPharma and the plant's planned expansion. I mean, a lot of kids' folks worked there, and everybody knew what it was doing for the town. I immediately suspected this had something to do with Skylar's father. It was a right shame what happened to him. Everybody around town likes Steven – he's a genuine, nice guy – but bad things sometimes happen to good people. Blaming ZenoPharma for some weird bacteria thing is just not right. I knew the workers' compensation board would make ZenoPharma pay him if it harmed him, even though I heard that the head of the board was living with the plant's production supervisor. They decided that ZenoPharma wasn't responsible, and that's good enough for me.

You would have thought all of the kids calling her/him names like "quack" and me explaining that the impact from the expansion wouldn't hurt the environment would have stopped Skylar. But, no, it seemed to only make her/him more agitated. I didn't take it too seriously at that point, but I was concerned that Skylar was coming unhinged. My fears were confirmed just a week later during the club's next meeting. Skylar got up in front of the class again and started talking

all about the endangered species of Pennsylvania. This, in and of itself, was nothing out of the norm, especially when s/he started talking about our club's favorite creature, the bog turtle. It was fairly well known in the land development business that these little turtles can cause some of the biggest problems for construction projects because of their status as endangered species. Skylar said that s/he had proof that these turtles were there on ZenoPharma land and that the plant expansion had to be stopped or else they would die. S/he then pulled out some printed out pages of some report. The students, as expected, were mean, and the name calling was louder than ever. No one wanted to hear about ZenoPharma. This enraged Skylar, and s/he launched into a rant about how s/he found the document after trespassing on Company property and getting arrested! The club spiralled out of control, and I had to cancel the meeting.

I had Skylar stay behind, and I gave her/him one of the sternest lectures I had ever given a student off of the basketball court. I told her/him that s/he could no longer serve as president of the club. I also told her/him that I knew first hand that ZenoPharma had a permit in place, so the report s/he had couldn't be real. Finally, I told Skylar that s/he had to go and visit with the school counselor because I was worried that s/he had become mentally unstable. As Skylar left my classroom, I distinctly remember her/him yelling, "well, if you will not support me, I will find someone who will. It doesn't matter what it will take, I will find a way to bring them down!" By the look in her/his eye, it was too late, all self-control was gone. I didn't know what s/he would do.

At the end of the day, it doesn't really matter if Skylar found a bog turtle near the quarry or not. The economic benefits that ZenoPharma provides Wisawe far outweigh the livelihood of a few turtles. Environmentalists always talk about how important symbiotic relationships in nature are when arguing for the protection of wildlife. This should also hold true for humans. Here in Wisawe we have a symbiotic relationship with ZenoPharma. My understanding is that if the expansion doesn't happen, the company may fold completely. Of course, Marlo also told me after one of our Council meetings that those fears have been way overblown and the company's doing better than it feared. Still, if ZenoPharma does close, it would be a serious blow, especially in this economy. If anything else goes wrong, then life in Wisawe will be as empty as the quarry pit was before the Company saved our dying town. Not only would that be really bad for the community, it would ruin my Council reelection chances. I've already got an uphill battle on my hands dealing with the fallout from the whole booster thing.

Of course, the Genie doesn't dwell on doom and gloom. We didn't win six Districts and one State Title because Wisawe folk run from a challenge. Fact is, we needed ZenoPharma very badly in 2005, and we need them a little less badly now. Wisawe's a town with a future. Hey, I like that. Hadley McAdoo for City Council of Wisawe, a town with a future!

Hadley McAdoo
Signature

<u>December 7, 2011</u>

ature DA

Statement of Brennan Nellie

My name is Brennan Nellie, and I am thirty-four years old. I prepared the environmental impact assessment for ZenoPharma that the Pennsylvania Department of Environmental Protection ("DEP") relied upon in deciding to grant the permits that ZenoPharma requested for the facility expansion in Wisawe.

I've provided my entire curriculum vitae to the lawyers, but I should mention a couple of things. First, I went to college late. Where I grew up, lots of kids got in trouble, and I was no exception. Right after I turned eighteen, one of my friends asked me to buy a gun for her, since she was a convicted felon and could not own one. And I did it! I can't believe how stupid I was. My friend got caught, and I lied to the police about my role, and I even swore at the preliminary hearing that it wasn't me. My folks bailed me out, pre-trial, and I thought it would impress the Judge if I signed up for the Army. When my lawyer told the prosecutor what I had done, she had this real serious talk with me about second chances and how few people got them. She decided to offer me a deal. I agreed to plead guilty to the misdemeanor false swearing in official matters and the prosecutor agreed to drop the felony charge. The military doesn't accept applications, it accepts commitments, and I was committed. Two weeks later I was in basic training.

Being in the army was the best thing that ever happened to me. I was assigned to the Corps of Engineers. Back then, I could barely read or do math. But my commanding officer and unit sergeant gave me things to read during my down time. Pretty soon, I was reading technical manuals and textbooks. As soon as I left the army, I enrolled at the University of Pittsburgh on the G.I. Bill and graduated in three years with a degree in environmental engineering. I spent a year as a park ranger and four at the Yale School of Forestry, where I received a Ph.D. in Ecology in 2008. I was even able to take classes at the Yale Law School in environmental law.

Unfortunately, when I graduated, the economy was in a really bad place. I may have been Dr. Nellie now, but I was living with my parents again. I applied to every government job I could find, but even with a veterans' preference, my criminal record held me back. So I opened my own shop, relying for business on an informal network of former service buddies, friends from Yale, and members of the Pennsylvania Young Engineers. Sure enough, the harder I worked, the "luckier" I got. For the last two years I have been doing freelance environmental assessments for use in planning and/or litigation. I've performed over two dozen environmental assessments and have testified in Pennsylvania courts three times, plus twice in New Jersey, and once in Montana. I have also consulted in a dozen or so other matters. I pride myself in three things: my objectivity, my creativity, and my price. I have worked for both defendants and plaintiffs, 60/40, and the results of my assessments have ranged from finding no problem at all to stopping a twenty million dollar condo project. And I only charge \$5,000 for a simple environmental assessment and \$10,000 for more complex work.

