

Table 4.22. Y-12 Plant Biomonitoring Program summary information for wastewater treatment systems and storm sewer effluents for 1995^a

Site/Building	Test date	Species	48-h LC ₅₀ ^b (%)	IWC ^c (%)
Central Pollution Control Facility (Outfall 501)	7/13	<i>Ceriodaphnia</i>	>100	0.41
		Fathead minnow	>100	0.41
Groundwater Treatment Facility (Outfall 512)	7/13	<i>Ceriodaphnia</i>	87.6	0.43
		Fathead minnow	40.7	0.43
9422-11 Storm Sewer	7/13	<i>Ceriodaphnia</i>	>100	<i>d</i>
		Fathead minnow	>100	<i>d</i>
9422-12 Storm Sewer	7/13	<i>Ceriodaphnia</i>	35.2	<i>d</i>
		Fathead minnow	85.4	<i>d</i>
9422-11 Storm Sewer (dechlorinated)	7/13	<i>Ceriodaphnia</i>	>100	<i>d</i>
		Fathead minnow	>100	<i>d</i>
9422-15 Storm Sewer	7/18	<i>Ceriodaphnia</i>	66.6	<i>d</i>
		Fathead minnow	>100	<i>d</i>
9422-15 Storm Sewer (dechlorinated)	7/18	<i>Ceriodaphnia</i>	71.8	<i>d</i>
		Fathead minnow	>100	<i>d</i>
9422-16 Storm Sewer	7/18	<i>Ceriodaphnia</i>	87.1	<i>d</i>
		Fathead minnow	>100	<i>d</i>
9422-16 Storm Sewer (dechlorinated)	7/18	<i>Ceriodaphnia</i>	>100	<i>d</i>
		Fathead minnow	>100	<i>d</i>
West End Treatment Facility (Outfall 502)	7/20	<i>Ceriodaphnia</i>	42.4	2.02
		Fathead minnow	82.9	2.02
Groundwater Treatment Facility (Outfall 512)	10/12	<i>Ceriodaphnia</i>	>100	0.31
9422-11 Storm Sewer	10/12	<i>Ceriodaphnia</i>	39.5	<i>d</i>
9422-12 Storm Sewer	10/12	<i>Ceriodaphnia</i>	55.4	<i>d</i>
9422-12 Storm Sewer (dechlorinated)	10/12	<i>Ceriodaphnia</i>	>100	<i>d</i>
9422-15 Storm Sewer	10/18	<i>Ceriodaphnia</i>	>100	<i>d</i>
9422-16 Storm Sewer	10/19	<i>Ceriodaphnia</i>	>100	<i>d</i>
West End Treatment Facility (Outfall 502)	10/25	<i>Ceriodaphnia</i>	24.2	0.78
Central Pollution Control Facility (Outfall 501)	12/9	<i>Ceriodaphnia</i>	>100	0.36

^aThese 48-hour acute tests using fathead minnows and *Ceriodaphnia* were completed in 1995 as part of the Biomonitoring Program conducted for the Y-12 Plant by ORNL. Summarized are the effluents and their corresponding 48-hour LC₅₀s and in-stream waste concentrations (IWCs). Note: Discharge from the treatment facilities are intermittent because of batch operations.

^bThe concentration of effluent that is lethal to 50% of the test organisms in 48 hours.

^cThe in-stream waste concentration based on actual flows at East Fork Poplar Creek, station 8.

^dThis point is in the storm sewer system; therefore, an IWC is not applicable.