

161). Mr. Joseph Brewster, Manager of Environmental Conservation for Shell, testified that the company had received 31 complaints in 1989 (R. 56) and 89 complaints from January until September 18, in 1990 (R. 57). Shell maintains that all of these noise complaints came from just nine households. (Pet. Brief pg. 8)

PROCEDURAL HISTORY

To date, Shell has received two variances in regards to noise excursions from its Wood River facility. In PCB 77-306, the Board found that the nature of Shell's operation in conjunction with its location made it virtually impossible for the facility to secure compliance within the short term. (See also R72-2, Opinion and Order Pg. 24, July 31, 1973). Shell pursued another variance in PCB 83-24. In this case the Board granted the variance, but noted that the situation was so complex that site specific relief may be warranted. Although Shell was found to be retrofitting its facility with noise abatement as a significant consideration, because of the size of the site in addition to the proximity of the adjacent community, the Board found that compliance may be "years away". (PCB 83-24 at pg. 3).

In the amended petition filed in the instant case, however, Shell asserts that it can come into compliance with the applicable noise regulations by December 21, 1991. In 1988, Shell hired Mr. George Kamperman, P.E. a noise expert, to inspect its facility and recommend a compliance plan. Shell has already implemented some of Mr. Kamperman's suggestions and has submitted its compliance plan (Pet. Ex. 10). This plan will be incorporated in the Order section of this Opinion. Mr. Kamperman testified that if Shell undertook these specific changes, it was his belief that the facility would conform to the regulations set forth in 35 Ill. Adm. Code 901.102(a) and 901.103. (R. 90, See also Pet. Ex. 6). Shell estimates these costs to be \$5,600,000. (R. 36, 38). Mr. Kamperman also stated that if Shell did not conform to the standards after the completion of these three projects, further evaluation would take place. (R. 91).

DISCUSSION

Testimony at hearing revealed that for Shell to comport with the state noise regulations, it would have to shut down at least a part, if not the entire facility. Thus the Board finds that for Shell to immediately meet the applicable noise regulation given its existing processes would be an unreasonable or arbitrary hardship. At the same time however, the Board notes that Shell has made an effort to formulate a viable plan to reduce its noise pollution. The initiation of its Environmental Division, under the direction of Mr. Brewster, indicates Shell's good faith in terms of community relations as well as its efforts to comply with State regulations. This is also manifested by the work of Mr. Kamperman who, in tandem with the Betchel

Corporation, is attempting to formulate a plan whereby Shell can co-exist with the surrounding community.

One problem with the figures provided by Shell remains that the Board is unable to distinguish how much is being spent to reduce noise pollution as opposed to how much would be spent anyway as a result of normal retrofitting costs. Part of this is understandable in that when rebuilding a complicated manufacturing process, costs become overlapping. Put another way, where a company can easily document the cost between two compressors, when that compressor is one of twenty interrelated parts, options become limited and costs intertwine. (R. at 136).

More important than the costs, however, is the result. At hearing, for example, ten citizens were present, seven of whom testified. Taken as a whole, a pattern emerged whereby residents complained that extreme noise comes in intervals of anywhere from two to four days. (R. 177, 193, 201-02). There was also testimony that because of the noise coming from the facility, doors and windows must be shut, people did not go outside, housing values were reduced, etc. (R. 175-206). In spite of the fact that there was testimony indicating that the noise levels present in South Roxana were not severe enough to cause a loss of hearing, the Board finds that other, long term environmental effects are a distinct possibility. If one cannot enjoy one's backyard or is forced to take medication in order to sleep, these are undoubtedly environmental effects. (See Ill. Rev. Stat. Chap. 111-1/2, Section 1023). The Board does not view these allegations as proven, but merely notes these are deep concerns which should be alleviated by Shell's compliance plan. Accordingly, the Board will add a condition whereby Shell will be required to seek regular input from the affected citizens.¹ In this way, the Agency will possess some documentary evidence by which it can evaluate the concerns of the affected community should Shell feel compelled to petition for any further relief.²

Aside from the conditions which the Agency and Shell have essentially agreed upon, the Agency has petitioned the Board to impose further requirements upon the company. Specifically, the Agency requests that Shell be precluded from using its intercom

¹This will not pose an undue burden as Shell has expressed a willingness to engage its affected neighbors. (Pet. Ex. #10). Moreover, Shell has represented that the affected area is "believed to contain less than 50 homes." (R. 33, Pet. Ex. 5).

