BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

WALLACE PHARMACEUTICALS,

Petitioner,

vs. PCB No.: 02-207

ILLINOIS ENVIRONMENTAL (Air-Variance)

PROTECTION AGENCY,

Respondent.

Proceedings held on July 16, 2002 at 10:00 a.m., at the Macon County Courthouse, 253 East Wood Street, Courtroom 5C, Decatur, Illinois, before Hearing Officer Steven C. Langhoff.

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Also present from the Board Staff:
Alisa Liu
William Murphy

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I N D E X

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E X H I B I T S

NUMBER	MARKED FOR I.D.	ENTERED
Petitioner's Exhibit A	13	13

(Petitioner's Exhibit A was retained by Hearing Officer Steven C. Langhoff.)

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P R O C E E D I N G S

(July 16, 2002; 10:00 a.m.)

HEARING OFFICER LANGHOFF: Good morning, everyone. My name is Steven Langhoff. I am the Pollution Control Board Hearing Officer, who has been assigned to this matter and who will be holding this hearing today. This is PCB 02-207, Wallace Pharmaceuticals, Inc., versus Illinois Environmental Protection Agency. For the record, it is Tuesday, July 16th of 2002, and we are beginning at 10:00 a.m.

I want to note for the record that there are two members of the public present -- make that three members of the public present. Members of the public are encouraged and allowed to provide public comment, if they so choose.

I want to welcome Attorney William Murphy and also Alisa Liu from the Board's Technical Unit from Chicago. They will be sitting in for today's hearing.

I will remind the parties that Board Rules allow the Board to ask questions of witnesses who are on the stand and testifying.

On May 20th of 2002, Wallace Pharmaceuticals filed a Petition with the Board seeking a Variance from the volatile organic material, or VOM, V-O-M, emission reduction requirements of 35 Illinois Administrative Code, Part 215, Subpart T. Wallace requested a Variance of the regulations from July 1st of 2002

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until December 31st of 2006.

On June 6th of 2002 the Board accepted this matter for hearing. On June 26th of 2002 the Agency filed its recommendation to the Variance Petition. Ms. Driver, attorney for Wallace Pharmaceuticals, will more fully explain the contents of the Variance Petition today.

I want to take a brief moment to let you know what is going to happen today and what is going to happen after the proceeding today. You should know that it is the Pollution Control Board, and not me, that will decide this case. My job as a Hearing Officer requires that I conduct this hearing in a neutral and orderly manner, so that the Board has a clear record of the proceedings here today on which to base its decision.

Please feel free to call me either Mr. Hearing Officer or Mr. Langhoff.

It is my responsibility to assess the credibility of any witnesses giving testimony today, and I will do so on the record at the conclusion of the proceedings. We will begin with opening statements from both parties and then we will proceed with Wallace's case. I will then allow any members of the public to participate in the hearing that wish to do so. We will then set a briefing schedule on the record and a date for the receipt of public comment at the Board's office.

The Board's Procedural Rules and the Act provide that

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members of the public shall be allowed to speak or submit written statements at hearing. Any person offering such testimony today shall be subject to cross-examination by both of the parties. Any such statements offered by members of the public must be relevant to the case at hand. I will call for any statements from members of the public later in the proceedings.

This hearing was noticed pursuant to the Act and the Board's Rules and Regulations and will be conducted pursuant to Sections 101.600 through 101.632 and Part 104 of the Board's Procedural Rules.

At this time I will ask the parties to make their appearances on the record. For the Petitioner?

MS. DRIVER: LaDonna Driver, Counsel for Wallace Pharmaceuticals, Petitioner.

HEARING OFFICER LANGHOFF: Thank you, Ms. Driver. For the Agency?

MR. MATOESIAN: Charles Matoesian, Counsel for the Illinois Environmental Protection Agency.

HEARING OFFICER LANGHOFF: Thank you, Mr. Matoesian. Do we have any preliminary matters that need to be discussed on the record?

MR. MATOESIAN: No.

MS. DRIVER: No.

HEARING OFFICER LANGHOFF: Okay. Thank you. Would Ms.

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Driver like to give a brief opening statement on behalf of her client?

MS. DRIVER: Thank you. Again, I am LaDonna Driver, Counsel for Wallace Pharmaceuticals. We are here today on Wallace's Petition for Variance from the emission control requirements of 35 Illinois Administrative Code, Part 215, Subpart T. Specifically, Wallace is seeking relief from the control requirements for five dryers at its facility here in Decatur.

We are going to be presenting two witnesses today. First is Mr. George Brown, who is immediately to my right. He is appearing on behalf of the company. He will testify generally regarding the facility and the manufacturing process at issue here, and he will specifically describe the dryers and how VOM emissions occur from them.

Mr. Brown will also then testify regarding the specific Variance relief we are seeking. He will describe the company's plan to upgrade its facility here in Decatur, and talk a bit about the increased production that the facility is expecting, both in the short-term and possibly in the long-term. Mr. Brown will explain that this production increase will result in at least a temporary increase, as well, in VOM emissions and also in the short-term above the thresholds for emission control under Subpart T.

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Mr. Brown will also describe the potential options for dealing with those emissions increases and the company's preference on pursuit of those options. The first preference of the company is to be able to eliminate VOM solvent from its process altogether. If that is not successful, the company would then pursue a substitution for this VOM solvent in its process in an effort to reduce or eliminate VOM emissions. As a last resort, would look to installing control technology to deal with the VOM emissions from the process.

Mr. Brown will describe the efforts and the time and the costs that will be necessary to look into all of those options during the course of the Variance. His testimony will demonstrate that the facility simply cannot comply with Subpart T's emission control requirements, at least in the short-term, without ceasing production. He will describe how such a halt to production would result in an arbitrary and unreasonable hardship, not only on the company, but on the public, who would have reduced access to medicines.

Then Mr. Brown will testify concerning the compliance schedule that we have proposed for the Variance and resolved with the Illinois Environmental Protection Agency, as well. This schedule has been adjusted since we filed our initial Petition to address some concerns raised by the IEPA, and we will be talking a bit about that adjustment in the schedule as well.

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Specifically the change is that our commitment to assess potential control technologies has been moved forward in the schedule now. When we originally proposed the schedule, it was going to occur at the third stage, the pilot scale testing, of the non VOM solvent or the solvent elimination. We have now moved that forward up to the bench scale phase of that process.

And, again, Mr. Brown will explain that the company wants to devote its resources up front to finding a change to its process that will eliminate solvent altogether in the future.

Finally, Mr. Brown will be testifying regarding the VOM emissions that will be occurring from the process during the Variance and the limits that the company has proposed to limit itself for VOM emissions during the course of the Variance. And he will also clarify what, exactly, the company has on site that is subject to Subpart T, to clear up some of the questions that have been raised about that.

Our other witness, sitting two chairs over from me, is Mr. Dan Goodwin. He is Wallace Pharmaceuticals' consultant. He will testify regarding the efforts that he has undertaken to study the potential control options that are there to control VOM emissions from the process. He will talk about the different options that he has analyzed for the facility and the technical feasibility issues with each option, and he will also testify regarding the cost issues associated with the chosen method of control.

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Finally, Mr. Goodwin will testify regarding the environmental impact of the VOM emissions that will be occurring during the term of the Variance.

With this testimony and the information contained in our Petition, it will be clear that a Variance should be granted from the emission control requirements of Subpart T for the dryers at our Decatur facility. The Illinois EPA has recommended that the Variance be granted. And on behalf of the company we express our appreciation to the Illinois EPA for working with us and recommending suggestions to us for this Variance, and we appreciate their support.

We will be happy to answer any questions that the Agency, the Board, or the public may have at the conclusion of our testimony. Thank you.

HEARING OFFICER LANGHOFF: Thank you, Ms. Driver. Mr. Matoesian, do you have an opening statement?

MR. MATOESIAN: Your Honor, or Mr. Langhoff, again, my name is Charles Matoesian, for the Illinois Environmental Protection Agency. We will not be presenting any testimony today, as we filed a recommendation recommending that the Board grant this proposal for a Variance.

I would state, though, that with me today is Mr. Joe Uy, who is an Environmental Engineer in the Air Quality Planning Section of the Agency. He will be here to help answer any

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questions that the Board or the public may have. That is all.

HEARING OFFICER LANGHOFF: Thank you. Ms. Driver, before we get to your first witness, we need to address the issue of the waiver of the decision deadline.

MS. DRIVER: Yes.

HEARING OFFICER LANGHOFF: Okay. Go ahead and make your waiver.

MS. DRIVER: We will be following up with a written waiver to this effect, but I believe currently we have a decision deadline of September 17th. And the company, Wallace Pharmaceuticals, has agreed to move that deadline back to the end of September to allow for a Board decision to be made on September 19th at its regularly scheduled meeting.

HEARING OFFICER LANGHOFF: Okay. Thank you. Would you call your first witness.

