

**Topical Scientific Workshop on
Risk Assessment for the Sediment Compartment**
7-8 May 2013, Helsinki, Finland

**COMPILATION OF SOME RELEVANT GUIDANCE DOCUMENTS AND
REVIEWS ON SEDIMENT RISK ASSESSMENT**

REACH Guidance documents on Chemical Safety Assessment:

ECHA 2008. Guidance documents on Chemical Safety Assessment. Chapter R7. Endpoint specific guidance.

ECHA 2008. Guidance documents on Chemical Safety Assessment. Chapter R10. Characterisation of dose [concentration] - response for environment

ECHA 2012. Guidance documents on Chemical Safety Assessment. Chapter R16 Environmental exposure estimation

<http://echa.europa.eu/web/guest/guidance-documents/guidance-on-information-requirements-and-chemical-safety-assessment>

WFD Guidance documents:

Guidance No 25 - Chemical Monitoring of Sediment and Biota

Guidance No 27 - Deriving Environmental Quality Standards

https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp?FormPrincipal:_idcl=FormPrincipal:libraryContentList:pager&page=1&FormPrincipal_SUBMIT=1&org.apache.myfaces.trinidad.faces.STATE=DUMMY

EFSA

Scientific Opinion on the development of specific protection goal options for environmental risk assessment of pesticides, in particular in relation to the revision of the Guidance Documents on Aquatic and Terrestrial Ecotoxicology (SANCO/3268/2001 and SANCO/10329/2002)

<http://www.efsa.europa.eu/en/efsajournal/doc/1821.pdf>

Opinion of the Scientific Panel on Additives and Products or Substances used in Animal Feed on the development of an approach for the environmental risk assessment of additives, products and substances used in animal feed

<http://www.efsa.europa.eu/en/efsajournal/doc/529.pdf>

Opinion of the Scientific Panel on Plant protection products and their residues (PPR) related to the revision of Annexes II and III to Council Directive 91/414/EEC concerning the placing of plant protection products on the market - Ecotoxicological studies

<http://www.efsa.europa.eu/en/efsajournal/pub/461.htm>

<http://www.efsa.europa.eu/en/efsajournal/pub/1165.htm>

EU Biocides

EU-TGD Part 2

http://ihcp.jrc.ec.europa.eu/our_activities/public-health/risk_assessment_of_Biocides/doc/tgd/tgdpart2_2ed.pdf

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OECD documents

ENVIRONMENT MONOGRAPHS No. 60. REPORT OF THE OECD WORKSHOP ON EFFECTS ASSESSMENT OF CHEMICALS IN SEDIMENT

[http://search.oecd.org/officialdocuments/displaydocumentpdf/?cote=ocde/gd\(92\)170&doclanguage=en](http://search.oecd.org/officialdocuments/displaydocumentpdf/?cote=ocde/gd(92)170&doclanguage=en)

OECD Series on Testing and Assessment No 11: Detailed Review Paper on Aquatic Testing Methods for Pesticides and Industrial Chemicals - Part 1: Report; Part 2: Annexes

<http://www.oecd.org/env/ehs/testing/seriesontestingandassessmentpublicationsbynumber.htm>

US EPA

Superfund programme: Approach to ecological and human health risk assessments involving contaminated sediments:

http://www.epa.gov/oswer/riskassessment//risk_superfund.htm (sediment related information)

<http://www.epa.gov/risk/> (general information)

U.S. EPA 2005. Contaminated Sediment Remediation Guidance for Hazardous Waste Sites.

<http://www.epa.gov/superfund/health/conmedia/sediment/guidance.htm>

U.S. EPA 2002. Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites <http://www.epa.gov/superfund/policy/remedy/pdfs/92-85608-s.pdf>

U.S. EPA. 1997. Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments, Interim Final. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, DC. OSWER 9285.7-25, PB97-963211, EPA 540-R-97-006, Jun 1997.

U.S. EPA. 1998. Guidelines for Ecological Risk Assessment. U.S. Environmental Protection Agency, Office of the Science Advisor, Risk Assessment Forum. EPA/630/R-95/002F, Apr 1998. U.S. EPA. Risk Assessment Guidance for Superfund Parts A-F (human health).