I charge a little lower than the going rate to be sure, but I'm relatively new in this field, and my credentials on paper certainly aren't as impressive as some other people, like Paz Bobrow. Of course, I don't come with Bobrow's idiosyncrasies either. And I try to work quickly. I don't do a bunch of unnecessary tests and try to think of every possible environmental impact. That's not what the law requires. What the law does say is that in deciding whether to designate a habitat as critical, the Secretary needs to consider three things: (1) whether there are actually animals there; (2) whether the area is "essential to conservation of the species" and (3) whether the harm done by that designation is outweighed by the economic impact of preserving that land. That's what I do. I don't have a degree in economics, but I have learned some things about business, and I try to talk to the people in the community as part of any report I create.

When I was contacted by Marlo Fernicker in April 2011, I was really excited about the opportunity to do some work for a big pharmaceutical corporation. I was surprised that Marlo found me through my meager web presence, but sometimes a bit of luck is needed in order to get to the top. Just like with Apollo randomly picked Rocky, I wasn't going to turn down the shot of a lifetime. During my first meeting with Marlo, s/he clearly laid out the purpose of my task. The company was planning on expanding its quarry site and needed to obtain an environmental impact analysis report in order to get the proper permits. This is all pretty standard stuff. The only strange thing was that Marlo kept telling me how time was of the essence and that s/he couldn't tolerate any more delays. I asked Marlo if s/he had any similar reports done in the past, and s/he told me none had been performed. I now know that this is not true, but honestly, even if I had read Bobrow's report before I started, there is little chance it would've impacted my opinion. I know to keep an eye out for bog turtles. Who doesn't? The only other odd thing was that Marlo had a 500 gallon terrarium in her/his office in which s/he said s/he had collected flora and fauna from the quarry pit area. In it was what looked like a spotted turtle, eyeballing us through the whole conversation. But I didn't get too close a look.

Before I left to start my survey of the land, Marlo looked me in the eye and stated, "now you know what you have to do to get this done right?," to which I responded, "yes, of course." Marlo, then stated that if I did a good job, there would be more work for me in the future. If I didn't know any better, I would have thought Marlo was trying to influence my result. If so, s/he had another thing coming. First of all, I learned my lesson a long time ago, and second, no one single case, no matter how big, was worth my reputation.

Between May 4th and May 15th, 2011, I surveyed the entire area. I took water and soil samples and looked for signs of endangered species and/or habitat that could support them. While some of the bog areas south of the quarry pit could support bog turtles, I didn't feel the likelihood was so significant it was worth mentioning in my report, because I didn't actually find any turtles there. Bog turtle compatible habitat is rare, but hardly unheard of. Habitat actually occupied by bog turtles is a whole different story. But it looked to me like the only things that would lose their homes were a few white-tailed deer, and they are anything but endangered. Of course, had I actually found a bog turtle there, my opinion would've changed dramatically.

ZenoPharma was well-known for its green initiatives, and it lived up to its billing. They even made painstaking efforts to ensure that their wastewater was properly decontaminated and disposed of so the aquifer was not affected. I have read Paz's opinion that the quarry expansion will allow some quarry water to mix with the aquifer, and Paz's drawing of that effect is more or less accurate. But Paz isn't an engineer, and it shows. No one knows the exact dimensions of the quarry pit, but after the expansion, it will be approximately 1000' long x 550' wide x 200' deep. That's 110,000,000 cu. ft. of water, over 820 million gallons, many times over enough to dilute the small amounts of cadmium that escapes from the filters ZenoPharma places on the algae processing. The levels of cadmium in the water are well below any environmental standard or regulation I know, and a lot of that cadmium might be naturally occurring.

Of course, that's nothing compared to an aquifer. I don't know exactly how much water flows in the Wisawe aquifer, but it's a lot. So, even though the quarry water is going to mix with the aquifer once the expansion occurs, the idea that mycobacterium ulcerans could reproduce in quantities sufficient to survive that trip, in that dilution, through those filters... it's science fiction, not science - although a few individual MU bacteria can cause a massive lesion if they touch broken skin. Plus, it's not like the entire quarry will dump into the aquifer. The vast majority of the water in the quarry will stay there, and only a modest amount will even reach the aquifer.

The real science, within a reasonable degree of certainty, is this: we simply don't have enough information to make sense of the data. The necrotic skin infections Bobrow mentions could have been anything from Steven Cohen's near-amputation to a couple simple cases of staph infection on the football team. Admittedly, Steven Cohen's MU infection, which was diagnosed by trained professionals, is bizarre and somewhat alarming. However, according to the Freslevin and Blackwood textbook, an MU culture takes five months to grow. Who knows what could've happened during that time? There's simply no evidence connecting MU to the ZenoPharma plant. There is no test for it in water, so there's no way to say how Steven Cohen was infected. And Bobrow's idea that cadmium is causing it to grow is a huge leap. Just because cadmium is in group 12 like mercury doesn't mean that MU will grow in it too. By that logic, I could check my temperature with a cadmium thermometer! The unemployment compensation board got it right.

Let's be really clear about what's going on here. The Endangered Species Act is the most powerful environmental law on the books, and the quickest way to stop a development you want stopped is to get an endangered species involved. It doesn't matter whether you're the government, a land owner, or a private company: you just can't develop in a way that wipes out critical habitat or threatens a protected species. And the bog turtle has become the go-to species for stopping development in the Commonwealth of Pennsylvania. It has everything you would want: it's cute, it's small, and it lives in wetlands, which are all over the place. It's also highly portable. I've heard stories from colleagues within my field that people try to block development by planting bog turtles on property in order to get an injunction. I'm not aware that any charges have been filed, mostly because the attempts have been so amateurish that they were spotted early by investigative professionals. But in nature, animals adapt to survive, and it was only a matter of time before more sophisticated efforts at fraud would happen.

Now, I can't prove that's what's going on. Is it possible that there are bog turtles on the property? I guess. If there were some, they'd be pretty happy, because that land is pretty good for bog turtles. The only problem is, no one ever seems to have seen evidence of the turtles being there but Skylar Cohen: not the facility's staff, not the DEP investigator, not me in the ten or so hours I spent on the property, not even Bobrow on her/his midnight strolls.

