

Representative References

Application Category	Literature citation
Effluent testing ¹	<p>Stewart, A. J. 1994. Toxicity monitoring. In: T. L. Ashwood, ed. Eighth Annual Report on the ORNL Biological Monitoring and Abatement Program. ORNL/TM-12767. Oak Ridge National Laboratory, Oak Ridge, TN.</p> <p>Beauchamp, J. J., et al. 1998. Toxicity monitoring. In: R. L. Hinzman, ed. Third Report on the Oak Ridge Y-12 Plant Biological Monitoring and Abatement Program for East Fork Poplar Creek. Y/TS-889. ESD Publication No. 4260. Oak Ridge National Laboratory, Oak Ridge, TN.</p> <p>Kszos, L.A. and P. Braden. 2004. Novel temperature control apparatus for whole effluent toxicity tests. <i>Bull. Environ. Contam. Toxicol.</i> 72: 692-696.</p>
Ambient testing	<p>Stewart, A. J., et al. 1990. Ambient toxicity dynamics: assessments using <i>Ceriodaphnia</i> and fathead minnow larvae in short-term tests. <i>Environ. Toxicol. Chem.</i> 9:367-379.</p> <p>Boston, H. L., et al. 1991. Evaluating direct toxicity and food chain effects in aquatic systems using natural periphyton communities. In: J. W. Gorsuch et al., eds. <i>Plants for Toxicity Assessments, Second Volume</i>. STP 1115. American Society for Testing of Materials, Philadelphia, PA. pp. 126-145.</p> <p>Kszos, L. A. et al. 1992. An evaluation of nickel toxicity to <i>Ceriodaphnia dubia</i> and <i>Daphnia magna</i> in a contaminated stream and in laboratory tests. <i>Environ Toxicol. Chem.</i> 11:1001-1012.</p> <p>Lotts, J. W., Jr. and A. J. Stewart. 1995. Minnows can acclimate to total residual chlorine. <i>Environ. Toxicol. Chem.</i> 14:1365-1374.</p> <p>Stewart, A. J. and B. K. Konetsky. 1998. Longevity and reproduction of <i>Ceriodaphnia dubia</i> in receiving waters. <i>Environ. Toxicol. Chem.</i> 17:11656-1171.</p> <p>Stewart, A. J., et al. 1996. Chlorine dynamics and toxicity in receiving streams. <i>Ecol. Appl.</i> 6:458-471.</p> <p>Stewart, A.J. 1996. Ambient bioassays for assessing water-quality conditions in receiving streams. <i>Ecotoxicology</i> 5:377-393.</p> <p>Adams, S.M., W.R. Hill, M.J. Peterson, M.G. Ryon, J.G. Smith, and A.J. Stewart. 2002. Assessing recovery in a stream ecosystem: Applying multiple chemical and biological endpoints. <i>Ecol. Appl.</i> 12: 1510-1527.</p> <p>Kszos, L.A., G.W. Morris, and B.K. Konetsky. 2004. Source of toxicity in storm water: Zinc from commonly used paint. <i>Environ. Toxicol. Chem.</i>, 23: p. 12-16.</p>
<i>In situ</i> testing	<p>Burris, J. A., et al. 1990. Behavioral responses of marked snails as indicators of <i>in situ</i> toxicity. <i>Environ. Toxicol. Chem.</i> 9:69-76.</p> <p>Smith, J. G. And J. J. Beauchamp. 2000. Evaluation of caging designs and a fingernail clam for use in an <i>in situ</i> bioassay. <i>Environ. Monitor. Assess.</i> 2: 205-230.</p>