MS. DRIVER: Sure. Before I do that, Mr. Hearing Officer, I would just like to put in Petitioner's Exhibit A, which is just a copy of the Variance Petition that was filed with the Board on May 17th.

HEARING OFFICER LANGHOFF: All right. Thank you. Any objections?

MR. MATOESIAN: No.

HEARING OFFICER LANGHOFF: All right. Petitioner's Exhibit A is admitted, which is the original Petition that was filed.

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(Whereupon said document was duly marked for purposes of identification as Petitioner's Exhibit A as of this date and admitted into evidence.)

MS. DRIVER: Would you like to look at --

MS. BARBARA RIDDLE: No, I don't know anything about that.

MS. DRIVER: Okay.

MS. BARBARA RIDDLE: I have had no dealings with it, to this point.

MS. DRIVER: Okay.

HEARING OFFICER LANGHOFF: Go ahead.

MS. DRIVER: The Petitioner calls George Brown.

HEARING OFFICER LANGHOFF: We will have Mr. Brown just stay where you are.

Would you swear the witness, please.

(Whereupon the witness was sworn by the Notary Public.)

G E O R G E R. B R O W N,

having been first duly sworn by the Notary Public, saith as follows:

DIRECT EXAMINATION

BY MS. DRIVER:

Q. Please state your name again just for the record.

A. George R. Brown.

Q. Who is your employer, Mr. Brown?

A. MedPointe, Incorporated.

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Q. And what is your position at MedPointe?

A. Director of Project Engineering.

Q. What does that position involve?

A. Basically I oversee all capital or large expense projects, engineering type projects for the corporation.

Q. And how is MedPointe related to the Wallace Pharmaceutical facility here in Decatur?

A. At the end of September of 2001, September 28th, precisely, Carter-Wallace, the former owner of Wallace Pharmaceuticals, what is now Wallace Pharmaceuticals, sold itself. It sold itself to two parties. The consumer products business was sold to Church & Deloitte. The pharmaceutical business was sold to MedPointe. Immediately after that sale, MedPointe changed the name to Wallace Pharmaceuticals for the operation in Decatur. Prior to that it was called Wallace Laboratories.

Q. And were you employed by Carter-Wallace prior to this transaction with MedPointe?

A. Yes.

Q. What were your duties for Carter-Wallace?

A. Well, I was employed by Carter-Wallace for 17 years prior to the transaction. And the last seven years was basically essentially the same duties that I have now.

Prior to that, I was a maintenance manager -- or an

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engineering manager for a facility in Trenton, New Jersey, a manufacturing facility. Prior to that I was a maintenance manager for an operation in another facility in New Jersey.

Q. What is your educational background?

A. I have a Bachelor's in Mechanical Engineering from Drexel University in Philadelphia.

Q. Do you have any other engineering experience prior to your education?

A. Prior to my education I served in the Marine Corps for ten years in the engineering field, in different aspects of the engineering field.

Q. And are you a member of any professional organizations?

A. I have a current membership right now in the ISPE, the International Society of Pharmaceutical Engineers, and BOCA, Building Officials and Code. Previously I have been involved with the ASME, American Society of Mechanical Engineers, and the AIPE, American Institute of Plant Engineers, and I was the Chapter President of the Northwest Indiana Chapter for about a year and a half in the early 1980s.

Q. Okay. Let's talk now about the Wallace Pharmaceuticals facility here in Decatur. Can you just describe for us its general location and just a little bit about the facility itself?

A. The facility is very, very close to this courthouse. It is off of Eldorado Street, which is a main east-west boulevard

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through the city, U.S. 36. It is at the intersection of Eldorado and North Morgan. I believe the street address is North Morgan. It is an older industrial, commercial neighborhood, basically. The building goes right up to the -- goes right up to the sidewalk and a curb on two sides.

Q. How many employees do you have at the facility?

A. Presently we have around 105 permanent employees, and for the last nine months or so we have been employing about 20 temporary employees.

Q. What does the company manufacture at this facility?

A. We manufacture liquid and oral -- or oral dosage products for cough and cold remedies and central nervous system remedies. Primarily by oral we have liquid dosage, nasal sprays and tablets, solid dosages tablets.

Q. As you know, today, Mr. Brown, we are here talking about the emission control rules regarding volatile organic material, or VOM for short. What products does the Decatur facility here make that involve or produce VOM emissions?

A. Some of the cough and cold solid dosage products or tablet products use a VOM, ethanol precisely, which is commonly used in the pharmaceutical industry to wet the dry ingredients prior to blending the ingredients together before the tablet is compressed. None of our other processes use that.

Q. Okay. Then let's confine the remainder of our

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discission just to those handful of tablet products that involve this ethanol as a wetting agent and subsequently produce VOM emissions.

If you could, describe for us how -- what is it in the process that actually generates the VOM emissions?

A. Well, when we make a tablet it starts out very much like making a cake. We blend the dry products together and we mix them up. And then we basically compress them through a press into this tablet. This mixing often requires a wetting agent. There are dry granulation processes that there is no wetting agent involved. You know, we have chosen, for reasons I don't really understand or know, to use a wetting agent. Water is often used as a wetting agent. If that is not an adequate wetting agent, then we -- the industry goes into these different solvents.

That binds the product together. And then after the product is suitably mixed, we dry it before the compression. And the drying is done on what we call tray drawers in the industry. They are metal trays about the size of this table top with perforated holes, and they lay a piece of photo paper on top of that and then just spread the damp powder out on top of that tray.

And they go into a rack of about 25 trays in each rack, which is tall. It is about six foot tall. And that goes into a

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chamber and the hot air is blown up through that. And then a percentage is released out into the atmosphere.

That is where the water is either -- the wetting agent is flashed off, because water is blown away or the solvent is also blown away and mixed into the air stream and out the exhaust vent.

Q. So the VOM emissions from the process are actually occurring at the dryers?

A. At the dryers.

Q. How many dryers do we have involved in this particular VOM associated process?

A. Well, we have -- the plant has five dryers, and there are a mixture of dryers. Four of them are very similar, but two of those are single-rack dryers and two are double-rack dryers, where we can put two of these racks in. And then we have a fifth dryer made by another manufacturer that is newer that will hold four racks. Okay.

But the way we have stayed within the 100 pound per day limit is by making our batches in subbatches, either three or four subbatches, depending upon the total quantity of solvent that is used. Then we dry these subbatches individually in each oven. Usually one rack will get us to that 100 pound limit or close to that 100 pound limit. So we generally just use the single or double rack ovens to dry these subbatches. We never

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use the four rack oven, because it just is not efficient to run that oven with just one rack in it.

Q. And just clarify for the record, when you referenced this 100 pound limit, what, exactly, are you referring to there?

A. Well, Subpart T limitations are 100 pounds per day, or two and a half tons per year per source.

Q. What happens if you cross that line, over 100 pounds per day, or two and a half tons per year of VOM emissions, what would Subpart T require?

A. Well, Subpart T would then require us to put in a pollution control device and reduce the emissions to 90 percent of that.

Q. Okay. So what you are saying is that the company has handled its process in the past such with the number of racks it puts in a dryer that it would never hit the 100 pound per day VOM threshold for Subpart T?

A. By only using the four what we call Ross dryers, made by a company called Ross, so we call them Ross dryers, they are the single and doubles. By confining our operation to those four ovens, we stay within the 100 pounds per day limit.

Q. And, similarly, have any of the ovens ever come up to the two and a half ton per year VOM emission limit?

A. No. Early on in this project I reviewed the emissions. We keep a daily -- the pharmaceutical industry requires -- most

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of the finished pharmaceutical industry is a batch industry. There is very little continuous manufacturing going on. They require what they call a batch record. And that's a complete recipe of how that batch is made and how everything is weighed in and everything has to be signed off and has to be witnessed. Two people have to be involved in putting the ingredients into the batch, and all of the elements. So we went back and reviewed all the batch records from 1999, 2000, and 2001. In 1999 we produced or emitted a little under one ton per dryer.

Q. For the year?

A. For the year, for the entire year. And then in 2000, that was just a little bit over a ton. And in 2001 it went up to just around two tons.

Q. Okay.

A. So we have never been, you know, close to the 2.5, but we felt, based on what we did last year, in 2001, and what the new management in the new company was asking us to produce in 2002, that we could have a problem this year and, hence, that's why we are here.

Q. Okay. Let's talk about that a little bit at this time. You were talking about the fact that in 2001 the emissions got up to about two tons per year per unit. And then you said the company was looking at what was going to be coming on the horizon, and wanted to come in for a Variance.

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Talk a little bit about what is behind the thinking there about what is going to be happening as far as an increase in emissions in the next couple of years?

A. Well, what happened in I guess back in 2000, we started to look for -- we are under significant marketplace competition from the generic drug manufacturers. So we started to look at the things that we could do to our products to get some additional patent protection and to keep the generic companies at bay a little bit. So we looked at some variations of our existing formulations and basically introduced new products.

