

ILLINOIS POLLUTION CONTROL BOARD
December 5, 1986

IN THE MATTER OF:)
)
APPLICATION FOR LAKE MICHIGAN) PCB 86-139
PERMIT NO. 204LM FOR THE)
U.S. ARMY CORPS OF ENGINEERS,)
CHICAGO DISTRICT)

ORDER OF THE BOARD (by B. Forcade):

On September 10, 1986, the Illinois Department of Transportation ("IDOT") filed a request for Board concurrence on an IDOT permit to the U.S. Army Corps of Engineers, Chicago District ("Army") for maintenance dredging of the federal navigation channel at the entrance to Waukegan Harbor. This concurrence is required by "an Act in relation to the regulation of the rivers, lakes, and streams of the State of Illinois" (Waterway Regulation Act), Ill. Rev. Stat. 1985, ch. 19, pars. 52-79. On September 11, 1986, the Lake Michigan Federation filed a letter of Objection. By Order of September 11, 1986, the Board set this matter for hearing in order to more fully develop the record and allow public participation. Hearing was held October 28, 1986. Approximately 20 members of the public were in attendance. By Order of November 13, 1986, the Hearing Officer closed the public comment period December 1, 1986. Comments were received from the Attorney General, on behalf of the People of Illinois, from the Lake Michigan Federation and from the Army.

The Board's statutory role in permitting dredge and fill activities in Lake Michigan is provided in the Waterway Regulation Act. Paragraph 65 requires that:

"no permit shall be issued or renewed authorizing any fill or deposit of rock, earth, sand, or other material, or any refuse matter of any kind or description in Lake Michigan except with the concurrence of the Pollution Control Board, and no such permit is valid without such concurrence."

Thus, the Illinois Department of Transportation ("IDOT") and the Board are co-permitting agencies for Lake Michigan permits. The Board has construed its role "to determine whether the information in record demonstrates that the proposed activity will not cause a violation of the Environmental Protection Act ("Act") or Board regulations or adverse environmental impact." PCB 85-134, In re: Application for Lake Michigan Permit No. 114, Order, March 14, 1986. Under this scheme, IDOT is to utilize its expertise to assess a project's impact on the configuration of

waterways and shorelines, and the Board is to utilize its expertise to assess a project's environmental impact.

As a co-permitting agency, the Board can effectively deny a permit by not directing the Chairman to countersign. Since the Board has the statutory authority to totally deny a permit if the activity will violate the Act or regulations, or if the information before the Board is inadequate to make a determination, the Board also has authority to grant a permit with conditions that ensure compliance with the law.

The Army plans to dredge approximately 50,000 cubic yards of sediment from an area south and east of the Waukegan Harbor Breakwater and directly east of the navigation channel. This area was sampled in 1986 and analyzed for several parameters, the results were (Report on Sampling and Analysis, Attachment, Table 2):

| | <u>Sample 1</u> | <u>Sample 2</u> |
|-----------------------------------------------|-----------------|-----------------|
| Particle Sizing Retained on U.S. 230 Sieve | 97% | 98% |
| Arochlor 1254 mg/kg dry weight basis | 0.06 | -- |
| Total PCB mg/kg dry weight basis | 0.06 | 0.05 |

Testing and analysis from 1981 in the same general area show similar results (Waukegan Outer Harbor Sediment Analysis, Attachment, Appendix A, Enviro-Test Laboratory Report, May 20, 1981).

While more detailed chemical analysis has been done on sediments in the area (Analysis of Sediment Samples collected in October, 1981, Table 4C), this testing was done in 1981, approximately 500 and 700 feet west of the proposed dredge location (R. 23). These sampling locations (CWH-01-81 and CWH-02-81) showed levels of arsenic, chromium, copper, cyanide, lead and zinc above the heavily polluted criteria and total Kjeldahl nitrogen (TKN), ammonia nitrogen, barium and manganese above the moderately polluted criteria (USEPA Region V, Guidelines for Pollutational Classification of Great Lakes Harbor Sediment). No analysis of these parameters have been reported in the area where dredging is presently anticipated.

Sediments will be removed from the dredge location by clam shell bucket and placed on bottom dump scows with a split hull. The scows will be transported into the near shore waters off Foss Park with depths in the eight to ten foot range. The bottoms of the scow will be opened and the material will fall. Typically, thousand-yard scows would be employed, so that fifty to sixty

trips would be needed (R. 34-35). This type of operation, in sluggish current, typically produces turbidity plumes of a couple hundred feet (R. 37). The disposal area is within 500 feet of one of the City of North Chicago's Public Water Supply intakes (R. 38).