<http://www.epa.gov/oswer/riskassessment/ragsa/>

U.S. EPA 2002. A Guidance Manual to Support the Assessment of Contaminated Sediments in Freshwater Ecosystems (three volumes).

http://www.cerc.usgs.gov/pubs/sedtox/guidance_manual.htm

U.S. EPA. 2008. Using Fish Tissue Data to Monitor Remedy Effectiveness - Sediment Assessment and Monitoring Sheet (SAMS) #1.

http://www.epa.gov/superfund/health/conmedia/sediment/pdfs/fish_sams.pdf

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U.S. EPA. 2009. Understanding the Use of Models in Predicting the Effectiveness of Proposed Remedial Actions at Superfund Sites.

http://www.epa.gov/superfund/health/conmedia/sediment/pdfs/Modeling_Primer.pdf

U.S. EPA. 2012. Guidelines for Using Passive Samplers to Monitor Organic Contaminants at Superfund Sediment Sites - Sediment Assessment and Monitoring Sheet (SAMS) #3.

http://www.epa.gov/superfund/health/conmedia/sediment/pdfs/Passive_Sampler_SAMS_Final_Camera_Ready_-_Jan_2013.pdf

U.S. EPA. 2000. *Prediction of sediment toxicity using consensus-based freshwater sediment quality guidelines*. EPA 905/R-00/007, Chicago

<http://www.cerc.usgs.gov/pubs/center/pdfdocs/91126.pdf>

U.S. EPA. 2002. *A guidance manual to support the assessment of contaminated sediments in freshwater ecosystems. Volume I: An ecosystem-based framework for assessing and managing contaminated sediments, EPA-905-B02-001-A, Volume II: Design and implementation of sediment quality investigations, EPA-905-B02-001-B Volume III: Interpretation of the results of sediment quality investigations, EPA-905-B02-001-C* USEPA Great Lakes National Program, Office, Chicago

U.S. EPA. 2003. *Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: Endrin*. EPA-600-R-02-009. Office of Research and Development. Washington, DC 20460. www.epa.gov/nheerl/publications.html

U.S. EPA. 2003. *Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: Dieldrin*. EPA-600-R-02-010. Office of Research and Development. Washington, DC 20460. www.epa.gov/nheerl/publications.html

U.S. EPA. 2003. *Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures*. EPA-600-R-02-013. Office of Research and Development. Washington, DC 20460. www.epa.gov/nheerl/publications.html

U.S. EPA. 2005. *Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: Metal Mixtures*. EPA-600-R-02-011. Office of Research and Development. Washington, DC 20460. www.epa.gov/nheerl/publications.html

U.S. EPA. 2007. *Sediment Toxicity Identification Evaluation (TIE) Phases I, II and III: Guidance Document*. EPA-600-R-07-080. Office of Research and Development, Washington DC. www.epa.gov/nheerl/publications.html

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www.epa.gov/nheerl/publications.html

U.S. EPA. 2009. *Evaluating Ecological Risk to Invertebrate Receptors from PAHs in Sediments at Hazardous Waste Sites (Final Report)*. U.S. Environmental Protection Agency, Ecological Risk Assessment Support Center, EPA/600/R-06/162F. Cincinnati, OH, USA.
<http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=214715>

U.S. EPA. 2012. *Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: Procedures for the Determination of the Freely Dissolved Interstitial Water Concentrations of Nonionic Organics*. EPA-600-R-02-012. Office of Research and Development. Washington, DC 20460.
www.epa.gov/nheerl/publications.html

CSIRO

Handbook for Sediment Quality Assessment
<http://www.csiro.au/files/files/p8m1.pdf>

GESAMP

Guidance on Assessment of Sediment Quality
http://www.gesamp.org/data/gesamp/files/media/Publications/GESAMP_Guidance_on_Assessment_of_Sediment_Quality/gallery_1369/object_1407_large.pdf

SETAC

Use of Sediment Quality Guidelines and Related Tools for the Assessment of Contaminated Sediments
http://c.ymcdn.com/sites/www.setac.org/resource/resmgr/publications_and_resources/sqgsummary.pdf

Environment Canada

Env Canada (1994) GD Collection and preparation of Sediment.pdf
<http://www.ec.gc.ca/Publications/default.asp?lang=En&xml=8F61B510-EFAA-4041-8FFF-BC7B99CC6B8B>

Env Canada (1995) GD Control Sediment
<http://www.ec.gc.ca/Publications/default.asp?lang=En&xml=BAFE0677-3F3F-48CA-9849-BB5813C4FEB6>

British Columbia Ministry of Environment. 2005. Guidance manual to support the assessment of contaminated sediments in freshwater, estuarine, and marine ecosystems in British Columbia
<http://www.env.gov.bc.ca/epd/remediation/guidance/technical/pdf/tg19.pdf>

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Relevant references

EFSA literature review on sediment effect assessment

<http://www.efsa.europa.eu/en/supporting/pub/337e.htm>

EFSA Literature review on the sensitivity and exposure of marine and estuarine organisms to pesticides in comparison to corresponding fresh water species

<http://www.efsa.europa.eu/en/supporting/pub/357e.htm>