ILLINOIS POLLUTION CONTROL BOARD
March 14, 1974

NATIONAL BY-PRODUCTS INCORPORATED, Petitioner,	)	
v.	)	PCB 73-208
ENVIRONMENTAL PROTECTION AGENCY, Respondent.	)	

John L. Parker, Attorney for National By-Products Incorporated
Thomas A. Cengel, Assistant Attorney General for the EPA

OPINION AND ORDER OF THE BOARD (by Mr. Henss)

Petitioner, National By-Products Incorporated seeks variance until June 15, 1975 from Sections 9(a) (Air Pollution) and 9(b) (permits) of the Environmental Protection Act and Rules 103(b)(2) (operating permit), 104 (compliance programs and project completion schedule) and 802(b)(odor nuisances) of the Illinois Air Pollution Control Regulations.

This company owns and operates a facility near Decatur, Illinois for the processing and rendering of animal by-products and fallen animals. The plant is located in an area known as Harristown Township, about 4.8 miles from the Decatur city limits. It is bounded on the east and southwest by landfills and on the south by the Sangamon River. To the north are homes and a commercial area, with the nearest home being about 0.2 miles distant (R. 58, Petitioner Exhibits #2 and 4). The original plant was constructed in the late 1930's (R. 55) but was not acquired by Petitioner until 1965 (R. 48). It is one of 13 such plants operated by Petitioner throughout the country.

Petitioner's Decatur plant originally served a large area including parts of western Kentucky, western Tennessee, eastern Arkansas, southeastern Missouri and the lower two-thirds of Illinois. The plant now processes animal and poultry fats, bones, viscera and fallen animals from supermarkets, locker plants, restaurants and farms located throughout central and southern Illinois (R. 61). It is the only such facility between Joliet, Illinois and St. Louis, Missouri.

About 1,650,000 lbs. of animal waste materials per week are procurred by the Decatur plant of which about 1,350,000 lbs. per week are actually processed at the Decatur plant. The remainder is shipped by truck to Petitioner's Indianapolis, Indiana facility for processing. Shipping costs are estimated to be $1,500 per week (R. 63, 152). Processing equipment at the Decatur plant includes a receiving hopper, a Stedman grinder, five batch type cookers, "perc pans" (draining conveyor system), two batch type expellers, product storage tanks, two shell and tube condensers, two barometric condensers, a hot well, and four lagoons for plant waste water.

Part of the plant is in the path of a proposed I-72 bypass and will probably be condemned by eminent domain by the State of Illinois (R. 59-60, Petitioner's Exhibit #3). Upon discovering this possibility, Petitioner immediately formulated plans to build a new rendering plant at Mason City, Illinois. Petitioner currently operates a fat blending, protein blending and waste grease processing plant at the Mason City site. When the Mason City plant is completed in June 1975 all of the Decatur operations will be transferred to Mason City and the Decatur plant will be dismantled. Petitioner presented the following time schedule for this change over (Amended Petition, page 14):

Item	Completion Date
Detailed engineering drawings and specifications of basic process and odor control equipment	By March 15, 1974
Bids received on equipment	By April 15, 1974
Equipment ordered	By June 15, 1974
Construction contracts let and construction started	By July 1, 1974
Equipment delivered	By November 1, 1974
Equipment installed and beginning of start-up tests	By April 15, 1975
Full plant operation, odor tests performed, discontinue processing at Decatur	By June 15, 1975

Petitioner's district manager, Dr. Fred D. Bisplinghoff, testified that the Mason City program is presently on schedule (R. 251). A considerable portion of the record in this proceeding pertains to the new Mason City operation. Petitioner is planning to spend about $250,000 for pollution control devices at the new four million dollar

plant. Dr. LaVerne W. Rees, President of Environmental Research Corporation, whose firm will design and supply the control equipment for the Mason City plant, testified that the new plant will be the best controlled in the world (R. 214). EPA employee Anton Telford stated his opinion that the Mason City plant "program is adequate to control rendering odors from the plant" (R. 32). The Board commends Petitioner for its diligent efforts to provide the new plant with control devices that have achieved excellent odor reduction results at other rendering plants throughout the world. But, while it is apparent from the record that the Mason City plant will be capable of operating in compliance, we must address ourselves to the present problem at the Decatur plant.

