

US EPA ARCHIVE DOCUMENT

# EPA's Roadmap for Mercury

## Endnotes

July 2006

## ENDNOTES

### Introduction

1. "EPA Releases 12th Annual National Listing of Fish Advisories." Press release. August 24, 2004.
2. EPA, 2005c. U.S. Environmental Protection Agency. National Listing of Fish Advisories. Fact Sheet, Sep. 2005. EPA-823-F-05-004. Accessible at: <http://epa.gov/waterscience/fish/advisories/fs2004.pdf>.
3. Table 1: National Air Emissions Inventory for Mercury. Source: EPA, 1999a.
4. Figure 1: The Mercury Cycle. Adapted from EPA, 1997. Mercury Study Report to Congress. EPA-452/R-97-003, December 1997. Accessible at: [www.epa.gov/ttn/oarpg/t3/reports/volume1.pdf](http://www.epa.gov/ttn/oarpg/t3/reports/volume1.pdf).
5. EPA, 2001a.  
NRC, 2000. National Research Council. Toxicological Effects of Methylmercury. Committee on The Toxicological Effects of Methylmercury, Board on Environmental Studies and Toxicology. Accessible at: <http://books.nap.edu/books/0309071402/html/1.html>.
6. EPA, 1997. Mercury Study Report to Congress. EPA-452/R-97-003, December 1997. Accessible at: [www.epa.gov/ttn/oarpg/t3/reports/volume1.pdf](http://www.epa.gov/ttn/oarpg/t3/reports/volume1.pdf).
7. EPA, 1997.
8. EPA, 1997.
9. EPA, 2005a. Technical Support Document, Revision of December 2000 Regulatory Finding on the Emissions of Hazardous Air Pollutants From Electric Utility Steam Generating Units and the Removal of Coal- and Oil-Fired Electric Utility Steam Generating Units from the §112(c) List: Reconsideration, Oct. 21, 2005. Accessible at: [www.epa.gov/ttn/atw/utility/TSC-112final.pdf](http://www.epa.gov/ttn/atw/utility/TSC-112final.pdf).
10. A Community Multiscale Air Quality (CMAQ) modeling run was performed to estimate the impact of global sources on U.S. deposition estimates. For this analysis, all non-U.S. mercury input species to the model were set to zero. By comparing the results of this analysis with the 2001 Clean Air Mercury Rule (CAMR) base case run, which included all U.S. and global mercury species, the percent of total mercury deposition attributable to global sources can be estimated. The model estimated that over 80 percent of total mercury deposition in the U.S. is attributable to global sources.  
  
Due to the evolving nature of mercury modeling science, such deposition estimates have associated uncertainties. For example, it remains difficult to distinguish between the natural emissions of mercury and the re-emission of previously deposited anthropogenic mercury and there remains uncertainty in the scientific community concerning the atmospheric processes that control the oxidation state of atmospheric mercury. Thus, further advances in the current understanding of mercury chemistry could potentially lead to changes in the modeling parameters and assumptions governing the mercury chemistry in the models and therefore, changes in the estimate of the fraction deposited in the U.S. attributable to global sources.
11. EPA, 2005a.

### I. Addressing Mercury Releases

1. EPA, 1999a. 1999 National Emissions Inventory Documentation and Data—Final Version 3.0. Accessible at: [www.epa.gov/ttn/chief/net/1999inventory.html](http://www.epa.gov/ttn/chief/net/1999inventory.html).
2. EPA, 1999a.
3. Table 1: National Air Emissions Inventory for Mercury. Source: EPA, 1999a.
4. President's Clear Skies Legislation of 2003. For information, see: [www.epa.gov/air/clearskies/](http://www.epa.gov/air/clearskies/).
5. EPA. Clean Air Act rules on mercury emissions. For information on EPA's activities to control power plant emissions, see: [www.epa.gov/mercury/control\\_emissions/index.htm](http://www.epa.gov/mercury/control_emissions/index.htm).
6. EPA, 1999b. Residual Risk Report to Congress. EPA 453/R-99-001, March 1999. Accessible at: [www.epa.gov/ttn/oarpg/t3/reports/risk\\_rep.pdf](http://www.epa.gov/ttn/oarpg/t3/reports/risk_rep.pdf).  
For information about EPA's Residual Risk Program, see: [www.epa.gov/ttn/atw/rrisk/residriskpg.html](http://www.epa.gov/ttn/atw/rrisk/residriskpg.html).
7. EPA. Nevada Mining Partnership Program. For information, see: [www.epa.gov/Region9/cross\\_pr/innovations/mining.html](http://www.epa.gov/Region9/cross_pr/innovations/mining.html).