Let's be clear. Bog turtles are very hard to find. They're small, they're camouflaged, and they love to hide, half-submerged, under the reeds. You could walk right over one. But spotting the bog turtle isn't the only way to know it's there. Think about the average bog turtle's day: wake up, eat, go to the bathroom, walk around a little, sit in the sun, eat some more, go to the bathroom again, sleep. Each of those things leave evidence. Did I find muskrat holes on the property? Yes. But that just means muskrats. If bog turtles were living there, they would have left some footprints or partially chewed vegetation. And scat. Like the kids' book says, "Everybody Poops." So while an amateur might need to spot a bog turtle to know that it's there, a trained environmental professional doesn't. We look for any sign that the turtle has been there – partially eaten food, tracks, evidence of lairing, or excrement. But neither Paz nor I saw any of those things. Of course, because of the time pressure, I wasn't specifically looking for secondary evidence of bog turtles. Still, if there was a huge colony of bog turtles there as Paz now is claiming, one of us would have found some evidence. Between that and the fact that no one else has seen a bog turtle there, there's simply no way that Skylar could be telling the truth.

Of course, if s/he were, it would be a remarkable find. According to Pennsylvania Fish and Boating Commission, there have never been any bog turtle colonies of this size, although,not all sightings are public information, because they're kept secret to protect turtles from poachers,

who can sell them for a thousand dollars or more on the black market. I heard from some townspeople that the local pet store owner had a history in that business.

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The photo that Skylar took is highly suspicious. Yes, the picture is of a bog turtle; you can tell right away by the orange marking on its neck. But the GPS coordinates only show that the camera was on the property at the time, not that the bog turtle was native there. And the photograph was taken on October 15, 2011. Normally the bog turtle burrows into the mud for the winter during the last two weeks of September and the end of the first week in October. While it was certainly a warm fall, with an average high temperature in September and October a full two degrees higher than normal, such a slight difference is unlikely to change the turtle's behavior that dramatically. Finding a bog turtle above ground on the 15th, much less three, would be highly unlikely. And then there's the fact that by October 24th, when DEP investigated the site, there was no remaining indication that it was present on the land at all: no lair, no chewed food and no scat. These things do not disappear into thin air. Unfortunately, the kind of searching investigation that it would take to completely prove Skylar is lying could take the better part of 2012 to complete. In my opinion, there is no reason for going through all of that time and expense. This is way beyond a reasonable degree of scientific certainty. The Sixers have a better chance of winning the title than we do of finding bog turtles here.

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I don't want to sound like I don't care about the bog turtle. It's a marvelous creature, one unquestionably threatened by habitat destruction and human predation, and like all species, it deserves our protection and stewardship. Put in legal terms, the taking of bog turtles and destruction of critical bog turtle habitat is an irreparable harm to the environment and therefore to us all. While there are too many bog turtles left alive to be truly endangered yet, the trend is clear: the bog turtle faces an existential threat over the next decade or two. But when Paz says that the ZenoPharma property is "essential to the conservation of the species," that's just wrong. Although bog turtles are endangered in Pennsylvania, they are only threatened nationwide. There are more than a few colonies of bog turtles in other states. For that reason, there are no properties in Pennsylvania that are essential to the conservation of the species. Of course, if the other states felt the same way, that could lead to an extinction-level event.

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Moreover, while the expansion would diminish the habitat, it would not eliminate it. That's especially true if ZenoPharma took steps to re-route the off-flow from its plant to preserve the natural wet-dry balance. I recommended that to Marlo when this whole bog turtle thing came up. But those steps are very expensive, and ZenoPharma hasn't committed to them.

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The biggest flaw with Bobrow's report, though, is that it ignores the balancing of human interest with environmental interest. I have spoken with local businessmen and politicians. ZenoPharma has revitalized the Wisawe community, creating desperately needed new jobs and bringing in millions of dollars in investment and new businesses. It's changed the whole outlook here. And that's just the impact on Wisawe. SutureStick isn't some consumer good; it's a medical marvel. Every secondary infection that's prevented by SutureStick, every wound that doesn't open or doctor's visit that isn't needed... all of these must be weighed in the balance as well. Heck, even I have benefited. Not only did I get the money from the complex assessment I did for ZenoPharma, but now I'm making \$275/hr. for my work on the litigation. I have already worked a couple dozen hours, and I haven't even testified yet! Plus, Marlo has been touting my efforts, and as a result my phone has not stopped ringing.

Brennan Nellie Signature

<u>December 12, 2011</u>

EXHIBIT LIST

Exhibit 1: Map of Wisawe and SutureStick Plant

Exhibit 2: Photographs Taken by Skylar Cohen

Exhibit 3: SutureStick Internet Banner Ad

Exhibit 4: Court Opinion (Worker's Compensation Claim)

Exhibit 5: Department of Labor Wisawe Labor Statistics

Exhibit 6: Bobrow Environmental Impact Analysis Report

Exhibit 7: Nellie Environmental Impact Analysis Report

Exhibit 8: Quarry Expansion Cross Sectional Diagram

Exhibit 9: Bog Turtle Fact Sheet

Exhibit 10: Photos of Steven Cohen Bacterial Infection

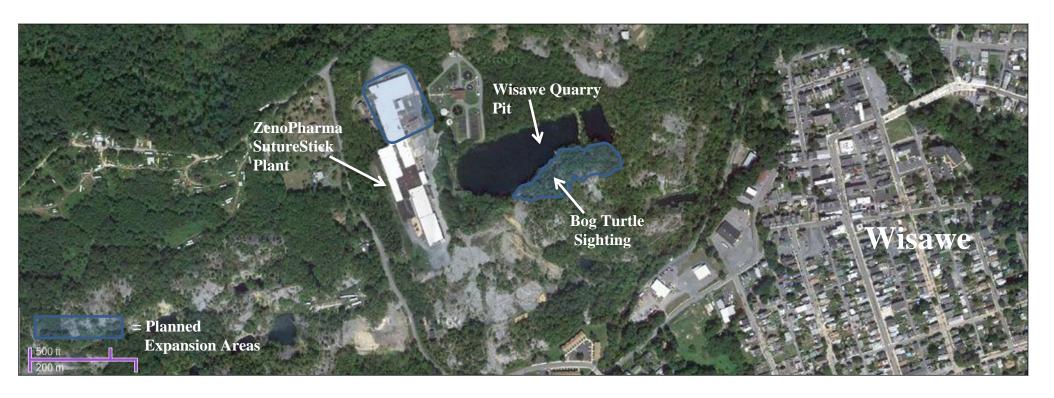
Exhibit 11: GreenPhilly.com Article on Bog Turtles

Exhibit 12: Wisawe Central High School Newsletter

Exhibit 13: C.V. Paz Bobrow

Exhibit 14: C.V. Brennan Nellie

Exhibit 15: ZenoPharma Headquarters Memo



2.1 Photograph of Bog Turtle found approximately 40 yards south of Wisawe Quarry Pit Date: October 15, 2011 ~ Credit Skylar Cohen