Petitioner admits that odors from the Decatur plant have on occasion been of such intensity as to cause possible violations of the act and applicable rules and regulations. Petitioner tried to show that the odors could have originated at the nearby landfills, or from a nearby sewage treatment plant, or from the A. E. Staley plant some eight miles away, or that the odors were a combination of emissions from these sources. However, the testimony of 12 of Petitioner's neighbors and of Maurice Doyle, supervisor for Harristown Township, leaves no doubt as to the source of the odors. Doyle testified that the odor came from the rendering plant and that "there is no question that I know where it comes from" (R. 142).

Diane Davies described her reaction to the odor by stating, "I have never smelled anything that bad, never" (R. 102). Other witnesses described the odor as the "most godawful smell you ever smelled" (R. 87), "horrendous, like something spoiled, very powerful" (R. 336) and "nauseating" (R. 341). Most witnesses agree that the duration and intensity of the odor increased during the summer months (R. 90, 101, 110, 133, 145, 337, 377, 384). Ellen Allan testified that she had suffered from odors from the plant for about 30 years (R. 348). Helen Hurley Turner testified that she had perceived the odors for 22 years (R. 337).

The Decatur plant has been at its present location for nearly 40 years. None of the witnesses who testified at the public hearing were living in this area before operations began at the plant. Only two of the witnesses had lived in the area for 20 or more years, yet the record shows that the surrounding area now has over 180 homes (Respondent Exhibit #1). Only two of the witnesses indicated that they did not have knowledge of the plant's existence prior to purchasing or building their homes. We can only speculate as to why the great majority of Petitioner's neighbors chose this area for their dwellings while having knowledge of the odor problems.

Most witnesses said they had called the plant on numerous occasions to complain of the odors. One witness, Betty Hopkins, testified that she had called the plant over 120 times in 1969 (R. 361). Nearly all of the witnesses who had called the plant testified that the odors would disappear within 15 to 30 minutes after the call. (R. 89, 112, 118, 132, 361, 383). We find this to be a very interesting aspect of the case.

Dr. Bisplinghoff said the "almost instant" relief described by the plant's neighbors might have come from hurried repairs to equipment. Plant employees have standing instructions to check all phases of the plant operation when an odor complaint is received. Bisplinghoff stated that an increase in odor could result from a burned out motor on a water pump, a broken water line, a broken valve on a water line or a sudden flash of noncondensable gasses from the hot well. If one of these problems has occurred, it is repaired as quickly as possible. If no such problem is encountered, Bisplinghoff stated that there is nothing that can be done at the plant to provide the instant relief (R. 162-164). It was suggested that a sudden change in wind direction in some cases could have given abrupt relief from odor.

In light of citizen testimony that numerous complaints were made to the Company over the period of time National By-Products has operated the Decatur plant, we must look at Petitioner's past efforts to abate the odor problem. National By-Products President Robert J. Fleming testified that odor control in past years was a "very vague and unscientific problem". He added that it has only been in the last couple of years that the industry has "zeroed in on control technology that we felt comfortable with". Fleming testified that the rendering industry has participated in "very expensive experimentatio from 1969 to 1973 on the use of chemical oxidation or scrubbing as a method of controlling odors.

Since 1969, Petitioner claims to have spent $74,000 at the Decatur plant for odor control (R. 311, Petitioner's Exhibit #1). This money was represented to have been expended for the following items:

1969-added barometric condensers on shell and tube condenser (R. 148)
1970-added another shell and tube condenser (R. 149)
1971-changed barometric condensers, added more water lines and pumps (R. 149)
1972-more pumps, more water (R. 149)
1973-more water (R. 149)

On cross examination Dr. Bisplinghoff disclosed that $29,000 of the $74,000 had actually been expenses for hauling excess raw materials to the Indianapolis plant. Petitioner included this amount in the expense column for odor control since the Petitioner considers such hauling to be a method of controlling odors (R. 312).