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<p>Pure-chemical testing</p>	<p>Giddings, J. M., et al. 1983. An efficient algal bioassay based on short-term photosynthetic response. In: 6th ASTM Symp. on Aquatic Toxicology. Amer. Soc. Testing and Materials. pp 445-459.</p> <p>Milleman, R. E., et al. 1984. Comparative acute toxicity of components of coal-derived synthetic products to aquatic organisms. <i>Trans. Amer. Fish. Soc.</i> 113: 74-85.</p> <p>Stewart, A. J. 1984. Interactions between dissolved humic materials and organic toxicants. In: <i>Synthetic Fossil Fuel Technologies: Results of Health and Environmental Studies</i>. Proceedings of the Fifth Life Sciences Symposium (Oak Ridge National Laboratory), ed. by K. Cowser. Butterworth Publishers, Boston. pp 505-521.</p> <p>Stewart, A. J. and L. A. Kszos. 1996. Caution on using lithium (Li⁺) as a conservative tracer in hydrological studies. <i>Limnol. Oceanogr.</i> 41:190-191.</p> <p>Hoyt, P. R., M. J. Doktycz, K. L. Beattie, and M. S. Greeley, Jr. 2003. DNA microarrays detect 4-nonylphenol-induced alterations in gene expression during zebrafish early development. <i>Ecotoxicology</i> 12: 469-474.</p> <p>Schrader, E. A., T. R. Henry, M. S. Greeley, Jr., and B. P. Bradley. 2003. Proteomics in zebrafish exposed to endocrine disrupting chemicals. <i>Ecotoxicology</i> 12: 485-488.</p>
<p>Sediment testing</p>	<p>Griest, W. H., et al. 1994. Chemical characterization and toxicological testing of windrow composts from explosives-contaminated sediments. <i>Environ. Toxicol. Chem.</i> 14:51-59.</p> <p>Gonzalez, A. M. 1996. A laboratory-formulated sediment incorporating synthetic acid-volatile sulfide. <i>Environ. Toxicol. Chem.</i> 15:2209-2220.</p> <p>Gunderson, C. A., et al. 1997. Multi-species toxicity assessment of compost produced in bioremediation of an explosives-contaminated sediment. <i>Environ. Toxicol. Chem.</i> 16:2529-2537.</p>
<p>Soil testing</p>	<p>Griest, W. H., et al. 1993. Chemical and toxicological testing of composted explosives-contaminated soil. <i>Environ. Toxicol. Chem.</i> 12:1105-1116.</p> <p>Gibbs, M. H., et al. 1996. A method for assessing sublethal effects of contaminants in soils to the earthworm, <i>Eisenia foetida</i>. <i>Environ. Toxicol. Chem.</i> 15:360-368.</p> <p>Napolitano, G. E., et al. 1998. Characterization of petroleum-contaminated soils by thin-layer chromatography with flame ionization detection. <i>J. Soil Contam.</i> 7:709-724.</p>
<p>Mesocosm Testing</p>	<p>Giddings, J. M., et al. 1984. Effects of chronic exposure to coal-derived oil on freshwater ecosystems. I. Microcosms. <i>Environ. Toxicol. Chem.</i> 3:447-467.</p> <p>Franco, P. J., et al. 1984. Effects of chronic exposure to coal-derived oil on freshwater ecosystems. II. Experimental ponds. <i>Environ. Toxicol. Chem.</i> 3:465-488.</p>
<p>Test Development</p>	<p>Kszos, L. A. and A. J. Stewart. 1991. Effort-allocation analysis of the 7-d fathead minnow (<i>Pimephales promelas</i>) and <i>Ceriodaphnia dubia</i> toxicity tests. <i>Environ. Toxicol. Chem.</i> 10:67-72.</p> <p>Kszos, L. A., et al. 1997. Evidence that variability in ambient fathead minnow short-term chronic tests is due to pathogenic infection. <i>Environ. Toxicol. Chem.</i> 16:351-356.</p>

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Test Application Strategy	Stewart, A. J. and J. M. Loar. 1994. Spatial and temporal variation in biomonitoring data. In: S. L. Loeb and A. Spacie, eds. <i>Biological Monitoring of Aquatic Systems</i> . Lewis Publishers, Boca Raton, FL. Stewart, A. J. 1999. Insights from ambient toxicity testing. In: P. C. Schulze, ed. <i>Measures of Environmental Performance and Ecosystem Condition</i> . National Academy Press, Washington, D.C. Pp. 199-216.
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¹ The ETL has conducted more than 2000 *Ceriodaphnia* tests and more than 1000 fathead minnow tests (acute and chronic combined), using EPA-approved procedures. The results of tests used routinely to characterize effluent quality according to the National Pollutant Discharge Elimination System permits for the DOE facilities on the Oak Ridge Reservation have been reported in technical reports.