## 80 - EPA's Roadmap for Mercury

8. EPA, 2004a. 2003 Report on Success of Voluntary Mercury Reduction Program (VMRP) with Nevada Gold Mines, October, 2004. Accessible at: [www.epa.gov/region9/toxic/mercury/goldmine.pdf](http://www.epa.gov/region9/toxic/mercury/goldmine.pdf).
9. 64 Federal Register 38705, 7/19/99.
10. EPA. Area Source Standards. For information, see: [www.epa.gov/ttn/atw/urban/arearules.html](http://www.epa.gov/ttn/atw/urban/arearules.html).
11. Ecology Center, 2001. Ecology Center, Great Lakes United, and University of Tennessee Center for Clean Products and Clean Technologies. Toxics in Vehicles: Mercury. Accessible at: [www.cleancarcampaign.org/pdfs/toxicsinvehicles\\_mercury.pdf](http://www.cleancarcampaign.org/pdfs/toxicsinvehicles_mercury.pdf).
12. The estimate is based on data gathered from industry by EPA during the initial phase of EAF area source rulemaking which is still under development.
13. EPA. National Pollutant Discharge Elimination System (NPDES) Permits. For information about this program, see: <http://cfpub.epa.gov/npdes/>.
14. Alpers, C.N. and M.P. Hunerlach, 2000. Mercury contamination from historic gold mining in California. USGS Fact Sheet FS-061-00. Accessible at: <http://ca.water.usgs.gov/mercury/fs06100.html>.
15. EPA, 2005b. 2003 Toxics Release Inventory (TRI) Public Data Release eReport, May, 2005. Accessible at: [www.epa.gov/tri/tridata/tri03/2003eReport.pdf](http://www.epa.gov/tri/tridata/tri03/2003eReport.pdf).
16. EPA, 2005b.
17. EPA, 2001b. Water Quality Criterion for the Protection of Human Health: Methylmercury. EPA-823-R01-001. Accessible at: [www.epa.gov/waterscience/criteria/methylmercury/](http://www.epa.gov/waterscience/criteria/methylmercury/).
18. EPA, 2001a.
19. 40 Code of Federal Regulations 130.7.
20. These statistics were compiled from data received by EPA and available on its Total Maximum Daily Loads (TMDL) webpage accessible at: [http://oaspub.epa.gov/waters/national\\_rept.control](http://oaspub.epa.gov/waters/national_rept.control).
21. EPA, 2005c.
22. EPA, 2001b.
23. These statistics were compiled from data received by EPA and available on its TMDL webpage accessible at: [http://oaspub.epa.gov/waters/national\\_rept.control](http://oaspub.epa.gov/waters/national_rept.control).
24. 40 Code of Federal Regulations 132 Table 4.
25. The average was developed by EPA based on effluent data reported by the EPA Region 5 states: Illinois, Indiana, Ohio, Michigan, Minnesota and Wisconsin. States discuss effluent data in reports on their web sites. For example:  
Michigan: [www.michigan.gov/deq/0,1607,7-135-3313\\_3686\\_3728-11384-,00.html](http://www.michigan.gov/deq/0,1607,7-135-3313_3686_3728-11384-,00.html)  
Wisconsin: <http://dnr.wi.gov/org/caer/cea/mercury/potw.htm>  
Minnesota: [www.pca.state.mn.us/water/tmdl/tmdl-mercuryplan.html](http://www.pca.state.mn.us/water/tmdl/tmdl-mercuryplan.html)
26. Cocca, P. 2001. Mercury Maps: National Report on Human Exposure to Environmental Chemicals. Publication No. 01-0379.
27. Clean Water Act (Federal Water Pollution Control Act, as amended) §307(b); 33 United States Code §1317.
28. LWA, 2002. Larry Walker Associates. Mercury Source Control and Pollution Prevention Evaluation, Final Report, March 2002, amended July 2002. Prepared for: Association of Metropolitan Sewerage Agencies. Accessible at: [www.amsa-cleanwater.org/advocacy/mercgrant/finalreport.pdf](http://www.amsa-cleanwater.org/advocacy/mercgrant/finalreport.pdf).
29. San Francisco Public Utilities Commission. For information about the San Francisco Dental Mercury Reduction Program, see: [http://sfwater.org/main.cfm/MC\\_ID/4/MS\\_C\\_ID/85](http://sfwater.org/main.cfm/MC_ID/4/MS_C_ID/85).
30. EPA, 2005b.
31. Surface impoundments include natural topographic depressions, man-made excavations and diked areas that primarily are made of earthen materials and which hold liquid wastes. These uncovered areas are commonly used to volatilize and/or settle materials. **Other surface impoundments are surface impoundments other than those which are authorized under the Resource Conservation and Recovery Act (RCRA) to accept hazardous waste for disposal.**

