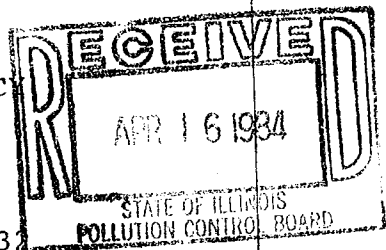


ORIGINAL

P U B L I C   H E A R I N G

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY



IN THE MATTER OF THE )  
PETITION OF VAUGHAN & BUSHNELL )  
MANUFACTURING COMPANY FOR A )  
SITE SPECIFIC OPERATIONAL )  
LEVEL UNDER CHAPTER 8, )  
RULE 206(d) )

No. R83-32

Held on Monday, March 12, 1984, commencing  
at the hour of 12:00 o'clock p.m., at the Peoria County  
Courthouse, Room 103, 324 Main Street, Peoria, Illinois,  
Mr. Kevin F. Duerinck, Hearing Officer presiding.

Member of the Board:

Dr. John C. Marlin

PRESENT:

Neil F. Hartigan, Attorney General  
of the State of Illinois, by:  
Mr. Major Hearn, Jr.  
Assistant Attorney General  
500 South Second Street  
Springfield, Illinois  
appearing on behalf of the Illinois  
Environmental Protection Agency;

Mr. James I. Rubin  
(Butler, Rubin, Newcomer, Saltarelli & Boyd)  
Three First National Plaza  
Suite 1505  
Chicago, Illinois 60602  
appearing on behalf of Vaughan & Bushnell  
Manufacturing Company;

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 Department of Energy and Natural  
 Resources.

I N D E X

	Page
Opening Statement by Mr. Rubin	3
Closing Statement by Mr. Rubin	24
<u>Witnesses:</u>	
CROWL, DONAVAN E.	
Direct Examination by Mr. Rubin	5
Cross-Examination by Mr. Esser	14
KAMPERMAN, GEORGE WILLIAM	
Direct Examination by Mr. Rubin	16
Cross-Examination by Mr. Esser	22

HEARING OFFICER DUERINCK: This is regulatory case title R83-32 in the matter of the petition of Vaughan & Bushnell Manufacturing Company for a site specific operational level pursuant to Chapter 8, Rule 206(d) of the Illinois Pollution Control Board Rules and Regulations. This has now been codified at 35 Illinois Administrative Code, Section 901.105(d).

Mr. Rubin.

MR. RUBIN: Thank you. I would like to incorporate my general observations made in my opening remarks in the Clifford-Jacobs proceeding in this proceeding and then state specifically that in this particular case the Environmental Protection Agency has raised no objection to the relief being sought.

Furthermore, Vaughan & Bushnell has never had a complaint by any member of the community that surrounds it. Vaughan & Bushnell is seeking to operate its facility, its ten hammers up to six days a week from 6 a.m. till 1:30 in the morning, that is, 6 a.m. until 1:30 a.m.

Vaughan & Bushnell is located in Bushnell, Illinois, and it is located approximately two blocks

from the C. S. Norcross facility, so that you'll find that one of the principle sources of sound surrounding Vaughan & Bushnell is C. S. Norcross and one of the principle sources of sound surrounding Norcross is Vaughan & Bushnell. And these facilities you'll find also have been in operation long periods of time and that compliance by them would be no different and no less difficult than compliance by Clifford-Jacobs and Moline.

As a result and especially since Vaughan & Bushnell has operated with the blessings of the community and without any complaints for decades, we believe that it would be appropriate to ask this Board to grant site specific relief in accordance with what has been traditionally accepted by the Pollution Control Board in the past.

With that, I'd like to call Mr. Donald Crawl.

DONAVAN E. CROWL, called as a witness herein, upon being first duly sworn on oath, was examined and testified as follows:

(Witness sworn.)

## DIRECT EXAMINATION

By Mr. Rubin:

Q Would you state your full name please.

A. Donavan E. Crowl.

Q And what is your address, Mr. Crowl?

A. 307 North Jackson, Bushnell, Illinois 61422.

Q Who are you employed by, Mr. Crowl?

A. Vaughan & Bushnell Manufacturing Company.

Q What is the address of Vaughan & Bushnell?

A. 201 West Main Street.

Q How long have you been employed by Vaughan & Bushnell?

A. About 35 years.

Q What is your position, sir?

A. Vice president in charge of manufacturing.

Q How long have you held that particular position?

A. Eighteen years.

Q Are you familiar with land uses that exist currently and existed when the facility began operations?

A. Yes.

Q Incidentally, how long ago did Vaughan &

Bushnell begin operations at its present location?