²Forrest and Doris Dhue were citizens present at the hearing and played a recorded tape. They submitted this to the Board, but it was unable to consider it for evidentiary reasons. Put another way, the Board is prevented from considering tape recordings which are not scientifically calibrated.

system absent an emergency. Moreover, the Agency suggests that evergreen trees be planted in the buffer zone between the facility and the residential community. Insofar as the intercom system is concerned,³ Shell's reply brief has demonstrated its necessity. While Shell does employ a pager system in addition to its intercom, the latter controls the entire facility whereas the former is used within certain control units. Moreover, Shell has realigned the speakers so that they face away from South Roxana. In short, the Board finds that the complexity of Shell's operation at the Wood River facility and the safety concerns inherent in such an operation require that Shell's discretionary use of the intercom system not be curtailed.

In regards to a buffer zone consisting of trees, the Board is reluctant to impose such a condition at this late date. Had Shell or the Agency implemented such a program in the early 1970's the problem might not be so severe today. Yet Shell has embarked on a program which commits to the revamping of three major noise sources at an estimated cost of \$5,600,000. To concurrently require the company to install a buffer zone would not be appropriate in this case, especially when Mr. Kamperman has projected minimal results relative to the entire situation. (See Attachment 1, Pet. Reply Brief, November 13, 1990). Accordingly, the Board will undertake neither of the Agency's late-filed⁴ suggestions.

Another important issue raised in this proceeding was the difficulty of obtaining a one hour "Leq" value as required by the Board in General Motors Corporation (Proposed Amendments to 35 Ill. Adm. Code 900.103 and 901.104, January 22, 1987). Both Mr. Kamperman and Mr. Zak testified as to the difficulties in securing a valid measurement of the noise from the plant during the daytime. Normal everyday sounds such as sirens, insects, railroads, road traffic, etc. undermine the accuracy of measuring the sounds from the plant. In addition to this, there was some concern by the Agency that it should be notified 48 hours in advance of any testing.

Because there was unrebutted testimony that the plant operates at the same level 24 hours per day, the Board sees no reason why testing cannot occur at night when extraneous sounds are limited. The Board notes, however, that all of the data considered in the instant case has been put forth by the Petitioner. While the Board accepts the data supplied by Shell, it notes that it would be advantageous if some independent

³Between 1985 and 1989, Shell received three complaints regarding intercom noise. (Respondent's Reply Brief at 3).

⁴Shell's Reply Brief correctly notes that the Agency's filing did not comport with the Hearing Officer's Order.

evidence had been supplied by the Agency. Because Shell's Wood River facility is the largest generator of noise complaints within the State, it is not unreasonable to expect that insuring the reduction of pollution from this source would be a high priority. In other words, even though Shell will be required to conduct quarterly tests, the Agency is free to obtain data anytime in the future and is encouraged to do so.

CONCLUSION

After three variances in a thirteen year period, the Board accepts Shell's compliance date of December 21, 1991. To do otherwise (i.e., force immediate compliance) would subject the company to an arbitrary or unreasonable hardship. The Board also accepts Shell's compliance plan, but will make some additions to reflect the concerns of the adjacent community, the Agency and the Board itself.

This Opinion constitutes the Board's finding of facts and conclusions of law in this matter.

ORDER

Shell Oil Company's Wood River facility is hereby granted a variance from 35 Ill. Adm. Code 901.102(a) and 901.103 beginning March 21, 1989. This variance expires on December 21, 1991.

1. Shell Oil Company shall complete the following noise abatement projects by December 21, 1991:

PROJECT NO. 1

<u>PROCESS UNIT</u>	<u>NOISE SOURCE</u>	<u>NOISE ABATEMENT</u>
CR-1	H-1 Burners	Replace 12 burners, air plenum, inlet air duct, and inlet air damper
	H-2 Burners	Replace 12 burners, air plenum, inlet air duct, and inlet air damper
	H-3 Burners	Replace 6 burners, air plenum, inlet air duct, and inlet air damper
	H-4 Burners	Install inlet air duct silencer
	H-5 Burners	Install inlet air duct silencer
	H-6 Burners	Install inlet air duct silencer
	H-7 Burners	Install inlet air duct silencer
DHT	Heater Burners	Replace 6 burners and air plenum, install inlet air duct and air flow controls
HCU	H-1 Burners	Replace 16 burners, air plenum, inlet air duct, and inlet air damper

	H-2 Burners	Replace 16 burners, air plenum, inlet air duct, and inlet air dampler
	H-3 Burners	Install an air inlet duct silencer
KHT	Heater Burners	Replace 32 burner fuel orifices and add air silencing mufflers to 32 burners

PROJECT NO. 2

<u>PROCESS UNIT</u>	<u>NOISE SOURCE</u>	<u>NOISE ABATEMENT</u>
CR-3	ID Fan	Install outlet duct silencer, replace fan, replace seals on APH
	H-2 Burners	Restart air preheat system when ID fan noise controls installed
	H-4 Burners	Restart air preheat system when ID fan noise controls installed
	H-5 Burners	Restart air preheat system when ID fan noise controls installed
	H-6 Burners	Restart air preheat system when ID fan noise controls installed

PROJECT NO. 3

<u>PROCESS UNIT</u>	<u>NOISE SOURCE</u>	<u>NOISE ABATEMENT</u>
HDU-2	H-1 Burners	Restart air preheat system

As the engineering specifications of these projects are finalized, Shell will submit the information with its quarterly progress reports required under condition No. 2.