2.2 Photograph of Wisawe Quarry Pit approximately 40 yards north of turtle sighting Date: October 15, 2011 ~ Credit Skylar Cohen

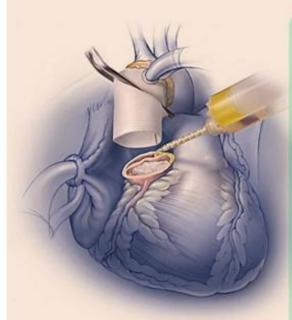


2.3 Photograph of turtles later identified as painted turtles on ZenoPharma Quarry Pit Date: October 15, 2011 ~ Credit Skylar Cohen



2.4 Photograph of turtles later identified as painted turtles on ZenoPharma Quarry Pit Date: October 15, 2011 ~ Credit Skylar Cohen

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Steven I. Cohen, Petitioner

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Workers' Compensation Appeal Board (ZenoPharma, Inc.), Respondent

No. 00023 C.D. 2009 COMMONWEALTH COURT OF PENNSYLVANIA 2009 Pa. Commw. Unpub. NEXLAW 1622*

November 16, 2009, Submitted December 21, 2009, Decided and Filed

NOTICE: OPINION NOT REPORTED

JUDGES: [*1] BEFORE: HONORABLE NATHAN MEYER, President Judge, HONORABLE K. SYLVIA McCLELLAN, Judge, HONORABLE LIAM DUNN, Senior Judge. MEMORANDUM OPINION BY SENIOR JUDGE LIAM DUNN.

MEMORANDUM OPINION BY: LIAM DUNN

Steven I. Cohen (Claimant) petitions for review of an order of the Workers' Compensation Appeal Board (Board) affirming the Workers' Compensation Judge's (WCJ) decision denying his claim petition. We affirm.

On or about January 5, 2009, Claimant filed a claim petition alleging that he sustained a work-related injury to his lower right leg from an extremely rare necrotic infection while employed by ZenoPharma, Inc. (Employer). Employer filed a timely answer denying the material allegations. Hearings before the WCJ ensued.

Upon review of the evidence presented, the WCJ found as follows:

From February 10, 2007 through September 27, 2008, Claimant was employed by Employer at its facility in Wisawe Township, Pennsylvania. As a part of his duties with Employer, Claimant was responsible for the processing of algae growing on a quarry on that property, the

adhesive properties of which were critical to the function of SutureStick, a medical device product for which Employer is the exclusive manufacturer.

Employer's algae is processed through a secret method that need not be discussed in greater detail in order to render this decision. Suffice it to say that the algae processors, including Claimant, must extract the algae from the water in the quarry adjacent to which the Employer's plant is located, must remove the algae from the collection equipment [*2] using a chemical derived from cadmium, and must add chemicals at precise intervals while the equipment in industrial-scale vats stirs and heats the algae to accelerate the chemical reactions. Once a given quantity of algae has been processed, the vats must be scrubbed clean using other chemicals. During his time as a ZenoPharma employee, Claimant was responsible for each step of this operation, and at the time of the alleged injury, he was principally responsible for testing the algae growing in the quarry pit itself in order to determine whether or not it contained the appropriate levels of key active ingredients.

Employer submits that employees are issued safety gear according to the job that they will be performing. For example, the vat-stirring employees wear light plastic

waders and thick sleeve length rubber gloves, while the vat-cleaning employees wear full hazardous materials suits and ear protection. All employees wear eye protection and full respirators. Claimant disputes this characterization, stating that many employees do not wear the issued gear and that Employer is aware that many employees do not wear that gear. Claimant states that on numerous occasions, he performed his duties without the required gear because it was not available or because it was too hot or too cold for the climate. Employer disputes this.

Employer submits that the chemicals used in its algae processing are non-toxic, inert chemicals and that there are no known human pathologies associated with them. Claimant admits that the chemicals have no known pathologies associated with them. He vigorously disputes that they are inert or non-toxic.

It is undisputed that on or about September 27, 2008, Claimant suffered an attack of an organism that was diagnosed by his family doctor as Mycobacterium Ulcerans ("MU"). The parties agree that MU is a highly unusual diagnosis in any part of the world and an organism never before found in the United States. To the contrary, MU is virtually exclusively found in tropical and equatorial regions. The parties agree that the symptoms Claimant suffered were consistent with a necrotic skin infection [*3] like MU. Claimant suffered aggressive ulceration and bleeding at several layers of the skin, including the dermis, panniculus, and deep fascia. This left him in terrible pain and led to a very serious surgery in which a large area of necrotic tissue was removed. This in turn led to an extended hospitalization, a significant loss of functional capacity, and significant Claimant's permanent impairments in ability to walk, run, or stand for extended periods of time.

A test for MU was performed and was returned positive. Employer claims that the test was likely a false positive. For purposes of this inquiry, the question of whether the organism that caused Claimant's injury was MU or was some other necrotizing organism with similar effects on Claimant's livelihood is largely irrelevant.

Claimant claims that he could only have come into contact with the organism, whatever it was, at Employer's plant. Employer denies that Claimant contracted the organism at work. As the party seeking benefits under the Workers' Compensation Act, Claimant bears the burden of proving that his injury was related to his work.

Unfortunately, he cannot meet this burden. There is no test for MU in water, or indeed anywhere outside the human body. Accordingly, Claimant's allegation that the water at the Employer's plant was tainted by MU is mere speculation. Claimant's representatives were permitted to test the water for other organisms with similar effects in the human body, but they declined to do so on account of the considerable costs associated with such In the absence of any actual, scientific proof that the water in Employer's quarry or its algae were associated with the organism that attacked Claimant, his allegation that the injury is work-related lacks substance.

Ultimately, neither Claimant nor Employer has provided a complete or entirely credible description of how Claimant came to be so severely injured. However, Claimant bears the burden of proof, not Employer. Accordingly, if neither side is entirely persuasive, Employer prevails. In the absence of competent, [*4] scientific evidence connecting Claimant's injury, I have no choice but to deny the claim for workers' compensation.

(WCJ Adjudication pp. 1-3)

Claimant appealed the decision of the WCJ to the Board, which affirmed. This appeal followed.