A. Since 1940.

Q. And do you know when the building that you're operating in was constructed?

A. Somewhere between 60 and 65 years ago.

Q. All right. When that building -- when you first occupied the building in 1940, were there any other commercial, residential or industrial facilities nearby?

A. All of them to the best of my knowledge that exist today.

Q. All right. And would you describe what exists today?

A. Well, as you mentioned, to the west of us is C. S. Norcross & Sons, to the south of us is DB&W Railroad and then some residents. To the east of us is a dog food factory. To the north of us there's all commercial. That's about it.

Q. You mentioned a railroad. Do you know approximately how many trains per day run on that rail line?

A. There's a railroad between -- just to the

east of our plant. That is the Burlington Northern. And the last information I had there was between 26 trains on that route.

Q Twenty-six trains per day?

A Per day. To the south on the DB&W, there's approximately two a day.

Q You said that there was a dog food plant. Does that make any noise?

A Yes, it does.

Q Processing machinery?

A That's correct.

Q Are there also semitrucks that drive to and from the dog food plant?

A Since that's to the east of us, there's very few. However, we are located -- just to the north edge of our building is Davis Street. And further west on Davis Street from our plant is a grain elevator, a ready mix concrete, a bulk gasoline facility and another industrial site further west which means that we have a great deal of large truck traffic.

Q Going by your facility?

A. Going right by our plant.

Q. Okay. How many hammers does Vaughan & Bushnell operate?

A. We operate ten hammers. They're all board hammers. They're from 1,000 pounds to the largest being 2,800 pounds.

Q. Okay. For reference, the Pollution Control Board will find the hammers located on Exhibit C to the petition and the site layout contained on Exhibit B.

How many buildings contain these hammers?

A. One.

Q. And how many furnaces are there that serve those hammers?

A. There's one at each unit, ten furnaces.

Q. How hot do those furnaces heat the steel that you forge?

A. From twenty-two to twenty-four hundred degrees.

Q. What kind of forgings does Vaughan & Bushnell produce?

A. We're in a hand tool business. We finish our own product. We manufacture hammers,



hatchets, axes, pry bars. We have about 75 basic forgings. We do no job forging work.

Q Approximately how large is the building in which the hammers are located?

A It's about 120 feet long, 80 feet wide and about 20 feet high with a cupola down through the middle. That's about the best way I can describe it.

Q And how is the heat vented from your facility?

A There is an opening over each unit.

Q Each hammer unit?

A Yes, sir. And it's just by draft.

Q Okay. And are there also openings at the ground level or grade level around the perimeter of parts of the building?

A Yes. There's two doors on the east side and windows and openings on the south side.

Q Does your facility abut right up against the public right-of-way?

A Yes, all around it, all around our total building.

Q Okay. Has the Environmental Protection

Agency inspected your facility?

A. Not to my knowledge.

Q. Okay. How many employees are there currently at your facility?

A. We have about 200.

Q. How many at peak operations?

A. Peak operations it would be about 225 to 250. We have been up to 250.

Q. How many shifts have you operated historically?

A. Two.

Q. From what hours?

A. From 6:00 in the morning until 1:30 at night.

Q. Okay. And that's the way you've typically operated in the past during normal economic conditions?

A. During normal economic conditions, we're working nine-hour shifts.

Q. Okay. Incidentally, has Mr. Kamperman done noise measurements at your facility?

A. Yes, sir.

Q. And are those the measurements that are contained within the petition?

A. Yes.

Q. And did he tell you the distances that those measurements extend out from your facility?

A. Yes.

Q. Does the noise petition accurately describe the taxes and raw materials and tonnages over the past few years?

A. Yes, it does.

Q. Did Mr. Kamperman -- did you hire Mr. Kamperman to consider noise control possibilities for your facility?

A. Yes.

Q. And for reference, we filed Mr. Kamperman's summary on February 29, 1984, with the Pollution Control Board.

Mr. Kamperman stated in order to bring this facility into compliance it would be necessary to close all the openings in the forge shop above the grade level door openings with either one-eighth inch glass or heavier material. It would be necessary to install a ventilation system to remove the hot air from the forge shop. It would be necessary to close

off all present grade level openings on the south side of the shop. It would be necessary to install an acoustically lined tunnel on the south side of the shop to accommodate all material handling into the shop and scrap removal. And this new entrance would require the removal of one or two of the forging units from the existing facility. It would be necessary to seal off the present main access doors on the east side of the shop, and it would be necessary to install an air supply system to properly distribute the fresh air throughout the forge shop at grade level. In addition, silencers on all of the fresh air inlets to the shop would be necessary and on the exhaust air discharged from the forge shop.

Have you considered those recommendations by Mr. Kamperman?