Bisplinghoff testified that the Decatur plant had used various chemical masking agents in past years but a truly effective maskant was not found until about 1 1/2 years ago. The chemical is added to each cooker during loading which allegedly helps mask odors which are contained in vapors from the drain conveyor system (R. 79). Bisplinghoff stated that the primary constituents of the odors were aldehydes, ketones and alcohol.

There are six major sources of odor within the plant and at least two outside the plant. Those inside include the cookers, the draining conveyor, raw material hoppers, the Stedman grinder, the Duke Hard Press and the French Soft Press. Only the cookers and the draining conveyor have some odor control. (R. 78) Outside the plant odors originate at hot wells and liquid discharges from trucks delivering the raw materials. The record indicates that odors from the four lagoons are not a major problem. Two of the lagoons that could be major sources of odor have been completely covered with a layer of grease, straw and other organic material (R. 77).

Petitioner has found an alternate delivery route to the plant which involves routing trucks through one of the landfills in order to avoid passing by any homes in the area. This route is passable about 50 to 70 per cent of the time but Petitioner testified that an all weather surface will be provided for the road in the Spring of 1974 thereby allowing use of the alternate route 100 per cent of the time (R. 158).

Petitioner estimates that $127,000 will be invested in the Decatur plant for odor control prior to June 1975. About $10,000 of this amount will be spent for a cover over the hot well and piping to convey gasses from the hot well to the plant boilers. The cover will consist of a wood and masonite hood. Gasses from the hot well will be transferred to the boiler fan intake by means of a fan which will be mounted on top of the hood. (Petitioner's Exhibit #9).

Gasses and vapors from the hot well are considered by Petitioner to be the major source of odor from the Decatur plant (R. 76). Petitioner's manager of engineering services, H. W. Heilman, testified that the proposed hot well cover will not eliminate all odors from the plant but will significantly change the odor situation (R. 170). On cross examination Heilman acknowledged that the engineering drawings for the cover were completed on December 18, 1973 after having been requested for the first time only two or three days prior (R. 187). Heilman also acknowledged that hot well covers have been used by Petitioner "many times" before, that such "technology" was known in 1965, and that if such a cover had been installed at the Decatur plant in 1965 the cost would have been about seven thousand to eight thousand dollars (R. 188).

Petitioner has undertaken a program whereby it attempts to process all fallen animals brought to the plant within four hours of delivery (R. 150). Bisplinghoff testified that there are difficulties with the program when frozen animals are delivered and during periods when unusual stress conditions cause the death of large numbers of animals. These difficulties allegedly occur about 30 days out of each year (R. 298). EPA investigator John Schum testified that he observed animal carcasses in various states of decay on each of his two visits. He was informed that the carcasses had been delivered the night before (R. 326, 329). Mattie Jane Rose testified that she and several neighbors and friends drove to the plant on a night when the odor was particularly intense. They observed a pile of bloated animals with "maggots working all over the place" (R. 370). Such testimony as this does not speak well for the effectiveness of Petitioner's four hour processing program. However, Petitioner's four hour processing program is a voluntary program.

Dr. David R. Bromwell of the Illinois Department of Agriculture testified that Petitioner is only required under the Dead Animal Disposal Act to process fallen animals within 48 hours after delivery (R. 329). Such animals could have been delivered to Petitioner's facilities in the condition described by Mattie Jane Rose, and Petitioner would still have 48 hours in which to process the animals.

Dr. Bromwell testified that it was his determination, based on personal inspections and inspection reports of his subordinates, that the Decatur plant was in compliance with the Dead Animal Disposal Act as that Act pertains to odors (R. 232). He stated that Petitioner can achieve compliance with that section of the Act dealing with odors by making "an honest effort to control the odors " (R. 232).

A review of that portion of the Dead Animal Disposal Act dealing with odors does not support Dr. Bromwell's contention. Chapter 8, Section 159(d) of the Illinois Revised Statutes states: "Odors shall be controlled and steam disposed of in such manner to be in compliance with the Environmental Protection Act". The record in this case clearly shows that odors from the plant are not being controlled. Compliance with Section 159(d) is dependent upon compliance with the Environmental Protection Act and clearly, Petitioner is not in compliance with the Environmental Protection Act.