As we did that, we continued to use the ethanol in these products. So one of the reasons for the spike in 2001 was a lot of development work on new products was being done. And then we actually introduced a couple of new products. And when we introduce a new product, we have to build a substantial what we call pipeline inventory. It is important that we have -- that all of the wholesalers and all the chain drug stores have this material available so that when we introduce it to the physicians and the physicians begin to write their prescriptions, it is available to the public.

So that pipeline build is what really amounts to about six months worth of inventory that, you know, we have to manufacture in a compressed period of time and get spread out. So when I say six months worth, six months worth of inventory that we would

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normally keep in our factory to back up the industry to get that spread out.

So that is what was going on in 2001. We saw a continuation of that coming in 2002 with the new company. The new company has already, at the beginning of the year, had made a goal of increasing the sales force by about 70 percent. That's basically in place. These people have now been hired and have been trained and there has been, you know, some turnover and that sort of stuff, but they are basically out there. And we are starting to feel a little bit of the new business that they are generating.

Most of that -- that increase in sales force was basically designed to support the liquid products more than the tablet products. But we are calling on more physicians and we are talking about all of our products when we talk to the physicians, and we are feeling an overall increase in sales. And that was one of MedPointe's goals.

Then we also -- what MedPointe did, when they did their due diligence in reviewing the facilities and in reviewing the businesses of Carter-Wallace, they looked at the manufacturing facility in Decatur, which was essentially very old. I think pharmaceuticals have been manufactured there since the 1950s. Carter-Wallace purchased it in 1979. In -- or excuse me. Yes, 1979.

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In 1987 Carter-Wallace expanded it in the liquids area and the warehouse area. But the tablet portion of it has been pretty much left alone. Through that due diligence we uncovered that we are really not up to current standards, so to speak, for the FDA in our ventilating -- in our heating and ventilation systems in this tablet area.

So we looked at a major project to revamp that entire system, which would require about 12 weeks of down time to physically do the work. So that meant another inventory build to cover us through that down time period. So those are the main contributing factors, the increased sales, increased new products, and then the required inventory build for the down time.

Q. When do you anticipate having the plant -- this part of it, the tablet area part of the plant, shut down for these improvements to come up to the FDA standards? When do you anticipate that shut down is going to begin?

A. Presently it is scheduled to happen in January.

Q. And that has been moved back a little bit?

A. That has been moved back. Originally it was supposed to be going on within the end of this month we would start, and then we pushed it back to October. And then about a month ago we pushed it back to January. We will be starting our inventory build in the fourth quarter for that to take place.

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Q. So then production would have to increase, as you just said, in the fourth quarter to build inventory in anticipation of the plant shut down in January?

A. Yes.

Q. Because of that increase in production, what will that mean for the facility with respect to the emission control thresholds for Subpart T?

A. That will push us later this year into a situation where we exceed the limits of Subpart T. So without this Variance we would have to just basically change our plans and shut down and possibly lay people off.

Q. Okay. In lieu of just shutting down production in October or whatever in the fourth quarter, you get to that point where you hit these emission thresholds, couldn't you just change your process to eliminate the VOM solvent and keep producing through the end of the year?

A. No. Some of our products are what we call an NDA product, which means back in the -- I am not exactly sure when, but back 20 or 30 years ago the FDA created a situation or created a ruling that any new drug that goes on the market has to have a new drug application and is subject to FDA review before it can be placed on the market.

So the drugs that we have that are in that category, since they have been fully reviewed by the FDA and are considered --

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for some reason we call them an NDA drug, but they are the drugs that come under that ruling. Any change that we make to that product, if we change the formulation, if we change the way we make the product, you know, specifically a process change, we have to review that with the FDA. And that requires -- that can take -- these products are not real critical products, you know, not like cancer medicine or something that is really critical, you know, to the public, so it takes a little lower priority with the FDA. And we feel that review would take about a year to a year and a half, just for the FDA to review.

Q. For each product?

A. For each product. And then we have -- fortunately at this plant we have quite a few products that are not NDA products. They are older products that were grandfathered before this provision was made with the FDA. And so they don't require the FDA review.

However, both the older products and the NDA products require that you go through a methodical process to make any change and, you know, document everything that is done during that process. One of the biggest time line item in that whole process is the stability studies. Because we claim a shelf life on our products. So we have to be able to document that that is an accurate claim.

If we say that the product is good for five years on the

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shelf, then we have to have some studies in place that say that we can prove that it is good for five years. You can't do that in a month. We can accelerate that process, but we can't accelerate to -- we can accelerate to a year or several months, but -- so that has to be done irregardless of whether it is an FDA -- an NDA product or non NDA product. The difference being that the NDA product requires that all this documentation be submitted to the FDA and reviewed. The other means it is just available for -- we have to be able to produce it if we are asked by the FDA to produce it, to show that we did the work.

Q. Let's talk a little bit about what is involved in that process and let's do so considering that we have got six or seven different products that we are talking about here that would have to go through this. What are the steps, basically, to take this through this analysis and documentation process for FDA requirements?

A. There is basically three -- four steps. Basically we do preliminary research, you know, a study of -- let's say that we were to do a solvent substitution. We would have to do a literature research. We would have to find out what would be a suitable solvent that may work in the situation.

Then we select that solvent and then we would do a bench-top test, test-tubes and little small beakers, maybe a three to five pound batch or something. And then we would start

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doing some stability work with that.

If that looked promising, then the next step would be a pilot scale, and that's -- our batches -- I really don't know the total weight of the batch, but just the alcohol in the batch is about 200 pounds. And so, you know, we would do a pilot scale which would maybe be a third of that or 25 percent, depending on what equipment is available to do the pilot scale. That is a process that mimics the full scale production.

We would go through that and then, again, continue with the stability. And then if everything looked pretty good, we would start doing full scale manufacturing. And that is done under what we call an E batch, which is an experimental batch, or an N batch. It would probably be done under an N batch, which is a batch of material that we would still be able to sell, because there is quite a bit of cost involved in making a batch because of the raw ingredients. So we don't want to make a lot of product and then just throw it away. So we would be able to see that. We would have to put it on hold for the stability work to be completed before we could actually sell it.

Q. And considering these four steps, and all of the products that we have involved here, how much time does it -- would it take for the facility to move through that complete process?

A. Well, we are estimating that to do this whole facility

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through that we would take about 10 to 12 months for the bench-top work, and then another 10 to 12 months for the pilot scale, and then another 15 months or so for the full scale.

Q. And how about for the preliminary, the first end stage, how much time we would allow for that?

A. We would figure around six months, six to ten months on that.

Q. Okay. So altogether when you talk about all four steps we are really looking at about four years?

A. Uh-huh.

Q. Is that as tight as we can get it? Can we cut any time out of there at any point?

A. We don't feel we can, because when we built that schedule, we really looked at most of it as -- we said, you know, we don't necessarily need to do 100 percent to stay within this Subpart T. So we said, well, we won't consider the NDA products as part of this because it would take a lot longer.

Q. Okay. Let's kind of go back now that we have talked about this process that is involved for getting to the point where we could do a non VOM solvent or solvent elimination altogether. Let's bring ourselves back now to where we are in 2002, in this production increase we are anticipating in the fourth quarter. And when we get to that point in October or so, where we are hitting -- getting up to those emission control

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thresholds.

We have established that we couldn't just switch over to working with a non VOM solvent or a dry process because of the FDA requirements. In lieu of that, and in lieu of just shutting down, could we not bring in a control device in the fourth quarter of this year to keep -- to reduce the VOM emissions and keep us going in production?

A. No. We feel that it would take about a year plus to install a pollution control device. We looked into this early this year. We employed Dan's group to help us. We looked at the different technologies.

One of our problems, and our biggest problem at the Decatur facility is lack of space, lack of real estate around the plant. So whatever we install there will have to probably go on the roof. It will have to go on the roof, you know, unless we can -- unless we can buy some property, and that would take several months to do that.

So now we have said, okay, this has to go on the roof. It is relatively heavy equipment. And even in the best case that we have looked at that we have chosen, which is the thermal oxidation, which is not necessarily the best for the environment, but it is the best that we have chosen. We chose that because it was the lightest and it required less revisions to the roof. But even that will require substantial structural revisions to the

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building to support it.

Then that opens up another problem, because you can't really just go in and reinforce the roof while people are working underneath it. So that requires more down time to get in and schedule that into the process.

Q. Okay. And assuming, then, that we could do all of that, get the structural work done and get the device up there, are there other requirements that we still have to follow?

A. Well, we also have to go through the permit process with the IEPA for installing the device.

Q. So considering that and all of the work that would have to be done at the facility, ordering and receiving the equipment, we think it would take about a year before we could get the device up and running?

A. Uh-huh.

Q. Okay. Have we looked into what the cost for that kind of control equipment would be?

A. Yes, we have. You know, the equipment installed, not just the equipment, but the equipment installed, it looks like it is probably a $500,000.00 to $600,000.00 effort.