A. Yes, sir.

Q. Forgetting for a minute that what he recommended would eliminate one or two of the forging units, do you have an opinion as to whether or not you could operate the existing facility with those

changes at the current levels of production?

A. No, we could not.

Q. Would the recommendations that Mr. Kamperman has made interfere with the free flow of materials in and out of the facility?

A. Yes, it would.

Q. And that's aside from any costs associated with the changes he's proposed?

A. That's correct.

Q. Are you familiar with any changes that you could make to the facility that would easily and inexpensively abate the problem, the noise problem?

A. None.

Q. Have you asked your -- the contractor who is familiar with your roof and your facility whether or not you could install additional ventilation equipment on the roof without making structural modifications to the building?

A. Yes we have.

Q. And what was his response?

A. It would be impossible with our present building.

Q. And do you propose to operate your facility in the future at the levels contained at paragraph 23 of the existing petition?

A. Yes.

Q. Excuse me, 22. And that is ten hammers up to six days a week from six in the morning until 1:30 in the evening?

A. Yes.

Q. Have you ever had any complaints with respect to those particular hours of operation?

A. No, we never have had any.

MR. RUBIN: I have no further questions of this witness.

HEARING OFFICER DUERINCK: Mr. Hearn, do you have any questions?

MR. HEARN: No questions.

HEARING OFFICER DUERINCK: Mr. Esser.

MR. ESSER: Yes, just one question.

#### CROSS-EXAMINATION

By Mr. Esser:

Q. The dog food company, there is a blower there I understand.

A. Yes.

Q Does that operate 24 hours a day?

A. It operates two shifts generally. I don't believe they operate three shifts. I can't answer that. They do operate two shifts quite frequently.

Q Okay. Thank you.

HEARING OFFICER DUERINCK: Mr. Marlin.

MR. MARLIN: You referred to -- Mr. Rubin, you referred to the February 29th filing response to request for written summary of expert testimony. Is that a typographical error on page 2? It says by one of its attorneys and it says Clifford-Jacobs Forging Company. I just wanted to point that out.

MR. RUBIN: That is a typographical error. That should read Vaughan & Bushnell as it does on the caption.

HEARING OFFICER DUERINCK: Thank you.

Thank you, Mr. Crowl.

(Witness excused.)

MR. RUBIN: I'd like to call Mr. Kamperman now.

GEORGE WILLIAM KAMPERMAN, called as a witness herein, upon being first duly sworn on oath, was examined and testified as follows:

(Witness previously sworn.)

DIRECT EXAMINATION

MR. RUBIN: And again I would like permission from the Board to dispense with going through Mr. Kamperman's background once again.

HEARING OFFICER DUERINCK: That would be fine. Let's refer to Clifford-Jacobs.

MR. RUBIN: Yes. Specifically, I'd like to incorporate Mr. Kamperman's background testimony to the Clifford-Jacobs petition. Thank you.

By Mr. Rubin:

Q. Mr. Kamperman, have you visited the Vaughan & Bushnell facility?

A. Yes, I have.

Q. Have you taken measurements at that facility?

A. Yes, I have.

Q. Are those the measurements that are reflected in the petition filed with the Board?



A. That is correct, plus earlier measurements obtained by ETA Engineering.

Q. The petition reflects that the estimated worse case level measured at the facility is 65 leq. Do you have an opinion as to whether or not there are any adverse impacts to the community that would result from that level of emission?

A. My opinion is there would be no adverse effects from the 65 level leq.

Q. Health effects that is?

A. Health effects.

Q. Did you also prepare the numbers that produce the isopleths that are contained within the petition?

A. Yes, I did.

Q. Have you analyzed Vaughan & Bushnell to determine the possible alternatives for reducing the sound at that facility?

A. Yes, I have.

Q. Is that what resulted in your recommendations that I've just read to the Pollution Control Board?

A. That's correct.

Q. In your opinion, are there other methods that are relatively and economically and technically available that would control the sound not listed in that submission?

A. No. This seemed like the most cost effective approach to solving the problem.

Q. Okay. In your recommendation, you said that one or two of the hammers would have to be eliminated from that facility in order to implement your recommendation; is that correct?

A. That's correct. That's based on looking at their vehicle circulation inside and outside the building. If we close the main entrance on West Main Street which is on the east side the building, they must be able to take in all of their product, their stock and their scrap in and out of the south door that I proposed. To do that would require the removal of one or two hammer units because physically there's no room inside the shop for vehicles to move around.

Q. So that they would automatically lose 10 to 20 percent of their productive capacity if they

began to implement your recommendation?