2. Shell Oil Company shall prepare and submit quarterly progress reports on implementation of the Compliance plan in Condition No. 1. These reports will be submitted in the month following the end of each calendar quarter. The first quarterly report will be for the fourth quarter of 1990. The reports will be submitted as follows to: 1) the General Counsel, 2) the Manager of the Division of Land Pollution Control, and 3) the Noise Technical Advisor. These persons are all at the Illinois Environmental Protection Agency, 2200 Churchill Road, P.O. Box 19276, Springfield, Illinois 62794-9276.
3. Shell Oil Company shall maintain documentation for items involved in the noise control projects in Condition No. 1 of this variance in conformance with its internal procedures.

These internal procedures are described in the document dated July, 1985, and titled ENVIRONMENTAL PROTECTION - NOISE or otherwise known as Section 24 of its Engineering Guides and General Specifications (EGGS). Shell will supply IEPA with copies of the relevant portions of any written internal policies throughout the pendency of this variance which change the noise policies expressed in their EGGS relating to documentation and are applicable to the Wood River Manufacturing Complex. Shell shall also submit documentation required by these EGGS with the quarterly progress reports required in Condition No. 2. If Shell so requests, and the Board approves, this information will be held as CONFIDENTIAL.

4. Shell Oil Company shall submit AUTHORITY FOR EXPENDITURE (AFE) documents and their attachments with the quarterly progress reports required in Condition No. 2 for noise control projects approved after September 1, 1990. Shell shall also submit vendor brochures and data on noise control equipment installed as a part of these projects. If Shell so requests, and the Board approves, this information will be held as CONFIDENTIAL.
5. Shell Oil Company shall take noise measurements in South Roxana at least once during each quarter starting the fourth calendar quarter of 1990. The Illinois Environmental Protection Agency shall be notified at least 48 hours in advance of any testing. These measurements shall be made in the vicinity of Madison and Southard Streets, and in the vicinity of Park and Melrose Streets. The measurements shall include one-hour Leq results in accordance with Board Procedures at 35 Ill. Adm. Code Section 900.103. Measurements shall be made between 10:00 p.m. to 5:00 a.m. at each location. Shell shall also attempt to describe background noise levels and to describe identifiable noises deriving from exempt sources and sources other than Shell during the one-hour measurement periods. Shell shall also measure a one-minute Leq during the one-hour periods. Shell shall submit all of these measurements with each quarterly report required in Condition No. 2. Shell shall also submit with each quarterly report any other noise reports generated regarding the facility relevant to this variance.
6. Shell shall design a questionnaire, which shall be approved by the Agency, to be sent to the affected households in South Roxana identified in Petitioner's Exhibit #5. Shell shall be required to do this in four month intervals during the course of the variance. The results of this survey shall be submitted in the appropriate quarterly report to the Agency as required in condition 2. Included in this questionnaire shall be questions pertaining to patterns, duration, loudness, dates and times of noise levels which preclude the

affected households of normal living patterns. The questionnaire shall include questions which address whether these affected households have experienced a reduction in noise pollution. Shell shall also provide space for a narrative statement for other factors not anticipated here.

- 7. Within 45 days of the date of the Board's Order, Petitioner shall execute a Certificate of Acceptance and Agreement which shall be sent to Gregory Zak at the address indicated pursuant to condition 2.

This variance shall be void if Petitioner fails to execute and forward the certificate within the forty-five day period. The forty-five day period shall be held in abeyance during any period that this matter is being appealed. The form of said Certification shall be as follows:

CERTIFICATION

I. (We), Shell Oil Company, having read the Order of the Illinois Pollution Control Board, in PCB 88-188, dated November 29, 1990, understand and accept the said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

Petitioner

By: Authorized Agent

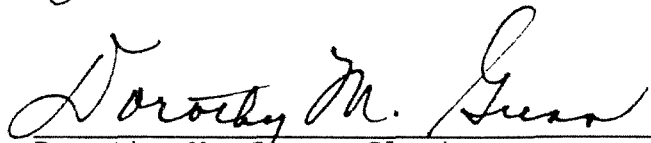
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Section 41 of the Environmental Protection Act, Ill. Rev. State. 1985 ch. 111-1/2 par. 1041, provides for appeal of final Orders of the Baord within 35 days. The Rules of the Supreme Court of Illinois establish filing requirements.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board hereby certify that the above Opinion and Order was adopted on the 29th day of November, 1990 by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board