DOCKET NO. 64B - An application of The Dexter Corporation for Amendment of the Certificate of Environmental Compatibility issued in Docket 64A.

Connecticut

Siting

Council

May 13, 1991

DOCKET NO. 64B
OPINION

On March 18, 1991, the Dexter Corporation (Dexter), in accordance with the provisions of Connecticut General Statute (CGS) section 16-501(d), applied to the Connecticut Siting Council (Council) for an amendment of the Certificate of Environmental Compatibility and Public Need for the Dexter Cogeneration Facility (Facility) in Windsor Locks, Connecticut.

The application is for an increase in water diversion and subsequent discharge of the non-contact cooling water. The need for this proposed increase is based on an underestimate of the non-contact cooling water needs made by the original design contractor. No changes to the Facility other than an increase in intake structure size are proposed. Although the proposed amendment would increase diversion and discharge rates, we believe that this increase would not substantially affect the Connecticut River (river).

We are concerned about how the increased diversion/discharge rates would affect the local fish populations. One of our major concerns is how the effects of the increased thermal plume will affect the fish populations. The proposed maximum diversion and discharge rate increase represents approximately 0.2 percent of the total flow of the river in an average flow season. During a worst case scenario of river flow, a seven day period of low flow expected over a ten year period (7Q10), the increased diversion and discharge would represent approximately 1.6 percent of the river flow. Modeling indicates that during a fall low flow period, the thermal plume would cover 7.1 percent of the cross sectional area of the river, and during 7Q10, the thermal plume would represent less than 25 percent of the cross sectional area of the river. We find these percentages within the Connecticut Department of Environmental Protection Guidelines for Water Quality Criteria, and believe that the local fish populations will not be adversely affected by the increased thermal plume size.

Increased fish-kill due to impingement and entrainment is also an issue of concern to the Council. Dexter has modeled the expected increase in impingement and entrainment rates due to an increase in diversion rates and has found an increase of 98

fish during a nine month period. We find that this modeled increase of fish entrainment and impingement is small in proportion to the numbers of fish found in this section of the river. Based on this information and a commitment by Dexter to operate a fish return system at the diversion structure, we believe that the fish, including migratory species, will not be significantly effected by an increase in diversion/discharge rates.

Without an approval for the proposed maximum diversion/discharge rates, the Facility would not be able to operate at full capacity during increased load demand when the ambient river temperature is higher on hot summer days. If the Facility was not able to operate at full capacity during increased load demand, not only Dexter, but the public relying on this electrical generation would be compromised.

Based on the information contained in the record for the amendment application, we find that the effects associated with the alteration, operation, and maintenance of the Facility in Windsor Locks, Connecticut, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the proposed amendment for the Facility. Therefore, we will issue an amended Certificate for the alteration, operation, and maintenance of this Facility.

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