H. W. Heilman testified that it would cost between $280,000 and $345,000 to control the odors from the Decatur plant (R. 182). A minimum of ten months would be required for completion of such a project and any equipment so installed could not be used at a later date in the new Mason City plant (R. 183, 186). To be ordered to implement such a program would, in Petitioner's estimation, impose an arbitrary and unreasonable hardship.

In the event this variance petition is denied, National By-Products claims it will close the Decatur plant rather than install odor abatement equipment. In the event the plant closes operations at this time, Petitioner claims the following consequences will result:

1. Approximately 45 employees will be out of work. Few of these employees will find their skills transferable to other employers in the area.

2. The Decatur community will be deprived of the benefits flowing from a $425,000 per year payroll and $400,000 per year in raw material purchases. An additional $450,000 per year will be taken from the area in expenditures for maintenance, repairs, services and miscellaneous operating expenses.

3. Over 500 supermarkets, grocery stores and restaurants and over 100 locker plants and packing houses would have no practical alternative for disposing of their waste materials. Farmers would have no ready manner of disposing of fallen animals.

4. Because of its long and highly satisfactory business relationship with its raw material accounts, Petitioner might have to continue to haul bones and fat material away from the premises of these accounts and deliver them to competitive renderers located many miles away for the approximately 16 month long period involved. In this event, Petitioner will undergo substantial additional expense, possible loss of accounts, and other resulting hardships.

5. Several hundred thousands of dollars in gross sales will be lost to Petitioner. In addition, damages from possibly permanent loss of accounts, loss of customers and other intangibles will be substantial.

6. A total plant investment (i.e. replacement costs as is, at market prices) of approximately $1,500,000 would sit idle for a period of about 16 months.

The Agency recommends denial of this variance, or in the alternative, the granting of a variance from Rule 802(b) only. In its Recommendation and post hearing Brief, the EPA argues against a variance from Section 9(a) of the Act on the premise that Petitioner's past actions do not warrant protection from prosecution under that Section. The Agency correctly points out that, under Section 3 of the Illinois Air Pollution Act [Illinois Revised Statutes, 1963, Chapter III 1/2, paragraph 240.3], Petitioner has been required to abate its odor nuisances from the date the Company first took control of the plant.

Additionally, the Agency argues that odors from Petitioner's plant should have been in compliance with Rule 3-3.284 of the Rules and Regulations Governing the Control of Air Pollution since the 1967 effective date of that Rule. Petitioner's proposed hot well cover is attacked as a belated effort to strengthen Petitioner's position for obtaining a variance.

The record in this case clearly shows that odors from Petitioner's plant have been at least partially responsible for the existence of an odor nuisance since long before Petitioner took over the operation. The odorous emissions have continued virtually unabated since Petitioner assumed control. What is surprising in this case is that, although EPA records show complaints "as far back as 1969", no enforcement action was filed against National By-Products.

Dr. Rees testified that he surveyed the odor problem near Petitioner's plant with a scentometer on the day before the public hearing. However, his discussion of the result provides precious little on which to base any definite conclusions. The Agency provided no information whatsoever as to any testing they might or might not have done in the area. Thus, we must rely on the descriptive testimony of Petitioner's neighbors from which we can only conclude that Petitioner's emissions are responsible for the existence of an odor nuisance.

Petitioner has known the major sources of its emissions and even the technology necessary to control the worst of the sources since 1965. The fact that Petitioner made no effort whatsoever to control the odors from the hot well for over 8 years does not favor the granting of this variance. We are not impressed by Petitioner's contention that the hauling of excess raw materials to the other plants is an odor control method. Such transfer of raw materials could just as easily be a means of insuring no loss of profits due to the failure to process the animals before a significant weight loss occurred due to animal decomposition. The right of Petitioner's neighbors to the enjoyment of life and property was of little apparent concern to Petitioner until it was determined that such concern might be necessary for continued operation. Petitioner turned a deaf ear to the pleadings of neighbors when $7,000 or $8,000 might have controlled most of the odor problem.