Q. What about annual operating costs that would go on with that?

A. Dan worked that up and could probably answer that more accurately than I can.

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Q. Okay.

A. But it is probably in the range of -- in the neighborhood of $100,000.00 plus a year to operate that, I believe.

Q. Now, going back to our situation here in 2002, we have established that we can't change our process right away, because of the FDA requirements. We can't install a pollution control device right away, because of physical issues and permitting requirements.

Getting to the point, again, here at the facility where we are hitting this threshold, instead of just shutting down production, is it possible for us just to move the production to another one of our facilities and keep going?

A. We considered that earlier this year, and we determined that that would take probably another -- that would be another thing that would take at least a year or so to do. That requires finding a -- it requires two things, basically.

It requires finding a contractor that could make our products, and is FDA registered and, you know, fully compliant and knowledgeable of all of the FDA regulations involved in the manufacturing of pharmaceutical products, and also that has a pollution control device in place.

We didn't pursue that too far, but we looked and that and said to go through all of that it would take a year and then we

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would have to go through moving the process from one facility to another. Even if we had another -- even if MedPointe had another facility, it requires several months of work with the FDA, just to transfer the manufacturing process from plant A to plant B within the same company.

Q. If we did that, what would happen to the jobs here in Decatur that are associated with this process?

A. That would have a negative affect on the population of the Decatur plant and the operation. And it would have a lot of negative affects. It would hurt the work force, and it would also hurt us. It would cost us more money. And it could -- I don't know where the contractor would be. The contractor could be some place else in the United States.

Q. So, really, when you look at all of the different options that we have talked about here, once we get to the point this year that we start coming up to these emission thresholds for Subpart T, the only thing that we could do, if we don't have the relief requested in the Variance, is to shut down this process, correct?

A. Uh-huh.

HEARING OFFICER LANGHOFF: Excuse me. Would you answer yes or no? I am sorry. That was a yes, right?

THE WITNESS: Yes.

HEARING OFFICER LANGHOFF: All right. Thank you.

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Q. (By Ms. Driver) Let's talk a little bit, then, about the Variance itself. And as you know, in the Petition we have provided a schedule of compliance that has since been adjusted a little bit.

Let's talk about the schedule itself and kind of going back to what you just described as a process for evaluating the non VOM solvent or the dry granulation process. Let's just kind of walk through what commitments the company has made to exploring these different options throughout the term of the Variance, and starting with this evaluation of the non VOM solvent or the process modification?

A. Can you repeat that?

Q. Sure. That was a long-winded question. Just walk us through what the company is committed to do during the term of the Variance to evaluate the non VOM solvent or the dry granulation process?

A. Well, we have committed to a schedule that would allow us to complete that work within the four years, we feel sufficiently enough to stay within the Subpart T limitations. And right now we are very optimistic that we can move toward eliminating VOMs from our products in the future.

This calendar year we had two products that we were planning to introduce -- first of all, the cough and cold season is the winter season. So our big season in the cough and cold

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business starts in November or December and runs through the winter. So we generally right now start launching these products for the next year whenever we have something new to take out to the industry.

The products that we had planned to launch this year, we were able to revise the process and use dry granulation and eliminate the solvent from those two products. So whether that will be as successful as other products is just speculation at this point. But we are very pleased with the results that we were able to do there. Our R&D group, or now what is known as our PPD group, the process product development group, is committed to all new tablet products to look at dry granulation, first choice, and then look at if that just does not work, then they will look at the other solvents, look at water first before we went into the VOM solvents.

Q. So the company's preference really is to eliminate ethanol altogether in production?

A. Absolutely.

Q. And that is the first step in the evaluation of the Variance?

A. You know, the solvent -- the ethanol solvent presents safety issues and employee handling issues and other issues, too, that we would be glad to get away from.

Q. So moving through the four steps that you talked about

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earlier, preliminary research, bench-top evaluation, pilot scale testing, and manufacturing evaluation, we have moved through all four of those for the elimination of ethanol.

What about the timing of looking into the control device option, where is that going to fall now in our compliance schedule?

A. I believe we originally put that in far enough back from the end of the Variance that we could complete it. But we would get to a point -- because we are very optimistic that we will be able to eliminate solvents or VOM solvents.

If it got to a point where if, for some reason, we felt that we were not going to be successful, that we would still have enough time to complete it before the end of the Variance, we have now moved that up to -- at least the initial study of it to the front end of the Variance to formulate our specific plan and do the structural analysis and stuff on the building and know exactly what we are dealing with as early as we can.

Q. Okay. Then at that point you will have that analysis done?

A. Right.

Q. If we find in the process that we can't make the solvent elimination work, you can begin down that path?

A. Yes.

Q. Let's kind of follow-up on that now and think about if

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we are in the process either at the pilot scale phase or the full scale manufacturing phase, and we find that the solvent elimination is not going to be successful or the non VOM solvent is not going to be successful, what is our approach going to be at that point?

A. Well, our -- at that point we would do a real careful analysis on where the business is going, and what are the costs of our different alternatives. And we would probably revisit -- we would definitely revisit, you know, do we need to introduce these products, do we need to actually make these products, you know, what do we yield off of these products. What is it going to cost us to put in the pollution control device. How much benefit to the environment will it actually provide.

So, you know, if we see that we are just slightly over a threshold, we would probably look at what is the -- I think the term is RACT, whether it is really a worthwhile thing here to do for the environment, for instance, economically from the cost, and then perhaps pursue a permanent adjustment to the standard. We would also probably look at outside contracting for at least some of these products.

Q. Is it possible, as well, that at that point in time that our production needs may be such that we may not even be operating over the Subpart T thresholds?

A. Absolutely. That's our goal.

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Q. Let's talk a little bit about -- just before I leave that part of it, we -- as we are moving through these things in the Variance we have committed to reporting about what our efforts are showing on these studies and that sort of thing and working with the IEPA; is that correct?

A. Yes.

Q. Okay. Let's talk now about the emissions that we expect to occur during the Variance. Earlier you stated that through 2001 we are seeing emissions of about two tons of VOM from the four dryers. So total, how much have we been seeing as far as actual VOM emissions from this process in the last couple of years?

A. Total, how much emissions we have seen?

Q. Right.

A. The total is around ten tons.

Q. All right.

A. Well, it is less than ten tons. It is about eight tons. In 2001, which has been our highest year, it was about two tons per dryer on the four dryers that we were using. So it is around eight tons total.

Q. What have we asked for or projected as the VOM emissions per dryer during the term of the Variance?

A. We have asked for relief up to five tons per dryer, which would be 25 total for the five. And we have asked for

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relief on a daily limit for the Lydon oven, the four rack oven, to 280 pounds a day from one oven, which would allow us to make a batch and dry it in that oven, with the understanding that on days that we did that we wouldn't be producing in the Ross ovens at the same time.

So the total daily emissions from the plant would essentially be the same. It would just be coming from one source instead of four.

Q. So overall we are looking at a total historical emissions of about ten tons, going up to 25?

A. Allowable.

Q. Right. Okay. Let's talk now, just as we conclude here, about the -- I think we have covered some of the things that the Board had raised in the last Hearing Officer Order. But one issue that we do want to clear up for the Board gets to these different pieces of equipment that Subpart T potentially regulates and whether or not we have those at this facility in Decatur. We will just work through what the different parts of Subpart T get to.

There are some provisions in Subpart T that regulate such things as pharmaceutical product reactors, distillation units, crystallizers, centrifuges, vacuum dryers, and so forth.

Do we have any of those pieces of equipment involved in this process?

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A. No, we don't have those at Decatur. Those are used by what is known in the pharmaceutical industry as fine chemicals or people that manufacture ingredients, and not the finished products.

Q. All right. Now, we know we have air dryers involved, obviously. That's why we are here?

A. Uh-huh.

Q. What about the rotary vacuum filters and the filters that have exposed volatile organic liquid surfaces, do we have any of those in this process?

A. No.

Q. Okay. Do we have any storage of ethanol in storage tanks?

A. No, all of our ethanol is purchased in drums.

Q. Okay. Do we have any end process tanks associated with this production?

A. No.

Q. Do we have any other kinds of emission units that would fall in kind of a miscellaneous category that could be regulated by Subpart T?

A. We report our emissions and we calculate our emissions based upon the total ethanol that we use in the process, and that is based on the assumption that it all goes out the stack in a dryer. And in reality a little bit is emitted when we actually

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add the ethanol ingredients in the mixer. At that point we set a drum of ethanol on a drum rack that is horizontal and there is a faucet on the side of it.

We pour it out and weigh it out into a smaller container, and then pour that into the mixing vessel. And there is an exhaust fan that is hooked up to that mixing vessel that pulls the fumes out into air. You know, this is basically speculation, but it is -- I would be surprised if that even accounts for half of a percent of the total emissions.

