ILLINOIS POLLUTION CONTROL BOARD

NOVEON, INC.,	)	
	)	
Petitioner,	)	
	)	
vs.	)	PCB 04-102
	)	(Permit Appeal - Air)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY	)	
	)	
Respondent.	)	

The following is the transcript of a hearing held in the above-captioned matter, taken stenographically by Gale G. Everhart, CSR-RPR, a notary public within and for the County of Peoria and State of Illinois, before Bradley P. Halloran, Hearing Officer, at 426 East Park Row, Henry, Illinois, on the 5th day of February, A.D. 2008, commencing at 8:30 a.m.

PRESENT:

HEARING TAKEN BEFORE:
ILLINOIS POLLUTION CONTROL BOARD
100 West Randolph Street
James R. Thompson Center, Suite 11-500
Chicago, Illinois 60601
(312) 814-8917
BY: BRADLEY P. HALLORAN

APPEARANCES:

DRINKER, BIDDLE & REATH, LLP
BY: ROY M. HARSCH, ESQUIRE
Attorney at Law
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Chicago, Illinois 60606-1698
(312) 569-1441
On Behalf of the Petitioner.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BY: SALLY CARTER, ESQUIRE
Attorney at Law
1021 North Grand Avenue East
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On Behalf of the Respondent.

ALSO PRESENT:

JEFF BRENNER
MICHAEL REED

NO MEMBERS OF THE PUBLIC WERE PRESENT

I N D E X

*Exhibits were retained by the Hearing Officer.

HEARING OFFICER HALLORAN: Good morning, everybody. My name is Bradley Halloran. I'm a hearing officer with the Illinois Pollution Control Board. I'm also assigned to this matter entitled Noveon, Inc., Petitioner, versus the Illinois Environmental Protection Agency. The docket reflects it's docketed as PCB 04-102. It's a Clean Air Act permit program appeal for CAAPP. This matter has been publicly noticed pursuant to the Board's regulations and will be conducted in accordance with sections 105.200 and 101.600 in the Board's procedural rules.

I also note for the record that I will not be making the ultimate decision in this matter. The ultimate decision will be made by the Board members of the Pollution Control Board. My job is to ensure an orderly hearing and rule on any evidentiary matters that may arise.

We have agreed that this hearing will be closed because of numerous trade secret issues.

Also, I want to let the transcript show that there are a couple motions filed. They were filed, I believe, on January 30th. They were agreed motions. One motion is to change Petitioner's name from Noveon to Emerald Performance Materials, LLC. And also another

agreed motion to voluntary dismiss certain claims. Those motions are pending before the Board. There was also another motion filed on January 24th, 2008, by Noveon, a motion to supplement the record on appeal. That motion was denied pursuant to an order I put out on February 4th, 2008.

There is a signup sheet on the outside of the door. If any members of the public would like to speak, we could stop the hearing at an appropriate time and let him or her take the floor. With that said, Mr. Harsch, would you like to introduce yourself?

MR. HARSCH: Sure. My name is Roy Harsch. And as of February 1st our law firm is Drinker, Biddle & Reath, LLP. We dropped the Gardner, Carton pursuant to our merger agreement. Same firm but changed the names. I'm here today on behalf of Petitioner. Do you want me to do the opening statement now?

HEARING OFFICER HALLORAN: Sally? Ms. Carter, Sally, would you like to introduce yourself and then Mr. Harsch can go into his opening?

MS. CARTER: Yes. Sally Carter with the Illinois EPA. Thank you.

HEARING OFFICER HALLORAN: Mr. Harsch.

MR. HARSCH: Yes. This is -- the Hearing Officer

pointed out this is a CAAPP permit appeal or Title V permit appeal. And, essentially, it is a very limited issue appeal. The original appeal challenged a number of issues. All of them have been withdrawn with the exception of the concern -- central concern of this matter; and that is whether or not the plant has to comply with the 2,000 part per million sulfur dioxide S02 limitation found at 35 Illinois Administrative Code 214.301.

The company maintains that it is entitled to the exemption found at 35 Illinois Administrative Code, section 214.382(a), which is an exemption for existing processes designed to remove sulfur compounds from the flue gases of petroleum and petrochemical processes.

At issue, as we understand it from the record, is the application of that exemption to the plant because of the amount of sulfur compounds removed from the flue gas and whether or not those -- I guess whether or not the process that removes the sulfur compounds, the reduction that occurs in that process, are accountable.

This was a very surprising issue for the company as the issue was first raised with the Illinois Environmental Protection Agency in 1975 by the Agency.

Permits were ultimately granted and have been renewed consistently through the last State operating permit issued in 1993. Despite the efforts of the company to look at the operating permit record as part of the Title V application preparation process. The first time it learned that the Agency had concerns was in 2001, some 26 or 27 years after the Agency issued the first operating permit based on the application of the exemption to its processes.

All of the permit conditions that are on appeal and challenged have to do with the Agency's determination in the CAAPP permit that the company was not entitled to this exemption and, therefore, subject to a 2,000 part per million S02 limit.

As you will hear today, the company has proceeded to, we believe, voluntarily install further sulfur removal system that Mr. Giffin will explain. It's referred to as the NaSH system and the very good reasons for wanting to continue this appeal notwithstanding the fact that it has installed such a system.

And I will have three witnesses today, direct witnesses today, Dave Giffin, Mike Corn and Bernie Evans.

HEARING OFFICER HALLORAN: Thanks, Mr. Harsch. Before I forget, I'm not sure if I stated on the record, today is February 5th, 2008. It's approximately 8:35.

Ms. Carter, open?

MS. CARTER: Thank you. The Illinois EPA agrees that the sole issue before the Board is whether two reflux condensers that recover, according to the source, no more than 23 percent of total sulfur compounds from a process are entitled to an exemption from the 2,000 part per million limitation of sulfur dioxide emission.

The Illinois EPA believes that the 2,000 part per million limitation in 35 Illinois Administrative Code 214.301 is applicable. And the exemption claimed by Noveon in 35 Illinois Administrative Code 214.382 for, quote, "Existing processes designed to remove sulfur compounds from the flue gases of petroleum and petrochemical processes," end quote, does not apply.

Today we will describe the CAAPP permitting process and will explain the evolution of and the bases for the Illinois EPA's permitting decision in this matter. In so doing, the Illinois EPA will further inform the Board as to the facts that are already in the administrative record and how this information supports the challenged permit conditions.

The Illinois EPA will be calling one witness, Mr. Dan Punzak. Thank you.

HEARING OFFICER HALLORAN: Thank you, Ms. Carter.

Mr. Harsch, you may call your first witness.

MR. HARSCH: Mr. Giffin, will you please move forward and start the process?

(Witness sworn.)

MR. HARSCH: Mr. Halloran, I would like to make an observation if it's okay. While this is a closed hearing today, we have not noticed any member of the public being present at this hearing that's been affected by that decision. Is that correct?

HEARING OFFICER HALLORAN: Correct. None to my knowledge. Thank you, Mr. Harsch.

DAVID GIFFIN,

called as a witness, after being first duly sworn, was examined and testified upon his oath as follows:

DIRECT EXAMINATION

BY MR. HARSCH:

Q Mr. Giffin, would you please state your name and address?

A My name is Dave Giffin. I live at 336 County Road 850 North, Sparland, Illinois.

Q Can you generally describe your duties at the

plant and how long you have worked there, sir?

A Certainly. I'm the health safety environmental manager for the Emerald Henry plant. I have been at the Henry plant for almost 38 years in June. I started in the plant in 1967 as an associate engineer, except for a two-year stint with the U.S. Army. I came back in 1969 as an associate engineer and worked in the polymer chemicals area. I was a foreman, and then I was also a technical engineer for the polymer chemicals area. I happened to be assigned the process that we are having discussions today as one of my processes.

From there we were -- we had the technical responsibilities of the process. At the same time -- that was about 1972, '73 -- the Illinois air regs came into being. And we started putting together the air permits for the different processes. And so about 1973 it was determined that we needed an environmental engineer at the plant. I became that environmental engineer and was responsible at that point in time for all the permits for the processes for the polymer chemical side of the plant as well the polyvinyl chloride side of the plant, PVC side of the plant. And over approximately about three to four years, until

1977, I was the environmental engineer for the plant.

I went -- then I moved from the polymer chemicals area to the PVC side of the plant because at that point in time we had -- we were trying to meet the vinyl chloride NESHAP's standard. And I went into that area as a general foreman to help install some of those control systems. I became the product manager of that area in the suspension and the compounding area, then became technical engineer, technical manager of the PVC area, and eventually went into being the plant engineer in about 1983 to '85.

1990 I became the plant health safety environmental manager again, and that's the position that I am holding presently.

Q You have basically been at the Henry plant throughout the entire air permitting -- since the Illinois Environmental Protection Act was passed in 1970 and the State operating permits were -- requirements were adopted by the Illinois Pollution Control Board?

A I have been. I have been.

Q I know we have filed a motion to do the name change, but perhaps you should explain -- could you explain the ownership history of the Henry plant and the PVC side of the operation as well?

A Certainly. Our plant was originally owned by BF Goodrich. BF Goodrich basically had three different divisions. They had the aerospace division, they had the chemical division, and they had the tire division. And approximately middle '80s, Goodrich spun off and sold the tire division. In 1993 they made a decision to sell the polyvinyl chloride portion of the business, one portion of the chemical group. And so -- which now is called PolyOne. And that is 50 percent or half of our -- the Henry plant. BF Goodrich continued to own the polymer chemicals side of the plant until approximately -- well, until 2001. In 2001 they made a decision to sell off the rest of the chemical group. And they sold that to a private investing group, I think AEA Investors. When they sold the polymer chemicals division, AEA then renamed it eventually Noveon. And we were Noveon until May of 2004.

At that point in time Luberzol, a corporation, purchased all of the Noveon division. And I think that was like about 40 plants worldwide. And so we became Luberzol, but yet we retained our name as Noveon during that time period.

Two years later Luberzol made the decision, and that would be 2000-- May of 2006, that they were

going to sell six plants -- and our plant was one of those plants -- because those plants did not fit their core business plan. And so when that occurred, the plant then became -- was renamed. And we were renamed Emerald Performance Materials, LLC. And that pretty much brings us to who we are now until the next sale I guess.

Q Who was the purchaser from Luberzol?

A Sun Capital was the investment group that purchased it from Luberzol.

Q That's another private equity?

A It's another private enterprise, yeah.

Q And throughout that time, has the -- have there been any significant changes in the operation of the chemical side of the Henry plant?

A Since the purchase of Emerald?

Q Since the original permitting in 1972?

A In 1972. As far as this process, there hasn't been any significant changes with the exception of the installation of the new NaSH unit.

Q Can you describe what the product is and the -- generally describe the production process that entails its production.

A Sure. The Emerald polymer chemicals portion

of the plant, that basically Luberzol sold, manufacturers a number of products. They manufacture accelerators, antioxidants. They also manufacturer some personal care products. The personal care products are fairly new to the plant. The accelerators and the antioxidants have been one of the primary manufacturing products ever since 1972. The accelerators that we make are what we call the salt and pepper chemicals that go into the master batch of rubber. And most of the rubber goes into the manufacturing of tires. If you didn't put the accelerator into the master batch, a small amount of it, it would take a long time for the rubber to cure. And so when you make a tire, if you didn't have that accelerator in the rubber, it would take maybe a couple hours to cure rather than maybe 30 minutes. So, basically, what it boils down to that everybody's tires here are less expensive because they use accelerators in the product.

Some of the antioxidants that we use, some of them go into rubber, some of them go into plastics. And, again, the antioxidants are sort of a small portion of chemicals that are salted into these products to prevent the oxidation of the rubber or the plastic so that the rubber and the plastic have a longer life.

And so for tires, going back to that analogy, by adding the antioxidant into the rubber batch, it will extend the life of the tire because the tire is subject to heat and other forces to break down the rubber. The antioxidant prevents that breakdown, and it makes the tire last longer. And, again, it gets back to giving you more miles to the tires that you purchase.

The personal care products that we make just recently, basically they're made to -- and we sell them to like Clairol or -- I'm not exactly sure our customer base on it, but a number of end product personal care companies that mix them into a final formulation.

Q What is the process and what is the product that is the subject of today's hearing?

A I'm going to refer to your aid back there. And the product that we are dealing with today is actually called sodium MBT. Sodium MBT is the intermediate that we use throughout the plant to make the accelerators. And the first part of the process is what we call the MBT crude process. Mercaptobenzothiazole crude is the product that's being manufactured here. That's the impure portion of the product. So then we put it into a react-- once we make MBT crude, then we put it into a reactor and we change

it into a salt soluble organic. And from there we purify it.

Today we are just going to deal with the MBT crude portion of the process and not the purification part of the process. The chart that we have shown up here --

Q Can you read the trade secret document number that's on the left of that chart?

A On the left?

Q Left-hand side.

A Oh, yeah. It's document number 000141.

Q That would be in the trade secret portion of the record. And I'm sure Ms. Carter will help me --

MS. CARTER: Yes, I will.

Q -- keep it straight like we did in the deposition?

MS. CARTER: That's no problem.

THE WITNESS: Keep me straight, too. Okay?

MS. CARTER: Okay.

A Okay. What we have is a depiction of the reactor, the blowdown tank and also the raw material charging system of the MBT crude process. The process utilizes three chemicals, aniline, sulfur and carbon disulfide.

The first part of this process, which is on the left-hand side of this chart, deal with those three chemicals and how they are charged to the reactors. The reactors are located in the middle of the chart. There are three reactors. These are high pressure reactors. And then as part of that reactor system, we have a condenser on each of the reactors which we, in this area, classify that as our sulfur reducing device. And then we have the blowdown tanks where we transfer the finished product, molten product, from the reactor to the blowdown tanks. And from the blowdown tanks, we transfer the product further into the process to convert it into a water soluble organic material.

The gases that are generated during the reaction and during the blowdown of these processes are collected in the MBT crude blowdown tanks. And if you will look at the drawing, all of the dotted lines of the drawing represent vapors. The solid lines depict liquid material being transferred.

So to continue on, once the vapors enter into the blowdown tanks, they are vented under a controlled basis to the flare system which incorporates a vaporizer, a knockout pot. And then that vapor is converted from hydrogen sulfide and some residual carbon

disulfide into sulfur dioxide.

The reaction is started by charging sulfur, aniline and carbon disulfide to the reactor. It's heated up. The reactor is heated up to about 500 degrees Fahrenheit using dotherm as the heating medium. Once it reaches a certain temperature, the reaction itself creates a pressure and that pressure will exceed 1,000 psig.

The vent condenser sulfur-reducing device that we have been discussing with the Agency on is a system that controls the return of carbon disulfide liquid back into the reactor during the reaction.

What is not shown on this chart is the support system to this sulfur-reducing device which is a high pressure control valve, an additional steam condenser, a tank that controls the level that's in this condenser. And that's what we classify as our sulfur-reducing devices.

Once the reaction begins, it generates hydrogen sulfide, and it generates -- it vaporizes some of the carbon disulfide inside the reactor. The condenser returns the carbon disulfide. The high pressure control valve carefully controls and it releases the H2S into the blowdown tank. And then

eventually it goes into the flare system itself. So this system knocks down the pressure from 1,000 psig to about 50 pounds of pressure in the blowdown tank. And then it's transferred down to the flare and then at the flare it's knocked down further as far as the pressure before it's converted to the sulfur dioxide.

Q On the drawing you are referring to trade secret 141. The reactor is listed as MBT-C reactor, numbers 1 and number 2. Also, the blowdown tanks are clearly marked as well?

A That is correct.

Q Are there any other aspects of this you want to describe?

A The only other aspect is that we did install a sodium hydrosulfide system which we call NaSH. And that has been installed in the last two years. And it's operating. It basically takes this gas, instead of going to the flare, we propel this gas to the NaSH system, which would not be shown here, but it's off to the side of this process. And it takes that gas and it recovers the carbon disulfide that remains after the reaction. And we capture that carbon disulfide through a column system. And then we return that carbon disulfide and recharge it back into the reactors at a

later time.

The H2S gas that goes with the carbon disulfide continues on through the NaSH system. We purify the hydrogen sulfide and then we react it in the NaSH column, distillation column. And we combine hydrogen sulfide and a caustic solution, and that forms what we call sodium hydrosulfide. And that's a liquid with a concentration -- a NaSH concentration of somewhere in the vicinity of about 45 to 47 percent NaSH.

We store that NaSH in a storage tank. And that then is shipped to users of NaSH, the NaSH product, in a liquid form. Right now basically we are trucking those -- that product to various customers. Some of those customer bases include tanneries. Tanneries would utilize the NaSH to tan leather. And a lot of our customers are in the Chicago area, and they prefer high quality NaSH. And this system has been designed to try to meet that market need. The other market need that is utilized by the NaSH system is mining ores, and they use NaSH to recover metals from ores.

The final step of the NaSH system after it goes to the NaSH distillation column, there is a NaSH scrubber. And that's the final step to make sure that

we scrub out all the hydrogen sulfide before there is an emission to the atmosphere. At this point in time this system operates to where there is less than 50 parts per million or less of hydrogen sulfide coming out of the scrubber.

Q Thank you. At the present time Henry -- who else produces the MBT crude in the United States?

A We are the sole producer of MBT crude in the United States. Over the past five years we have had a number of competitors who have not been able to compete, and they have closed down their plants. And we have basically outsurvived those plants. And --

HEARING OFFICER HALLORAN: Excuse me. Yes, sir, can I help you?

MEMBER OF THE PUBLIC: Is this a public hearing today?

HEARING OFFICER HALLORAN: It's a public hearing. It's a closed hearing because of trade secret issues. And your name is --

MEMBER OF THE PUBLIC: Oh, I'm sorry.

HEARING OFFICER HALLORAN: No. No. No. What we can do is --

MEMBER OF THE PUBLIC: I was on the mailing list --

HEARING OFFICER HALLORAN: Okay.

MEMBER OF THE PUBLIC: William Mautin, Bill Mautin.

HEARING OFFICER HALLORAN: Oh, okay. How are you doing, sir?

MEMBER OF THE PUBLIC: Good.

