STANDARD OPERATING PROCEDURE
IN SITU BIOACCUMULATION STUDIES USING CAGED FISH

1.0 SCOPE AND APPLICATION

This standard operating procedure (SOP) describes conducting an *in situ* bioaccumulation study using caged fish. This procedure is applicable to any water body; stream, lake, wetland, etc. Young-of-the-year (YOY) channel catfish (*Ictalurus punctatus*) or fathead minnows (*Primephales promelas*) are recommended.

2.0 METHOD SUMMARY

Caged YOY fish are deployed in cages for 28 days, and retrieved for contaminant analysis. Fish are processed as whole fish, not fillets.

3.0 PROCEDURE

3.1 Equipment and Supplies

- YOY fish, from a commercial hatchery or other source known to be free of contaminants
- metal mesh cages; approximately 18" x 18" x 30" recommended
- appropriate supplies to secure the cages on-station; see below
- certified clean wide-mouth glass jars; 500 mL recommended
- an appropriate boat for deploying the cages
- ice chests
- global positioning system, or other means of establishing station locations

3.2 Procedure

[Note: steps marked with "**" denote general descriptions of activities that will vary from project to project, the details of which are described in detail in the project-specific Field Sampling Plan.]

1. Establish position of station and record location in the field notebook.** Appropriate procedures could include use of a global positioning system, triangulation on local landmarks, careful notations on a detailed map, etc.

2. Measure the dissolved oxygen in the water at the depth at which the cages will be deployed. If it is less than 3 mg/L. consider moving the station.

3. Fix the cage on-station by an appropriate means. This could include:
   - attachment to a bridge piling, or other permanent structure
   - suspension from a buoy, which is attached to an anchor