32. Other land disposal is the disposal of the toxic chemical to land at the facility that does not fall into one of the other on-site land release categories found in Section 5.5.1 through 5.5.3 of the TRI Form R. **Other disposal includes such activities as placement in waste piles and spills or leaks.** Data from Section 5.5.4 on the TRI Form R.
33. Mercury -Containing and Rechargeable Battery Act, 42 United States Code 14301, and EPA Universal Waste Rule. For information, see: [www.epa.gov/epaoswer/hazwaste/id/univwast/regs.htm](http://www.epa.gov/epaoswer/hazwaste/id/univwast/regs.htm).
34. EPA. Municipal Incinerator Rules. For information about Large Municipal Waste Combustors, see: [www.epa.gov/ttn/atw/129/mwc/rimwc.html](http://www.epa.gov/ttn/atw/129/mwc/rimwc.html). For information about Small Municipal Waste Combustors, see: [www.epa.gov/ttn/atw/129/mwc/rimwc2.html](http://www.epa.gov/ttn/atw/129/mwc/rimwc2.html).
35. EPA. Universal Waste Regulations. For information, see: [www.epa.gov/epaoswer/hazwaste/id/univwast/regs.htm](http://www.epa.gov/epaoswer/hazwaste/id/univwast/regs.htm).
36. 70 Federal Register 45508, 8/5/05.
37. EPA. Superfund National Priorities List. For information on NPL Site Listing Process, see: [www.epa.gov/superfund/sites/npl/npl\\_hrs.htm](http://www.epa.gov/superfund/sites/npl/npl_hrs.htm).
38. EPA. RCRA Corrective Action Program. For information on the program, see: [www.epa.gov/epaoswer/hazwaste/ca/backgnd.htm#5](http://www.epa.gov/epaoswer/hazwaste/ca/backgnd.htm#5).
39. Maine. An Act to Prevent Mercury Emissions When Recycling and Disposing of Motor Vehicles. Provision to remove mercury switches found at Sec. 3.38 Me.Rev.Stat.Ann.tit. §1665-A.3. Accessible at: <http://janus.state.me.us/legis/ros/lom/LOM120th/5Pub651-700/Pub651-700-05.htm>.
40. Ecology Center, 2001.
41. EPA, 2005d. Clean Air Mercury Rule (CAMR) and Clean Air Interstate Rule (CAIR). For information, see: [www.epa.gov/air/mercuryrule/](http://www.epa.gov/air/mercuryrule/).
42. 69 Federal Register 21198, 4/20/04.
43. 68 Federal Register 70903, 12/19/03.
44. 69 Federal Register 21906, 4/22/04.
45. Cocca, P. 2001.  
64 Federal Register 38705, 7/19/99.