HEARING OFFICER HALLORAN: What I think we are going to do is if you want to -- did you want to say something up here, or --

MEMBER OF THE PUBLIC: I'm just here to learn the status.

HEARING OFFICER HALLORAN: Okay. If you wanted to say something, you could sign up outside the door. Or you can say something right now, if you want, under oath or otherwise.

MEMBER OF THE PUBLIC: Well, if it's a closed meeting, I understand that. I'm not trying to intrude or anything like that.

HEARING OFFICER HALLORAN: Oh, no. Would you like to speak your piece or say anything?

MEMBER OF THE PUBLIC: No. I'm just here to listen.

HEARING OFFICER HALLORAN: All right. Well --

MEMBER OF THE PUBLIC: Maybe speak my piece later, but I can't stay. I always try to get the information.

HEARING OFFICER HALLORAN: I understand.

Unfortunately, because there are trade secret issues involved --

MEMBER OF THE PUBLIC: I understand.

HEARING OFFICER HALLORAN: So --

MEMBER OF THE PUBLIC: That's fine.

HEARING OFFICER HALLORAN: Thank you for stopping by.

MR. GIFFIN: We are trying to keep the Chinese out of our business.

MEMBER OF THE PUBLIC: There you go. That's a good idea. Buy American.

MR. GIFFIN: Unfortunately, that's the way it is.

MEMBER OF THE PUBLIC: I understand, sir. I was just a little confused.

HEARING OFFICER HALLORAN: Okay. Thank you so much.

(Whereupon, the member of the public left the proceedings.)

Q So all of the tire manufacturers in the United States that are still left will either have to buy your accelerator or other companies have to rely on this product that is made overseas?

A That's my understanding at this point in time; that we are the sole supplier of the accelerators

to the North American market. And the market -- the tire company will either purchase it from us or they will bring it from Asia.

Q Has the MBT crude process remained unchanged since it was originally installed prior to the Board's adoption of the air pollution regulations in 1972?

A There have been no changes to the process. It's basically what I have described here.

Q And in your discussions with the Agency over past permitting issues and continues through the Title V, to your understanding -- what's your understanding as to the Agency's view regarding whether or not this is a petroleum or petrochemical process?

A They consider this process to be a petrochemical process.

Q And why is that?

A The utilization of aniline is a petrochemical -- comes from a petrochemical source, and that classifies it as a --

Q What is your understanding of the requirement to meet the exemption found at 35 Illinois Administrative Code 301?

MS. CARTER: Objection to the extent that it calls for a legal conclusion.

MR. HARSCH: I'm asking for his understanding.

HEARING OFFICER HALLORAN: Excuse me. Gale, could you please read the question back? There was some rustling of papers.

COURT REPORTER: Sure. "What is your understanding of the requirement to meet the exemption found at 35 Illinois Administrative Code 301?"

MR. HARSCH: Response to the objection. He has testified he is plant environmental engineer, has been and is responsible as such, I would assume, for compliance with all aspects of the air pollution regulations as it applies to this facility. I think it's a very valid question.

HEARING OFFICER HALLORAN: And Ms. Carter has an objection because it appears to draw a legal conclusion?

MS. CARTER: Yes.

HEARING OFFICER HALLORAN: You know, I think Mr. Giffin can answer if he can do so.

THE WITNESS: Sure.

HEARING OFFICE HALLORAN: It's overruled.

A Sure. The exception to the rule 301 basically requires that a process have some sort of a sulfur-reducing device. If it has a sulfur-reducing device, than it does not have to meet the 2,000 part per

million S02 standard.

HEARING OFFICER HALLORAN: Okay. This is 35 Illinois Administrative Code -- what number?

MR. HARSCH: 214.382(a).

HEARING OFFICER HALLORAN: Thank you, Mr. Harsch.

Q Is carbon disulfide a sulfur compound?

A It is. It contains carbon, one molecule of carbon and two molecules of sulfur. And it's designated as CS2.

Q What is the recovery of this carbon disulfide or sulfur compound percentage-wise that results by the use of the two condensers?

A The condensers condense the carbon disulfide during the reaction phase and return it back to the reactor as a liquid. And we have conducted studies that show that that recovery rate is 70 percent of the carbon disulfide.

Q And the condenser is recovering none of the hydrogen sulfide?

A None of the hydrogen sulfide is recovered. The hydrogen sulfide passes through the condenser.

Q Were the condensers originally designed to recover -- or to remove the sulfur compound, carbon disulfide from the stacked gases?

A They were designed for that, yes.

Q Based on your running this process for a number of years, is it possible to run the MBT reactors without the condensers?

A When I was the technical engineer of the process back in 1972, I was responsible for the process. We did a lot of work on the condensers to understand them, including the measurements of the carbon disulfide returning. During that work we certainly -- we ran those condensers at different levels of control. We -- in order for the condensers to operate properly, we have to have a liquid water level in the shell side of the condenser. When the hot gases come through that condenser, the water then is boiled off, flashed off. And due to the vaporization of that water, it cools the carbon disulfide. So we did a lot of work on the condenser as far as different levels of water in the condenser, anywhere from no level all the way to about two thirds level in the condensers.

And in all that work, we were able to make prime material. It was just basically control the amount of carbon disulfide that reached the flare and was converted to sulfur dioxide.

Q During that work -- during that time period

and then at any subsequent time period where the water, for example, wasn't available to the condenser, you were able to continue to operate the MBT crude --

A We were.

Q -- reactors?

A We were.

Q Moving away from the drawing, if you want to sit back down.

A Thank you.

Q After you became plant environmental safety director again, what was your involvement with respect to the preliminary work that went into the preparation of the Title V application or CAAPP application?

A I basically was responsible for coordinating the -- putting together the Title V application that was to be submitted in 1996. So at that time I hired AquAeTer, Incorporated, an engineering firm, to assist us on putting together that permit application. And so we probably started that activity somewhere around 1994, 1995 time span and worked until we were able to submit the application on time in March of 1996. Is that right?

Q And did Mr. Corn from AquAeTer, was he the principal person at AquAeTer you --

A Yes. Mike Corn was the principal owner of AquAeTer. He, along with one of his fellow engineers, John Upmore, worked closely with myself and with the plant engineers, the plant technical engineers, to instruct the Title V application system.

Q Did you have any legal assistance?

A We did. Before we submitted the Title V, part of the Title V requires us to identify all the pertinent regulations that are applicable to each part of the process. We felt that we wanted to make sure that we understood what our requirements were. So at that point in time we asked Gardner, Carton & Douglas to assist us in that. And a lawyer by the name of Bob -- Robert Mueller assisted us in carefully reviewing all parts of our Title V permit application and also to seek the appropriate regulatory applications to any part of that permit.

Q Part of that effort by Mr. Mueller and yourself was there a Freedom of Information Act request given to the Illinois Environmental Protection Agency to gain access to your operating permit files to assist you in identifying the various regulatory requirements?

A Yes, we did. We did a FOIA request in February of 1996 to look at the files, to make sure that

we understood the posture of the EPA concerning our processes and to understand if we were interpreting the regulations appropriately.

Q Did you, in fact, subsequent to that FOI filing, in fact, review the files?

A I did.

Q When you reviewed the files that were provided you, was there anything in those files that concerned -- or showed the Agency's concern over the application of the exemption?

A We did not pick anything up specific in the FOIA concerning the issue that we are discussing today in the files. We did -- as we went through the files, we did notice there was a number of documents that had been removed from the file for Agency usage.

Q In the Title V application that was originally filed, which is, I believe, trade secret documents 1 through 2,115. For this specific MBT crude process, what did you list for the applicable sulfur dioxide emission limitations that would be applicable to the flare?

A We listed the exemption regulation as the applicable regulation which --

Q Did you submit any compliance plan? I'm

sorry. I interrupted you.

A Which basically allowed the sulfur-reducing device to be classified as the compliance.

Q And that was consistent with all of the operating permits that had been issued since 1975 through 1993?

MS. CARTER: Objection. Counsel -- that's the subject of his motion to supplement the record issue ruled upon. What Counsel is seeking to do is to open up the Illinois EPA prior permitting history which is not at issue here today.

HEARING OFFICER HALLORAN: Mr. Harsch?

MR. HARSCH: Well, one, I totally disagree, with all due respect, to the Hearing Officer's ruling. And as we proceed in this proceeding, will probably be asking him to reconsider or filing a motion with the Pollution Control Board to overrule the ruling. It would seem to me that the Illinois Environmental Protection Agency has put this squarely at issue. They have included memorandum, selectively included parts of the operating permit file, excluding other parts. There are countless memorandum and references to the Agency's prior permitting decisions in this record, including the memorandums prepared by Mr. Punzak dated 1993, legal

analysis, My 17th, 1993, by legal counsel based on that memorandum and a number of e-mails and other documents regarding the continued view of the Agency of the application of this exemption or lack thereof while Mr. Punzak and the Agency were considering the Title V application. So I think it's fair to ask the witness if he -- regarding the previous operating permits that had been issued by the Agency based on that exemption.

HEARING OFFICER HALLORAN: Well, if you are making a motion to reconsider --

MR. HARSCH: I'm not at this time until I get the proper facts established through the direct examination of this --

HEARING OFFICER HALLORAN: I ruled on a motion to supplement that you filed on January 24th. I ruled on February 4th. That motion to supplement is denied. And you stated that you might want to appeal to the Board to overrule my ruling. Obviously, it's too late at this point. You can do it afterwards. Had that motion been made earlier, maybe the Board could have ruled on it sooner. With that said, I find that the topic of your direct addresses my motion -- my order to deny your motion to supplement. So with that point I would grant Ms. Carter's objection.

MR. HARSCH: At this point then I will make an offer of proof to include all of what was marked as Exhibit A to my motion to supplement subsequent that it should be allowed as admissible in this proceeding and should have been allowed into the record.

HEARING OFFICER HALLORAN: Ms. Carter, I assume you object to his offer of proof to allow Exhibit A attached to his motion?

MS. CARTER: Yes, Mr. Hearing Officer. The Illinois EPA objects on the same grounds they objected in response to Counsel's motion to supplement the record.

HEARING OFFICER HALLORAN: What I'm going to do is overrule your objection. I am going to accept Exhibit A that is attached to Noveon's January 24th motion to supplement. It's about an inch thick, Mr. Harsch, Exhibit A?

MR. HARSCH: Bound volume (indicating).

HEARING OFFICER HALLORAN: I'll -- again, I will accept that as an offer of proof.

(Discussion off the record.)

HEARING OFFICER HALLORAN: We are back on the record. Mr. Harsch.

MR. HARSCH: There has -- in the Agency's response

to our motion to supplement the record that Ms. Carter referred to, there is attached to it the affidavit of Mr. Punzak. I would move that his affidavit copy which is already in the Board records be introduced into evidence as Petitioner's Exhibit 1.

HEARING OFFICER HALLORAN: Ms. Carter?

MS. CARTER: I have no objection to that.

HEARING OFFICER HALLORAN: Okay. Perfect. The affidavit attached to IEPA's response to Noveon's motion to supplement the record filed on January 29th is admitted into evidence without objection. And it's entitled Petitioner's Exhibit Number 1.

Q Mr. Giffin, would you please read paragraph 4 from this affidavit?

A "Based on my recent review of the permitting file for operating permit number 72110935 for the accelerator crude process since at least 1975 through 1993 the Illinois EPA issued permits authorizing the source to operate the process exempt from the requirements in 35 Illinois Admin Code 214.301 based on the applicability of 35 Illinois Admin Code 214.382."

Q Mr. Giffin, do you agree with that statement?

MS. CARTER: Objection. Again, Counsel is going into the prior permitting history. Anything beyond the

Illinois EPA's admission is not necessary or relevant to this case. What's at issue here is the Title V permit matter which is under appeal.

HEARING OFFICER HALLORAN: I agree. But I think he can answer whether he agrees or disagrees. Objection overruled.

A Those permits were granted; that's correct.

Q It's your understanding that Mr. Punzak was, in fact, the permit review engineer for the 1993 permit?

A That's correct.

Q Now I will repeat my question. Mr. Giffin, is it your understanding that the Illinois Environmental Protection Agency issued operating permits for the Henry facility beginning in 1975 through 1993 based on the exemption from the 2,000 parts per million general applicable S02 limitations because of the sulfur removal exemption found at 35 Illinois Admin Code 214.382(a)?

MS. CARTER: Again, objection. Counsel is still probing into our underlying -- or the permit history of the Illinois EPA that dates back to the early 1970s. It's not at issue here today.

HEARING OFFICER HALLORAN: Mr. Harsch?

MR. HARSCH: I find it exceptional and unfathomable that the Agency is trying so hard to continue to keep

the fact that it issued permits for 26 years, some eight permits based on this exclusion, out of the record and has kept, as we pointed out already, kept this information from Petitioner when they reviewed the operating permit files and continues to this day to try to exclude this information and hide it.

MS. CARTER: May I respond to that?

HEARING OFFICER HALLORAN: Yes, you may. And then I will make my ruling.

MS. CARTER: Okay. The Illinois EPA takes offense to the statements. That the Illinois EPA voluntarily provided an affidavit stating the permitting history for the past 30 years of this source. That being said, it's simply not relevant to the instant permitting decision. No part of those underlying permits found their way into this Title V. There is no reflection in there. Thus, it's not relevant to this proceeding.

HEARING OFFICER HALLORAN: Objection sustained. My order of February 4th, 2008, has covered that.

Mr. Harsch.

Q Did you include a compliance plan for achieving compliance with the 2,000 part per million sulfur dioxide limitation in your Title V application?

A We did not.

Q Did you receive a CAAPP application completeness determination dated March 6th, 1996, from the Agency regarding the original application filed?

A Yes, we did.

MR. HARSCH: For the record, that document is found in the general public portion, document number 1507 to 1509. Correct, Counsel?

MS. CARTER: Yes. Yes, it is, sir.

Q When Mr. Punzak began his review of the Title V application in January of 2001, did you have an occasion to meet with him on January 18th, 2001, to discuss the application?

A Yes, we did. There was -- we met with Dan. Nathan Gray was one of the senior process engineers that was working with me on the Title V. And we went to Springfield and met with Dan to talk about issues concerning the Title V.

Q At that meeting -- strike that.

(Pause in proceedings.)

Q I show you what is document 1464 and its attachments. It's a letter dated March 21, 2001, to you from Don Sutton. Are you familiar with this letter?

A Yes, I am.

Q Was this the first time that you became aware

that the Agency had concerns regarding the application of the exemption to your facility part of the Title V process?

A It's the first formal communication.

Q That letter requested information regarding the process, did it not?

A It did. It did.

Q And the company responded to that information?

A Yes. We responded in two parts. We answered, I believe, the first portion of the letter and one submittal. And a second letter was submitted to the Agency with the rest of the information in a second letter that was sent to the Agency.

Q The first part of the letter dealt with issues with -- potential issues with respect to PSD, did it not?

A It did.

Q PSD is prevention of significant deterioration, correct?

A Yes, it is.

Q And it's my understanding -- did the Agency have the right process in mind regarding the PSD issues?

A No. There was a confusion of the MBT crude

process and the what we call the accelerator A&E processes.

Q I show you what is document 2122 from the trade secret file. Is that the response regarding the PSD issue?

(Pause in proceedings.)

A Yes, it is.

Q And if I show you what is document 2120 and 2121 from the trade secret file, is that the company's response to the questions regarding the MBT crude reactor and condenser?

A It is. It is.

Q What happened subsequent to the submittal of that information; do you recall?

A In regard to the plant or in regard to --

Q Regards to the plant?

(Pause in proceedings.)

Q Let me rephrase the question. Did you receive a formal request for additional information from the Illinois Environmental Protection Agency after you submitted the response to that request for information that was contained in the February letter?

A I believe we did, yes. Yes.

Q I show you what is in the general portion of

the permit record at 1459 and 1460. Would you tell me what this document is?

A Yes. This is a document from Don Sutton requesting additional information, specifically for the MBT crude process and for indicating that they had a concern about the applicability of the exemption.

Q Is this the first formal response you received from the Agency regarding its determination that you were not entitled to the exemption?

A Well, certainly the earlier one started causing us to question that there was a potential issue. This one here basically spelled it out.

Q I'm showing you document 2116 and 17 and 18, which is a letter from Don -- to Don Sutton from myself, dated June 14, 2001. Are you familiar with this document?

A I am familiar with this document.

Q Did you assist me in the preparation of that document?

A I did.

Q Is this document -- is this document the formal response to Mr. Sutton's May 16th letter?

A It is.

Q In that letter we requested a meeting. Did

that meeting with the Agency occur; do you recall?

A Yes, it did.

Q In July of 2001?

A Yes. I think we met the day after my birthday.

Q And the attendance sheet is at 1420 in the general permit record. At that meeting, if you recall, did Mr. Punzak present his observations that other manufacturers of the same material had differing types of control systems?

A Yes, we did. We learned of the work that Dan had done in researching other competitors in the USA.

Q And he drew your attention to facilities in West Virginia and Louisiana; is that correct?

A That's correct.

Q Following that meeting, did the company agree to evaluate certain add-on control systems in a general manner?

A We agreed that we would go back and we would investigate the control systems and the information that Dan had supplied to us to begin understanding further control systems that could improve the removal of sulfur materials.

Q Did you abandon your position that you were

entitled to the exemption?

A We did not.

Q Did you make a decision with respect to the company's willingness to install additional sulfur removal subsequent to that analysis?

A I guess that was kind of a difficult time period for us because it was when Goodrich had sold us to -- and we became Noveon. And so we were trying to determine exactly what we could financially withstand without closing the plant. And so we had another issue with the water people concerning ammonia, and we were trying to understand the financial involvement of that before we went further with this. We did go ahead and evaluate and start evaluating what we could do on a parallel path, but that took quite a bit of time for us to shake that out.

And our initial attempt was to look at sulfur recovery utilizing the claus unit. And we went to the point of going through and then doing a lot of the detailed design and estimating the cost of that. The unfortunate aspect of the claus unit was that the return on recovering sulfur was -- there was none. Basically, we were going to have to probably landfill all of the sulfur that came off the system.

