

BEFORE THE COASTAL ZONE INDUSTRIAL CONTROL BOARD
OF THE STATE OF DELAWARE

In Re: APPEAL OF
OCCIDENTAL CHEMICAL
COMPANY

)
)
)
)

259

A hearing was held on Monday, April 6, 1992 before the Coastal Zone Industrial Control Board in the matter of an appeal filed by Occidental Chemical Company from the determination of the Secretary of the Department of Natural Resources and Environmental Control that its proposed addition of a bleach plant constituted heavy industry. Donald Crossan served as Chairman to the Board. The remaining Board members present were John Allen, Eugene D. Bookhammer, John D. Super, David Ryan and Fred McKee, Harry M. Fisher, III and Terry Reilly. The Department of Natural Resources and Environmental Control was represented by Kevin P. Maloney and David L. Ormond, Deputy Attorneys General. Occidental Chemical Corporation was represented by John W. Noble, Esquire of Parkowski, Noble & Guerke. Marsha Kramarck, Deputy Attorney General served as counsel to the Board.

SUMMARY OF THE EVIDENCE

The Occidental Chemical Corporation ("OxyChem") operates a manufacturing plant in Delaware City, Delaware, which produces

chlorine and caustic soda, caustic potash and hydrogen. It proposes to add to its present facility an annex which would manufacture bleach by mixing chlorine with caustic soda. The addition of this new facility would encompass approximately one-half acre for new equipment together with additional storage and truck loading facilities.

The original manufacturing plant owned by Occidental Chemical dates to 1965. Its existence in the Coastal Zone constituted a non-conforming use upon the enactment of the Coastal Zone Act (the "Act") in 1971. Upon reaching its decision to expand, OxyChem applied for a status decision from the Secretary ("Secretary") of the Department of Natural Resources and Environmental Control ("DNREC"). By decision dated January 27, 1992, the Secretary determined that the proposed expansion by OxyChem constituted heavy industry and was thus prohibited in the Coastal Zone pursuant to Del. C. 7003. OxyChem filed a Notice of Appeal to the Board on February 12, 1992.

OxyChem argues that the decision of the Secretary constitutes a major departure from interpretation of the Act in the past. It cites earlier decisions of the Secretary where major production capacity increases were authorized. To prohibit the

expansion of OxyChem's product line, it argues, represents a significant departure from the way in which earlier decisions are decided. Such a change should, it argues, be accomplished only by rule making, regulatory or legislative changes.

OxyChem urges the Board to regard the new bleach plant as an independent manufacturing use, which is subject to regulatory permit by the Secretary for its location in the Coastal Zone.

Alternatively, it argues that the facility improvement should not be regarded as an "expansion or extension" of a non-conforming use. It quotes a regulation of the Board defining "expansion or extension" as a "change of existing processes, facilities, buildings which significantly increases the production capacity, land use area or environmental impact." Counsel for OxyChem argues that the "or" preceding "environmental impact" should be read to mean "and." Such an interpretation would yield the result that the proposed addition is not an expansion or extension because of its relatively small size compared to the overall production capacity of OxyChem, together with its minimal environmental impact. There being no expansion or extension, the argument goes, OxyChem should be free to expand without a permit or interference from DNREC.

Moreover, OxyChem argues that the Coastal Zone Act is a zoning law; under whose principles a non-conforming use should be permitted to expand to meet the reasonable requirements of natural growth. Zoning law, contends, permits non-conforming uses to expand, and the Coastal Zone Act must be interpreted to avoid any question of unconstitutional impairment of property rights.

Finally, OxyChem contends that 7 Del. C. sec. 7004(a) necessarily permits expansion of heavy industry uses by permit, since the legislature must have intended that "heavy industry" uses are also manufacturing uses. Thus, since a permit for such an expansion or extension of a manufacturing use may be issued by the Secretary, it must not be absolutely barred as suggested in 7 Del. C. sec. 7003(b).

