



Iowa Department of Natural Resources  
Effluent Toxicity Testing Report Form  
48-Hour Acute Test

FACILITY DATA

Facility Name: IPL-Ottumwa Station NPDES # IA: 9000101 (EPA IA0060909)  
Address: 20775 Power Plant Rd.  
City/State/Zip: Ottumwa, IA 52501  
Lab Sample #: 8707 Date Collected: 9/22-23/25  
Sampling Location: 008  
Diluted effluent sample ratio (from permit): 46.4%  
Date Received: 9/24/25 Temperature Upon Receipt: 9.4

ORGANISM DATA

Pimephales promelas age: 11 Ceriodaphnia dubia age: <24  
Reference Toxicant: NaCl Reference Toxicant: NaCl  
Reference LC50 (95% Conf. Interval): 6.95 (6.7-7.2) gm/L Reference LC50 (95% Conf. Interval): 2.68 (2.3-3.1) gm/L

SAMPLE DATA (100% EFFLUENT)

|                         |        |       |                                       |                |       |
|-------------------------|--------|-------|---------------------------------------|----------------|-------|
| Temperature             | 25.5   | °C    | Ammonia Nitrogen (as N)               | NA             | mg/L  |
| Initial D.O.            | 8.0    | mg/L  | D.O. (end of test)                    | 7.4 (46.4%FHM) | mg/L  |
| pH (start of test)      | 7.38   | Units | pH (end of test)                      | 7.65(46.4%FHM) | Units |
| Total Ammonia (as NH3)  | <0.2   | mg/L  | Unionized Ammonia (calculated as NH3) | NA             | mg/L  |
| Total Residual Chlorine | <0.017 | mg/L  | Specific Conductance                  | 3390           | µmhos |

MORTALITY DATA

Laboratory (Name): Environmental Consulting and Testing Inc. (IA LAB# 377)  
Test begun (Date): 9/24/25 Test ended (date): 9/26/25

| Conc.   | Pimephales promelas Mortality<br>(Number Dead/Number Tested) |       |       |       |                                         |                              | Ceriodaphnia dubia Mortality<br>(Number Dead/Number Tested) |       |       |       |                                         |                              |
|---------|--------------------------------------------------------------|-------|-------|-------|-----------------------------------------|------------------------------|-------------------------------------------------------------|-------|-------|-------|-----------------------------------------|------------------------------|
|         | Bk. 1                                                        | Bk. 2 | Bk. 3 | Bk. 4 | Pass                                    | Fail                         | Bk. 1                                                       | Bk. 2 | Bk. 3 | Bk. 4 | Pass                                    | Fail                         |
| Control | 0/5                                                          | 0/5   | 1/5   | 0/5   |                                         |                              | 0/5                                                         | 0/5   | 0/5   | 0/5   |                                         |                              |
| 46.4%   | 0/5                                                          | 0/5   | 0/5   | 0/5   | ( <input checked="" type="checkbox"/> ) | ( <input type="checkbox"/> ) | 0/5                                                         | 0/5   | 0/5   | 0/5   | ( <input checked="" type="checkbox"/> ) | ( <input type="checkbox"/> ) |
| %       |                                                              |       |       |       | ( <input type="checkbox"/> )            | ( <input type="checkbox"/> ) |                                                             |       |       |       | ( <input type="checkbox"/> )            | ( <input type="checkbox"/> ) |
| %       |                                                              |       |       |       | ( <input type="checkbox"/> )            | ( <input type="checkbox"/> ) |                                                             |       |       |       | ( <input type="checkbox"/> )            | ( <input type="checkbox"/> ) |
| %       |                                                              |       |       |       | ( <input type="checkbox"/> )            | ( <input type="checkbox"/> ) |                                                             |       |       |       | ( <input type="checkbox"/> )            | ( <input type="checkbox"/> ) |
| 100%    |                                                              |       |       |       | ( <input type="checkbox"/> )            | ( <input type="checkbox"/> ) |                                                             |       |       |       | ( <input type="checkbox"/> )            | ( <input type="checkbox"/> ) |

EFFLUENT TOXICITY TESTING RESULTS: PASS (☒) FAIL (☐)

Comments: 100% effluent hardness: 1250 mg/L 100% Effluent alkalinity: 40 mg/L  
FHM&CD LC50= >100%  
FHM&CD NOEC= 100%  
FHM&CD LOEC= >100%

Report Approval:   
Patrick Poirier

Date Reported: 9/26/25