And so the timing of that, I'm not sure exactly how that fits into this, but a lot of that activity went -- occurred as a result of studying what other companies were doing in relationship to sulfur recovery. Still, I mean, we did not abandon the fact that we felt very strongly that we had a sulfur-reducing device and it met the requirement of the regulation. We understood that the Agency's concern was the amount of sulfur, and we were trying to find a suitable way of doing that and stay in business.

Q Did the company, in fact, prior to the issuance of the Title V permit make a decision and communicate that decision to the Agency that it was willing to proceed to install additional sulfur recovery system?

A Yes. I believe we did.

Q And did that schedule allow you time to obtain a ruling by the Pollution Control Board on the MON issue?

A It did. It did.

Q And that was so you could understand the economic impact on the plant of both of these two environmental issues?

A That's exactly right. And we certainly did

appreciate the patience of the air people on this because it was a very, very fragile time for us.

Q Do you recall why the company -- the owners at that point in time made the decision that it would agree to install additional sulfur control?

A Well, certainly looking at the -- at what Dan had presented to us gave us a little more understanding of what other companies were doing. We felt that there was a lot of emissions of sulfur dioxide, that we needed to see if there was a reasonable way of reducing that. Our company supported us on that. At that point in time we were owned by Noveon, AEA Investors. And we -- so we began looking for a solution to -- economic solution to reduce the amount of sulfur dioxide being generated. We knew that the Agency had a concern about it. And, basically, we -- if for a reasonable amount of investment and if we could get a return that it would be better to try to resolve that rather than fight it legally.

Q You mentioned earlier -- strike that.

Your initial review were what's referred to as a claus type system?

A Yes.

Q Does the fact that your MBT reactor process

is a batch process impact the use of a claus process?

A Any type of recovery system that you would employ is affected by the batch operation because most -- well, all of the sulfur recovery devices is a continuous process. And so we had to determine how to smooth out the batch operation so that the feeds to the new system would be continuous -- would meet a continuous process dynamic. The claus unit was certainly a problem from that standpoint. In addition, like I had mentioned before, the claus unit, all it did was recover the sulfur. And sulfur is very cheap. As a matter of fact, you can't get rid of it. When we costed that out, we thought it was going to cost us somewhere around $3-1/2 million. When we finally got the final estimate back, it was in excess of $5 million. And so the company wanted us to reevaluate that from a -- because there wasn't a good fit from the standpoint of financials.

And so we returned and evaluated the NaSH system. At about that time Luberzol had purchased us, and they had operating NaSH systems within their company. We evaluated their systems, and we embarked on a -- designing a carbon disulfide recovery system and a sodium hydrosulfide reaction system that would create

NaSH. The revenue generated by that system would just about break even as far as material cost going in and cost of product being sold so that the overall financial impact would not be as great as the production.

The other thing that we did find out is about that point in time Flexsys from West Virginia closed their plant. They had a claus unit that was for sale. And as we investigated it, it was shot. They had had all kinds of problems operating the claus unit. So there was other inputs that we found that basically convinced us that the claus unit was not a technical -- a good technical solution.

Q Were there any other economic factors that went into your decision on putting a NaSH unit in?

A Yes. We knew that there are sulfur dioxide credits and that if we were able to reduce the emissions of the sulfur dioxide from our flare, that there was a potential that we could qualify for sulfur dioxide credits and help pay for the initial investment of $10 million into the NaSH system.

Q Was that the primary driving force when the company proceeded with the appeal of the Agency's determination regarding the legal requirement that you had to meet the 2,000 parts per million limitation?

A Was the sulfur dioxide credit issue the primary?

Q Yes.

A Certainly it was a significant part of it. So, I mean, we still hadn't changed our mind concerning the regulation. We had a sulfur-recovering device, and it met the language of the regulation.

Q Mr. Giffin, did the company rely on the parent agency position that you were entitled to the exemption for the operating permit history period Mr. Punzak mentions in the deposition -- or excuse me -- in the exhibit, Petitioner's Exhibit 1, which is his affidavit?

A If I understand your question, the company -- during the different company ownerships?

Q Yes.

A Conducted due diligence. We did a due diligence when we went from BF Goodrich to Noveon. A very, very thorough due diligence. We probably had three separate meetings with outside contractors to make sure that Noveon or the AEA Investors understood the risk involved in purchasing the Noveon division. And in doing that, our due diligence occurred from about the year of 2000, and we were sold in, I think, March of

2001. So all that due diligence had occurred during the year of 2000.

As we looked at the records and understood the issues at the plant, we identified the ammonia issue which is associated with our wastewater system as a significant issue that was unresolved so that the purchaser would understand the risk and that would be a part of the negotiations.

We did not consider the sulfur-reducing device issue to be an event, or we didn't consider it to be an issue at that time because we didn't know about it. And in the due diligence I did not mention anything in relationship to the MBT crude process. And so in the negotiation processes there was notifications that were generated by Goodrich in the sale to Noveon for the ammonia, but there were no -- to my knowledge there were no indemnification for the MBT crude process.

Q And you were actively involved in the preparation of those environmental disclosures?

A I was.

Q And at that point in time you had no knowledge of concerns of the Agency as highlighted by the 1993 memorandum which are in the record 1474, 5, 1477, 78, 79, which are the memos from Don Sutton and

Dan Punzak to Robert Sharpe and Rachel Doctors and Kathleen Bassi?

A No, I didn't.

Q When you submit a Title V application, do you have to certify your compliance?

A Yes.

Q And you certified your compliance also -- you certified your compliance in the Title V application based on the application of the exemption?

A I did.

Q Following the July 12th, 2001, meeting, that you testified to, did you direct me to submit an FOI request to the Agency to attempt to obtain documents from the Agency regarding this change in interpretation, the applicability of the exemption?

A I did.

Q And you reviewed the response to that FOI request, did you not?

A I did.

Q Did the Agency withhold all of the documents relevant to these internal discussions regarding the applicability of the exemption and their concerns regarding that exemption?

A They did.

MR. HARSCH: Counsel, do you want to see?

MS. CARTER: Are you looking at the September 6th, 2001.

MR. HARSCH: Yeah.

MS. CARTER: I have a copy of that. And the attachment, I have that as well, sir.

MR. HARSCH: Mr. Hearing Officer, I would like to introduce the September 6th, 2001, response from Bonnie Sawyer to myself and Attachment A thereto as Petitioner's Exhibit Number 2.

MS. CARTER: Just to make sure I'm clear, the attachment is the list of withheld documents?

MR. HARSCH: Yes.

MS. CARTER: I have no objection.

HEARING OFFICER HALLORAN: Petitioner's Exhibit 2 is admitted into evidence without objection. And it's the, again, September 6th, 2001, response from Sawyer to Harsch and Attachment A.

MR. HARSCH: Yes.

HEARING OFFICER HALLORAN: Where is that found in the record, Mr. Harsch?

MR. HARSCH: It's not, and I will have to see if Sally can give me a clean copy -- since mine is marked up -- that shows all of the reference to the -- where

these various withheld documents are contained in the permit record.

MS. CARTER: He anticipated me. I was going to give that to you as well. It's not in the record because it wasn't a part of our permitting decision, but it is a part of our FOIA response.

HEARING OFFICER HALLORAN: Thank you, Counsel.

MR. HARSCH: Thank you very much.

(Pause in proceedings.)

MR. HARSCH: Just to make it easier, I'm going to move that exhibit from the trade secret file 142 be admitted as Petitioner's Exhibit 3, and I'm going to ask Mr. Giffin a couple of questions regarding this before I move it. Is that okay?

HEARING OFFICER HALLORAN: That's fine.

Q Mr. Giffin, you are familiar with this document?

A I am.

Q And it's a blowup of the actual page from the permit record, is it not?

A It is.

Q And is it identical to, for all practical purposes from what you were talking about earlier, to the bulletin-board size document 141 that you were

referring to?

A It is.

Q Will you please mark and circle and put a number 1 in it, the raw materials?

A Each one?

Q Just one big circle around them. You pointed to it on the map.

A Do you want me to put "raw material" on it?

Q Fine.

A (Witness complies.)

Q And you just put "raw material" in the circle. That encompasses sulfur, aniline --

A And carbon disulfide.

Q And carbon disulfide. And then would you circle the -- what you pointed to as the reactors and put a number 2 there?

A (Witness complies.)

Q Okay. And then put a number 3 above the blowdown tanks that you pointed to. And then a number 4 around the flare.

A (Witness complies.)

MR. HARSCH: Since he was pointing to that, Counsel, just marked it -- it's kind of hard to show the points on the record. At this point I would move this

for admission.

HEARING OFFICER HALLORAN: Ms. Carter?

MS. CARTER: I have no objection to it to the extent that it's for demonstrative purposes to illustrate what the witness was testifying to.

HEARING OFFICER HALLORAN: Mr. Harsch, any response?

MR. HARSCH: No.

HEARING OFFICER HALLORAN: Petitioner's Exhibit 3 is admitted.

MR. HARSCH: At this point in time I would rest the direct examination.

HEARING OFFICER HALLORAN: Thank you, Mr. Harsch. Does anybody want to take a five-minute break and then on with cross?

MS. CARTER: That's fine.

HEARING OFFICER HALLORAN: Okay. Great. Thank you.

(Whereupon, a recess was taken in the proceedings.)

HEARING OFFICER HALLORAN: Are you ready for your cross?

MS. CARTER: Yes. Thank you.

Good morning, Mr. Giffin.

THE WITNESS: Good morning, again.

MS. CARTER: Good morning.

CROSS-EXAMINATION

BY MS. CARTER:

Q When was the MBT-C reactor built?

A I think it was one of the original processes, probably back in 1958 or '59.

Q And did it include the condensers at issue here today?

A It did.

Q Okay. And I believe during your direct testimony you stated that you have operated the MBT-C reactor without the condenser; is that correct?

A Yes. We have had occasions when we had tested it. And we also had occasions when it ran without water in the storage tank.

Q Okay. Can you just tell me generally, did anything change with the MBT-C reactor when you operated it without the condenser?

A We probably didn't notice anything because we don't take samples directly from the reactor. It goes into the sodium MBT reactor and is solubilized in water and plastic, and then it goes into a large storage tank. Then we would sample the storage tank over -- maybe on a

daily basis. And in those events we didn't see any change.

Q Okay. So when you said you didn't see anything changed, you were referring to the rate of reaction and what you got out of it?

A No. The quality.

Q The quality?

A The quality of the product. By the actual -- we knew that we probably lost carbon disulfide out the vent of it. And as a result there was more sulfur dioxide that was generated because there is two molecules of sulfur in carbon disulfide rather than there is one molecule of sulfur in H2S. So there would be more sulfur dioxide generated.

Q Because you are not pulling that CS2 back into the reactor?

A That's correct.

Q Is why you are saying that?

A That's correct.

Q Okay. Without the condensers, would the temperature change at all in the reaction?

A No. No.

Q What about the pressure; would it change?

A No. The pressure is still the same.

Q Okay. Is it fair to say that generally the only thing that would change would be the amount of raw materials utilized?

A Yes.

Q Okay. And with that you mean the CS2, right?

A Yes.

Q And how is the temperature regulated in the reactor?

A Basically, when we add the ingredients, we heat the reactor up to a certain temperature and that temperature may be like 480 degrees. And then the reaction from that point on will cause the temperature to go up, to peak up to about 500 degrees and stay there.

Q And --

A So it's mildly exothermic.

Q And what about the pressure? How would that regulate it in the reaction?

A The pressure is regulated by the high pressure control valve that is located on the outlet of the sulfur-reducing device condenser.

Q Is the condenser designed and operated to target a specific compound? Is it seeking -- is the purpose behind the condenser to recover CS2?

A Yes. Well, its purpose is to recover CS2 and also to separate the H2S from the CS2.

Q Does the condenser eliminate the components here, CS2 and H2S, in the vent gases from the reactor?

A Yes. There is a -- when it -- when the high pressure control valve on the condenser opens up, it will vent the H2S and a certain amount of carbon disulfide that's not liquefied. And they will go into the blowdown tank.

Q Okay. So you are saying that the H2S is vented. It's not necessarily eliminated from the process, it's just vented onto the MBT-C blowdown tank there; is that what you are saying?

A That's correct.

Q Okay.

A That's correct.

Q Okay.

A That's correct.

Q Is it fair to say that the condenser was designed to recover CS2 for purposes of reducing the amount of virgin CS2 used in the process?

A I wasn't back in that time when it was installed. So I don't know exactly the reason why the condenser was installed. I presume it was to reduce raw

material usage.

Q Have you ever --

A And also to control any emissions.

Q Have you ever reviewed any sort of design specifications for the MBT-C reactor and the condenser? I understand that you said it was built probably in '57 or '58?

A Correct.

Q Have you ever seen any design specifications?

A No, I haven't.

Q Are you aware whether any exist?

A I haven't seen them myself, no.

Q Mr. Giffin, are you familiar with the term "reflux condenser"?

A I am.

Q And what does that term mean to you?

A I'm not really sure.

Q You are not really sure. Okay. Would you characterize yourself as a chemical engineer?

A I am not.

Q And I'm sorry if I missed this in your background section; what is your undergraduate degree in?

A My undergraduate degree is in zoology and I

minored in chemistry. And I have a master's in engineering administration.

Q Engineering administration. Okay. And for a nonengineering type, what sort of classes do you take in engineering administration just so I understand.

A Basically, math, engineering math, physics chemistries, quantitative/qualitative chemistries, organic chemistries. As far as design of this equipment, no, the exemption of that.

Q I'm going to be referring to the trade secret version of the record, the Title V permit application which is pages 1 through 2,115. I'm just going to hand you the first part of it, sir, so you don't have all 2,100 pages in front of you. If I could direct your attention to page 173 of that document. And when I say 173, I mean the Bates-stamped version. I also see that there is handwritten numbers, the application page numbers on there as well, but I mean the machine one.

A Sure.

Q Do you know what I'm talking about?

A Sure.

MS. CARTER: Roy, I can give you another copy of what I'm referring to.

Q Are you on that page, sir?

A I am.
Q If you go down to paragraph number 8. Are you there?
A I am.
Q It states, quote, "Is this a reflux condenser?" Do you see that?
A I do.
Q Can you read that?
A Yes. It says, "Is this a reflux condenser?" In other words, Does condensed material return directly to the process from which it was generated?
Q And what's Noveon or Emerald Performance's response to that question?
A We checked "yes."
Q And did you -- I believe -- did you indicate in your direct testimony that you assisted in the preparation of the Title V application?
A I did.
Q What year was the NaSH unit installed?
A We started installing the NaSH unit in 2006. 2006.
Q When were you -- when did you complete construction?
A We completed construction -- well, it's

been --

MR. HARSCH: I would like to object to the question. Can you define "completed construction" because it has a legal --

Q Well, what I mean by that is -- let me rephrase the question.

Mr. Giffin, when was construction complete on the NaSH unit and you folks commence operation after completing all appropriate testing?

MR. HARSCH: Again --

A Because the testing is -- some of the testing was done in July of this year.

Q Okay.

A And the actual physical installation was done before that. And probably that physical installation and initial startup occurred back in November of last year.

HEARING OFFICER HALLORAN: Is that okay, Mr. Harsch?

MR. HARSCH: Yeah. I will clarify it on redirect.

A And, I mean, we are still in the process of shaking down the NaSH system. And the NaSH system -- I mean, we still aren't without some problems with the NaSH system. Whereas the process does operate about 85

percent uptime at this point in time. There are months that we have better months. But there are months that -- we are averaging in the last six months about 85 percent uptime.

Q Okay. And is it fair to say when you installed the NaSH unit you were aware that the Illinois EPA had concluded that the source was not entitled to the exemption in 214.382?

A We understood that the Agency didn't agree with us.

Q I believe you should still have sitting up there, sir, what has been marked Petitioner's Exhibit Number 2. Do you have that, sir? It's a September 6th, 2001, FOIA response.

A I do.

Q And if I could direct your attention to Attachment A. Are you there?

A I'm there.

Q What is generally reflected in this Attachment A, sir?

A Internal communications of the Agency, attorney/client communication.

Q Does it provide a general description of various documents, the date of the document and then the

reason that the document has been withheld?

A Yes.

Q Did Noveon ever appeal the Illinois EPA's FOIA decision as reflected in this document?

A Not to my knowledge.

MS. CARTER: I have no further questions. Thank you, Mr. Giffin.

HEARING OFFICER HALLORAN: Thank you, Ms. Carter.

Mr. Harsch, redirect?

REDIRECT EXAMINATION

BY MR. HARSCH:

Q Mr. Giffin, you mentioned that completion of the physical construction and startup and testing. Can you describe the operational problems in further detail that you also testified to regarding the NaSH system?

A Sure. First of all, the NaSH system, the carbon disulfide recovery system is a very unique system. It's one of a kind. I don't think there is any other unit like it in the world. So when we began operating it, we understood we would possibly face some challenges as far as shaking out some of the issues, the operational issues. We have had -- when we vent the MBT crude into the blowdown tanks, obviously you are venting from 1,000 psig down to about 50 pounds of pressure. So

there is a huge pressure job. In that venting there can be some tar-like material that will accompany the gases. We designed into the initial part of the NaSH unit ways to prevent the tar from entering the NaSH process. And for the most part, I think the design has done a pretty good job. But there is some residual material that does get into the carbon disulfide condensing system. And we are continuing to find ways to prevent the -- some of the lines that will plug. And we developed washing techniques on the columns to improve the uptime of the NaSH system.

Obviously, with winter outside operating conditions -- I mean, we are having a learning curve there as well. And we have gone anywhere from -- we have averaged, like I said, 85 percent uptime on the unit since July. In October we operated at 98 percent. And in December, with the cold weather and everything, it was a lot less than 85 percent uptime because of cold conditions. And so we have had our share of shakeout challenges on the system. But we believe that the system is designed, and we will continue to improve that uptime.

Q What happens when the NaSH system plugs?

A If the NaSH system plugs, then we have to

divert the vapor stream from the blowdown tanks to the NaSH, and we divert it back to the flare.

Q Is the NaSH system what you anticipate compliance with the Miscellaneous Organic NESHAP or MON?