Richard Timmons testified on behalf of OxyChem. He is Technical Manager for the Delaware City facility, and holds a Bachelor's Degree in chemistry and chemical engineering from the University of Delaware. He described the process carried on in the existing facility as electrolyzing sodium chloride with potassium chloride. This process produces chlorine, caustic soda, hydrogen and potassium hydroxide. Electricity and water comprise the remaining raw materials used in the chlorine production process.

The facility's equipment includes reactors, reactor chemical cells, filters, storage tanks, drying systems, coolers, refrigeration compressors and other equipment. Using an overlay on an aerial photograph of the Delaware City facility, he demonstrated that approximately a half-acre of land would be used to support the storage tank for caustic soda and the truck loading area as well as the process building for the bleach production unit.

Current production capability for chlorine is 400 tons per day. Also, 300 tons per day of caustic soda and 175 tons per day of potassium hydroxide are produced. Hydrogen is produced at the rate of 4 million standard cubic feet per day.

On January 30, 1992, a chlorine pressure switch failed causing a uncontrolled release into the atmosphere. OxyChem worked with DNREC representatives to evaluate the cause of the failure and to redesign a switch to avoid any recurrence in the future.

Currently, a small amount of bleach is produced as a by-product of the chlorine manufacture. It is then intentionally decomposed into salt and oxygen and disposed of as a waste product. The new bleach production unit will combine water with caustic soda and chlorine to form sodium hypochlorite

(bleach). This reaction takes place in a reactor where there occurs some cooling and some filtration. The bleach is then stored in tanks and prepared for shipment. There will be two self-contained units producing bleach, if this project is approved. If the bleach production unit were constructed on a site without an existing chlorine plant, it would normally require three to five acres, in contrast to the one-half acre planned here. Environmental contamination would be minimized by equipment used to prevent venting of chlorine to the atmosphere. The current chlorine disposal units on site would serve as a back-up resource to prevent an unauthorized release.

Some 4500 gallons of waste water generated each day would be treated in the existing waste water treatment system, which maintains a permit for a 300,000 gallon per day discharge. The plant currently averages approximately 157,000 gallons per day of water discharge. The solid waste that is generated by the plant is classified as non-hazardous waste and requires a permit for disposal in sanitary landfills. On cross-examination, Timmons conceded that an equipment malfunction or human error would result in greatly increased amounts of chlorine being vented to the emergency utilization system already in existence. The plant design calls for redundancy controls so that there is no environmental risk. Mr. Timmons knew of no

circumstance where an explosive reaction might result from the generation of the by-products of this process.

At the time of the accidental release in January, approximately 37 pounds of chlorine escaped into the atmosphere. During 1991, approximately 1800 pounds of point source emissions were vented into the atmosphere. Fugitive emissions for hyperchloric acid were 40 pounds for 1991, and sulfuric acid was 50 pounds. Mercury is released into the atmosphere at the rate of 580 pounds per year and 102,000 pounds of carbon tetrachloride is released each year. Mercury which is extracted in the waste water process is discarded in solid waste landfills in New York and Louisiana. It is anticipated that in early 1993 new emissions controls equipment will reduce carbon tetrachloride emissions to zero.

The idea for the bleach production plant arose when a current customer requested that OxyChem produce this product. Timmons believes that there is, but is unfamiliar with, a more benign process for bleach production without chlorine, using electrolysis.

K. Wesley Sanders testified as a witness on behalf of OxyChem. He is the Plant Manager in Delaware City, and holds a Bachelor of Science degree in chemical engineering. He has 31

years of experience in the chemical industry. OxyChem's original predecessor was Diamond Alkali which merged with Shamrock Oil and Gas, yielding Diamond Shamrock Corporation. That Delaware City plant produced polyvinyl chloride as well as chlor-alkali. The polyvinyl chloride production was sold to Georgia Gulf, while OxyChem purchased Diamond Shamrock including the Delaware City plant.

Since its inception in 1971, OxyChem has operated the plant as it is today, using a mercury cell process to produce chlorine. The company believes that bleach production is a natural outgrowth of its existing processes. OxyChem operates nine chlor-alkali plants across the United States, all of which utilize ancillary processes for production of chemical by-products. The employee population at the Delaware City plant is approximately 170. The bleach plant would add 5 new employees. Sanders regards regulatory consistency as critical to promoting a stable business environment, which in turn encourages discretionary investments for such things as pollution abatement systems. Generally, OxyChem is active in regulatory and legislative arenas.