Initially, we note that this Court shall affirm unless it determines that the adjudication is in violation of the claimant's constitutional rights,

that it is not in accordance with the law, that provisions relating to practice and procedure of the Board have been violated, or that any necessary findings of fact are not supported by substantial evidence. See Lehigh County Vo-Tech School v. WCAB (Wolfe), 652 A.2d 797 (Pa. 1995). An adjudication is against the law where the WCJ capriciously disregards material and competent evidence. Leon E. Wintermyer, Inc. v. WCAB (Marlowe), 812 A.2d 478 (2002). Capricious disregard of evidence is shown if the WCJ willfully or deliberately ignored evidence that any reasonable person would have considered to be important. Id.

In this case, Claimant argues that the WCJ's findings are not in accordance with the law wherein the WCJ deliberately disregarded competent evidence that supported the finding that Claimant's contraction of MU or some other necrotizing organism was work-related.

As noted by the WCJ, the claimant bears the burden of proving that his or her injury arose in the course of employment and was related thereto. Krawchuk v. Philadelphia Electric Co., 439 A.2d 627 (Pa. 1981). Generally, if there is no obvious relationship between the disability and the work-related cause, unequivocal medical testimony is required to meet this burden of proof. Lewis v. Commonwealth, 498 A.2d 800 (Pa. 1985).

The WCJ, as fact finder, had exclusive province over questions of credibility and evidentiary weight and is free to accept or reject the testimony of any witness, including a medical witness, in whole or in part. General Electric Co. v. WCAB (Valsamaki), 593 A.2d 921 (Pa. Cmwlth.). Determinations as to witness credibility and evidentiary [*5] weight are not subject to appellate review. Hayden v. WCAB (Wheeling Pittsburgh Steel Corp.), 479 A.2d 631 (Pa. Cmwlth.)

1984). The WCJ's findings will not be disturbed when they are supported by substantial competent evidence. Northeastern Hospital v. WCAB (Turiano), 578 A.2d 83 (Pa. Cmwlth. 1990). Substantial evidence is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. Mrs. Smith's Frozen Foods v. WCAB (Clouser), 539 A.2d 11 (Pa. Cmwlth. 1988).

Our review of the record reveals that the Board correctly concluded that the WCJ had not capriciously disregarded any evidence in finding a lack of causation between Claimant's injury and his employment. Claimant, in fact, put forth *no* evidence that the water at the Employer's plant was tainted by MU or a similar necrotizing organism.

Claimant does argue, somewhat persuasively, that there is simply no other reasonable explanation for where he could have contracted a necrotizing organism. However, the WCJ did consider evidence that Claimant enjoys outdoor activities including hiking, fishing, and kayaking, and was presented by the Employer with a list of organisms with which Claimant could have had contact that could have had the identified effect. While each of the proposed organisms is rare and the identified effect incredibly unlikely, Claimant's theory that Employer's algae or water is somehow responsible for infecting him with a pathogen completely unknown in the United States is no less of a strain.

Accordingly, this Court finds that the WCJ did not commit an error of law in denying Claimant's claim. The Board's order is affirmed.

ORDER

AND NOW, this 21st day of December, 2009, the order of the Workers' Compensation Appeal Board [*6] in the above-captioned matter is hereby affirmed.

U.S. Department of Labor

Suite 410 – The Wisawe Center 600 Central Station Rd. Wisawe, Pennsylvania 19919 Wisawe Township, Pennsylvania Division

Phone: 717.555.3421 Fax: 717.555.3422 www.dolwisawe.gov

Statistical Category	2000	2005	2010	10 Year Avg.
Total Population	9674	8945	10452	9690
Labor Force	5629	4977	6042	5549
Employment	4841	4220	5703	4921
Unemployment	788	757	339	628
Unemployment Rate	14.00%	15.20%	5.60%	11.30%
Mining	15	13	74	34
Manufacturing	251	227	899	456
Trade / Transportation	698	648	714	687
Restaurant / Leisure	895	783	981	886
Financial activities	147	129	169	148
Prof. and Business Services	1182	1023	1291	1165
Education	527	528	607	554
Health Services	478	420	500	466
Other Services	570	385	389	448
Government	78	64	79	74



FIELD OF DREAMS: REPORT ON THE PROPOSED ZENOPHARMA EXPANSION

Executive Summary

Investigator Paz Bobrow was retained to investigate a planned expansion of the ZenoPharma plant in Wisawe, PA, and a concurrent expansion of the quarry adjacent thereto. That property contains numerous features common to habitats of one of Pennsylvania's greatest ecological treasures, the bog turtle. Bog turtles are a highly endangered species living at the very margin of survivability. They are also one of the most charming of all reptile species, highly sought after both for their beauty and their companionship.

The property of the ZenoPharma planned expansion is near-perfect bog turtle habitat. The run-off from the plant's activities and the natural terrain surrounding the quarry creates an excellent mix of wet and dry, which the bog turtles require. Indeed, ground-fed quarries are recognized as a common place in which to find bog turtles. In addition, there is a small muskrat population, which is significant because bog turtles winter in muskrat holes. The suitability of the habitat for bog turtle inhabitation is further demonstrated by the



presence of many of the bog turtles preferred vegetation: sedges, rushes, jewelweed, and sphagnum moss.

In sum, the abandonment of the quarry approximately thirty years ago created just the kind of stable ecological environment in which the bog turtle thrives. It is somewhat surprising, then, that no bog turtles were specifically sighted, and no immediate residue of their existence (scat, shells left behind by predators, etc.) was discovered. They are, however, challenging to locate, even by an experienced professional.

The primary threats to bog turtles are human, and this is no exception. The ZenoPharma expansion would disrupt the critical habitat surrounding the quarry and would distort the environment such that bog turtles might not be able to live there any longer, if any bog turtles currently live there, or move there in the future. The proposed expansion would threaten the wet-dry balance and introduce additional harmful predators that scavenge on human garbage. The heat pollution from the ZenoPharma expansion would pose another, more attenuated danger, by potentially disrupting the vegetation.

In addition, the investigator has determined that the planned expansion could pose a risk to human health when the quarry water mixes with the Wisawe aquifer. If contaminants in the quarry water, such as cadmium or bacteria present in the algae, were to reach the aquifer, they could reach the town's drinking and washing water. Because many Wisawe residents rely on wells that may or may not be able to filter out these contaminants, they could be exposed to health risks, including serious health risks.

The investigator was shown revenue projections for the proposed expansion. The proposed expansion would undoubtedly benefit ZenoPharma, and it would likely benefit the local economy. But the bog turtle is one of nature's greatest treasures, and even in the absence of an actual bog turtle sighting, the risks inherent in the expansion are too great.