However, we shall grant a relatively short variance in order to facilitate the improved operation of a much needed service to a large part of Illinois. A decision by National By-Products Company to close the Decatur plant at this time would cause some loss to farmers and the food industry. On balance, we believe that the continued operation of the plant with improved odor control is the better course.

This variance will allow Petitioner to continue operations through the period of time required to construct a hot well cover and place the gas-to-boiler system in operation. An additional 45 days after completion of the hot well cover is allowed for odor

testing and evaluation. Any extension of this variance will depend largely on Petitioner's actions during the next four months and the degree of relief provided Petitioner's neighbors, as shown by the odor test.

In addition to controls at the hot well and odor testing, our Order will require covering of the scrap pit, the limitation of amounts of materials processed, efforts to process fallen animals within 4 hours after receipt, use of the alternative route for delivery of raw material to the plant, covering of lagoons A and B, and good housekeeping practices.

The variance is granted only from Section 9(a) of the Act and Rule 802(b) of the Air Pollution Control Regulations. We deny variance from Section 9(b) of the Act and Rule 103(b)(2) of the Air Regulations and require that National By-Products apply for necessary installation and operating permits. Rule 104 of the Air Regulations is not applicable to Petitioner's operation.

This Opinion constitutes the Board's Findings of fact and Conclusions of Law.

ORDER

It is the order of the Pollution Control Board that National By-Products Incorporated be granted variance from Section 9(a) of the Environmental Protection Act and Rule 802(b) of the Air Pollution Control Regulations for its Decatur rendering plant until August 15, 1974 for the purpose of constructing a cover over its hot well and evaluating any odor reduction effects of such cover in order to achieve compliance with Section 9(a) of the Environmental Protection Act and Rule 802(b) of the Regulations. Variance from Section 9(b) of the Act, Rule 103(b)(2) and Rule 104 is hereby denied. This variance is subject to the following conditions:

1. Petitioner shall apply for all necessary permits required for the installation of the hot well cover.

2. The installation of the hot well cover and the subsequent routing of all noncombustible gasses from the hot well to the plant boiler shall be completed not later than June 1, 1974.

3. Petitioner shall cover its scrap pit.

4. Petitioner shall conduct its operations so as not to process in excess of 1,350,000 lbs. of raw material per week.

5. Petitioner shall insure that a complete cover is maintained over lagoons A and B.

6. All possible efforts shall be made to process all fallen animals within 4 hours after receipt.

7. All good housekeeping practices described during these proceedings shall continue for the duration of this variance.

8. Within 30 days after installation of the hot well cover, Petitioner shall cause an odor nuisance determination test to be performed by an independent testing service in accordance with the procedure set forth in "Quantitative Odor Measurements" by John L. Mills, as referred to in Rule 802(b) of the Regulations and shall provide the Environmental Protection Agency with a complete evaluation of such testing. Testing shall be performed in a manner approved by the Agency including selection of potential odor sources to be sampled.

9. Within 15 days after the receipt of the evaluation report specified in part 8 of this Order, the Agency shall report to the Board regarding the effectiveness of the hot well cover program.

10. Petitioner shall make every effort for early completion of the all weather surface road through the landfill area. Upon completion of the road, Petitioner shall route all delivery trucks over the alternate route.

11. Petitioner shall submit monthly progress reports to the Agency. Said progress reports shall commence March 25, 1974 and shall provide details of Petitioner's progress toward completion of the hot well cover program, the amount of raw materials processed since the last report (since February 25, 1974 for the initial report only), the condition of the cover on lagoons A and B, the amount of raw materials that could not be processed within 4 hours of receipt, progress towards completion of the alternate truck delivery route, selection of the independent testing service for the odor reduction evaluation, and finalization of plans for conducting the odor reduction testing.

12. Petitioner shall, by April 8, 1974, post a bond in the amount of $10,000 in a form acceptable to the Environmental Protection Agency, such bond to be forfeited in the event Petitioner fails to install the hot well control and perform the required odor testing. Bond shall be mailed to: Fiscal Services Division, Illinois EPA, 2200 Churchill Road, Springfield, Illinois 62706.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order was adopted this 14th day of March, 1974 by a vote of 5 to 0.

Christan L. Moffett