A The NaSH is one form of that compliance. We also are evaluating utilization of the flare as a backup mode of compliance.

Q Is that backup mode dependent upon favorable outcome in this appeal?

A Yes.

MR. HARSCH: I have no further questions.

HEARING OFFICER HALLORAN: Thank you, Mr. Harsch.

Recross, Ms. Carter?

MS. CARTER: No, thank you.

HEARING OFFICER HALLORAN: Mr. Giffin, you may step down. Thank you so much.

MR. HARSCH: Mr. Corn.

(Witness sworn.)

MICHAEL R. CORN, P.E.,

called as a witness, after being first duly sworn, was examined and testified upon his oath as follows:

DIRECT EXAMINATION

BY MR. HARSCH:

Q Mr. Corn, would you please state your name

and address for the record?

A My name is Michael R. Corn. I live at 6615 Manley Lane, Brentwood, Tennessee.

Q And would you provide your educational background?

A I hold a bachelor's degree in eco engineering from the University of Tennessee and a master's degree in environmental and water resources engineering from Vanderbilt.

Q And can you briefly describe your professional experience and who you are affiliated with?

A I have been working since I graduated from -- or since I got out of Vanderbilt as an environmental consultant since 1975. I think about 33 years of experience. I am currently president of AquAeTer, Inc. We have offices in Nashville; Brentwood; Denver, Colorado; and Hershey, Pennsylvania. We do environmental consulting in air, water, wastewater, solid hazardous and nuclear waste.

Q Have you testified as an expert before?

A Yes. I have testified -- in fact, I have testified before -- for Noveon before on the ammonia issue. Also I have testified for the City of Sauget, and I have testified on several air cases in other

states across the country.

Q Are you familiar with the Henry plant?

A I first came to the Henry plant in 1988 and am familiar with the Henry plant. I have been through all the processed buildings as far as the Title V permit application preparation.

Q And was AquAeTer and yourself retained to assist the company in the preparation of the Title V application?

A Yes. We were retained, I believe, in 1995. It may have been late '94. But '95 we were retained to begin the preparation of the Title V permit application.

Q Did you work on a number of Title V applications around the country?

A Yes. We have worked on Title V's for the chemical industry, for pulp and paper, for petrochemical, for wood treating, including Title V permits in Illinois, other Title V's.

Q Did you have a standard procedure that you followed when you were working on preparing the Title V application?

A Yes. There is a standard procedure that we use, and I imagine most other people would use as well. You review the process information with the engineers

that run the processes. You look at their past permits to see how they permitted each process before. You look at the regulatory requirements that the permit is required to -- or where the permittee is required to meet. And then you prepare the permit application based on all the data that you put together. Obviously we would try to check the calculations from the engineers, an independent check of that, of their emissions, and make sure that the emissions are what we believe are correct.

Q As part of your preparation of the Title V application, did you review all of the operating permits that have been issued for this facility?

A The best of my recollection we reviewed the permit -- all of the permit history. I believe the first permit was issued back in 1975. I think the first permit application started in '72, but was issued in '75.

Q Did you review the materials that were provided to Mr. Giffin and Mr. Mueller in response to the FOI request when they reviewed the operating permit files prior to the preparation of the application?

A Yes. We reviewed -- in fact, I reviewed those as well as other staff, John Upmore. John is in

Afghanistan, called up. But we reviewed all the past history, and that's part of what you do when you are doing a Title V permit.

Q Are you familiar with the regulatory requirement found in 35 Illinois Admin Code 214.301, which establishes the 2,000 part per million S02 requirement in Illinois?

A Yes. I am familiar with that.

Q And are you also familiar with the exemption found in 35 Illinois Admin Code, section 214.382?

A Yes. I'm familiar with that. And that is one of the things that we review during the Title V to make sure that the past permitting history was -- that the 382(a) was still in effect.

Q Is it possible to prepare a permit application without reviewing and relying upon past operating permit decisions by the regulatory agency?

A From my standpoint, it is not. And, in fact, it is part of the Title V; you have to do that to go through that exercise.

Q And that's a standard operating procedure, as far as you know, that all consultants follow?

A All Title V's that we have prepared -- and there has been probably over 20 or 30 Title V permits --

we followed that procedure. And I know that other people in other consultant firms follow that same procedure.

Q Based on your review of the operating permit history, your knowledge of the facility, and the two regulations we have just talked about, did you fill out the applicability section of the permit application?

A I did or John Upmore and I did.

Q And what did you conclude?

A We concluded that the facility was in compliance with the S02 requirements of the Illinois regulations.

Q And why did you conclude that?

A There are a couple of reasons we concluded that. In reviewing the record both the '90 and the '93 permits had specified that the condensers and the flares be operational when the unit is producing product. In other words, the control devices had to be operational. Part of the exemption is that you have to remove CS2, the condensers, or remove sulfur. And the exemption that was given in those permits, it was required to run that condenser to meet that exemption. The flare turned everything into S02 so you weren't discharging H2S as a hazardous gas.

Q So based on your review, you believe that 1990 and '93 permits treated the condenser as a control device?

MS. CARTER: Objection. Now Counsel is again going into the prior permitting history of the Agency.

HEARING OFFICER HALLORAN: Mr. Harsch?

MR. HARSCH: The witness has testified that it's standard operating procedure to review past permitting decisions of the Agency and the past permits. That it's impossible to fill out a Title V application without doing so, and it's a standard operating procedure. I'm questioning him regarding his decisions that led to the filling out of the Title V permit application.

HEARING OFFICER HALLORAN: Any further objection, Ms. Carter?

MS. CARTER: I did not object to the previous questions based on what the course of his review was and what he considered. However, to the extent that he is getting into an analysis of the Agency's prior decisions, I think it's off limits. Again, those are not at issue here today.

HEARING OFFICER HALLORAN: I agree with Ms. Carter's objection. It seems to me it's -- whether it's trying to or not -- it's trying a little bit of a

backdoor type regarding my ruling. So the objection is sustained.

Q Part of your review of the permit application and preparation of the Title V permit, do you have to list all of the applicable requirements?

A Yes, you do.

Q And what did you determine to be an applicable requirement for this process?

A In order to meet the exemption, it had to be a petrochemical process, and it had to remove sulfur. And from our review, both of those conditions were met.

Q And that would also include the requirement to operate the condenser?

A That's absolutely part of our decision and the State's decision. To require that as a control device was part of our analysis.

Q In preparation for today's hearing, you have reviewed a number of documents that the Agency record has been filing in this proceeding?

A Yes, sir, I have.

Q Without going through every document, have you reviewed enough of the -- Mr. Punzak's review notes in reviewing the Title V, the various letters that have been submitted to the company to understand what you

believe to be the basis of the Agency's determination that the exemption does not apply?

A I think I understand it. I disagree with that.

Q What is your understanding of the evolving Agency's decision?

A That there is a -- I believe a couple of things that the sulfur -- the condenser does not recover enough sulfur, a certain percentage of sulfur. There is nothing in the regulation that gives a percentage of sulfur recovery.

The second thing, I think he is claiming that a reflux condenser makes it a process and not a sulfur removal process. Regardless of whether it recovers that CS2, carbon disulfide, and sends it back to the process, it's still recovering sulfur; and that's the requirement of the regulation of the exemption. So that seems to be a moot point. It's not classified in a regulatory language of how much sulfur you have to recover.

Q Does the exemption in your view turn on whether the device is a process device or a control device, a reflux condenser, or something called a big red apple?

MS. CARTER: Again, objection. Calls for a legal

conclusion.

HEARING OFFICER HALLORAN: I'm going to overrule it. If Mr. Corn can answer, he may do so.

A It does not require a specific type of control equipment. Most environmental regulations do not specify the type of control equipment you put on to reduce emissions, just that you reduce emissions. That's for a purpose. We as engineers have to put our stamp on that, not the regulators.

Q So is it your opinion then that the fact that it condenses CS2 and returns it back to the process makes any difference?

A Based on my reading of the regulations, that should not make any difference to the interpretation that it removes sulfur from the flue gases.

Q Based on your familiarity with the reactor and the condenser, do you agree with Mr. Giffin's testimony that the reactor is not necessary to control -- the condenser is not necessary to control the temperature of the reaction?

A I agree with that.

Q Do you agree with Mr. Giffin's testimony that the condenser is not necessary to control the pressure in the reactor?

A I agree with that as well.
Q In fact, do you have an opinion as to whether or not the condenser is, in fact, necessary to be operated so that the reactor can function and produce usable product?
A My basic understanding of the process is that they charge the unit with additional carbon disulfide. Whether that comes from the condenser or from the raw product storage tank, does not make any difference. You use more carbon disulfide from the raw product storage tank, obviously, but it does not make any difference where you get that makeup from.
Q Is the chemistry of the reaction, does the carbon disulfide serve as a solvent?
A No. All three of the chemicals that are added are part of the reactants that go into -- that make the -- that go up to make the product. They are considered reactants.
Q You are familiar with the references and direction to the company that they evaluate the competitors' production in West Virginia and Louisiana, the documents that were in the permit record?
A Yes, sir. I'm familiar with those.
Q Have you had occasion to review the West

Virginia and Louisiana air pollution regulations that apply to those facilities?

A I have reviewed those. They contain the requirements, just like Illinois does, for the 2,000 part per million that's contained under, I believe it's 301. But they do not have a specific exemption like Illinois does. That's the 382(a), I believe, that gives an exemption for petrochemical processes that remove sulfur with a device. And that's the difference between those other two. That's the -- one of those other facility's had put sulfur recovery; they did not have that exemption written into their language in their regulations.

MR. HARSCH: I have no further direct questions.

HEARING OFFICER HALLORAN: Thank you, Mr. Harsch.

Ms. Carter, cross?

MS. CARTER: Yes. Thank you.

CROSS-EXAMINATION

BY MS. CARTER:

Q Mr. Corn, I know you stated what you have your bachelor's degree in, but I missed it. What do you have it in?

A Nuclear engineering.

Q Okay. Thank you. And you have your master's

in water resource engineering?

A Environmental and water resource engineering.

Q Okay. Thank you.

A The department is now just civil and environmental.

Q I believe in your direct testimony you stated you were familiar with the 35 Illinois Administrative Code 214.301 and 382; is that correct?

A Yes, ma'am.

Q And when did you first become familiar with these regulations?

A That was during our initial review during 1995 when we first started this and we discussed with Mr. Giffin and Mr. Mueller the applicability of the regulations because we are required to do an independent review of that.

Q And beyond this source here in Henry, Illinois, have you ever had experience with these regulations elsewhere in the state?

A On the sulfur rule?

Q Yes, sir.

A No, ma'am, I have not.

Q Now you also stated in your direct testimony that you reviewed the regulations in West Virginia and

Louisiana; is that correct?

A Yes, ma'am.

Q Okay. When did you initially review those regulations?

A Louisiana regulations, we have done work with refineries down there.

Q Okay.

A That's --

Q That's your general knowledge?

A General knowledge. West Virginia's, recently I reviewed those as part of the preparation for this.

Q Did you review the regulations in South Carolina?

A I have not reviewed the regulations in South Carolina.

Q Have you had the opportunity to research similar MBT-C processes in other states while you were preparing the Title V submittal for this site?

A We did not review any of the processes in other states.

Q And in the process of compiling this initial Title V application, did you review any design specifications for the MBT-C process at issue here today?

A Other than we went and talked with the engineers that ran the process.

Q Okay.

A In fact, Nathan Gray and I think Steve Saunders (phonetic), I believe were the names. And so we did not review specific design, the original design specs. But we did talk with engineers about how they ran the process; what was required to make the process work.

MS. CARTER: No further questions. Thank you, Mr. Corn.

HEARING OFFICER HALLORAN: Thank you, Ms. Carter.

Redirect, Mr. Harsch?

MR. HARSCH: No.

HEARING OFFICER HALLORAN: You may step down, Mr. Corn.

THE WITNESS: Thank you, sir.

(Witness sworn.)

BERNARD O. EVANS,

called as a witness, after being first duly sworn, was examined and testified upon his oath as follows:

DIRECT EXAMINATION

BY MR. HARSCH:

Q Mr. Evans, would you please state your name

and where you reside for the record?

A My name Bernard O. Evans, also known as Bernie Evans. I reside at West 195 South 10392 Racine Drive in Muskego, Wisconsin, M-u-s-k-e-g-o. It's not Indian. It's Norwegian.

Q Can you briefly describe your educational background?

A I got my engineering degree from the University of Illinois. My master's degree in environmental engineering from the University of Florida.

Q And who are you presently employed with?

A The firm I work with currently is Environmental Resources Management. It's a firm of about 135 offices across the world, about 3,000 employees. I have been with ERM about ten years.

Q What are your principal duties there?

A My responsibility with ERM is the air program director for the Midwest area. I support our air practice in about five states, region 5.

Q Does that include Illinois?

A Yes.

Q Who did you work with before?

A I have actually worked with the U.S.

Environmental Protection Agency, region 6, after school. I started consulting with Radian Corporation in Austin, Texas, in '78. I have been consulting with the industry on air matters for about 30 years.

Q As part of your background, did you personally work on a number of Title V applications?

A Yes. In my background I directed the air permitting area of Radian Corporation for a number of years through the Eighties. And in that situation, I was involved in a lot of prevention of significant deterioration permits, PSD permits, construction permits and operating permits and Title V applications since the onset of the Clean Air Act amendments in 1990. I have supported development of Title V, our CAAPP permit applications, for numerous industries in maybe as many as ten states.

Q Does that include a number of chemical industries?

A Yes.

Q Do you currently have a -- are you currently -- is your firm under contract with the company to provide assistance?

A Yes. I have been working with BF Goodrich, Noveon, Emerald, in a capacity as consultant since 1998.

My role with the company over that period of time has been in understanding and determining compliance approaches for various NESHAPs for their chemical processes. My first job was with the hazardous organic NESHAP with their Charlotte facility in support of and in relationship to compliance with the amino resin MACT. I have worked with the firms in relationship to pharmaceutical MACT, pesticide active ingredient MACT.

Q Are you currently working on a specific project for the facility?

A Yes. With the Henry plant. I have been working with the Henry plant since 2003 in relationship to the Miscellaneous Organic NESHAP and the plan and the compliance approach for that particular NESHAP.

Q Is that sometimes referred to as the MON, M-O-N?

A Yes, it is. M-O-N for MON.

Q As part of your efforts, are you thoroughly familiar with the process that's depicted in trade secret 141?

A Yes, I am. This is the MBT crude process. It is one of the effective MPCUs or miscellaneous chemical processing units that's affected by the MON. And we have been working with the plant to get in

compliance with the MON for this process.

Q Let me show you what is document 1473 from the general permit record file. It's a memorandum from Don Sutton to Julie Armitage.

(Brief pause in proceedings.)

Q You have reviewed that document previously?

A Yes. I have seen this document.

Q Do you agree with his conclusion in the second paragraph that the -- while it isn't yet promulgated, the flare would probably comply with the MON?

A Don's statement here is that the process may be subject to the Miscellaneous Organic NESHAP which has not yet been -- has been proposed. But the current control device flare would probably comply with organic HAP control requirements, but would still emit in excess of State S02 rules.

The flare requirements for compliance with the MACT would require, for this particular flare, this is a nonassisted flare. So it's a nonassisted flare. Requirements are that it operates all the time that material is vented to the flare. It must have a flame present at all times. And they have monitors to confirm that the pilot's on, that there is flame present all the

time. And it has to be designed as a nonassisted flare for tip velocity and that the heat value of the gases would be adequate to support flame. And this one currently complies with those particular requirements.

The MACT's rules also require that the flare operate with no visible plume. There are times when this plume is visible. The problem with the H2S, it's combusted in the process. And it does form droplets that can be visible at times. The plant, if they are able to use the flare for MACT compliance, will modify the flare for no visible observations.

Q Would that be modified by just increasing the temperature, natural gas emission?

A We may have a need for more additional natural gas to support the flame.

Q Does the -- when it operates, does the NaSH system comply with MON?

A Yes. That is correct. The process as it's designed currently requires -- there is two ways to comply with the -- several ways to comply with the MON. One would be with a control device that reduces your HAPS by 98 percent, or use of a recovery device that reduces HAPS by 95 percent. In relationship to this one with carbon disulfide condensers and the reactors are

about 70 percent. They would have needed to have the flare that would destroy the CS2 further or the NaSH system which completes the conversion of the CS2 in terms of back to the process as a recovery device to meet the compliance with the MON.

Q If Petitioner is successful in this appeal, will you be able to formulate the compliance program for the facility based on the use of either the NaSH system when its operational and not plugged or the flare that Mr. Giffin has testified to that they direct the gas system plug?

A Correct. The flare, as we just discussed, would accomplish the requirements of the MON in relation to compliance with the MON as an alternative to the NaSH system.

Q And the successful outcome is necessary because you would not be allowed to utilize the flare in conformance with 35 Illinois Admin Code 214.301, correct?

A Would you repeat the question?

Q The successful outcome of this appeal is necessary because of the requirement of 35 Illinois Admin Code, section 214.301, which would impose the 2,000 part per million S02 limitation absent the

applicability of the exemption?

A Correct.

Q Have you had reason to review the exemption?

A Yes. We did review the exemption. When we developed the permit application for the NaSH system, we looked at applicability of Illinois' regulations and applicability of sulfur dioxide. And we looked at both 301 and the exemption 382(a).

Q Based on your extensive background that you testified to regarding preparation of Title V applications and all the permits that you have been involved in, do you agree with the Agency's interpretation that the exemption at 35 Illinois Admin Code, section 214.382 is not applicable to this facility?

A As I read that regulation, it requires two things, petrochemical operation or your refiner. It also requires that you reduce sulfur. And the system as it's designed is reducing sulfur in relationship to the way the process operates which would be compliant with that regulation.

Q Do you have an opinion as to whether it makes any difference if it's characterized as a reflux condenser, or a control device, a process device, or a

big red apple, or any other clarification?

A The rule does not describe that it requires any sort of device other than a recovery device. It doesn't prescribe any level of recovery. As the rule is written, the system would comply with that particular requirement. And I would disagree with the interpretation it does not.