Q. So from this very small amount of VOM that could be happening from mixing, obviously, it would never have been an issue with the Subpart T thresholds in the past. In this anticipated increase in production, is there the potential that VOM emissions from this mixing could ever come close to the Subpart T thresholds?

A. Well, we don't believe there is, but it would certainly be studied. We need to look at that because the provisions of Subpart T say we have to get down to ten percent of our total. So we want to make sure that this is not a large contribution. If it was, the remedies are simple. You just tie that exhaust from that pick up in that room into a pollution control device.

Q. But we don't see the need now to seek relief from Subpart T for the mixing?

A. Huh-uh.

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Q. Okay. So then the only thing in Subpart T that we need the relief on are the five dryers that we have talked about today?

A. Uh-huh.

Q. That's a yes?

A. Yes.

Q. Okay.

A. I am sorry.

MS. DRIVER: That's all of the questions I have for you right now. Thank you.

HEARING OFFICER LANGHOFF: All right. Thank you, Ms. Driver.

Mr. Matoesian, do you have any questions?

MR. MATOESIAN: No questions.

HEARING OFFICER LANGHOFF: All right. Thank you. Ms. Liu?

MS. LIU: Sure. Thank you.

CROSS EXAMINATION

BY MS. LIU:

Q. Good morning, Mr. Brown.

A. Good morning.

Q. As part of your compliance plan you describe that Wallace Pharmaceuticals will be doing some research into a non VOM alternative. You described the bench scale testing, and the pilot scale phase that you will be investigating and --

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A. Pardon me?

Q. You described the bench scale and the pilot scale phases that you will be investigating?

A. Right.

Q. Do you plan to utilize internal resources for all of this research, or do you think you might seek outside expertise, as well?

A. The answer is yes to the second part. We always use outside expertise on just about all of our research. In fact, at this point in time we don't have a pilot facility. So even the pilot and the manufacturing facility would be contracted out.

Q. Would your process product development group be receptive to utilizing assistance from resources within the Illinois Environmental Protection Agency or the Department of Natural Resources that have some expertise in pollution prevention in the manufacturing processes?

A. You know, I can't speak for them directly, but I would think they would be.

Q. Okay.

A. I would think they would take any resources from any place that they could get them.

MS. LIU: Thank you.

THE WITNESS: Uh-huh.

HEARING OFFICER LANGHOFF: All right. Is there anything

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further? Okay. Thank you, Mr. Brown.

Yes, Ms. Driver?

MS. DRIVER: Could we take a break so that I could go plug my meter?

HEARING OFFICER LANGHOFF: Sure. We will take a brief recess. Five minutes.

MS. DRIVER: Thank you.

HEARING OFFICER LANGHOFF: All right. We will be back on at 11:00.

(Whereupon a short recess was taken.)

HEARING OFFICER LANGHOFF: All right. We are back on the record. It is 11:04.

Ms. Driver, your next witness.

MS. DRIVER: Thank you, Mr. Hearing Officer. I would like to call Dan Goodwin.

HEARING OFFICER LANGHOFF: Would you swear the witness, please.

(Whereupon the witness was sworn by the Notary Public.)

HEARING OFFICER LANGHOFF: By the way, the microphones are not on.

THE WITNESS: Okay.

HEARING OFFICER LANGHOFF: So you will have to speak up so that Darlene can pick up everything you say.

THE WITNESS: All right.

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D A N I E L J. G O O D W I N,

having been first duly sworn by the Notary Public, saith as follows:

DIRECT EXAMINATION

BY MS. DRIVER:

Q. Please state your name for the record.

A. Daniel J. Goodwin.

Q. Who is your employer, Mr. Goodwin?

A. I am employed by Secor International, Incorporated, which is a national environmental consulting firm.

Q. Okay. What is your position there with Secor?

A. I am a principal engineer.

Q. What do you do as a principal engineer?

A. I oversee the work of a group of professionals, environmental professionals, engineers and scientists, and do a variety of consulting assignments in the environmental field.

Q. What, just generally, kind of projects would be involved in that work?

A. Well, one of the areas that I particularly specialize in is air quality, air pollution control related work. And a typical example of the kind of thing we do is to assist clients in compliance with air quality regulations, in understanding what regulations apply, and the record keeping, and data collection, and so on, that is required. We also do a great deal of

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environmental permit application work.

Q. Okay. How long have you been in this position?

A. I have been in this role for 18 years almost.

Q. Okay. How were you employed prior to this position that you have now?

A. Well, I am counting in that 18 years the time that I spent as principal of a predecessor firm, Goodwin Environmental Consultants, which was also previously known as Goodwin & Broms, Incorporated. They were environmental consultants acquired by Secor last year.

Q. How about before that, how were you employed?

A. I spent 13 years with the Illinois Environmental Protection Agency, the last seven of -- I am sorry -- the last six of which were as head of the division of Air Pollution Control.

Q. What kind of responsibilities did you have as the Chief of the Division of Air Pollution Control?

A. I was the Chief Administrator of the Air Pollution Program in the State. The position, then, is comparable to what is now called the Chief of the Bureau of Air. I was responsible for regulatory development for satisfying the Clean Air Act, the state implementation plan requirements, as well as permitting and compliance monitoring and enforcement.

Q. Okay. And tell us about your educational background?

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A. I have a BS in Engineering from Rose-Hulman Institute of Technology in Tere Haute, Indiana. I have a Master's in Business Administration from Indiana University.

Q. What are your professional affiliations?

A. I am a member of the Air & Waste Management Association, the Water Environment Federation, the American Institute of Chemical Engineers. And I am currently serving as Vice President of the Consulting Engineers Council of Illinois.

Q. Are you, then, a Licensed Professional Engineer in Illinois?

A. Yes, and I have been since 1972.

Q. Okay. Thank you. Let's talk a little bit about the work that you have done specifically for this facility here in Decatur that we are talking about today.

Mr. Brown mentioned that they had retained you to study some options that they might have as far as control technology. Can you tell us a little bit about what you did in that regard?

A. Yes. MedPointe retained me back in the fall of 2001 to look at their situation and evaluate their alternatives for complying with Subpart T. And in the course of doing that, in addition to the solvent substitution option, which has been discussed, I identified four main control technology alternatives that might be considered for application in their problem.

Q. How did you go about deciding what the four options

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could be? What were the activities you undertook to come up with that?

A. Well, I looked at the four main or most commonly used technologies for control of organic chemical emissions. And I went through a qualitative screening of those four alternatives to identify which ones really were most likely to be a preferred alternative and deserving of a more detailed quantitative type of analysis. And out of that process I identified one technology that seemed clearly the best choice of the four.

Q. Tell us just briefly what four options you came up with in the beginning?

A. Okay. First of all, I looked at absorption, and that is with a B. That's a technology where typically you -- in this situation you would use water as a scrub and absorb the ethanol vapors, which are very soluble in water, using either a packed column or a tray type scrubber.

That technology would probably not be very feasible because of the very dilute nature of the ethanol concentration in the air stream and the large volume of liquid that would have to be disposed of once it passed through the scrubber. In addition, considering that it would have to be placed on the roof, the equipment would have to be protected from freezing conditions with some type of heated enclosure, or possibly it could be insulated with heat tracing. But neither of those -- either of

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those would add considerably to the cost of the installation. It really is not a technology that is very well suited for this situation.

Q. So based on those concerns, you ruled out absorption on a technical or a practical basis for the facility?

A. That's correct.

Q. All right. What was the next option that you looked at?

A. The next option was adsorption, with a D. With adsorption, using -- most often it is done with activated carbon. There are two main approaches to it. You can do it with on site or in-situ regeneration of the carbon. The way that works is the organic vapor laden gas stream is passed through a bed of activated carbon. The organic material is adsorbed on to the carbon bed.

Periodically, then, you have to stop the gas flow or switch it to another unit and regenerate that activated carbon using a hot gas. Usually it is done with steam to desorb the organic material from the carbon. Then that hot gas, that steam, would go to some type of a cooling device where the organic phase would condense out and be separated from the steam.

The other approach with activated carbon is to use carbon units or canisters. They come in standard sizes. And the system is set up so that you simply physically switch out canisters as they become saturated with the organic phase. And those are then

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transported off site for regeneration at a facility that is designed for that purpose.

With in-situ regeneration, you would have a very large, heavy installation. The control systems on activated carbon units are fairly complex and require a lot of attention to keep them operating properly.

If you were to use off site regeneration, you would have the problem of physically moving these canisters of carbon from the roof top to ground level where they could be trucked for regeneration. Practically speaking, that would require the installation of an elevator of some sort.

Neither version of the carbon adsorption process appeared to be a very desirable approach. If it were the only game in town, so to speak, it could be done. But as I am sure we will get to later on in the testimony, there is a better option.