PPL finds that the land into which the expansion is planned is critical bog turtle habitat. Accordingly, should ZenoPharma even bother to apply for an environmental permit, it ought rightly to be denied. ZenoPharma is advised that it is lucky that the DEP didn't notice this before the plant even opened, and it is advised that requesting the permit could lead the DEP to shut down the plant entirely in order to protect the bog turtle and the people of Wisawe.

By my hand, this 13th day of April, 2011,

<u>Paz Bobrow</u>

President CEO Lead Investigator

Nellie Consulting, LLC

15 Thames Terrace | Gesselchaft, Pennsylvania 15217 Phone: 215.555.9089 | Brennan@nellieconsult.com founder& principal: Brennan Nellie

Marlo Fernicker ZenoPharma, Inc. Wisawe, PA

Dear Mr./Ms. Fernicker:

I am pleased to report that I have concluded my investigation. You have nothing to fear. The ZenoPharma plant is currently located on an abandoned quarry of no particular environmental significance. I have carefully toured the land itself, and I have run water and soil samples. They show no levels of pollution in excess of state or federal regulations. You directed my attention particularly to the levels of cadmium. They are well within tolerance.

I have examined the grounds carefully and found no evidence that any endangered or threatened species is present on the property in question. There is a healthy ecological balance, and I was pleased by our conversation, in which you suggested that ZenoPharma would do everything it could to maintain that balance, consistent with your obligations to your shareholders and the citizens of Wisawe.

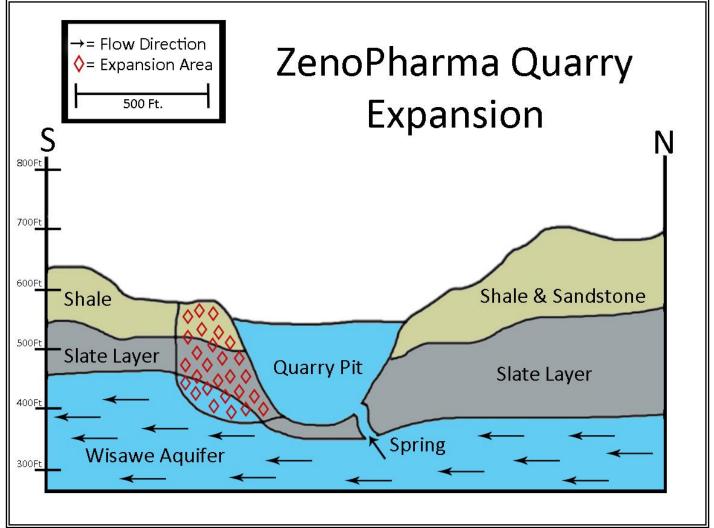
I have also spoken with members of the Chamber of Commerce and the City Council. To say that they are excited for your expansion would be an understatement. They are aware that the quarry water will soon be mixing to a greater degree with the town's aquifer, but I assured them that the quarry water was safe. No test I was able to run in the time allotted showed the contrary, and I reminded them that there has never been a successful claim of workplace injury stemming from the activities of the ZenoPharma plant.

All of my conclusions are within a reasonable degree of scientific certainty, based on my education, training and experience conducting environmental assessments.

I trust this report meets with your satisfaction. Congratulations on your company's business endeavors and its long history of charitable and environmental excellence. I look forward to seeing you at the ribbon-cutting ceremony. If there is anything else that I or my company can do for you, please do not hesitate to contact me. We stand ready to serve any of ZenoPharma's environmental investigatory needs.

Very Truly Yours,

Brennan Nellie



Fact Sheet - Bog Turtles

From the Pennsylvania Fish and Boating Commission

- Scientific Name: Clemmys muhlenbergii
- **Maximum Shell Length:**4 to 4.5 inches at maturity
- Reproductive Age: Reached between 4 and 8 years but commonly commence mating as teenagers and continue until death
- Longevity: 20 to 30 years
- **Key Identifying Characteristics:** Small, semi-aquatic turtle. In addition to its small size, the bog turtle is known for its dark shells and distinguishing yellow or orange spot on each side of its head behind the eye. The bog turtle is often mistaken for the spotted turtle which looks similar but is significantly larger and has a light spot on its upper shell.
- **Habitat:** Live in small isolated areas in very special habitats ideally consisting of springs, marshes, bogs, stream flood areas, flood plain wetlands, ground water fed abandoned quarry pits and fens. Generally found in areas that have high concentrations of sedges, rushes, jewelweed, poison sumac, and/or sphagnum moss. Requires sunlight for nesting. Bog turtles require a habitat that is relatively stable over decades. Most known colonies are less than two acres in size and are often inhabited by less than twenty individuals. In Pennsylvania, they are most commonly found in the northeast part of the state as well as rolling hills associated with the southeast. Bog turtle sightings have been confirmed in most northeastern states and North Carolina, but the colonies are disjointed. There is a distance of approximately 250 miles between the northern and southern colonies of bog turtles. In Pennsylvania, there are 94 known locations where bog turtles have been sighted since records were first created in 1873. However, only a meager 23 are thought to still host the dying population.
- Annual Life Cycle: Eating basking and mating occurs from mid-April through June. Preferred diet includes invertebrates such as slugs, worms and other similar insects. Will consume some plant matter. Egg-laying happens in June and July with hatching occurring from mid-August through mid-September. One to six eggs are left to mature without attention for approximately six weeks. Commences hibernation in abandoned muskrat lodges or by burrowing in soft mud. Generally burrows 12 to 18 inches below ground. Depending on air and ground temperature, hibernation will occur between mid-September and the end of October. The bog turtle will not emerge from hibernation until the Spring, when both air and water temperatures reach 50 degrees Fahrenheit. Often found basking in open spaces during early spring just after emerging from hibernation while the coldblooded reptile raises its temperature.
- **Primary Threats:** Primary threat is the destruction of habitat due to commercial, residential and industrial construction as well as transportation route development (both road and rail). Secondary threats include illegal collection, pesticides and industrial runoff. Black market value of bog turtle often in excess of \$1,000 per turtle. For this reason, confirmed bog turtle habitat locations are not provided as public information by state and federal environmental agencies. It is unlikely this "extinction prone" species can survive without human intervention.
- State and Federal Protection: Listed as a Pennsylvania endangered species and threatened under the federal Endangered Species Act.



bog turtle top view



bog turtle bottom view



Photograph of Steven Cohen's infected right leg.

