

<u>DATE</u>	<u>TOTAL DISSOLVED SOLIDS</u>		
	Upstream	Discharge	Downstream
December, 1978	661 mg/l	1415 mg/l	1238 mg/l
January, 1979	525 mg/l	1755 mg/l	1390 mg/l

CHLORIDE

December, 1978	72 mg/l	301 mg/l	248 mg/l
January, 1979	28 mg/l	495 mg/l	362 mg/l

Rule 203 water quality standards are 1000 mg/l for TDS and 500 mg/l for chloride.

Borden believes its discharge constitutes 90-95% of the flow of the ditch (Pet. 4). Upstream are located two other dischargers, a municipal water treatment plant which discharges filter back wash and a chicken hatchery which discharges cage and crate washings (Pet. 3). Borden claims that the ditch is not used for recreational purposes and that chloride and TDS concentrations will not detract from whatever aesthetic value the ditch might have (Pet. 6). The ditch runs about one and one-half miles before joining a drainage area known as Long Point Slough, which flows into the Sangamon River about one-half mile past the ditch (Pet. 4). Borden believes no water is withdrawn from the ditch prior to confluence with the Sangamon River and that there will be no significant environmental impact on Long Point Slough (Pet. 4, 6). Water quality of the Sangamon River is cited as less than 600 mg/l TDS and 200 mg/l chloride (Pet. Ex. A; Rec. 4). There will be no water quality violation in the Sangamon River (Pet. 7; Rec. 4).

Borden admits that the data do not demonstrate a water quality violation for chloride in the ditch (Res. 7). The Agency recommends that the variance be denied for chloride for this reason (Am. Rec. 3). During the sampling, the plant was not in full production and water flow was high because of melting snow (Res. 7). Borden believes the concentration of chloride in the ditch will increase as production is increased and the weather becomes drier (Res. 8). Although Borden did not violate the ditch water quality of 500 mg/l chloride, the effluent averaged 495 mg/l during the month the scrubber was in operation. If the discharge were the sole source of water in the ditch, there would have been violations on six days out of the thirteen sampled (Res. 6; Ex. A). Considering this the Board concludes that Borden has established the need for a chloride variance during periods of low flow.

The original petition was vague about whether a water quality or effluent variance was requested. Borden now requests that the plant be granted a variance which would exempt the plant from the

application of Rules 203(f) and 402 for TDS and chloride, so long as the plant remains in compliance with the 3500 mg/l effluent limitations for TDS contained in Rule 408(b). Borden claims that mere modification of water quality standards would give it no relief because compliance would be based not upon the plant's discharge, but upon such discharge together with a variety of other factors over which the plant would have no control (Res. 9, 11). On the other hand the Agency recommends that the variance be denied until Borden proposes a water quality standard for the ditch (Am. Rec. 3).

Rule 402 provides that no effluent alone or in combination with other sources shall cause a violation of any applicable water quality standard. In this proceeding Borden seeks a variance from the water quality standard. Borden refers to the effluent standard found in Rule 408(b) which provides that effluents shall not increase TDS by more than 750 mg/l above background unless caused by recycling or other pollution abatement practices, but in no event are TDS effluents to exceed 3500 mg/l. Borden believes that the increases beyond 750 mg/l above background limitation are attributable to the plant's pollution abatement practices which it says include softening, deionization and filtration of influent water and treatment of wastewater with lime and ferric sulfate to enhance settling of suspended solids and with activated sludge to eliminate organics (Res. 8). There is no evidence that softening of the influent water is a pollution abatement practice. The pleadings do discuss the relative contributions of these processes to the total waste load. It has therefore not been established that the 3500 mg/l discharge level for TDS is applicable. Rule 408(b) also sets a 750 mg/l above background level limit for TDS discharges not caused by pollution abatement practices. Borden does not draw water from the ditch and has not established the TDS level in its influent water. The record is therefore insufficient to determine whether Borden is in compliance with this discharge limit.

The Board rejects Borden's claim of hardship because it cannot control water quality upstream. Borden estimates that its discharge accounts for 90-95% of the flow in the stream (Pet. 4). The upstream discharges should probably therefore not have a significant effect on the water quality Borden must maintain.

Borden quotes the Illinois Effluent Standards Advisory Group in support of its contention that there is no proved conventional technology for control of TDS in waste waters (Pet. 6). The Agency is aware that treating for TDS and chloride is not economically feasible (Rec. 4). The Board finds that it would impose an arbitrary and unreasonable hardship to require the application

of non-conventional technology at this time. The Board will set an interim standard sufficiently high to permit Borden to operate while collecting data to propose water quality standards for the ditch in the pending site specific regulation R78-13. This should include continued monitoring of discharge levels and biological surveys which include counts of salt tolerant and sensitive species as low flow conditions develop this summer.

No water is drawn from the ditch prior to confluence with the Sangamon River and it appears that the use is limited to secondary contact. There is adequate dilution in the Sangamon River. There is no evidence before the Board about the effects these levels could have on the environment around the ditch. The Board notes that chloride and TDS are relatively innocuous pollutants. No permanent build-up of pollutants or damage to the environment is likely to occur during pendency of the regulatory proceeding.

The Agency recommends a discharge limit of 2200 mg/l for TDS if the variance is granted (Am. Rec. 3). This is the figure Borden originally requested (Pet. 2). The effluent monitoring data averaged 1755 mg/l TDS with the scrubber in operation, with a maximum of 2172 mg/l. The petition requested a limit of 1500 mg/l for chloride. The Agency does not recommend a chloride level. The chloride effluent monitoring data averaged 495 mg/l with a maximum of 635 mg/l during the period when the scrubber was in operation. Maintenance of a water quality level in the ditch not to exceed 2200 mg/l TDS and 700 mg/l chloride would appear adequate to prevent significant environmental damage and still not interfere with Borden's operation.

This Opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

It is the Order of the Pollution Control Board that:

1. Petitioner, Borden Chemical Company, is granted a variance from Rules 203 and 402 of Chapter 3: Water Pollution as these apply to TDS and chloride.
2. Borden's discharge shall not cause the water in the unnamed ditch to exceed the following levels:

Total Dissolved Solids	2200 mg/l
Chloride	700 mg/l

3. This variance will expire three years from the date of this Order or upon the adoption by the Board of a final Order in the site specific regulation for the unnamed ditch, R78-13, whichever comes first.
4. Borden shall monitor the chloride and TDS levels in its effluent and in the ditch above and below its discharge.
5. Within forty-five days of the date of this Order, Petitioner shall execute and forward to the Illinois Environmental Protection Agency, Variance Section, 2200 Churchill Road, Springfield, Illinois 62706, a Certificate of Acceptance and Agreement to be bound to all terms and conditions of this variance. This forty-five day period shall be held in abeyance for any period this matter is being appealed. The form of the Certificate shall be as follows:

CERTIFICATION

I, (We), _____, having read and fully understanding the Order in PCB 78-269, hereby accept that Order and agree to be bound by all of its terms and conditions.

SIGNED _____

TITLE _____

DATE _____

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 22nd day of June, 1979 by a vote of 5-0.

Christan L. Moffett

 Christan L. Moffett, Clerk
 Illinois Pollution Control Board