MR. HARSCH: I have no further questions.

HEARING OFFICER HALLORAN: Thank you, Mr. Harsch.

Ms. Carter?

CROSS-EXAMINATION

BY MS. CARTER:

Q Mr. Evans, you said you have been under contract with Noveon or any of its iterations since 1998?

A Correct.

Q When did you first become involved with the Henry facility?

A 2003.

Q Do you recall the exact date of that involvement?

A No. I do not.

Q Did you have any involvement in the preparation and submittal of the initial Title V

application that we have been discussing here today?

A Not for the Henry plant, no.

Q No. Okay. Did you participate in any of the communications with the Agency with regard to the Title V application from 1996 until November of 2003?

A Not until they entered it, no.

Q And you said that you have reviewed 214.301 and 382. Is that in the context of this litigation?

A No. It's in the context of the NaSH permit application that was submitted for the NaSH process.

Q And is that the first time you have been exposed or dealt with those regulations here in Illinois?

A Yes. For chemical processes. I have looked at the sulfur rule requirements for other types of industry, but first time for chemical industry.

MS. CARTER: I have no further questions. Thank you, sir.

HEARING OFFICER HALLORAN: Thank you.

MR. HARSCH: I have a --

HEARING OFFICER HALLORAN: Mr. Harsch?

MR. HARSCH: I don't know if it's redirect or clarification or whatever.

REDIRECT EXAMINATION

BY MR. HARSCH:

Q Mr. Corn testified that it was standard operating procedure for a consultant to review past operating permits in preparing Title V applications. Based on all the Title V applications that you assisted in putting together, do you agree with that testimony?

MS. CARTER: Objection. That's beyond the scope of my cross, Counsel.

HEARING OFFICER HALLORAN: Mr. Harsch, I agree with Ms. Carter, but Mr. Harsch --

MR. HARSCH: I agree heartily that it's beyond the scope. I said it was a point of clarification that I had forgotten. I'm sure I will get it in in redirect after questions of Mr. Punzak.

HEARING OFFICER HALLORAN: Thank you, Mr. Harsch. Objection sustained.

MR. HARSCH: That would be all my questions subject to calling him back as a rebuttal witness.

HEARING OFFICER HALLORAN: Okay. Very well. You may step down, Mr. Evans. Thank you so much.

Before we go off the record and discuss what we are going to do for now, I do want to make note in the record that around 9:10 a.m., a member of the

public, Bill Maypin, Mautin, (emphasizing pronunciation) I believe, he wanted to come in and sit and just listen at the hearing. I informed him that it was closed due to trade secret issues. He stated he did not want to make a comment; he just wanted to sit and listen. And he seemed fine with being told that it would be a closed hearing. So I just wanted to make that note for the record. And we will go off the record for a moment. Thank you.

(Whereupon, a brief recess was taken in the proceedings.)

HEARING OFFICER HALLORAN: It is approximately 11:36. We are going to do a direct for about 35 minutes. Mr. Harsch has informed me that the Petitioners have rested their case in chief. Now it's Ms. Carter and the IEPA's turn.

MS. CARTER: Thank you.

HEARING OFFICER HALLORAN: Thank you.

(Witness sworn.)

DAN PUNZAK,

called as a witness, after being first duly sworn, was examined and testified upon his oath as follows:

DIRECT EXAMINATION

BY MS. CARTER:

Q Please state your name.

A Dan Punzak.

Q Mr. Punzak, can you tell me a bit about your undergraduate education?

A I have a bachelor of science degree in chemical engineering from Carnegie Mellon University.

Q What type of coursework did you take to obtain your chemical engineering degree?

A You take a number of general courses, physics and chemistry. But then in engineering you take courses like thermodynamics and kinetics where you will study about reactors. And then heat transfer and various other types of courses. I have also had courses in organic chemistry.

Q Who are you currently employed with?

A Illinois Environmental Protection Agency.

Q And when were you first employed by the Agency?

A In March of 1978.

Q And what was your first position with the Agency?

A I was in the permit section.

Q And what were your general duties in the permit section in 1978?
A In 1978 I did more -- all types of permits. It wasn't as complex as it is now. Back then I did construction and operating permits. And back then you had -- often had permits for individual units of equipment.
Q And how long did you hold this position?
A I was in the permit section for less than a year and then transferred to field operation section.
Q And what position did you hold in the field operations section?
A I was a field inspector.
Q And for how long?
A A year and a half, year and three quarters.
Q Where were you assigned as a field inspector?
A I was in the LaSalle-Peru office and then in the Peoria office.
Q And after you were a field inspector with the Agency, what was your next position?
A I went back to the permit section.
Q And when you went back to the permit section, were you responsible for all types of permits?
A Yes. A number of them. They generally limit

it a little bit, but I was generally -- you could still have a fairly broad number of permits. But, generally, I tended to get permits in the fields of chemical processes, printing, refineries and that type of operation. I usually, for instance, didn't do power plants very often or anything.

Q And today are you responsible for both construction and operating permits?

A No. I'm now in the Clean Air Act Permit Program or CAAPP as they have been using it. And we do not do construction permits. There is a separate group that does construction permits for CAAPP, CAAPP sources, meaning a source that has a CAAPP permit.

Q In the CAAPP unit, do you also have a particular area of industry that you routinely deal with?

A I'm sort of still in the same area as before, refineries, chemical plants, coding operations, printing, and those type of operations.

Q And what is generally included in a CAAPP permit?

A A CAAPP permit is a broad permit that -- there is only one for an entire site. It includes all the processes that occur there. And we

have a section that addresses general requirements for the whole plant that may apply to anything. And then there is a -- then there will be a separate section where each process may have its own section. And we will describe the applicable rules, any monitoring, record keeping, reporting, and conditions that came from construction permits.

Q And prior to your employment with the Illinois EPA, were you employed elsewhere?

A Yes. I was employed as a process engineer in the chemical industry and also at a research institute.

Q While you have been with the Illinois EPA, have you participated in any sort of training activities?

A Yes. We have a number of different programs. There is a number of courses that the U.S. EPA makes available. There is ones they have had ever since basically they started the EPA up, and they still have them. They update them a little bit. But then they also have courses that are appropriate for new things that came along. For instance, I went to a -- something on the MON rule that somebody else has already described. I went to a training course on that. And then they also have a training course on what they call

CAM or Compliance Assurance Monitoring. And, basically, U.S. EPA courses that we can obtain.

Q Do you maintain any professional licenses?

A Yes. I have a professional engineering license in Illinois. Well, I took the test in '78 and, I guess, it was in '79 by the time they issued it. But I have maintained it ever since.

Q And are you familiar with Emerald Performance Materials that we have been discussing here today?

A Yes, I am.

Q And how are you familiar with the facility?

A I believe once when I was an inspector, I came over here and saw the site. That was like in '79 or '80. But back then they still had what's now PolyOne as a separate company was part of BF Goodrich at that time. But I was to the site at one time.

Q Are you also familiar with the source from working on the CAAPP permit?

A Yes, I am.

Q Generally, just to let you know, Mr. Punzak, I will be referring to the source as Emerald Performance Materials rather than any of the previous iterations just so there is no confusion.

A Okay.

Q Are you familiar with, I believe, what was discussed earlier as the MBT-C process and NaMBT process?

A Yes, I am.

Q I'm going to hand you the pointer, and I am going to be referring you to what's been previously identified as the trade secret version of the record, marked 141. And there is also a pointer if you need that, sir.

You just indicated that you are generally familiar with those processes. Can you tell me generally how the MBT-C process works, just in real general terms, first off?

A Well, they have a raw material preparation area so they can feed it in. Then they have the reactor. Then they have the condenser and a blowdown tank and then that vents to a flare. And there is two different ones here. These would be called parallel operations. This one is going on and this one is going on. And they can be going on at the same time, although they may -- most likely would be in a different phase of the process at any given time.

Q In terms of the MBT-C process, I believe you identified various reactions on the left-hand side of

that diagram there. What are the reactants that we are talking about?

A We are dealing with molten sulfur, aniline and carbon disulfide.

Q And how does the Illinois EPA characterize the MBT-C process?

A Well, it's called a batch process. And it's also a petrochemical process as earlier identified. We agree with that.

Q Okay. And I do believe that Mr. Giffin testified to the various line -- the legend down there in the lower corner. But just to get us further oriented, I see that there is various abbreviations on that document. Could you identify what those abbreviations are? For instance, I see there is a reference to an "EU"?

A Yes. We have -- they use the term "EU" means emission unit. Then we have "CU," which they call control -- this is their designations of the control unit. And then we have "EP" for an emission point.

Q And I believe you just indicated these are the company's designations?

A Yes, they are.

Q Do they necessarily reflect the Illinois

EPA's designations of those various units?

A No. They do not.

Q Just so we are on the same page, sir, when I'm using the term "MBT-C reactor process," what does that mean to you?

A Well, it's the heart of the plant here, the reactor and the condenser and the blowdown tank.

Q And how did Noveon classify the MBT-C reactor process in its Title V application?

A Well, as a process emission unit.

Q And I want to take this through step by step in a little bit more detail here. I want to first focus on the MBT-C reaction taking place in the reactors there, sir. I believe you mentioned before there were three reactants?

A Yes.

Q And what state are they in when they enter the MBT-C reactor?

A They come in as liquids.

Q And is the reaction under any sort of temperature and pressure constraint?

A Yes. They are under high temperature and high pressure once the reaction builds. They have to heat them up to get there, but they are under high

temperature and pressure when they are reacting.

Q Once it enters the reactor, what leaves the reactor there? I see that there is dotted lines leaving the MBT-C reactor number 1?

A There is two -- well, the dotted lines mean gases, and the solid lines mean liquids. And the gases that are going into the condenser are some of the carbon disulfide which is a raw material and then hydrogen sulfide which is one of the byproducts of the reaction.

Q Does the MBT-C reactor, does it release S02?

A No, it doesn't.

Q Once the vapor leaves the MBT-C reactor, where does it travel next? Where is it headed to?

A Well, it goes through the condenser and then into the blow tank -- the blowdown.

Q And what's the inlet temperature at the condenser?

A I believe the application identified in the range of 480 to 500 degrees.

Q And then let's just talk about the CS2. What happens to the CS2 when it goes through the condenser?

A Well, the condenser starts to cool the material down so it enters as a vapor. But part of it comes back to a liquid state and is returned back to the

reactor.

Q Is that designated by the solid line then heading back to the MBT-C reactor?

A Yeah.

Q Can you just tell me real generally, Mr. Punzak, how the condenser works.

A When you lower the temperature of a lot of materials, it's called above the boiling point or below the boiling point. So if you lower the temperature to below the boiling point, it returns to a liquid state.

Q And I believe you indicated what the inlet temperature was to the condenser, what's the outlet temperature at the condenser?

A I believe it's in the range of 300 degrees.

Q And then once the CS2, sir, travels back to the reactor, what function does it serve in the reactor there?

A Well, it's a raw material. It's what didn't react when it first went in. So now when it's condensed, it can go back into the reactor and is available to react.

Q Approximately what percent of this CS2 recovery took place in the condenser prior to the installation of the NaSH unit?

A In the range of about 70 to 80 percent of --
Q Do the condensers remove CS2 from the process?
A No. They don't remove it; they just recycle it back to the reactor.
Q Now you said 70 to 80 percent of the CS2 went back to the reactor. Where does the other 20 to 30 percent of the CS2 travel?
A It's not condensed. And it continues on as a vapor and goes to the blowdown tank and, ultimately, to the flare.
Q Now we have been talking about CS2. I believe you mentioned before that there were two vapors leaving the MBT-C reactor?
A Yes. There is also hydrogen sulfide.
Q Where does the hydrogen sulfide go once it hits the condenser?
A It just travels on through. It's a vapor at room temperature no matter -- unless you've got it extremely cold, it would never condense. And they are not attempting to condense it because it would have no advantage to have it back to the reactor. It just passes on through to the blowdown tank and then onto the flare.

Q So is it fair to say -- scratch that. I apologize.

Are the condensers removing H2S from the process?

A No. They are not.

Q And why don't the condensers remove the H2S from the process?

A Well, because they don't cool it down cool enough to make it into a liquid.

Q And does the condenser emit S02?

A No, it doesn't.

Q Okay. Mr. Punzak, how would you characterize these two condensers CU711-0001 and 0002?

A I would classify them as reflux condensers designed to recycle some of the raw material back into the reactor.

Q Mr. Punzak, do you recall anything within the Title V application that supports your understanding that these condensers are reflux condensers?

A Yes. That was one of the questions in the -- in one of the forms. And it was answered as, "Yes, it was a reflux condenser."

Q Is that what is on -- do you have this document in front of you, trade secret version of the

record, page 1 through 2,115. The first portion of that document on page 173 of the Bates-stamped version, sir, is that what you were referring to there?

A I have to put my glasses on.

Q Do you have your glasses?

A Yeah.

(Pause in proceedings.)

A Yes. On page 173 in question number 8 it says, "Is this a reflux condenser, i.e., does the condensed material return directly to the process from which it was generated?"

And the answer is yes.

Q Did the Illinois EPA ultimately receive information, Mr. Punzak, from the company indicating the percent of total sulfur compounds recovered from the condenser on the MBT-C condenser?

A Yes, it did.

Q And what was that?

A 23 percent.

Q Now you just mentioned 23 percent. Earlier you mentioned 70 to 80 percent, I believe, for the CS2 recovery. Why is there the difference in those numbers?

A Well, because the remainder of the sulfur is present in the hydrogen sulfide which passes directly on

through. But only the carbon disulfide is returned to the reactor.

Q Does the condenser remove sulfur compounds from flue gases?

A It just recycles one of the materials. It doesn't remove them from the process.

Q Now we have been talking about all of these emissions in the MBT-C reactor and then going on to the MBT-C blowdown tank. Where do they all ultimately go?

A From the blowdown tank, they are in a vapor state and it goes on to the flare where they are combusted.

Q So what exactly is a flare designed to do? You say they are combusted; what does that mean?

A It converts them from -- either to sulfur dioxide and then to some other innocuous materials like carbon dioxide and water.

Q And what percent of CS2 and H2S is converted to S02?

A That conversion is very high. That's better than 99 percent.

Q And is the flare designed to remove sulfur compounds from flue glasses?

A No, it isn't.

Q Now is this here trade secret version, page 141, is that the current configuration of the facility?

A No. They have now -- as previously discussed, they have now added what they call a NaSH system on here to take those vapors that are in the blowdown tank and to send them to control devices to reduce the emission.

Q Prior to the installation of the NaSH unit, are you familiar with what the flaring emissions were of S02 from this process?

A The actual emissions were in the range of 3,000 to 4,000 tons a year, but I think they listed the potential as 4,922. That would be essentially operating every minute of the year. And rarely do they meet that high a level.

Q I'm going to hand you what has previously been marked public version of the record, page 1473 through page 1479. It's a memorandum from Don Sutton to Julie Armitage and attachments dated January 12th, 2001. Do you recognize this document, Mr. Punzak?

A Yes, I do.

Q I see that this document was from Don Sutton. Did you play any role in the drafting of this document?

A Yes. I actually drafted it. And Don Sutton

is the manager. Memos like this are supposed to go from the manager, but they are prepared by someone else like me. I prepared this one.

Q And what were you generally seeking to do in this memo, Mr. Punzak?

A Well, I just wanted to reaffirm that a decision made in '93, that we're still going to go on with this. That there is a -- that this is a reflux condenser and therefore shouldn't be considered to be control equipment. But we wanted to ask the company some questions about that. And we just wanted to -- wanted to let -- this went to -- Julie Armitage is a compliance manager. We just wanted to make her aware that we were going to be doing this and have their confirmation that they agreed.

Q Okay. I see here in paragraph 5 your reference to your belief that it is a reflux condenser and not a control condenser or a control device. Can you explain to me how the reflux condenser differs from a control device?

A Based on various types of guidance that the U.S. EPA has provided to us in regard to organic or petrochemical processes, that reflux condensers are referred to as a process condenser. They are designed

just to operate the process, often to save raw materials and not for the purposes of reducing emissions. That's just an incidental, something that's incidental.

Q I see that there are a couple of memos attached to this January 12th memo?

A Yes.

Q Just to make sure it's clear, does this January 12th memo with attachments accurately reflect how this document appears in the CAAPP permit file?

A Yes, it does.

Q I believe before, Mr. Punzak, you stated that you spent a great deal of your time as a permitting engineer also dealing with petroleum refineries?

A Yes, I do.

Q Can you tell me a bit about petroleum refineries. Do they have emissions of S02?

A Yes, they do.

Q And do they have any sort of control devices to deal with those emissions?

A Yes, they do. They have a -- basically the sulfur dioxide that would come from a refinery, much of it would come from burning of fuel which is contaminated with hydrogen sulfide. So in a refinery what they seek to do is to remove the hydrogen sulfide from the fuel

before it's burned. And then they take that hydrogen sulfide and convert it into sulfur.

Q Is that a multistep process in a refinery?

A Yes. It's a very complex process at a refinery. First of all, I mentioned it's in the fuel. So what they do is they have the fuel gas go through an amine scrubber. And the hydrogen sulfide gets absorbed by the amine. The amine now has this hydrogen sulfide. And it is usually just heated up to dry the hydrogen sulfide off. So, in effect, you have 100 percent hydrogen sulfide. This concentrated stream of hydrogen sulfide is sent through a multistep process involving combustion and use of catalysts and so on. And you end up with elemental sulfur at the end of this process. So you remove the sulfur from the system.

Q And what percentage of sulfur is -- scratch that.

What percentage of H2S is converted to sulfur in a sulfur recovery system typically in petroleum refineries?

A The modern ones today are usually at around 98 percent. But the ones -- I believe when they adopted these rules, they weren't quite that high. They were maybe in the range of 90 to 95 percent in the final part

of it. In addition to the sulfur coming out, there was a final combustion device. And at that time the emissions could be over 2,000 parts per million. So I believe that's why the exemption was provided then for the sulfur recovery units, the combustion device on the sulfur recovery unit.

Now, like I said, the modern ones are up to 98 percent, and the final combustion device has a limit of 250 parts per million.