Date: September 25, 2008 ~ Credit Skylar Cohen

HOME NEWS ARCHIVES

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ROAD EXPANSION STUCK IN THE MUD – ACTUALLY, STUCK IN A BOG
By William Kilgore, GREENPHILLY STAFF WRITER

When planning a massive road construction project, engineers are often concerned, and rightly so, with the big issues that require creative solutions and big dollars, common questions like how do we get around this rock outcrop, where are bridges going to be located, and what drainage systems should be used on flood plains? However, as the Pennsylvania Department of Transportation (PennDot) recently realized, it is sometimes the smallest of issues that cause the greatest of problems.

In this case, the smallest issue is the smallest turtle known to live in Pennsylvania – the bog turtle. This cute little fellow is only about four inches long at maturity. After decades of development, its numbers reached critical levels and it became an officially listed endangered species in Pennsylvania in 1974. In addition, about 6 years ago, the U.S. Fish and Wildlife Service designated the bog turtle as being federally protected. It's not like it used to be when Badger Creek High School was built on a bog turtle habitat without question in 1962.

While the government has finally recognized the importance of saving the bog turtle, what is often lost on the general population is the cost associated with finding alternative solutions when a bog turtle habitat becomes threatened. About 15 years ago, a single bog turtle stopped an entire dam project in Lebanon Country from occurring. The only way the country can use the land now is to sell it to a conservancy, because such a group would never develop it. Now the proposed highway between Doylestown and I-95 has been jeopardized by the discovery of a bog turtle colony along the proposed route. As a result, PennDot will have one of three choices: 1) Divert the route and displace additional homeowners; 2) build an expensive bridge over the bog where the turtles were found; or 3) abandon the proposed highway altogether. Each option carries costs in excess of \$1 million. Kermit was right – it's definitely not easy being green!

We here at greenphilly certainly applaud the Commonwealth for its efforts and making this discovery public information and for trying to find a green solution. We also echo a word of caution to environmentalists in the area since the bog turtle has become the poster-child for anti-urbanization: do not attempt to plant bog turtles in locations where they do not exist. Even though a black market bog turtle can sell for as much as \$1500, many opponents of construction projects feel it is a small price to pay to run some interference. But that is not the only cost. Now, if you are caught, you will be prosecuted.

A representative from the Pennsylvania Fish and Boat Commission (FBC), who chose not to have her name cited in this article, informed greenphilly that she knows of at least five instances in the past three years where opponents of given construction projects have tried to plant bog turtles on site in hope of derailing it. To a trained environmental scientist, it is easy to spot a fake sighting. Bog turtles live in very specific and limited locations. The conditions have to be just right to support the endangered species. It is not an environment that can be created. While none of the environmental vandals have yet to be prosecuted, a new mandate in FBC policy is about to change all of that. It is illegal to own or possess bog turtles. Convictions can even include up to four years of jail time and the FBC will now prosecute, even if your "possession" of the turtle was limited to the few minutes it takes to drop it in the path of the new superhighway or chain store and snap a few shots with your camera.

It is yet to be known if the bog turtles found along the planned highway route were real or planted. However, given the delay in construction, it appears as if PennDot is not taking any chances. At the time of the writing of this article, PennDot was in the process of consulting with the Army Corps of Engineers to determine the cost of building a bridge over the bog area in question.

Questions? Comments - Write to me: WilKil@greenphilly.com

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Wisawe Central
High School

Wisawe, Pennsylvania www.wisaweHS.edu



Home of the Hawks!

May 2009 Newsletter Vol. 37 Issue 9

Suzy's W's Pet Palace Lives up to Its Name by Skylar Cohen (9th)

Two days ago me and a couple of my fellow members of the Environmental Science Club went and visited Suzy W's Pet Palace down on Main Street. We had heard that Suzy had been mistreating some of the dogs and cats that she sold there. Our informant told us that she would often forget to feed them and rarely took the dogs out of their pens. Puppy mills are really bad for the community and that is where we heard Suzy got most of her dogs.

Well, I am happy to report that Suzy W's Pet Palace was really that — a palace! All of the rumors are not true. The cats and the dogs are well cared for. In fact, Suzy regularly adopts shelter dogs and cats for herself and donates money to the SPCA. We were all very impressed.

Suzy is even saving the lives of one of Pennsylvania's endangered species – the bog turtle. The bog turtle is a beautiful species with

a dark multicolored shell and attractive yellow splotches on the side of its neck. In the middle of the Pet Palace was a larger tank that had two bog turtles in it. Someone had found the turtles on the side of a country road somewhere southwest of Wisawe. But the turtles were ill. Suzy nursed them back to health and recreated their environment. Suzy told me that they make great pets and that she hopes to have more bog turtles available in the future from a trusted source. Because they are so rare, a single bog turtle can cost \$750. Suzy said she will only sell them to the right buyer.

It is so nice to report a story of someone helping the community and the environment like the work done by Suzy and her Pet Palace!

Upcoming Baseball Schedule

Date	Opponent	Home / Away	
May 5	Lenape South	Home	
May 13	Slately High	Away	
May 18	Delaware N.	Away	
May 21	Shawnee Cen.	Home	
May 25	Conrad High	Home	

Paz Bobrow

P.O. Box 10. Driftwood, PA 15832

EDUCATION

Penn State University, M.S., Zoology, 1977

Oberlin College, B.S., Literature, 1970

Departmental honors

EXPERIENCE

Planet Protectors, LLC, Driftwood, PA, 2006-Present

President and CEO, 2006-Present

Provides comprehensive environmental analysis and litigation support, including categorical exclusion analysis, environmental assessments, environmental impact statements, and other examination of water, soil, and air pollution; present and potential population of existing or planned property for threatened or endangered species using the proprietary NestFinder database; and wildflowers suitable for consumption. Provides investigation and expert testimony on matters of environmental science and conservation, including litigation testimony. Expert eco-tourism guide.

Pun-Yin Institute for Wholistic Studies, 2003-2006

Guru, 2005-06 | Student of the Wave, 2004-05

Led seminar sessions in zoology, botany, environmental science, reflexology and aura cleansing to groups of students from around the world studying nature, human impacts, and fengshui.