Q. Okay. Let's move on, then, to the third option that you identified.

A. That would be condensation. In condensation, the vapor-laden gas is subjected to a combination of reduced temperature and increased pressure to condense out the organic phase. Here, again, because we are looking at a rather dilute gas stream, and the temperature is well above ambient temperature on most days, at least, it would take quite a refrigeration capacity to produce the required chilling to condense out the

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organic phase particularly to achieve the 90 percent reduction that the regulation would require. That's a critical point in all of these technologies, is the ability to get a 90 percent reduction from that very dilute gas stream.

For reasons of weight alone, it probably would not have been a technology of choice for this application. But, in addition, in discussing it with the MedPointe people, I learned that there is a capacity problem with the plant's electrical substation which would have required a major and costly upgrade to that facility in order to get the power that would be needed to operate this condensation system. And it would be a very large user of electrical power.

Q. So based on that, the condensation option was also eliminated as being, on a technical basis at least?

A. That's correct.

Q. Okay. Let's move on to the fourth and final option that you identified?

A. The fourth option is thermal oxidation. There are two variations of that we looked at. The first being simple oxidation, which you can do either with or without a recovery of waste heat. And the second variation of it is catalytic oxidation.

Let's talk about the catalytic first. In catalytic oxidation, the gas stream is passed through a combustion chamber,

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which is heated by supplemental fuel -- in this case it would be natural gas -- typically to a temperature of 12 to 1,500 degrees Fahrenheit for simple thermal oxidation. But with catalytic oxidation, you have a bedded catalyst just downstream from the combustion zone, or I should say from the burner area. And that catalyst bed allows the oxidation or combustion process to go to completion at a much lower temperature, something more in the 650 to 800 degree range. That allows for a much lower fuel use for catalytic oxidation.

For thermal oxidation, simple thermal oxidation, you don't have the catalyst bed. It is just a large combustion chamber and you are simply burning the organic vapors to carbon dioxided water and it passes out of a stack into the atmosphere. Usually in that situation, you do have some form of recovery of waste heat as part of the process, but it is not technically required. That simply reduces the fuel consumption if you do.

Q. So based on your evaluation, did you feel that the -- either of the oxidation alternatives would be technically feasible for addressing the VOM emissions?

A. I think probably either one of them would work in this case, and either one of them would be better than any of the other options that were looked at.

The main drawback with catalytic oxidation, apart from the cost of the catalyst, which adds significantly to the cost of the

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unit, the catalyst is subject to being poisoned, which reduces its effectiveness and eventually you have to replace the catalyst periodically.

The types of agents that can poison it are halogen compounds or sulfur compounds. And while we don't know that there is reason to suspect that there would be large quantities of either of those things in this gas stream, it is a concern.

So we really have come to the conclusion that simple thermal oxidation is probably the best choice for control in this particular situation.

Q. In looking at that, then, in the context of a control under Subpart T, what is your feeling about how that control option would fit for this kind of situation, considering the emissions involved and the regulatory background for Subpart T?

A. It certainly will meet the requirements of the regulation. It would not be unreasonable to expect that you would get 98 or 99 percent control using a well designed thermal oxidizer over the entire cycle, the entire 16 hour drying cycle.

So from that stand point, it is -- it would be an appropriate choice. Whether or not this would represent a Reasonably Available Control Technology, which is what Subpart T was adopted to establish in the regulations in the particular circumstances of this plant, my own judgment is that it isn't really a reasonable measure.

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Q. What is the basis for your feeling on that?

A. Well, one factor is cost and cost effectiveness. In looking at -- if you go back and review the Board's rulemaking, when it adopted the presence of the Subpart T rules, as Reasonable Available Control Technology, the Board was using sort of a benchmark of $5,000.00 per ton of VOM controlled as a reference point for what is reasonable or what is not. And that was taken as sort of the maximum cost per ton that the Board would have considered reasonable at the time that it adopted this rule in 1987, I think it was.

I did cost effectiveness calculations for the MedPointe application. And there are various ways you can do the calculations, but one way in which you can do it is to look at the cost for reducing the emissions to the 12 and a half ton per year level that would represent the threshold at which Subpart T became applicable. If you do the calculation in that fashion, you get a cost effectiveness ratio in the range of $87,000.00 to $102,000.00 per ton.

If you use a more conservative approach, and look at the cost of effectiveness for doing a 90 percent reduction from 15 tons per year, then you get a cost effectiveness ratio of $16,000.00 to $19,000.00 per ton of VOM.

Either way, you are way, way above what the Board adopted as its benchmark when the Rule was adopted, even after you

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consider the inflation that has occurred in that intervening period of time. So on economic grounds I think you can say it is not reasonable.

You can also look at it from the perspective of what is the environmental benefit of this reduction, and is it -- is the cost to achieve this reduction commensurate with -- or is the environmental benefit commensurate with the cost, is the way I should say it.

We are really looking at a very, very small fraction of the emissions in the Decatur area that would be controlled if this device were installed. It would be about .05 percent of the Macon County total VOM emissions, as estimated by the Agency for 1999.

So given that the area is in attainment of the ozone standard, has been in attainment, I believe, all the way back to the time that the attainment designations were first made, and is not marginal in its attainment status, that very, very minute change in the total emissions in the area is going to have no discernible environmental benefit to go with it.

Q. These kinds of factors, looking at the environmental benefit and also the cost effectiveness of reduction, those are the kinds of things that you would be looking at with the company during the course of the Variance if the control option is decided to be pursued or being evaluated, particularly if the non

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VOM solvent option does not work out, or the dry granulation process as well?

A. Yes, that's correct. We would -- that would be a part of the continuing study that we would do of the control technology alternatives. You know, we would revisit those questions as we went through that evaluation to make sure that what we were doing was still -- well, going to work, number one, going to meet the requirements of the regulation, but also that we were not identifying some option that would produce much greater benefits or could be implemented at a substantially lower cost. If we did, then we would have to rethink which option we wanted to pursue.

Q. Okay. Let's talk now about the emissions themselves. Mr. Brown testified earlier that historically we are now right around ten tons of VOM per year total for all the dryers. And the Variance would allow us to go up to 25 tons per year. Is that your understanding as well?

A. That is my understanding, yes.

Q. All right. You have talked a little bit about this already. In the course of your work for the facility on the control options in the Subpart T compliance, you did take a look at the environmental impact of this increase in the VOM emissions during the term of the Variance; is that correct?

A. Correct.

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Q. Okay. And what, basically, were your conclusions on that?

A. Well, my conclusion is that there really is not going to be any environmental impact that would be discernible to the human senses or that could be measured using conventional ambient air quality monitoring equipment.

Q. You did do some looking at what fraction, I think you called it, of the Macon County emissions that this emissions increase would be comprised of. What was that number again?

A. That figure is .05 percent of the Macon County total for 1999.

Q. So even with the production increase that we are talking about during the term of this Variance, we still would not reach one percent of the total Macon County VOM emissions?

A. That's correct.

MS. DRIVER: I think that's all the questions I have for you, Mr. Goodwin. Thank you.

HEARING OFFICER LANGHOFF: All right. Thank you, Ms. Driver.

Mr. Matoesian, do you have any questions?

MR. MATOESIAN: I have no questions.

HEARING OFFICER LANGHOFF: All right. Thank you. Ms. Liu, do you have any questions?

MS. LIU: Yes. Thank you.

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CROSS EXAMINATION

BY MS. LIU:

Q. Good morning, Mr. Goodwin. You were discussing the environmental impact and your analysis. There is mention in the Petition of a nearby school and a church. Is there any reason to single out those in an environmental impact study in terms of what they would receive as far as exposure goes on the human health side as well as the environmental side?

A. I don't believe so. First of all, you should recognize that if this Variance is granted, there will not be any increase in the short-term emission rates. The hourly emission rates that would be of greatest concern, from the standpoint of exposure of the school children, for example. The increase will be on annual emissions. And there might be an increase from one dryer, but it would be offset by the fact that the other dryers were not going to be used simultaneously. So you don't really have any short-term increases in emission rates.

Secondly, the maximum concentration coming out of the dryer without any control is about -- it would be about three-tenths of a percent ethanol. Now, that concentration would not persist for any length of time, at most maybe a few minutes. That concentration represents only three times the maximum permissible exposure level that OSHA allows for worker exposure to ethanol in the workplace.

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Certainly, as it goes out the stack and becomes disbursed, that concentration is going to be diluted by a factor of several hundred before it reached the area of the school and the church. So it is going to be far, far below the level of any health concern.

Q. Could you describe what the primary environmental concern is for the emissions of VOMs from ethanol?

A. Well, I think that the primary concern is that the ethanol will react in the atmosphere in the presence of sunlight with oxides of nitrogen to form ozone. That is the underlying reason for the regulation, and absent that phenomenon, there would not be any reason to regulate it at the levels that we are talking about.

MS. LIU: Okay. Thank you, Mr. Goodwin.