The Secretary did not produce any additional evidence or witnesses. Instead, it relied on its brief and supporting arguments. The Secretary argues that new heavy industry is

prohibited in the coastal zone by 7 Del. C. sec. 7003. Similarly, a non-conforming use which attains its status by being "grandfathered" in this use may not expand. Moreover, the significant potential to pollute which OxyChem presents is characteristic of heavy industry. Despite the contentions of OxyChem that it will minimize environmental impact in its day-to-day operations, the Secretary contends that its potential for pollution should be considered from the perspective of equipment malfunction and human error. Since chlorine is highly unstable and reactive, an equipment malfunction raises the possibility of discharge of hypochloric acid into the environment with its attendant hazards to human, animal and vegetable life.

In the case of a non-conforming use, the Secretary contends that the statutory provisions which permit expansion or extension for certain manufacturing uses are inapplicable. A non-conforming use therefore has no entitlement to expand beyond the limits of its operations upon enactment of the statute. Similarly, the Secretary argues that "expansion and extension" is only applicable to those manufacturing uses which do not constitute heavy industry. Thus, section 7004 applies only to non-heavy industry manufacturing uses. Finally, the Secretary argues that the proposed expansion by OxyChem is designed to further the profit motive, rather than any environmental enhancement.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

The express purpose of the Coastal Zone Act is to:

...control the location, extent and type of industrial development and Delaware's coastal areas...[to] better protect the natural environment of its bay and coastal areas and safeguard their use primarily for recreation and tourism.

7 Del. C. sec. 7001. In precise and clear language, the Act ~~identifies the construction of new heavy industry as incompati-~~

ble with protection of the environment in the Coastal Zone. 7 Del. C. sec. 7001. Thus, the Legislature intended that heavy industry should be regarded as a category of development to be entirely prohibited in the coastal zone. Here, there is no dispute that OxyChem regards itself as heavy industry. This fact was conceded by its counsel at the hearing.

The issue central to this appeal is whether the proposed addition to the Delaware City facility is permissible in the coastal zone, either as a new manufacturing use which is not heavy industry, or as an expansion of a currently existing non-conforming use.

According to 7 Del. C. sec. 7002(e), a heavy industrial use means:

A use characteristically involving more than 20 acres, and characteristically employing some but not necessarily all of such equipment as, but not limited to, smoke stacks, tanks, distillation or

reaction columns, chemical processing equipment, scrubbing towers, pickling equipment and waste treatment lagoons; which industry, although conceivably operable without polluting the environment, has the potential to pollute when the equipment malfunctions or human error occurs.

The proposed bleach production unit which OxyChem seeks to add to its Delaware City facility consists of a closed vessel reactor wherein sodium hydroxide and chlorine are mixed. Chlorine scrubbers exist in the current facility, and will likewise be used in the addition. Waste water will be produced and will require treatment prior to its discharge locally. Tanks will be present on-site for storage of the bleach produced there. Neutralizing equipment is currently in place to process those chemicals produced as by-products in the existing manufacturing design. These same neutralizers would be used on an emergency basis to manage excess chlorine produced by a malfunction of the equipment or by human error. All of these forms and types of equipment are suggestive of heavy industry.

Likewise, with regard to potential to pollute, all of the chemicals produced in and utilized by this process, except hydrogen and water, are hazardous to the environment. Also, the size of the plant is significant. The bleach plant would

utilize an additional half-acre only because it is proposed as an adjunct to the existing facility. From the testimony of OxyChem personnel, it is clear that a bleach plant could not exist on a half-acre standing alone, but would require additional equipment such as already exists at the Delaware City plant.

Viewed from the perspective of only the bleach production facility, without regard to the existing Occidental plant, we find that the bleach plant itself constitutes heavy industry. New heavy industry of any kind may not be introduced into the coastal zone.

Heavy industry uses of any kind not in operation on June 28, 1971, are prohibited in the coastal zone and no permits may be issued therefore.