A. It appears that might happen, yes.

Q. In addition, would this tunnel be closed and have to be opened every time there was a egress?

A. If the tunnel is long enough like 50 feet long, it probably could be opened half the time.

Q. If it were closed half of the time, would that interfere with the movement of materials? Would it slow the movement of materials in and out of the facility?

A. Well, clearly the tunnel is going to be an impediment to flow because that's not for normal circulation. That's not the way they've laid out the shop for it, in and out of one opening.

Q. So that aside from the physical removal of one or two hammers, there would be other impediments with the free flow of materials and the productivity within the shop?

A. Yes. Their bar stock goes in through the east door on West Main Street and the finished product goes into heat treat out through the west side of the plant, so that side is enclosed already.

So, it's only concerned with the input of their bar stock and the removal of the scrap through the opening.

Q. Incidentally, would the people in the neighborhood close to C. S. Norcross benefit at all if Vaughan & Bushnell made changes to its operations but Norcross did not?

A. No. There would be no benefit to the residents nearby it, C. S. Norcross.

Q. So, effectively, in order to produce any benefit in the neighborhood, you not only have to completely alter one facility, you have to completely alter both facilities?

A. I would like to rephrase that and say that the people that are near C. S. Norcross are not impacted by Vaughan & Bushnell.

Q. But there are people commonly that are impacted by both?

A. There are few residents that are in between that would be benefited if both of them were down.

Q. But if both of them weren't changed,

would those people, those people that are common to both, they wouldn't get the full benefit?

A. That's correct.

Q Do you have any idea what -- based on an order of magnitude, what it would cost to make the changes that you recommended to Vaughan & Bushnell not including the cost of the adverse impact on production?

A. The cost is going to be in the range between 100 and 200 thousand dollars just as a rough estimate to make these changes.

Q The physical changes?

A. That's just the ventilation, not the removal of hammers.

Q That's just the ventilation?

A. Yes, the ventilation and the sound source.

Q Okay. Does that include any estimate of the cost or incorporate the cost of energy requirements for noise fans?

A. No.

MR. RUBIN: I have no further questions of Mr. Kamperman.

HEARING OFFICER DUERINCK: Mr. Hearn.

MR. HEARN: I have no questions.

HEARING OFFICER DUERINCK: Mr. Esser.

CROSS-EXAMINATION

By Mr. Esser:

Q The cost figure estimate of between 100,000 and 200,000 dollars, did that include the cost of altering the structure of the building itself?

A This is one of the shops I did not do a cost study on because ETA had not looked at this earlier. But I'm surmising from the number of silencers and the fan units that we are putting in there that they will probably cost over 100,000, and I'm estimating that it may cost another 100,000 to make the structural changes to the building.

Q And that doesn't include structural changes to the roof necessary in order to accommodate fan silencers; is that correct?

A That's correct. I am only talking about noise control. I am assuming the structure is sound enough, strong enough to hold all this equipment. And we've heard this morning that it won't. So,

there will have to be additional moneys for beefing up the structural system to support the loads. I have no idea what that involves.

Q In making your calculations of the sound levels, in converting to leq's, you reduced -- you deducted an 8 db to come up with your leq measurements. Why an 8 dba?

A The procedure for which I arrived at that was to continuously tape record the noise emission from the shop at a downwind location, maybe a block away from the shop approximately, for 10-15 minutes continuously. Then in analyzing that, record the A-weighted fast response when the data is played back and simultaneously compute the leq for the duration of that sample.

So over that 15-minute period of what I was told was normal production activity, I determined that the difference between the typical A-weight of the fast meter response and the computed leq over that quarter-hour period was 8 decibels.

MR. LSSER: No further questions.

HEARING OFFICER DUERINCK: Mr. Marlin, any

questions?

MR. MARLIN: No.

HEARING OFFICER DUERINCK: I have no questions.

Thank you, Mr. Kamperman.

MR. RUBIN: Thank you.

(Witness excused.)

MR. RUBIN: In closing with respect to Vaughan & Bushnell, I would again note that there has been no adverse community response, there have never been any complaints about Vaughan & Bushnell's operations and that the hours and the level of operation sought by this company is consistent with its historical level of operations.

And in as much as the EPA has analyzed this and it has no objection, we would request that the level of operations that we've sought in the petition be granted.

HEARING OFFICER DUERINCK: Thank you.

That concludes R83-32.

(HEARING CONCLUDED.)



STATE OF ILLINOIS )  
                          )     SS:  
COUNTY OF LASALLE )

SHEILA LEGER hereby certifies that she is the Certified Shorthand Reporter who reported in shorthand the proceedings had in the above-entitled matter and that the foregoing is a true and correct transcript of said proceedings.

*Sheila Leger*

\_\_\_\_\_  
Certified Shorthand Reporter