Q Okay. Do sulfur recovery units at petroleum refineries generally differ from the condenser at issue at the MBT-C process?

A Well, in addition to the much higher percent, it's a very -- I mentioned it's a very complex system of first removing the hydrogen sulfide from the fuel and then taking hydrogen sulfide and converting it into sulfur.

Q I see, without going into the particulars, there are two memos attached to the 2001 memo?

A That's correct.

Q Okay. Without calling for a legal conclusion as to the particular of the analysis included in the May 13th, 1993, memo, did you consider the original intention behind 35 Illinois Administrative Code 214.382

in your original decision?

MR. HARSCH: I object. It calls for a legal conclusion of the witness.

MS. CARTER: All I asked the witness, Mr. Hearing Officer, was whether or not he relied upon it.

HEARING OFFICER HALLORAN: Objection overruled. You may answer if you are able.

A Yes. I did reply upon it.

Q Okay. Thank you.

HEARING OFFICER HALLORAN: About three or four minutes, Ms. Carter, and then we'll --

MS. CARTER: I saw that. I was going to squeeze one more in if that's okay.

HEARING OFFICER HALLORAN: One more witness or one more --

MS. CARTER: No. One more set of questions.

Q I am going to hand you, sir, what has previously been marked public version of the record, page 1469 through page 1471. It's a February 22nd, 2001, request for additional information for the CAAPP permit application. Do you recognize this document?

A Yes, I do.

Q And did you draft this document?

A Yes, I did. You can tell that from the third

page of it where they have initials down there. The middle initials are DGP which was my initials.

Q And, generally, what are you doing in this request for additional information?

A Well, this was sent to what would be BF Goodrich at the time and is now Emerald and was asking for more information about the MBT-C process.

Q If I could direct your attention to what's been labeled paragraph 2 on page 2 on page 1470. Are you there, sir?

A Yes.

Q And what does just paragraph 2 state?

A Well, it informs the company that we are reevaluating whether the MBT-C process is in compliance with the sulfur dioxide regulations.

Q And subsequent to that statement, do you ask certain questions of the source?

A Yes, I do.

Q And, generally, what types of questions were you asking of the source?

A Well, the first, A, I just wanted to know about more of the process because I was aware the carbon disulfide could be a solvent for sulfur. But I did ask them. And they said it's a raw material.

Q Okay.
A Then I asked them -- we had an efficiency of -- that the form said for carbon disulfide recovery, but I asked what it was for overall efficiency for sulfur and then what percentage of the S02 is attributable to an CS2 and hydrogen sulfide and then whether the purpose of the condenser was to reduce carbon disulfide usage.
Q And why did you ask that last question, Mr. Punzak?
A Well, just to ask for verification that they said in the application that it was a reflux condenser.
MS. CARTER: Okay. Mr. Halloran, I can break now.
HEARING OFFICER HALLORAN: Okay. That would be great. We will take a break until 12:55, then we will come on back and start again. Thank you.
(Whereupon, a luncheon recess was taken in the proceedings.)
HEARING OFFICER HALLORAN: Good afternoon. We are back on the record. I want to thank everybody for being so prompt from their lunch break. It's approximately 1 and the IEPA has their first witness. We are going to continue direct. Thank you.
MS. CARTER: Thank you.

CONTINUED DIRECT EXAMINATION

BY MS. CARTER:

Q Mr. Punzak, I'm going to hand you what has previously been marked page 2120 through page 2121 of the trade secret version of the administrative record. If you could just identify this document for me.

A Well, prior to that, we discussed a request for additional information that Illinois EPA had sent to the company. And this is their response to our letter.

Q And what did you find to be significant in this response?

A Well, the total sulfur efficiency of the condensers is 23 percent. And they are targeting only the carbon disulfide.

Q And that's referenced in what paragraph, sir?

A That's paragraph 2. And then in -- this is 2. That was in B. And then in D it says, "The condenser operates to conserve the loss of carbon disulfide during the reaction."

Q What did this information lead you to conclude?

A This led us to conclude that this system should not qualify for the exemption in 214.382(a).

Q And why so?

A Because it's -- when it's for carbon disulfide they tend to use the word "remove," but we consider it to be recycling of the material. That it's not being removed from the system at all; it's just being recycled back to the reactor. It's a reflux condenser.

Q And was the information in this letter ultimately conveyed to management at the Illinois EPA?

A Yes, it was.

Q Hopefully, if I can find it, I'm going to hand you what has previously been marked page 1461 of the administrative record public version. If you could identify this document for me.

A Let me take time to review it.

Q That's great, sir.

(Pause in proceedings.)

A Well, this is the notes I entered. And it said that after we received that response, I -- the decisions as to whether a rule applies is done by what we call a compliance decision group. It consists of several of the top managers in the division of air. And so I had gone to them and described the response from the company. And the CDG said that should not qualify for the exemption provided. And, therefore, we decided

to send a compliance plan -- request a compliance plan from the company.

Q And did the Illinois EPA ultimately request a compliance plan from the company?

A Yes, we did.

Q Now I'm going to hand you, sir, what has previously been marked page 1459 through page 1460 of the administrative record public version. Can you identify this for me?

A This is request for additional information to the company where we ask for a -- well, we give technical information. We send a letter to you. And we got your response on the date, and then we -- the most important part, we say, "Does not qualify for the exemption." We decided it didn't qualify for the exemption.

And there were two basic reasons in the third paragraph there. One was the 23 percent. That it's such a low percentage compared with what we would expect from a real true sulfur removal system like they have at a refinery. But then also we say that the 23 percent is questionable because based on my experience as a chemical engineer and guidance from the U.S. EPA, reflux condensers are not -- are considered to be process

condensers and shouldn't be given any credit in terms of efficiency as a control device.

Q What U.S. EPA guidance were you generally referring to, sir?

A Well, there have been several that we use. One is just general information on available types of control technologies. And then another one had to do with the -- the MON that was previously mentioned. That's short for Miscellaneous Organic NESHAP. It's a set of new federal regulations referred to as -- NESHAP is an acronym for National Environmental Standards for Hazardous Air Pollutants.

Q So I believe you just indicated that you referred to general definitions in the MON. Did you refer to definitions elsewhere as well?

A Yes. We have control technology information we receive from the U.S. EPA.

Q I'm going to hand you what has previously been marked public version of the record page 2136 through page 2510. If you could identify this document for me, sir?

A This is a document that the U.S. EPA publishes called Control of Volatile Organic Compound Emissions from Batch Processes. And then it has a

subtitle then, Alternative Control Techniques. And I would like to say that the word volatile organic compound is used by the U.S. EPA. In Illinois EPA regulations we use the definition of -- we call it volatile organic material. But they are effectively the same.

Q Is this one of the guidance documents that you were referring to, sir?

A Yes, it is.

Q If I could direct your attention to page 2236 of this document.

A Okay.

Q Are you there, sir?

A Yes.

Q Particularly, the second paragraph. Halfway through the paragraph beginning with "note." Can you read that out loud?

A Well, let me just read the first half of the sentence.

Q Okay. You go ahead, sir. Get yourself some context.

(Pause in proceedings.)

A Okay. Beginning with where it starts "note," it says, "Note that condensers servicing reactors and

distillation columns often function in refluxing material. This refluxing is an integral part of the process. And, therefore, these condensers are often not considered to be emission control devices. Such applications often using secondary condensers which operate at still lower temperatures and function primarily as control devices."

Q What is the significance of this passage to the two MBT-C condensers at issue here today?

A Well, they were identified as reflux condensers. And they -- previous discussions they were set to return materials to the reactor. So they make this definition, and this process does not have any secondary condenser on it.

Q And you mentioned secondary condenser. And this process not having a secondary condenser on it, sir. Can you explain to me a little bit about the secondary condenser reference in this passage. What are they are referring to that way?

A Well, you could have a secondary condenser which would have a coolant at an even lower temperature. And you would be able to get out more of the material. In this case it may condense more of the carbon disulfide. And, in fact, their new system -- well, it's

not a condenser. It does do that, but it would still only get it up where it would never get the hydrogen sulfide because hydrogen sulfide, unless you -- it's simply, for all practical purposes, not condensable. And you wouldn't have any reason for wanting to condense it because it would be difficult to dispose of, has no value or anything.

Q Just to make sure that the record is clear, What sort of process exists at Emerald?

A We said it's batch organic chemical process, which this mentions that.

Q I am going to hand you, sir, what's been previously marked trade secret version of the record page 2116 through page 2118. If you could identify that document for me, please?

A Well, we sent the company a request for this compliance plan because we felt that they were out of compliance. And this is their response saying that they disagreed with us.

Q If I could direct your attention to page 2117, the third full paragraph on that page. Is that really the paragraph where they express their concerns with the Illinois EPA's position?

A Yes. That's probably the most important

paragraph addressing their position.

Q Do they make a statement with regard to the Illinois EPA's reliance on information pertaining to VOM emitting units?

A Yes. They say we shouldn't be allowed to use guidance documents for pollutants other than sulfur.

Q Do you have an opinion with regard to this statement provided in this paragraph?

A Yes. I have an opinion that this is a petrochemical process, which carbon disulfide, one of the materials used, is a volatile organic material. So, therefore, I believe it's very relevant to be able to use documents addressing volatile organic material control equipment.

Q Mr. Punzak, did the initial Title V application reference CS2 as a VOM?

A Yes, it did.

Q If I could direct your attention to the trade secret version of the Title V application that is sitting in front of you. Beginning with page 1, I think it runs to page 2115 trade secret. But, particularly, page 173 on that document.

A Yes.

Q Are you there, sir?

A Yes.
Q Where is the statement there that we just referred to with regard to CS2?
A Well, on the last line relative to the table, it has "Efficiency" and then parentheses "VOM reduction." And then it has a colon there and they filled in CS2 which is carbon disulfide. So they are recognizing carbon disulfide as a volatile organic material.
Q I'm going to hand you what has been previously marked public version of the record, page 1841. If you could identify that document for me, sir?
A This is an e-mail I sent to Dave Giffin. And I state that this document we have previously talked about, the MON, the Miscellaneous Organic NESHAP, has been published by the U.S. EPA and the Federal Register. And so I wanted to explain how they defined process condensers in there. And that's what -- the last paragraph gives the definition from that, and then they say examples of process condensers include reflux condensers.
Q And as a chemical engineer, Mr. Punzak, why did you generally refer to these definitions that we have been talking about in the MON and in that VOM

guidance document?

A Because this process will be subject to the MON. It was discussed by the company this morning about how they will -- that they recognize that it does apply to them.

Q And you have been talking a great deal about the definition of process condenser relevant to your conclusion with this condenser being appropriately characterized as a reflux condenser. Why is that relevant?

A Because if it's a reflux or process condenser, it should, in effect, be given zero percent efficiency in terms of control equipment that it's designed for the purpose of recycling material.

Q And because it is a process condenser, is it a control condenser then?

A No. It is not a control condenser.

Q Did you consult with other regulators in other states about similar MBT-C processes that they might regulate?

A Yes, I did.

Q And what states did you consult with?

A West Virginia, Louisiana and South Carolina.

Q And I'm going to hand you what's previously

been marked public version of the record, page 1552 through page 1553. Can you just identify this for me, sir?

A This is two e-mails I received from a Robert Keatley with the Department of Environmental Protection in the state of West Virginia. And he tells us how much hydrogen sulfide potential could be emitted. And then how much sulfur dioxide is finally emitted.

Q So is it fair to say, then, that West Virginia regulated an MBT process similar to Emerald?

A Yes, it is.

Q And you were talking about the emissions that were provided by West Virginia?

A Yes.

Q The numbers that were provided, were they significant to you in any way?

A Yes. They -- on the second page of the two-page memo, they said they emitted 126 tons of S02. And they did identify this as a sulfur recovery unit. And I calculated, based on the amount of H2S that was there, that this indicates an efficiency of 97 to 98-1/2 percent, somewhere in that range.

Q Did you also, sir, I think you mentioned you consulted with regulators in Louisiana?

A Yes.

Q I'm going to hand you what has previously been marked public version of the record, page 1510 through page 1539. If you could take a moment to flip through that document for me, sir?

(Pause in proceedings.)

A Okay. This is a copy of a permit for the -- they call it a thiazole unit, but that is the same as mercaptobenzothiazole. And they call it a part 70 operating permit. But part 70 is just one particular part of Title V permit that we sometimes refer to this CAAPP permit, sometimes called a Title V permit or a part 70 permit. On page 1512 or the third page as you are going through them, it states, "Vents from the reactors and MBT recovery steps are routed to the sulfur recovery unit and then to the incinerator followed by the scrubber which operate under the SRU incinerator permit."

Q Did you also consult with regulators in South Carolina?

A Yes.

Q I am handing you what has previously been marked public version of the record, page 1421 through page 1451. If you could take a moment again and flip

through that entire document. And once you have done that if you can generally tell me what's contained in that document.

A Well, this is a collection of several different papers. When I was doing this research on other states, I had asked somebody in our library to do some of it. So some of the pages at the back or some of the information the librarian found. I gave her the chemical name and the initials and so on, and she found various types of identifications of the materials and locations where it's manufactured.

And the first four or five pages are just information about if we wanted to go to Louisiana and get a page on how we would go through their FOIA type system, but we actually didn't use that. But then on page 1426 I have some names of some people from the environmental people in South Carolina. It's HEC for Health and Environmental Control down there. And I didn't get a whole lot, but I did mention here that the process down there had an off gas scrubber.

Q And based on all this information that you gathered from West Virginia, Louisiana and South Carolina -- actually, scratch that. Let's back up for a second.

Can you describe for me what an off gas scrubber is?

A An off gas scrubber is a device that absorbs the material. For instance, their NaSH system that we had previously described, that would be called an off gas scrubber.

Q Now based on all the information that you gathered from West Virginia, Louisiana and South Carolina, what did all this information generally indicate to you?

A That all of these states had systems that were much more -- had a much higher control efficiency than the system operated by Emerald. And, in particular, when they use the term -- theirs were sulfur recovery system and not sulfur recycling systems. Or the one was a scrubber, but that's usually very high efficiency also.

Q And, Mr. Punzak, as a matter of course, does the U.S. EPA typically review draft Title V permits prior to issuance by the Illinois EPA?

A Yes. When we -- when a permit goes to public notice, we put it on the U.S. EPA website. And the U.S. EPA has access to that. And they review the permit. They can either do it during the public notice

phase or else then they are after the public notice phase during which the companies can comment. There is another thing called a U.S. EPA review period. And they could comment during that period also.

Q Did the U.S. EPA provide comment on the draft permit for the Emerald Performance facility?

A Yes, they did.

Q I'm going to hand you what has previously been marked public version of the record page 1842 through page 1843. If you could take a moment and then identify this document for me.

(Pause in proceedings.)

A These are some comments I received from Stacey Coburn of the U.S. EPA. This is at region 5 in Chicago where they do these reviews. And this is her comments on that draft permit. The one that's really relevant to this is in number 1. It does say MON would be applicable to the process.

Q But did the U.S. EPA have any comments on 214.301 or 382 at issue here today?

A No. They did not.

Q Mr. Punzak, when you put together a Title V permit and it's ready for issuance, do you typically put together any sort of notes, analysis notes?

A Yes, I do.
Q And what do you generally include in your analysis notes?
A Generally, it's in any controversial issues, like any comments that were made during the -- either the public notice period or U.S. EPA notice period. While these are significant ones, if they are just typos, I don't usually put them in there. But any significant comments made by either the company, the public or the U.S. EPA, I will mention them and say how we address them.
Q I'm going to hand you what's previously been marked 1235 through 1237 of the administrative record. Are these your analysis notes for this matter?
A Yes, they are.
Q Did you provide any discussion of the Illinois EPA's ultimate conclusion with regard to the applicability of 214.382?
A Yes. Again, in the fifth paragraph or the last paragraph on the bottom of the first page, beginning on the bottom first page, I reiterate what we have been saying here that reflux condensers would not be considered control equipment -- or process condensers would not be control equipment. And, therefore, they

shouldn't qualify for any type of control for this process. And I state -- this is definitely in terms of my background this will definitely be reflux condensers as identified by the company.

MS. CARTER: If I could have just a moment, Mr. Halloran?

HEARING OFFICER HALLORAN: Yes, Ms. Carter.

(Off the record.)

Q Mr. Punzak, based on all this information and analysis that we discussed here today, what did the Illinois EPA ultimately conclude?

A That the condensers that they operate on their systems should not -- are reflux condensers and should not qualify as a system that could qualify for the exemption in 214.382(a).

MS. CARTER: Thank you. I have no further questions for this witness.

HEARING OFFICER HALLORAN: Thank you, Ms. Carter.

Mr. Harsch, cross?

CROSS-EXAMINATION

BY MR. HARSCH:

Q Mr. Punzak, would you please read 214.382(a) out loud?

A Okay. "Section 214.301 shall not apply to

existing processes designed to remove sulfur compounds from the flue gases of petroleum and petrochemical processes."

MR. HARSCH: And, I believe, that's how the rule still stands today, is it not, Counselor?

MS. CARTER: I believe so.

Q Does the term "pollution control device" appear in that rule?

A No. It does not.

Q Does the word "reflux condenser" appear in that rule?

A No. It does not.

Q Do the words "process condenser" appear in that rule?

A No. It does not.

Q I think you testified on direct that this is a petrochemical process; the Agency accepts that?

A Yes.

Q And it's clearly an existing process at the time that the Board wrote these rules?

A Yes.

Q Carbon disulfide is a sulfur compound?

A Yes, it is.

Q What happens to the carbon disulfide that is

condensed in the condenser and sent back to the reactor?

A Well, it's available for reaction.

Q So it is tied up and reacts --

A Yes.

Q -- with the other raw materials?

A Yes.

Q So that carbon disulfide that's removed from a condenser and sent back to the reactor doesn't emit to the atmosphere; is that correct?

A Yes. If it reacts, that's correct.

Q In your direct testimony you were given trade secret document 2120 which is the letter that the company sent to you in response to the request for more information, is it not?

A Yes.

Q And if I recall your direct testimony you said that those answers were significant because it told you that the overall total sulfur recovery was 23 percent?