In comments, the Attorney General objected to permit issuance unless the permit included a monitoring program to sample and analyze applicable water quality constituents. The Lake Michigan Federation urged testing of the sediments that will be deposited near the North Chicago water intake. The Army comments opposed monitoring, stating that the information acquired would be inadequate for a meaningful research study.

The Board finds merit in both of these monitoring recommendations and is, itself, concerned with the proposed fill site's close proximity to a public water supply intake. The Army correctly argues that the monitoring requested by the Attorney General (as modified by the Board for specificity and to include the Lake Michigan Federation comments), does not constitute a full scale research project. However, this monitoring will provide useful information to evaluate whether this project, or similar projects in the future, might comply with relevant water quality standards. Because the specific monitoring language was largely developed by the Board, the participants are allowed until December 15, 1986, to file motions for reconsideration regarding the clarity of the language regarding the monitoring.

Therefore, the Board authorizes the Chairman to countersign Lake Michigan Permit No. 204LM, but directs the Army Corps of Engineers to comply with the following notification and monitoring requirements as a condition of that authorization:

The Army Corps of Engineers shall notify the Illinois Attorney General's Office and the Agency at least three days prior to the commencement of any dredging operations and immediately following the last day of operations; and

The Army Corps of Engineers shall conduct a sampling program in order to monitor the impact of sediment disposal on water quality and to assure compliance with Lake Michigan water quality standards. At a minimum, this program shall consist of the following:

- a. Samples shall be taken within three days prior to any disposal of sediments, on the first day of disposal of sediments, after completion of approximately 50% of disposal of sediments, on the last day of

disposal of sediments and three days after the last day of disposal of sediment;

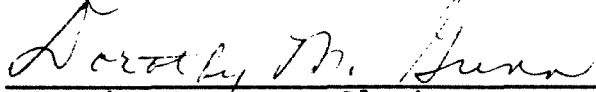
- b. Samples taken prior to and after disposal shall be from the water column only;
- c. Sampling during disposal of sediments shall consist of a set of three samples taken from the following points -
 - 1. one sample taken from the dump scow of the sediment to be disposed;
 - 2. one sample taken from the water column immediately upcurrent of the disposal site and immediately prior to disposal; and
 - 3. one sample taken from the water column and in the center of the visible turbidity plume within 15 minutes of dumping of the sediment.
- d. All ten samples taken from the water column shall be taken at a depth approximately midway between the surface and the bottom of the lake, all three sediment samples shall be taken at a point representative of the material contained in the dump scow;
- e. All samples shall be representative of the nature and characteristics of the water and/or sediments being samples;
- f. All water samples shall be analyzed for the following parameters - total suspended solids (TSS), total dissolved solids (TDS), turbidity, arsenic, barium, chromium, copper, lead, manganese, mercury, zinc, cyanide and ammonia nitrogen.
- g. All sediment samples shall be analyzed for the same parameters identified above in item "f" for water samples except TSS, TDS and turbidity. In addition, all sediment samples shall be analyzed for particle size distribution. Specific attention shall be given to determination of the percent passing through a standard 62 micron sieve (#230 U.S.);

- h. All water and sediment samples taken on the first day of disposal of sediments and on the last day of disposal of sediments shall be analyzed for phosphorous (as P) and total PCBs;
- i. Samples shall also be taken at all three points identified in item "c" above at any time that visual inspection indicates that the composition of the sediments being dredged has substantially changed such that the fraction consisting of finer material (i.e., organic and/or silt material that would pass through a standard 62 micron sieve) would be expected to be greater than 5% on a dry weight basis;
- j. All analytical testing shall be consistent with 35 Ill Adm. Code Section 301.104; and
- k. A report precisely describing the monitoring program developed and sampling results to comply with these requirements shall be submitted to the Attorney General's office and the Agency within 60 days of the completion of disposal. This report shall include analytical data for all samples taken and an analysis of the impact of sediment disposal on Lake Michigan water quality during this project. Additionally, it shall include a description of the quality control and quality assurance programs operative during this monitoring program and the results of quality assurance checks.

IT IS SO ORDERED.

Chairman J.D. Dumelle and Board Member John Marlin concurred.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Order was adopted on the 54 day of December, 1986, by a vote of 6-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board