HEARING OFFICER LANGHOFF: Mr. Goodwin, I have one question that might be helpful to the Board in making its determination. I believe you testified about the thermal oxidation alternative and the benchmark that you believed to be $5,000.00 per ton. You did your calculations on 15 tons per year.

Have you done any calculations on reducing the cost effectiveness of the thermal oxidation using the 25 ton per year figure?

MR. GOODWIN: No, I did not do that calculation. It would be a simple calculation to do, and I would be glad to do that and

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submit it.

HEARING OFFICER LANGHOFF: Would it be less than the 15 ton per year calculation, the cost per ton?

MR. GOODWIN: It would come out somewhat less than the -- let me back up. If you looked at a 90 percent reduction from the 25 ton per year level, the cost effectiveness ratio would be somewhat lower than the 87 -- I am sorry -- than the 16,000 to 19,000 numbers that I quoted. It is going to be somewhere over half of those numbers. So it is still going to be in probably the 9 to 12,000 range, something like that.

HEARING OFFICER LANGHOFF: Okay. Thank you.

MS. DRIVER: Could I just follow-up on one thing that I think is important from Ms. Liu's question, to clarify for the record?

HEARING OFFICER LANGHOFF: Yes.

REDIRECT EXAMINATION

BY MS. DRIVER:

Q. Mr. Goodwin, you mentioned that during the course of the Variance, that the short-term or the hourly VOM emissions would not be increasing. The increase is going to be seen on an annual basis. Can you just explain practically why that is with respect to the increases that we are talking about in this Variance? It might be helpful?

THE WITNESS: Surely. The emissions occur mostly in the

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beginning of the 16 hour drying cycle. You have the mixture that is wet with ethanol. As the warm air begins circulating through the trays, it evaporates very rapidly, and it is exhausted out the stack. As that surface material begins to reach dryness, and the evaporation has to take place from material below the surface on the layer of the tray, the evaporation rate slows down. And so you will continue to have some evaporation over probably most of the 16 hour cycle, but at an increasingly reduced rate until you reach the end.

Now, the proposal here does not change the way these batches will be dried, and it does not change the cycle time or the number of batches that will be dried at one time. It only allows -- would allow the use of the Lydon oven by allowing for more than 100 pounds per day to be emitted from a single oven. And it allows for more batches per year, because you are raising the annual threshold of applicability of the 90 percent control requirement. But it really does not result in any change in the amount of emissions that would occur in any given 16 hour period.

MS. DRIVER: Okay. Thank you.

HEARING OFFICER LANGHOFF: All right. Thank you, Mr. Goodwin.

Anything further, Ms. Driver?

MS. DRIVER: No. That's all we have. Thank you, Mr. Hearing Officer.

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HEARING OFFICER LANGHOFF: Thank you. Mr. Matoesian, do you have anything?

MR. MATOESIAN: No, Your Honor.

HEARING OFFICER LANGHOFF: Thank you.

MS. LIU: Mr. Hearing Officer, can I ask some questions of the Agency?

HEARING OFFICER LANGHOFF: Sure. Certainly.

MS. LIU: Thank you.

HEARING OFFICER LANGHOFF: I think you might need to speak up a little.

MS. LIU: If it would be all right, I would like to ask some questions of the Agency.

Would we need to swear in Mr. Uy?

HEARING OFFICER LANGHOFF: Yes. Would you swear the witness, please.

(Whereupon the witness was sworn by the Notary Public.)

HEARING OFFICER LANGHOFF: Thank you.

J O E C. U Y,

having been first duly sworn by the Notary Public, saith as follows:

DIRECT EXAMINATION

BY MS. LIU:

Q. Good morning, Mr. Uy.

A. Good morning.

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Q. Would the Illinois Environmental Protection Agency's Office of Pollution Prevention be able to provide some assistance to Wallace Pharmaceuticals in their research for a non VOM alternative?

A. I believe that they have the capability. Right now that I know of, because I don't work under that particular division, I work with the Air Quality Planning, they have been helping like hospitals in streamlining their operations to reduce the amount of pollution that those particular sources emit.

But in the case of Wallace Pharmaceuticals, I think the Office of Pollution Prevention would be able to have the resources and the expertise to help them out in seeking out ways to reduce pollution.

Q. Could you describe the type of assistance that the Office of Pollution Prevention provides in terms of Agency personnel, college students, laboratory services, kind of on site field work, are you familiar with how the Agency interacts with businesses like this to accomplish the pollution prevention goal?

A. Unfortunately, I am not very familiar with the operations of the Office of Pollution Prevention. But what I know is that they have the resources, and they have been working with outside sources, as well.

Q. Okay. Are you familiar with the pollution prevention assistance also offered through the University of Illinois and

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the Waste Management Research Center in Champaign?

A. Those are the outside sources that I am referring to that the Office of Pollution Prevention works with.

Q. Okay. If Wallace Pharmaceuticals were receptive to the idea of utilizing State resources, do you think it might be beneficial to introduce them to either your office of Pollution Prevention or the Waste Management and Research Center to team them up to see if maybe they could utilize each other's resources?

A. I believe so.

Q. Okay.

A. If Wallace Pharmaceuticals permits me, I could introduce them to the right persons in the Agency.

Q. Okay. Do you think that would be something that we could definitely do if this Variance were granted?

A. Yes.

MS. LIU: Okay. Thank you very much, Mr. Uy.

HEARING OFFICER LANGHOFF: While we have Mr. Uy on the stand, Ms. Driver, do you have any questions?

MS. DRIVER: Yes.

CROSS EXAMINATION

BY MS. DRIVER:

Q. I just have one question, Mr. Uy. Do you know if the Office of Pollution Prevention or the Waste Management Research

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Information Center, I think is what it is called, have they ever had any projects involved with FDA requirements?

A. I am not familiar with the Office of Pollution Prevention, and I don't know if I could answer that question.

Q. Okay. You don't know if they would have the expertise to deal with that?

A. Yes.

MS. DRIVER: Okay. That's all I have. Thank you.

HEARING OFFICER LANGHOFF: Mr. Matoesian?

MR. MATOESIAN: Nothing.

HEARING OFFICER LANGHOFF: Okay. Thank you.

Is there anything further, anybody?

Okay. At this time I will call for any statements from members of the public. Statements from the participants are made pursuant to Section 101.628 of the Board's Procedural Rules.

Did you want to make a statement today, ma'am?

MS. BARBARA RIDDLE: Yes.

HEARING OFFICER LANGHOFF: All right. Will you be sworn, please?

MS. BARBARA RIDDLE: Yes.

(Whereupon the witness was sworn by the Notary Public.)

HEARING OFFICER LANGHOFF: Thank you. What is your name, ma'am?

MS. BARBARA RIDDLE: Barbara Riddle.

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HEARING OFFICER LANGHOFF: Could you spell your last name for the court reporter.

MS. BARBARA RIDDLE: R-I-D-D-L-E.

HEARING OFFICER LANGHOFF: Where do you reside or live?

MS. BARBARA RIDDLE: 1835 North Woodford, Decatur, Illinois.

HEARING OFFICER LANGHOFF: Okay. Thank you. Would you like to go ahead and give your statement.

MS. BARBARA RIDDLE: Well, I have allergies to ethanol. I have had these allergies for quite some years, until a year ago when they finally found out. I have to go to Wisconsin to be tested, because the doctors in Decatur or in Springfield or Champaign do not test for that many chemicals.

HEARING OFFICER LANGHOFF: Anything else? I mean, I take it that you would be against the grant of a Variance to Wallace Pharmaceuticals?

MS. BARBARA RIDDLE: I would be if they are going to put out more ethanol into the air.

HEARING OFFICER LANGHOFF: Would you like to elaborate at all, or have you said everything you need to say this morning?

MS. BARBARA RIDDLE: Well, if you need to ask me any questions, I can give you my doctor's name and address and they can sure send you a statement.

HEARING OFFICER LANGHOFF: I don't have any further

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questions for you.

Ms. Driver, do you have any questions for Ms. Riddle?

MS. DRIVER: Yes. Thank you.

CROSS EXAMINATION

BY MS. DRIVER:

Q. Just briefly, Ms. Riddle. I am sorry to hear about your allergies.

Have you and your doctors in Wisconsin ever looked at what the sources of the ethanol might be that are causing your problem?

A. I took the letter from Springfield to them and that's how we found out that ethanol was being released. That's how we found out that I was allergic to it.

Q. Okay. Do you know what the sources are of ethanol in Decatur that are causing your problem?

A. No, she didn't tell me all those.

Q. Okay. Do you think it would be helpful, given your problems with ethanol, if the company, Wallace, had time to investigate finding a way to eliminate ethanol from its processes so that it wouldn't be emitted any more?

A. Oh, that would be wonderful.

MS. DRIVER: Okay. I think that's all I have. Thank you.

HEARING OFFICER LANGHOFF: All right. Thank you, Ms. Driver.

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Mr. Matoesian, any questions?

MR. MATOESIAN: I have no questions.