A That's correct.

Q That's the first time you were aware of that?

A Yes. That was one of the questions I asked. I only had the 70 percent for CS2. I didn't have an overall sulfur efficiency.

Q That's funny. I show you the memo that I think you testified you wrote, April 13th, 1993, document 1477 and 79, and I draw your attention to the fourth paragraph. It seems to me that you were aware back in 1973 (sic) that the overall recovery was in that range; is that correct?

MS. CARTER: Okay. I'm going to object again. Counsel is going back 30 years in prior permitting history with the witness. The prior permitting decisions are not at issue here today.

HEARING OFFICER HALLORAN: Mr. Harsch?

MR. HARSCH: The witness just testified that was the first time he was aware of it. And this is a document that he prepared in 1993. It's part of the permit record. And I'm showing that he was aware of it way back then.

MS. CARTER: Can I respond to that?

HEARING OFFICER HALLORAN: Sure.

MS. CARTER: Mr. Punzak was not employed with the agency in 1973.

MR. HARSCH: '93. '93.

MS. CARTER: I want to make sure that's correct.

MR. HARSCH: He was a permit review engineer in 1993.

MS. CARTER: Yes, he was, sir.
HEARING OFFICER HALLORAN: I thought you said you were going to check to see if it was '73 or '93.
MS. CARTER: No. He said it was '93. I thought he said '73. He said '93. I apologize.
HEARING OFFICER HALLORAN: Oh, okay. So Mr. Harsch is asking Mr. Punzak regarding prior permit decisions.
THE WITNESS: Yes. This is a memo I prepared in '93.
HEARING OFFICER HALLORAN: Regarding this permit at issue?
MS. CARTER: No. It was not. I apologize. It was regarding a 1993 State operating permitting decision is what these memos pertain to. They just happen to be attached to our 2001 memo, and that's how they found their way into the record. We provided a complete copy of it for the record.
MR. HARSCH: Mr. Hearing Officer, it is an integral part of the permit record in this proceeding. It is attached to and is the basis of the technical information contained in the memorandum to which it is attached. It has been included in the permit record by the Agency, and I'm showing -- the question asked if he was not aware of the overall sulfur dioxide recovery

prior to his receipt of the document, which is trade secret 2120, which was his direct testimony.

I believe I'm allowed to utilize anything in this permit record to question the Agency witness. And I can clearly use prior documents prepared by this same witness if I want to try to impeach or otherwise correct the direct testimony of the witness.

MS. CARTER: May I respond to Mr. Harsch?

HEARING OFFICER HALLORAN: Sure.

MS. CARTER: My concern with this is that he is actually going into Mr. Punzak's 1993 State operating permitting decision. That's what he's going into which is not at issue here today.

HEARING OFFICER HALLORAN: That's the way I understood it. How is that any different than the motion to supplement that was filed on January 24th?

MR. HARSCH: I asked in that motion to include all of the relevant documents from the permit -- operating permit file that the Agency chose not to include in this record. Many of those same documents were, in fact, attached -- if I could ask these direct questions -- by Mr. Punzak when he prepared that memorandum. And yet they only filed, as part of the permit record, that memorandum. This case involves the Agency's

interpretation of a regulation and the reinterpretation of that regulation during the CAAPP permitting process.

HEARING OFFICER HALLORAN: I understand that, Mr. Harsch.

MR. HARSCH: And this is a --

HEARING OFFICER HALLORAN: How is that different from the motion to supplement that was filed on January 24th regarding --

MR. HARSCH: I'm not trying --

HEARING OFFICER HALLORAN: -- prior permit?

MR. HARSCH: Excuse me. I'm not trying to put those prior permits in the record. I'm referring to a document that is in this permit appeal record, submitted by the Agency and apparently relied upon by the Agency in this proceeding. I'm not going to the actual permits themselves.

And, I believe, that this document is referenced in the document that Mr. Punzak has testified that he prepared in January of 2001 to which this one and the memorandum by the Agency lawyer, Rachel Doctors. The two memorandums are attached. And that memorandum talks about relying on the past decisions. The witness has testified that this is his first time that he was aware of it. This document prepared by the witness is

in direct contrast to that statement.

HEARING OFFICER HALLORAN: And that record is filed with the Board?

MR. HARSCH: Yes. It's document 1477, 78 and 79 in the permit record.

MS. CARTER: Mr. Hearing Officer?

HEARING OFFICER HALLORAN: Sure.

MS. CARTER: Thank you. As I indicated in my response to Mr. Harsch's motion to supplement, these two memorandum that he keeps talking about are merely attachments to the 2001 memorandum. That's the only reason -- they pretty much -- they found their way into the record because they were attachments to this. And as Mr. Punzak testified in his direct testimony, this is exactly how this document appeared in the Title V permit file for this source. Mr. Harsch makes it sound as if we were cherry-picking. We did not cherry-pick our record. We did not do that at all. And Mr. Harsch, when he is going into what he prepared or relied upon back in 1993, is going directly to the permitting decision at that time. My concern is, if he then goes into that and he is allowed to go into that, that I am going to have to go back on redirect, unfortunately, and have to have him explain what happened back in 1993

which I don't find to be appropriate at all because none of this -- none of the analysis that took place from 1973 to 1993 by the Agency found itself into the Title V permit which indicates we did not rely upon it. If we had relied upon, then 214.382, we would have found that they are entitled to it, and we wouldn't even be here today.

HEARING OFFICER HALLORAN: I agree with Ms. Carter. It's --

MR. HARSCH: You are going to rule that I --

HEARING OFFICER HALLORAN: I am sorry, Mr. Harsch?

MR. HARSCH: You are going to rule that I cannot use --

HEARING OFFICER HALLORAN: Mr. Harsch, I haven't finished my ruling. I have given you the floor for a number of minutes. Okay?

MR. HARSCH: Yes, sir.

HEARING OFFICER HALLORAN: And what I'm going to do I find it's pretty much similar to what your motion to supplement is. It is a prior permit decision. And the IEPA has represented they did not rely on it. So I am going to sustain Ms. Carter's objection. Now what do you want to do?

MR. HARSCH: Well, I take issue with respect to

your ruling, sir.

HEARING OFFICER HALLORAN: Well, you normally do, Mr. Harsch. But --

MR. HARSCH: And I believe that I'm entitled to ask a witness to show a prior statement by a witness in another document that contradicts his direct sworn testimony and point that out.

HEARING OFFICER HALLORAN: And you have been. It's on the record.

MR. HARSCH: The question wasn't the permit decision. The question was, was he aware of it previously?

HEARING OFFICER HALLORAN: And what Ms. Carter's argument is if I allow this, even in a small latitude, then she will have to go back and redirect --

MR. HARSCH: Well, we are going to have probably a fair amount of it as we go through it because I'm going to show that they did, in fact, look at that record as we go through that.

HEARING OFFICER HALLORAN: Okay.

Q Mr. Punzak, if you look at the various guidance documents that you generally testified to, the one for the MON and the one for Control of Volatile Organic Compounds, those documents were all prepared

substantially after the Board's adoption of the rule in question, were they not?

A Yes, they were.

Q And the 2136 document Control of Volatile Organic Compounds from Batch Processes, it's dated February --

A 1994.

Q And the paragraph that you read on page 2236, would you please read this sentence from the same paragraph?

A Beginning with what word?

Q Right there (indicating).

A This?

Q Yeah.

A "This refluxing is an integral part of the process and, therefore, these condensers are often not considered to be emission control devices."

Q Are often considered, correct?

A Yes.

Q So they sometimes are?

A Well, I have --

Q Doesn't say never, does it?

A It does not say never.

Q When you were reviewing with West Virginia

and Louisiana, South Carolina, did you look at the underlying air pollution regulations that those states had?

A No. I did not.

Q So you don't know if those states had a similar exemption to the Illinois exemption?

A No. I do not.

Q You have no idea, then, what the applicable air pollution regulation was that might have triggered the control equipment or processes that those companies had installed?

A No. I don't.

Q You referred to the petrochemical processes and the degree of control that they have on flue gas --

A Yes.

Q -- for sulfur control?

Were you referring to subpart J of NSPS rules that U.S. EPA adopted?

A Well, that's where the -- for the ones -- not for the older ones, but for the newer ones once the NSPS came in that's the 250 parts per million came from that rule, yes.

Q And that was adopted well after the Board's original enaction of the rule in question?

A Yes. But that's why they were over -- because that hadn't been adopted, they were allowed to be over 2,000 prior to that.

(Pause in proceedings.)

Q I will show you 1473. That's a memorandum you prepared when you started your permit review; is that correct?

A Yes.

Q At the time you prepared this document and attached to this document the 1993 memorandums that were attached to it, did you read those memorandums at that time when you were preparing this document?

A Well, that was seven years ago. I most likely did, but I can't know for sure that I did seven years ago.

Q Did you consult with the operating permit records in the past permitting decision when you wrote this memorandum?

A I knew I was contradicting the interpretations the Agency had given in the past.

Q Did you have the operating permit records at your desk?

A You're asking me to recall something that I simply don't know for sure.

Q Mr. Punzak, are you aware of the guidance for U.S. EPA permit? I think it was called Permit Writers Handbook. U.S. EPA wrote to assist permit review engineers in reviewing CAAPP permit applications and writing permits?

A I knew there was such a document, yes.

Q At the time you read it?

A Well, again, I can't recall when I -- we probably had maybe a training course on it, but I can't remember every detail of every page in that document.

Q Do you recall the guidance in there to consult the past operating and construction permits and incorporate the appropriate permit conditions, especially those having to do with new source review?

A Yes. I know that we are supposed to review all construction permits issued to see whether those conditions should be inserted into the Title V permit.

Q And the same statement is made with respect to operating permit condition?

A If they seem appropriate. I mean, sometimes we change things. For instance, sometimes in operating permits in the past we'll just say you can operate under malfunction or breakdown and now we are putting in a complex. So, therefore, it's a totally irrelevant one

line sentence when I know we are going to put in something much more complex and they had to reapply for malfunction and breakdown.

Q I understand. But you have to read the past permits to make those determinations, don't you?

MS. CARTER: Objection. Asked and answered.

HEARING OFFICER HALLORAN: Mr. Harsch?

MR. HARSCH: I didn't ask the question in that format.

MS. CARTER: You have asked the question before.

MR. HARSCH: No, I haven't.

HEARING OFFICER HALLORAN: Overruled. You may answer if you are able.

A I don't necessarily look at every single permit.

Q Wasn't the purpose of the letter asking for more information that was submitted in February 22nd of 2001, the first paragraph question with respect to PSD a hope by you and others in the Agency that PSD might have been triggered and you wouldn't have to address the issue of the applicability of the exemption?

A No. I'd have to read -- do you want me to reread that document or something because when I started preparing for this, I thought the question 1 wasn't

relevant to this hearing so I haven't even reviewed it.

(Pause in proceedings.)

Q 1469.

(Pause in proceedings.)

Q Wasn't the purpose of question number 1 to see if there was a PSD issue that could then avoid having to make the decision with respect to the applicability of the exemption?

A Well, I don't know if it was directly related. It may have. If they did have to address PSD, it may have taken care of it. But I wasn't thinking of the exemption on that question when I prepared it.

Q I show you a document which is a memo you prepared to Rachel Punzak dated February 2nd, 2001.

A I think it's Rachel Doctors.

Q Rachel Doctors, excuse me. Thank you. Which is 1574.

MS. CARTER: What page, Mr. Harsch?

MR. HARSCH: 1543.

MS. CARTER: 1543.

Q Last couple sentences of the last full paragraph.

A Okay. Do you want me to read it?

Q Sure.

A "If we can show that they have made changes, we may be able to use the PSD rules to require control and not have to get into the semantics of whether the condenser is a control -- a recovery device. I could have asked them questions about this at the same time I was asking for information about the recovery control device."

Q And you subsequently asked those questions. They answered. Turned out that PSD wasn't an issue?

A Right.

Q And you had to get into the issue?

A Yes.

(Pause in proceedings.)

Q At the time of the permit decision, can you tell me who is Joyce Embrey (phonetic)?

A Joyce Embrey?

Q Yes.

A It seems like I remember the name, but I can't think now unless I have something to refresh me.

Q Document 1542, memorandum, e-mail, I guess, January 30th, 2001, to Joyce Embrey?

A I still can't think.

Q Was she possibly somebody in Illinois Air Toxic?

A Illinois Air Toxic?
Q Yes.
(Pause in proceedings.)
Q It's been a long time.
A Yeah. It's been seven years ago. Maybe let me read it.
(Pause in proceedings.)
A She could have been, but I can't recall.
Q She was an Agency employee at any rate?
A Yeah. It looks like she is an Agency employee, but I can't recall.
Q Well, now that you have read the document in its entirety, would you read the last sentence?
A "However, as I explained in my memo to the CGG even if there were a MACT, it would probably only address whether the HAP material, for example, CS2 was destroyed by 98 percent, not that the destruction" -- oh, wait a minute.
Q The last sentence.
A Oh, okay. "I have the State operating permit file at my desk to make a copy for you."
Q So at the time you were reviewing the initial CAAPP application that the company submitted, it appears you did, in fact, have the State operating permit files

at your desk and you were offering to make copies for other Agency employees; is that correct?

A It appears that way.

Q I show you 1543. It's your memo to Rachel Doctors of the same February 2001.

A Okay.

Q In that memorandum you're offering -- you're discussing your '93 analysis and offering to bring it up and discuss it with her?

A Well, this is where I said we decided to delay our decision on BF Goodrich until the MACT was issued.

Q If I draw your attention to the first -- I'll read it. "I will be bringing up to your desk shortly several documents related to the above subject. One is my analysis notes from 1993 in which we decided to delay our decision on BF Goodrich until the MACT was issued."

That analysis would have been contained in the operating permit records that you had at your desk at that time, correct?

A I think -- I think I may have put it in my calculation sheet, but I'm not 100 percent sure.

Q If the operating permit record was at your desk, you were offering to make copies of it for other

Agency people to review as part of the Title V application. In this memorandum two days later you are talking about reviewing documents from your permit decision in 1993 when you were the permit review engineer for the operating permit, correct?

A Yes.

Q And you're pulling documents, your review notes and discussing those with Agency people. Explain to me how you are not relying on those documents as part of your review of the CAAPP application if you can?

A Well, I was relying on the -- some of the memos, not necessarily every single permit file.

Q So you were relying on part of the documents but not all of the documents from the past operating permit files?

A Well, I knew I had contradicted some of the past decisions. So, therefore, why go into the details when I already knew that I was -- my decision was different than other Agency employees had made.

Q The Agency decision in 1993 was to issue an operating permit, was it not?

MS. CARTER: Objection. Again, Mr. Harsch, I think you are crossing the line into our prior permitting decision.

MR. HARSCH: I think the Agency has crossed the line.

HEARING OFFICER HALLORAN: Well, you know, Mr. Harsch, I think you have your record regarding --

MR. HARSCH: Mr. Hearing Officer, in light of the fact that you think I have now made that record, I would like you to now revisit your prior ruling that I can't ask questions regarding the memorandum that he clearly talks about reading, having at his desk, sharing with other Agency employees at the time they were considering the permit application.

HEARING OFFICER HALLORAN: I guess we can -- it would be great if I would have copies in front of me. I have been sitting here for four or five hours and I have not received one document as a copy.

Ms. Carter?

MS. CARTER: Yes, sir. Thank you. As I have stated before, what's been attached is merely these two memos from the file. We didn't dispute the fact obviously in 2001 these memos were pulled. And they were included as attachments. There was never a statement, though, by the witness that he specifically pulled or relied upon the other permitting decisions that were a part of this file. He just pulled these.

And I hate to go any further than this, because I'm going into the prior permitting issue to even say this now, but I'm going to have to respond. Back in 1993 Dan Punzak was the engineer for the State operating permit that was issued to the facility.

He knew when he was going in, obviously, in 2001 that those files existed because he had made a decision back in 1993. So he just knew -- he knew it was in contrast as he has been stating here. So it's part of, I guess, not only the Agency's institutional knowledge, but his personal institutional knowledge from his prior acts what it was.

That's all he had to do was pull those two memos, attach it to this and there you have it. Honestly, that's how I construe it. I mean, it's part of his institutional knowledge from his prior act. But I don't want to go any further into what he decided in '93, and where he got the '93, and how come it differs from the CAAPP permitting decision and the CAAPP application that came in '96.

HEARING OFFICER HALLORAN: And that's how I construed the motion and the response in my February 4th order.

Mr. Harsch?

MR. HARSCH: It's clear that the witness admits that he had the operating permit file; he was making copies of it, offering it to other Agency employees. At the time of your ruling making his initial determinations on the Title V permit application. He is discussing and pulling from that certain documents regarding the past Agency review notes, his review notes in '93.

I think it is clear that the Agency's permit review engineer had available to himself and was consulting it, the operating permit records from the prior operating permits. The fact the Agency chose not to put them in the record to me is not controlling as to the ability to question the Agency witness with respect to those prior permit documents, operating permit documents regarding interpretations and the various memos and such that are there, he was reviewing at the time he made the decision. They should be part of the record.

HEARING OFFICER HALLORAN: As an aside, was Mr. Punzak deposed?

MS. CARTER: Yes.

HEARING OFFICER HALLORAN: You may continue, Ms. Carter.

MS. CARTER: Okay. Thank you, Mr. Halloran. I would just like to, I guess, reiterate the fact that merely because you pull two documents from the file does not mean that you went and looked back to 30 years of permitting history. I guess, I'm still missing the point, though, because the Agency admitted and was more than willing to provide to the Board the affidavit of Mr. Punzak when we indicated. We had a contrary position for 20-some years. And we don't dispute that fact. I don't see how it gets Mr. Harsch anywhere or anything further on his case in chief to go back into all of those underlying decisions and the rationale of all those underlying decisions because it didn't obviously form a basis of our review.

We have said we had a different position. That goes to his detrimental reliance argument. What more is needed? And why do we have to open up 30 years of permitting history? I don't see how it's relevant because the Agency made a mistake for 20 years, we now have to go back in and evaluate the Agency's mistake for 20 years. That's not at issue.