7 Del. C. sec. 7003.

OxyChem concedes that its planned addition represents no increase in its current production. There will be no greater volume of chlorine manufactured in Delaware City. The bleach plant represents the manufacture of an entirely new product line for OxyChem. Since the bleach production unit was not in operation on June 28, 1971, and because it is a heavy industry, it is prohibited from location in the coastal zone.

We expressly reject OxyChem's argument that the proposed bleach plant constitutes a simple manufacturing use for which a permit could be issued. 7 Del. C. sec. 7002(e) includes "chemical plants" in its examples of heavy industry. We likewise reject OxyChem's argument that the reference to heavy industry in the first phrase of 7 Del. C. sec. 7004(a), together with the balance of that paragraph, suggests that non-conforming uses in existence in active use on June 28, 1971 may expand or extend at will or by permit.

We have here adopted the view urged by Appellant that the bleach plant should be examined independently of the basic chlor-alkali plant already in existence. Therefore, we need not reach the question of whether a heavy industry may expand or extend by the introduction of a new product line which is expressly not a heavy industry. We leave this question for another day and a proper set of relevant facts.

Having found as a fact that the bleach plant constitutes heavy industry, we apply the law found in 7 Del. C. sec. 7003, which prohibits new heavy industry uses of any kind in the coastal zone. We find that the statute is clear and unambiguous and that resort to traditional aids for statutory construction are unnecessary. Coastal Barge Corp. v. Coastal Zone Industrial Control Board, Del. Supr., 492 A.2d 1242 (1985).

CONCLUSION

For all the foregoing reasons we conclude that the decision of the Secretary dated January 27, 1992 was proper, and must be upheld.

Donald F. Crossan

Donald F. Crossan, Chairman

* John Allen

Harry M. Fisher III

Harry M. Fisher III

David Ryan

David Ryan

John D. Super

John D. Super

6/6/92

Terry Reilly

Terry Reilly

* Eugene D. Bookhammer

* Fred McKee

John J. Casey, Jr.

CONCLUSION

For all the foregoing reasons we conclude that the decision of the Secretary dated January 27, 1992 was proper, and must be upheld.

Donald F. Crossan, Chairman

John Allen

Harry M. Fisher III

David Ryan

John D. Super

Terry Reilly


Eugene D. Bookhammer

Fred McKee

John J. Casey, Jr.

JUN 8 1992

DEPARTMENT OF JUD
CIVIL DIVISION

CONCLUSION

For all the foregoing reasons we conclude that the decision of the Secretary dated January 27, 1992 was proper, and must be upheld.

Donald F. Crossan, Chairman

John Allen 6/4/92

John Allen

Harry M. Fisher III

David Ryan

John D. Super

Terry Reilly

Eugene D. Bookhammer

Fred McKee

John J. Casey, Jr.

CONCLUSION

For all the foregoing reasons we conclude that the decision of the Secretary dated January 27, 1992 was proper, and must be upheld.

Donald F. Crossan, Chairman

John Allen


Harry M. Fisher III

David Ryan

John D. Super

Terry Reilly

Eugene D. Bookhammer

 (m)
Fred McKee

John J. Casey, Jr.

AFFIDAVIT OF SERVICE

STATE OF DELAWARE)
)
NEW CASTLE COUNTY) SS:

Robin Truitt, being first duly sworn, deposes and says that:


1. She is a secretary with the Department of Justice.
2. That on July 29, 1992 she caused to be hand delivered or placed in United States Mail, Carvel State Office Building, Wilmington, Delaware, true and correct copies of the within document:

John W. Noble, Esquire
Parkowski, Noble & Guerke
116 W. Water Street
P.O. Box 598
Dover, DE 19903

Kevin P. Maloney
David L. Ormond
Deputy Attorneys General
Carvel Building
820 N. French Street
Wilmington, DE 19801


Robin Truitt

SWORN TO AND SUBSCRIBED before me on this 29th day of July, 1992.


Marsha Kramarck
Deputy Attorney General
Pursuant to 29 Del. C. sec. 2508