Consumers Power Company

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February 28, 1979

Mr William H Regan, Jr, Chief
Environmental Projects Branch 2
Division of Site Safety and
Environmental Analysis
US Nuclear Regulatory Commission
Washington, DC 20555

MIDLAND PLANT
DOCKET NO 50-329, 50-330
ENVIRONMENTAL REPORT (OLS)
AQUATIC ECOLOGY PARAMETERS RECOMMENDED FOR PRE- AND POSTOPERATIONAL MONITORING IN THE TITTABAWASSEE RIVER NEAR THE MIDLAND PLANT
FILE: 0505.5 SERIAL: 6616

REFERENCE: Meeting with Michigan Department of Natural Resources and U S Nuclear Regulatory Commission on February 1, 1979 in Lansing, Michigan

Aquatic ecology monitoring activities for preoperational and operational assessments of the Tittabawassee River are provided in the attached table. We request that the U S Nuclear Regulatory Commission confirm the adequacy of this monitoring program. Consumers is also requesting approval of this program from the Michigan Department of Natural Resources.

If further clarification is needed, please contact R F Green at (517) 788-0350.

Stephen D Howell

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PREOPERATIONAL AND POSTOPERATIONAL AQUATIC MONITORING PROGRAM AT MIDLAND PLANT

PARAMETER	TECHNIQUE	FREQUENCY	SAMPLING LOCATIONS
Periphyton	Periphytometer II	April, June, August, October	1. Transect A, Approximately 300 ft upstream of the Midland Plant intake. 2. Transect B, Approximately 300 ft downstream of the Midland Plant intake. 3. Transect C, Approximately 300 ft downstream of the proposed Midland Plant discharge. 4. Transect D, Approximately 300 ft downstream of Lingle Drain. 5. Transect E, Approximately 200 ft upstream of the Freeland Road Bridge. Sampling locations within a transect shall be selected to represent extremes of river flow velocity and to compare the effects of thermal addition.
	Natural Substrates	April, June, August, October	
	Artificial Substrates	April, June, August, October	Locations to coincide with Periphytometer II sampling.
Macroinvertebrates	Triplex Ponar	June, August, October	Transects A/B/C/D/E, as above.[a] Three locations across each transect.[b]
Sediment	Triplex Ponar	June, October	To coincide with macroinvertebrate Triplex Ponar collections.
Fisheries	Electroshock	March through November	Approximately 300 feet of shoreline on each side of the Tittabawassee River: 1. Immediately upstream of the Midland Plant intake. 2. Immediately upstream and downstream of Dow's tertiary pond discharge. 3. Immediately downstream of the proposed Midland Plant discharge. 4. 300 feet downstream of Lingle Drain. 5. Near the Freeland Road Bridge.
		Bimonthly September through Mid-December	Shoreline areas in the vicinity of: 1. Sanford Lake. 2. Pine and Chippewa Rivers. 3. Saginaw Bay. 4. Midland Plant.
	Seine	March through November	Approximately 200 feet of shoreline on each side of the Tittabawassee River near Transects A/B/C/D/E.
	Hoop Net	April, June, August, October	Transects A/B/C/D/E. Three locations across each transect.
Ichthyoplankton	Oblique Tow With a 1/2 m Plankton Net	Weekly April through August Bimonthly through October - Day and Night	Three locations across Transect A.
		Weekly April and May	Tows in the vicinity of: 1. Sanford Lake. 2. Pine and Chippewa Rivers. 3. Saginaw Bay.
	Neuston Net	Weekly April through August, Bimonthly through October - Day and Night	Three locations across Transect A.
Entrainment	1/2 m Plankton Net	Two 24-hour periods per week when pond filling occurs on a minimum of 4 days during a week. Triplicate day and night samples per collection day.	Cooling pond intake.
Impingement	-	All fishes impinged shall be collected.	Midland Plant intake.

[a] Transects A/B/C/D/E, as described for periphyton, are identical sampling areas for all parameters.
[b] Three locations across a transect, chosen to characterize each shoreline and midstream.

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Sediment	Triplex Ponar	June, October	To coincide with macroinvertebrate Triplex Ponar collections.
Fisheries	Electroshock	March through November	Approximately 300 feet of shoreline on each side of the Tittabawassee River: 1. Immediately upstream of the Midland Plant intake. 2. Immediately upstream and downstream of Dow's tertiary pond discharge. 3. Immediately downstream of the proposed Midland Plant discharge. 4. 300 feet downstream of Lingle Drain. 5. Near the Freeland Road Bridge.
		Bimonthly September through Mid-December	Shoreline areas in the vicinity of: 1. Sanford Lake. 2. Pine and Chippewa Rivers. 3. Saginaw Bay. 4. Midland Plant.
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