HEARING OFFICER HALLORAN: I agree, Ms. Carter. Mr. Harsch has made his record. I will stand on my ruling. You may proceed.

(Pause in proceedings.)

HEARING OFFICER HALLORAN: Do you need a minute?

MR. HARSCH: I'm trying to wrap up here.

Q Mr. Punzak, you mentioned the carbon disulfide additional controls installed as part of the NaSH system. You referred to that pollution control system in response to a question from Ms. Carter?

A It could -- since it is secondary, it could be considered that. But, on the other hand, it is eventually reusing materials. So it could be -- I would have to evaluate it in more detail to determine which one it was.

Q You anticipated my questions here.

(Pause in proceedings.)

Q I know we got into this during your deposition that when the company I proposed lead in reference in the Title V permit was finally issued to the requirement that the Agency had made, the company was felt that -- they felt the company was subject to 2,000 part perfect million S02 limitation, in one of your notes you referred to the possibility if you did that that the company would renege on its agreement to move forward and install sulfur control, correct?

A I used that term. Yes. I did use it. I

meant that they could potentially. I didn't mean that I really seriously thought they would. I just meant that we would have no basis for our rule.

Q There was a potential. There was nothing leading you to believe the company would, in fact, do that?

A No.

Q And as the permit review engineer and a member of the team, you were aware of -- and the Agency was aware of the financial condition of the company at that time?

A Yes, we were. That's why -- you know, originally this stuff took place in 2001 and we negotiated with them for like two years before we eventually agreed on their system.

Q I'm not sure how major of a point it is, but in document -- the various documents that you received from the other states regarding the other producers, one of those that you read had to do with the -- for the Louisiana facility. It starts out document --

A Okay.

Q -- 1510. Do you know if the Louisiana facility uses toluene in their process?

A No, I don't.

Q 1512 description. First sentence.
A Oh, okay. It says here "It's produced by a series of reactions of aniline, carbon disulfide and other reactants in toluene."
Q That's a different process than what is utilized by the company, is it not?
A Yes. But they still go to a sulfur recovery unit.
Q But it's inside?
A That's what it says.
Q Mr. Punzak, given the constraints of the Title V permit as issued, would the Title V permit as issued constrain the company's ability to utilize the flare when the NaSH system is unavailable because of the plugging problems that Mr. Giffin has testified about as a compliant means for MON?
MS. CARTER: Objection. I will have to object at this point to the relevancy of his question.
HEARING OFFICER HALLORAN: Sure. Go ahead.
Gale, could you read the question back, please?
COURT REPORTER: Sure. "Mr. Punzak, given that constraints of the Title V permit as issued, would the Title V permit as issued constrain the company's ability

to utilize the flare when the NaSH system is unavailable because of the plugging problems that Mr. Giffin has testified about as a compliant means for MON?"

HEARING OFFICER HALLORAN: And your objection?

MS. CARTER: My objection is that I don't see the relevancy of it. He is talking about the MON. And I believe the applicability of it is at issue here today. And I don't see what bearing it has to Title V that was issued back in 2003.

HEARING OFFICER HALLORAN: I will give him a little latitude. Objection overruled.

If you can answer, please do so.

THE WITNESS: Can I ask you to reread it again?

COURT REPORTER: Sure.

Q I will try to restate it. You were present when Mr. Giffin testified to continued operational problems that they have had with the NaSH unit due to plugging?

A Yes.

Q And when the plugging occurred, they diverted the gas stream to the flare?

A Yes. We put that into the construction permit that they could do that.

Q And my question is, Since I think you

testified to -- that the NaSH unit complies with the MON, if the NaSH unit is not available for -- Mr. Evans's testified to that -- is not available due to plugging problems, does the permit, Title V permit as written, preclude the company's ability to use the flare to comply with the MON?

A Well, I believe we said that you could divert to the flare to finish a batch. But you can't start a new batch. So they could go in and clean out the plugging or something like that. So, I mean, just prevent -- you know, you have gases, you have to do something with them. So we put in there that they could go to the flare.

Q But it would preclude it from an operational standpoint other than eliminate that one bad gas from that one batch?

A Yes, it would.

MR. HARSCH: No more.

HEARING OFFICER HALLORAN: Thank you, Mr. Harsch.

Ms. Carter, redirect?

MS. CARTER: Yes. Thank you.

REDIRECT EXAMINATION

BY MS. CARTER:

Q Mr. Punzak, why were you looking to the

processes in West Virginia and Louisiana and South Carolina? Why were you gathering that additional information?

A I just wanted to know if they were -- the processes were controlled there and what type of system they had. If it was anything similar to what we had in our state or whether it was a system that got much better than 23 percent or a low percentage control, but whether they had a high percentage control equipment operating.

Q Mr. Punzak, did you generally rely upon the definitions in the MON and VOM just as background information?

A Well, I just wanted to see that they confirmed my chemical engineering understanding of those types of condensers.

Q And I believe you referred back to this control of VOC document that's in front of you, sir. Do you have that in front of you?

A Yes, I do.

Q It's public version of the record 2136 through 2510?

A Yes.

Q On page 2236?

A Okay.

Q Just a moment. Mr. Harsch questioned you about the statement, quote, "This refluxing is an integral part of the process and, therefore, these condensers are often not considered to be emission control devices."

Mr. Punzak can you describe -- I'm sorry. Did you finish reading that?

A Yes.

Q Can you describe a time when a reflux condenser, you know, such as the one that's at issue here would be considered a control device?

A Well, when they mentioned here that if you had a secondary condenser, the low temperature. But if we could show that even the primary condenser had something that was beyond the -- a normal condenser operates say at -- the cooling fluid is at 70 degrees or higher or something. If you could show that the primary one was operating with a brine cooler and was at 20 or 30 degrees, then we might be able to consider that to be a control.

MS. CARTER: I have nothing further. Thank you.

HEARING OFFICER HALLORAN: Thank you, Ms. Carter.

Mr. Harsch, recross?

RECROSS-EXAMINATION

BY MR. HARSCH:

Q Mr. Punzak, if the company were to use a different cooling medium, I guess -- following up on the last question -- and recovered 100 percent -- or recycled 100 percent of the carbon disulfide by condensing it all and diverting it back to the reactor, wouldn't your analysis still be the same?

A No. But that would be done with presumption that all the material that was capable, in this case the hydrogen sulfide.

Q I'm talking only about the carbon disulfide.

A No. In this case even if all the carbon disulfide was returned, we would probably still say that this system was not designed for that.

MR. HARSCH: No further questions.

HEARING OFFICER HALLORAN: Thank you, Mr. Harsch.

MS. CARTER: May we have a five-minute recess?

HEARING OFFICER HALLORAN: Sure. Are you done with Mr. Punzak?

MS. CARTER: I am done with Mr. Punzak.

HEARING OFFICER HALLORAN: Okay. You may step down, Mr. Punzak. Thank you.

(Whereupon, a brief recess was taken

in the proceedings.)

HEARING OFFICER HALLORAN: It's approximately 2:30. Ms. Carter, you just finished with your first witness?

MS. CARTER: Yes. And that is my only witness, sir.

HEARING OFFICER HALLORAN: Okay. So you rest.

Mr. Harsch, rebuttal?

MR. HARSCH: Mr. Corn.

(Witness previously sworn.)

MICHAEL R. CORN, P.E.,

called as a witness, having been previously duly sworn, was examined and testified upon his oath as follows:

DIRECT EXAMINATION

BY MR. HARSCH:

Q You have sat here and you have been previously sworn. You are still sworn. You sat here and listened to the testimony of Mr. Punzak and various questions. Does anything change your opinion with respect to the applicability of the exemption as it applies to the Henry plant?

A No. Nothing has changed. The rule reads the same as I stated this morning in my testimony.

Q In the guidance that Mr. Punzak recited using the condensers are not to be counted as pollution

control equipment. Is that your understanding with respect to the subsequently adopted Pollution Control Board -- or excuse me, pollution regulations that were enacted in the late Seventies through the Eighties with respect to VOC control, for example?

A I'm sorry. Repeat that question, please.

Q Is this the guidance that was written by U.S. EPA for control of VOC's or VOM's in the ozone noncontainment area generally?

A Yes, sir, it was. It included in there that flares can be used for control of those emissions.

Q And does it involve a concept that the condenser is not going to be counted; it has to be an integral part of the process?

A Integral part of the process means that the condenser makes the process continue. In this case this condenser, they can provide the carbon disulfide even from the virgin tank or from the recycle. So it's not an integral part of the process. Typically we think of reflux condensers as a distillation step where they are using a solvent. And the solvent has to be -- you have to keep adding it to make the process go along.

A lot of the definition of reflux condensers, it keeps the reactor vessel from drying out. And that's

the true case of a reflux. When we checked off reflux, it asked, Does it recycle it back to the process?

We have answered yes on that.

Q And, in fact, the permit application page that was cited had room for additional verbiage to describe the process?

A Yes, it did.

Q And on that page, in fact, the process was described as a process to reduce sulfur?

A That's my recollection. I would have to look back at it exactly, but that's my recollection.

MS. CARTER: Page 173?

MR. HARSCH: 173, I guess.

Q And the box I am referring to is -- box 7 briefly describes (indicating) --

A Okay.

Q That's where you describe that it was -- what happened --

A Aniline, CS2 and elemental sulfur compound reacting pressurized reactor vessel. For approximately two hours the reactor begins venting while the reaction is occurring. The gases pass through a condenser and most of the CS2 returns to the reactor vessel.

Q And this only occurred -- since this is a

batch step, is it not, a batch process?

A Yes, sir, it is.

Q This only occurs after the reaction?

A The reaction is going on. It may not be completed, but, yes, after the reaction.

Q So it's not continuous throughout the entire time?

A No. It's not continuous.

Q Would not be analogous then to a distillation step where you are running a distillation column the entire time?

A Distillation column is different than what this process is.

Q Do you have any comments or opinions regarding the integral part of the process for the facility that was using the toluene to make a similar product?

A Toluene in that -- and I'm totally familiar with that process, but it sounds like the toluene was used as a solvent there where they had to keep that solvent in the reaction continuously. And that would be considered in the truest form a reflux condenser.

MR. HARSCH: I have no further.

HEARING OFFICER HALLORAN: Thank you, Mr. Harsch.

HEARING OFFICER HALLORAN: Cross, Ms. Carter?

MS. CARTER: Just a moment, sir. I'm ready now.

CROSS-EXAMINATION

BY MS. CARTER:

Q Mr. Corn, did you see a document from Emerald stating that the condensers were designed to reduce sulfur compounds?

A I have never seen a document like that, no.

Q And is carbon disulfide needed in the reactor at all times to produce the MBT-C?

A I think you will have to ask Mr. Giffin that or someone else from the plant. My understanding is that is part of the reactant. And it's one mole CS2, one mole of aniline and one mole of sulfur is required.

MS. CARTER: Nothing further. Thank you.

HEARING OFFICER HALLORAN: Thank you, Ms. Carter.

Redirect, Mr. Harsch?

REDIRECT EXAMINATION

BY MR. HARSCH:

Q Mr. Corn, if you know, are all the reactants added at one time to this batch operation at the beginning?

A That's my understanding, but I'm not sure. I know that the carbon disulfide is added in excess to the

reaction.

MR. HARSCH: No further.

HEARING OFFICER HALLORAN: Thank you, Mr. Corn.

MR. HARSCH: Mr. Evans.

(Witness previously sworn.)

BERNARD O. EVANS,

called as a witness, having been previously duly sworn, was examined and testified upon his oath as follows:

DIRECT EXAMINATION

BY MR. HARSCH:

Q Mr. Evans, based on -- you sat here and you listened to Mr. Punzak respond to the questions I asked about guidance from U.S. EPA on permit drafters, what permit drafters look at. Do you have any experience with respect to the guidance I'm referring to and what permit drafters do, in fact, look at when they are reviewing Title V permit applications in terms of past operating permit and construction permit records?

MS. CARTER: And I will have to object to this question as being beyond the scope of my questioning of Mr. Punzak, because it's beyond the scope. It's not appropriate for Mr. Harsch to be raising it in his case in rebuttal when I never raised such issues in my case.

HEARING OFFICER HALLORAN: Mr. Harsch?

MR. HARSCH: I think it's fair game. I asked the questions of Mr. Punzak, and I don't think I got necessarily an adequate straight answer.

MS. CARTER: The question was never posed to Mr. Punzak what a consultant reviews or consults when they are putting together a Title V.

MS. HARSCH: Excuse me. That was not the question.

MS. CARTER: Okay.

MR. HARSCH: The question was what his experience was in terms of guidance from U.S. EPA permit drafters and what permit review engineers, in fact, look at as it relates to operating -- past operating permits and past construction permits.

MS. CARTER: Again, it's beyond the scope of my questioning to Mr. Punzak.

HEARING OFFICER HALLORAN: I will overrule. I will allow a little latitude. It's a tweener, but you may answer if you are able.

A In my experience and in my past as a consultant with Radian Corporation, we also work with the federal government, U.S. EPA, and we help write Title V guidance documents in relationship to how to review and develop a Title V permit application or permit relationship in response to the application.

Our typical approach is you want to incorporate all the conditions that exist in operating permits. The whole purpose of the Title V CAAPP permit is to bring together all those conditions into a single document that was more easily understood by the plant in relationship to what has got to be applied and more easily understood by the inspector from the federal government or the state agency in relationship to how do you review compliance of a facility. So the whole purpose is to bring those operating conditions into a single document.

Q So that would require review of the prior operating --

A Yes.

Q -- and construction permit files?

A Yes, it would.

Q And in your experience after you left Radian and working on the other side as a consultant industry and preparing those applications, has it been your experience that that was normally done by permit review engineers?

A Yes. I have got clients in the state of Illinois where the Title V permit application covering all those operating permits stapled together constitutes

their operating permit.

HEARING OFFICER HALLORAN: Ms. Carter?

MS. CARTER: Thank you.

CROSS-EXAMINATION

BY MS. CARTER:

Q Mr. Evans, are State operating terms federally enforceable in the State of Illinois?

A State operating terms?

Q Yes.

A They would have those that would have been associated with federally enforceable conditions developed by the State would be. Some State permit conditions are not federally enforceable.

Q Okay. So when you say that are relevant to federally enforceable terms, does that include things like PSD?

A PSD, permit terms and conditions, yes.

Q Okay. Are operating permit terms applicable requirements?

A They are applicable requirements, yes.

Q And what about construction permitting terms? Are they applicable requirements?

A Construction permits would have been incorporated into the Title V.

Q And what are those commonly referred to as? Is there a name, a jargon that the U.S. EPA utilizes when they are referring to construction permitting terms?

A Not that I recall.

Q Is there something called a T1 condition?

A Title I?

Q Yes.

A Yes. There are those.

Q And is a T1 condition a construction permitting term?

A Yes. It would have been NSPS terms, PSD terms within Title I.

Q And do the Title V permits that are issued in the State of Illinois, do they typically or do they incorporate T1 conditions?

A Yes. They actually list them separately as T1 conditions.

Q So much so are Title V permits actually referred to as Title V and Title I permits in the State of Illinois?

A I believe that's correct, yes.

MS. CARTER: Okay. I have nothing further. Thank you.

HEARING OFFICER HALLORAN: Thank you.

Mr. Harsch?

MR. HARSCH: Nothing further.

HEARING OFFICER HALLORAN: You may step down, sir. Thank you.

Any other witnesses in rebuttal, Mr. Harsch?

MR. HARSCH: No, sir.

(Discussion off the record.)

HEARING OFFICER HALLORAN: We are back on the record. Counsel from both parties decided to waive their closing. They are going to reserve it and put it in their post hearing brief. Counsels from both parties are going to contact me, hopefully no later than this Thursday, regarding a post hearing briefing schedule.

Before I forget, I want to note that I find no credibility issues with the witnesses.

Yes, Ms. Carter?

MS. CARTER: I apologize for this. I just want to raise that Mr. Harsch had raised an issue that he was inadvertently missing certain pages from his version of the public copy of the record. I did not know if the Board was missing those same pages and if it needed an additional copy of them?

HEARING OFFICER HALLORAN: Do you have those there?

MS. CARTER: Yes, I do.
HEARING OFFICER HALLORAN: I can take them.
MS. CARTER: I don't know if you guys are or not. I just want to make sure --
MR. HARSCH: I don't know. I never looked at the record.
MS. CARTER: Okay. I just wanted to double check. I apologize.
HEARING OFFICER HALLORAN: No. No. That's fine.
MS. CARTER: Thank you. And it's a public version of the record those pages.
HEARING OFFICER HALLORAN: This is marked up, or --
MS. CARTER: That's how it is in the record. That's how it is in the record, sir.
HEARING OFFICER HALLORAN: With that said, drive safely, God speed and thank you so much.
Mr. Harsch?
MR. HARSCH: I don't believe there has been any other member of the public to show up here.
HEARING OFFICER HALLORAN: Thank you for noting that. No. Other than Bill Mautin. Again, it is explained on the record. We told him it was a closed hearing due to trade secret issues, but if he wanted to make a comment he was more than welcome. He decided he

didn't want to. He just wanted to sit and listen, then he left. He seemed okay with that. There hasn't been any members of the public enter since.

MS. CARTER: We are going to provide you with a briefing schedule. Do we have an idea of when we might see a transcript?

HEARING OFFICER HALLORAN: It's eight -- pursuant to contract, eight business days from tomorrow.

MS. CARTER: Okay. That will help us. Thank you.

(Whereupon, the proceedings concluded at 2:50 p.m.)

STATE OF ILLINOIS)
)
COUNTY OF PEORIA)

CERTIFICATE OF REPORTER

I, GALE G. EVERHART, CSR-RPR, Notary Public in and for the County of Peoria, State of Illinois, do hereby certify that the foregoing transcript, consisting of pages 1 through 173, both inclusive, constitutes a true and accurate transcript of the original stenographic notes recorded by me of the foregoing proceedings had before Hearing Officer Bradley P. Halloran, in Henry, Illinois, on the 5th of February, 2008.

Dated this 13th day of February, 2008.

_____
GALE G. EVERHART, CSR-RPR
Illinois License No. 084-004217