HEARING OFFICER LANGHOFF: Ms. Liu?

MS. LIU: Yes.

CROSS EXAMINATION

BY MS. LIU:

Q. Good morning, Ms. Riddle. If I might ask, are you experiencing problems now?

A. Well, I take the medicine daily and have for a year, and I will have to remain to take it the rest of my life.

Q. How close do you live to this facility?

A. About six miles away, five to six miles away from it. And I didn't even know they were putting it out. I just thought ADM and Staley's was putting it out.

Q. Are those facilities also located in the Decatur area, as well?

A. (Nodded head up and down.)

Q. Okay. Just out of curiosity, what kind of reaction does ethanol elicit in allergy form?

A. My nose would get irritated. Sometimes it would be raw. And the doctor -- I was at one allergy doctor, Velek, here in Decatur. He used to give me sauve for it. But he couldn't figure out why. Because, see, we didn't know about the ethanol. When I went to Wisconsin and we got that letter and took it up

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there, she tested me. When I take the drops -- within three to six months after I took the drops it all cleared up.

Q. So the medication is working for you now?

A. Yes, yes.

MS. LIU: Okay. Thank you very much.

HEARING OFFICER LANGHOFF: I have a couple of other questions for you, Ms. Riddle. You testified that you live approximately six miles from Wallace Pharmaceuticals; is that right?

MS. BARBARA RIDDLE: Uh-huh.

HEARING OFFICER LANGHOFF: I am not familiar with your address. I am sure the Board is not either. How close are you to Staley?

MS. BARBARA RIDDLE: You take a ten mile radius in a circle. Wallace is here. Staley's and ADM is here, and I am right here. It is about a ten mile radius.

HEARING OFFICER LANGHOFF: You are about five mails away from Staley?

MS. BARBARA RIDDLE: I am not even that far away from Staley's.

HEARING OFFICER LANGHOFF: Closer than that? Three miles away?

MS. BARBARA RIDDLE: Yes.

HEARING OFFICER LANGHOFF: Okay. Do you live here in

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Decatur?

MS. BARBARA RIDDLE: Yes.

HEARING OFFICER LANGHOFF: We have your address. The Board could take judicial notice of where she lives and how close all of those things are. Okay. Thank you.

MS. BARBARA RIDDLE: Okay.

HEARING OFFICER LANGHOFF: Is there anyone else that would like to testify today as a participant?

MS. RUTH RIDDLE: Well --

HEARING OFFICER LANGHOFF: Ma'am, you just need to give me a yes or a no, and if it is a yes then I will have you sworn. If not, then --

MS. RUTH RIDDLE: I can.

HEARING OFFICER LANGHOFF: Would you like to then?

MS. RUTH RIDDLE: Yes.

HEARING OFFICER LANGHOFF: Would you please swear the witness.

(Whereupon the witness was sworn by the Notary Public.)

HEARING OFFICER LANGHOFF: Okay. What is your name, ma'am?

MS. RUTH RIDDLE: My name is Ruth Riddle.

HEARING OFFICER LANGHOFF: Okay. What is your address, ma'am?

MS. RUTH RIDDLE: 1155 North Nickey, N-I-C-K-E-Y.

HEARING OFFICER LANGHOFF: Would you like to go ahead and

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give the Board your comment.

MS. RUTH RIDDLE: Well, I was the one that sent for the information from the Environmental Protection Agency and asked about the pollutants that came out from Staley's and ADM. And I didn't realize that there were so many other companies that put out things.

And when I took it up and gave it to the doctor, she went like (indicating). You know, her mouth dropped open. She said she didn't -- she couldn't believe that all this pollution was in the air. And I have asthma. I am not allergic to ethanol. I was tested for it, too.

But, you know, whatever goes out in the air, we are all going to breathe it. And I live close to Staley's and ADM. I live right between the two of them.

HEARING OFFICER LANGHOFF: How close do you live to Wallace Pharmaceuticals? About the same, about five miles?

MS. RUTH RIDDLE: Well, what do you think?

MS. BARBARA RIDDLE: I would say between five and seven miles.

MS. RUTH RIDDLE: Okay. It is between five and seven miles.

HEARING OFFICER LANGHOFF: Okay. Thank you.

Ms. Driver, do you have some questions?

MS. DRIVER: Yes, just briefly.

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CROSS EXAMINATION

BY MS. DRIVER:

Q. You said that you sent for some information from the EPA?

A. Uh-huh.

Q. Is that right?

A. Yes.

Q. Were you looking for information on pollution in general in the Decatur area?

A. Well, if you lived -- yes. If you lived in my neighborhood, you can wash your car and the next morning you can go out and it needs washed again. That's just how bad it is.

Q. So you were just trying --

A. And I had a lot of allergies, too. So I wanted to know what it was.

Q. What did the EPA then give you when you asked for information from them?

A. I don't know. Just several sheets of, you know, the different emissions that came from Staley's and ADM.

Q. Okay.

A. I gave it to the doctor.

Q. Okay.

A. I don't have it now.

MS. BARBARA RIDDLE: She has it.

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MS. RUTH RIDDLE: Yes, she has it.

MS. DRIVER: Okay. That's all I have.

MS. RUTH RIDDLE: And also we do both go to the same doctor.

MS. DRIVER: Thank you very much.

HEARING OFFICER LANGHOFF: All right. Any questions, Mr. Matoesian?

MR. MATOESIAN: No.

HEARING OFFICER LANGHOFF: Ms. Liu?

MS. LIU: Yes.

CROSS EXAMINATION

BY MS. LIU:

Q. Ruth, how long have you and Barbara lived here?

A. I think she lived here all her live.

MS. BARBARA RIDDLE: Yes, I have lived here all my life.

MS. RUTH RIDDLE: And I have lived here since I was, oh, about 18.

MS. LIU: Okay. Thank you.

HEARING OFFICER LANGHOFF: All right. Thank you, Ms. Riddle.

All right. Are there any other members of the public that would wish to participate today?

Okay. There are none.

Prior to the hearing today we had a discussion regarding

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the availability of the record and the submission of briefs. I have set a briefing schedule. Before we get to any closing arguments, if any, I will go ahead and read that schedule into the record.

The transcript of these proceedings will be available from the court reporter by July 26th of 2002. I will establish a public comment period of 14 days.

Wallace Pharmaceuticals' brief will be due by August 16th of 2002. The mailbox rule will apply.

The Agency's brief will be due by August 23rd of 2002 and, again, the mailbox rule will apply.

The transcript of the proceedings is usually put on the Board's web site within a few days of its availability. I would just like to note that our web site address is www.ipcb -- that stands for Illinois Pollution Control Board -- .State.il.us.

All posthearing public comments are due by July 30th of 2002, and must be filed in accordance with Section 101.628 of the Board's Procedural Rules.

The mailbox rule set forth at 35 Illinois Administrative Code 101.102(d) and 101.144(c) will apply to any posthearing filings. That means that any posthearing public comments must be put in the mail and postmarked by July 30th of 2002.

Is there anything further from the parties before we conclude?

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MS. DRIVER: No, Mr. Hearing Officer.

MR. MATOESIAN: No, Mr. Hearing Officer.

HEARING OFFICER LANGHOFF: Okay. Thank you. At this time, I would like to note for the record there are no other members of the public present that want to make statements on the record.

I am required to make a statement as to the credibility of witnesses testifying today during the hearing. This statement is to be based upon my legal judgment and experience. Accordingly, I state that I found all the witnesses testifying today to be credible. Credibility is not an issue for the Board to consider in rendering its decision in this case.

At this time I will go ahead and conclude the proceedings. It is still Tuesday, July the 16th of 2002, at approximately 11:56 in the morning. We stand adjourned.

I thank you all for your participation, and wish everyone to have a good day and a safe drive home.

MS. DRIVER: Thank you.

MR. MATOESIAN: Thank you.

HEARING OFFICER LANGHOFF: Thank you.

(Petitioner's Exhibit A was retained by Hearing Officer Langhoff.)

(The hearing concluded at approximately 11:56 a.m.)

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STATE OF ILLINOIS)
) SS
COUNTY OF MONTGOMERY)

C E R T I F I C A T E

I, DARLENE M. NIEMEYER, a Notary Public in and for the County of Montgomery, State of Illinois, DO HEREBY CERTIFY that the foregoing 74 pages comprise a true, complete and correct transcript of the proceedings held on the 16th of July A.D., 2002, at the Macon County Courthouse, 253 East Wood Street, Decatur, Illinois, in the case of Wallace Pharmaceuticals, Inc., v. Illinois Environmental Protection Agency, in proceedings held before Hearing Officer Steven C. Langhoff, and recorded in machine shorthand by me.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my Notarial Seal this 24th day of July A.D., 2002.

Notary Public and
Certified Shorthand Reporter and
Registered Professional Reporter

CSR License No. 084-003677
My Commission Expires: 03-02-2003

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