Pennsylvania Department of Environmental Protection, 1978-2003

Chief, Investigations, 1993, 1996, 2000 | Senior Investigator, 1994-1995, 1997-1999, 2001-03 Investigator, 1985-1994 | Associate Investigator, 1977-1984

Assisted, joined, and led teams of investigators in performing environmental assessments and drafting environmental impact statements. Investigated allegations of permit violations relating to clean water, clean air, and soil pollution. Testified before executive, legislative, and judicial tribunals on matters relating to environmental science, including on behalf of the DEP in enforcement and injunction proceedings. Served as Chief of the Investigations division at request of DEP administration for three years, supervising over fifty investigators.

PROFESSIONAL ASSOCIATIONS

Association for Environmental Studies and Sciences
Association of Environmental Professionals
Natural Resources Defense Council
League of Conservation Voters

Greenpeace Earth Liberation Front TerraFirst! Greenwar

REPRESENTATIVE PUBLICATIONS

Para-Environmental Disruption: Toward a New Paradigm of Conservation, www.planetearthfirst.com Living on the Edge: Bog Turtles, Wild Resource Conservation Fund 2007 (educational video) A Mother's Love: Gaia, Her Children, and Unity of Spirit and Body, Redbook, October 2005

Brennan Nellie, Ph.D.

15 Thames Terrace • Gesselchaft, PA 15217

EDUCATION

Yale School of Forestry and Environmental Studies, New Haven, CT, Ph.D. Ecology, 2009

Honors: Gravesend Research Fellowship, Cambridge University, 2008

University of Pittsburgh, Pittsburgh, PA, B.S. Environmental Engineering, 2004

Honors: Josef Teodor Konrad Prize for Undergraduate Research - Environmental Engineering Achebe Scholars Program

EXPERIENCE

Nellie Consulting, LLC, Founder and Principal, 2009-Present

Provide environmental assessments and, where necessary, prepare environmental impact statements for public and private clients seeking completeness and discretion. Utilize all modern, accepted methodologies for determining presence or absence of threatened or endangered species. Work with clients on environmental management plans to minimize disruptive influence of development or expansion projects on endangered or threatened species or their habitat. Act as liaison with governmental entities, private groups, and press relating to development. Testify as expect before executive, legislative or judicial bodies.

Rutgers University - Camden, Adjunct Professor of Law, 2010-11

Taught environmental law seminar classes to second and third year law students. Received excellent evaluations and invitation to return as adjunct professor in the future.

Drexel University, Lecturer in Environmental Engineering, 2010

Lectured in various aspects of environmental engineering, ecology, and botany.

National Park Service, Park Ranger, 2004-05

Patrolled, maintained, and guided tours and other groups at Valley Forge National Historical Park and other national parks. Accredited as federal law enforcement officer.

United States Army Corps of Engineers, 249th Engineer Battalion, 1995-2001

As enlisted member of United States military, actively participated in the world's largest public engineering, design and construction management enterprise. Actively supported Corps work with Federal Emergency Management Agency. Engaged in water management, coastal navigation, outdoor recreation, water supply and disaster recovery efforts.

PUBLICATIONS

The Crisis in Our Forests: Invasive Species and Human-Mediated Transplantation of Wood-Boring Beetles, Journal of Environmental Sciences, June 2011

Clean Water, Clean Air, and a Cleaned-Out Wallet?: Strategies for Mediating the Impact of Environmental Findings on Development and Expansion, in Green Growth, 4th Ed., Berdichev and Bishopsbourne, eds., University of Chicago Business Press, 2010

Does The Endangered Species Act Adequately Protect Growth?, Comment, Yale Journal of Regulation, Winter 2007

PROFESSIONAL ASSOCIATIONS

American Academy of Environmental Engineers Pennsylvania Chamber of Commerce United States Army Alumni Association Pennsylvania Young Engineers Nature Conservancy Board of Advisors Yale Alumni Association

ZenoPharma
unlocking the key to our future

Date: January 31, 2011

To: All ZenoPhama Executive Level Employees

From: David P. Carney – Sr. Vice President, Research and Development Re: Current Trends in ZenoPharma Research & Development

Dear Colleagues:

With a heavy pen and heavier heart, I must report that our research and development efforts have not met expectations. A perfect storm of increased cost of capital, an increasingly robust FDA adjudicative process and the fact that some of our best selling products are or soon will be subject to generic competition, paints a bleak future. Worse, based on publicly available information, our competitors appear to have had greater success stocking their pipeline with new products for market. If we are not able to break through on our pending projects, and barring any unexpected legal activity that would extend the patents on our leading pharmaceuticals, it is possible that we could be targeted by one of our competitor companies, or, worse, be forced to enter bankruptcy, sell some of our assets and close our less profitable divisions. Needless to say, this would bring about a substantial workforce downsizing.

Specifically, our three biggest profit generating products, Tellnopsis (the leading post-glaucoma surgery eye drop), Crownopy (asthma medication), and Sympiocore (anti-depressant) will have lost their patent protection by February 1, 2012. Indeed, Tellnopsis, which lost list protection in Nov. 2010, is already losing market share to aggressive generic competition. In addition, our high hope for Thermadapline (high blood pressure medication) was dashed when the drug recently failed in phase three testing. It will not be eligible for FDA approval until 2015 at the earliest. This leaves ZenoPharma reliant on SutureStick (medical adhesive) as our primary profit driver. Unfortunately, as I documented in my report last quarter, the production levels of SutureStick are limited to the algae production and processing capabilities of our Wisawe facility. We have been trying for many years to get the algae to grow in laboratory settings to increase production levels. However, this project has suffered significant setbacks, and we may be as far as 5 years away from being able to utilize laboratory based production to supplement the quarry's natural algae production on even a limited scale. We are examining options for substantially increasing the quarry's productivity in order to provide sufficient revenue to remain solvent in this trying time. Furthermore, the long term testing of SutureStick has produced some troubling results, including an increased occurrence of patients suffering abnormal pain around suture sites and elevated cortisol levels. However, these results are still well within the statistical margin of testing error, and they are not significantly higher than those associated with SutureStick's primary competitor, Stull Medical Adhesive's BioBinder. However, these long term test results are fair warning that we cannot become entirely reliant upon this single product.

Do not share the contents of this memo with line employees, but keep its message in mind through all of your endeavors. ZenoPharma has faced trying times before, but the creativity and hard work of our management and our employees have always pulled us through. The night is always darkest just before the dawn. Together, with perseverance, we and ZenoPharma will survive and flourish.