## II. Addressing Mercury Uses in Products and Processes

1. Jasinski, S.M., 1994. The Materials Flow of Mercury in the United States. U.S. Bureau of Mines, Information Circular 9412. Accessible at: <http://pubs.usgs.gov/usbmic/ic-9412/>.
2. Figure 3: Total 2001 U.S. Mercury Use in Products. Source: Lawrence, Bruce, 2001. Bethlehem Apparatus Company, Inc. Personal communication, June 22, 2001.
3. Lawrence, 2001 and The Chlorine Institute, Inc., 2-006.
4. Figure 4: U.S. Mercury Product and Process Use Trends. Sources: For 1980 through 1997: USGS. U.S. Geological Survey. Minerals Yearbook: Mercury, 1994-2001. Accessible at: <http://minerals.usgs.gov/minerals/pubs/commodity/mercury/>. For 2001: Lawrence, 2001 and The Chlorine Institute, Inc., 2006.
5. Environment Canada and EPA, 1997. The Great Lakes Binational Toxics Strategy. Accessible at: [www.epa.gov/glnpo/p2/bns.html](http://www.epa.gov/glnpo/p2/bns.html).
6. Environment Canada and EPA, 2004. Great Lakes Binational Toxics Strategy 2004 Annual Progress Report. Accessible at: <http://binational.net/bns/2004/index.html>.
7. The Chlorine Institute, Inc., 2006. Ninth Annual Report to EPA for the Year 2005, May 15, 2006. Accessible at: [www.epa.gov/region5/air/mercury/9thcl2report.pdf](http://www.epa.gov/region5/air/mercury/9thcl2report.pdf).
8. H2E. Hospitals for a Healthy Environment. For information, see: [www.h2e-online.org/](http://www.h2e-online.org/).
9. For information about legislation to reduce mercury in the New England states, see: IMERC. Interstate Mercury Education and Reduction Clearinghouse at: [www.newmoa.org/newmoa/ntdocs/prevention/mercury/imerc.cfm](http://www.newmoa.org/newmoa/ntdocs/prevention/mercury/imerc.cfm).

10. Conference of New England Governors and Eastern Canadian Premiers, 2002. Summary of School Mercury Programs in New England and Eastern Canada. August 2002. Accessible at: [www.cap-cpma.ca/images/pdf/eng/10-mtf\\_school\\_survey\\_e.pdf](http://www.cap-cpma.ca/images/pdf/eng/10-mtf_school_survey_e.pdf).
11. The Chlorine Institute, Inc., 2006.
12. IMERC. For information, see: [www.newmoa.org/Newmoa/htdocs/prevention/mercury/imerc.cfm](http://www.newmoa.org/Newmoa/htdocs/prevention/mercury/imerc.cfm).
13. EPA. Environmentally Preferable Purchasing, Database of Environmental Information for Products and Services. For information, see: <http://yosemite1.epa.gov/oppt/epstand2.nsf/Pages/Homepage.html?Open>.
14. EPA. Green Suppliers Network. For information, see: [www.epa.gov/p2/programs/gsn.htm](http://www.epa.gov/p2/programs/gsn.htm).
15. EPA. Schools Chemical Cleanout Campaign (SC3). For information, see: [www.epa.gov/epaoswer/osw/conserve/clusters/schools/index.htm](http://www.epa.gov/epaoswer/osw/conserve/clusters/schools/index.htm).
16. EPA. National Partnership for Environmental Priorities (NPEP) Program, The Mercury Challenge. For information, see: [www.epa.gov/epaoswer/hazwaste/minimize/mercchall.htm](http://www.epa.gov/epaoswer/hazwaste/minimize/mercchall.htm).

### III. Managing Commodity-Grade Mercury Supplies

1. Lawrence, Bruce, 2002. Bethlehem Apparatus Company, Inc. World Mercury Market(s) From the Supply Side. Presentation at conference: Breaking the Mercury Cycle, Boston, MA, May 1-3, 2002. Accessible at: [www.newmoa.org/Newmoa/htdocs/prevention/mercury/breakingcycle/toc.cfm](http://www.newmoa.org/Newmoa/htdocs/prevention/mercury/breakingcycle/toc.cfm).
2. Maxson, P.A., 2004 Mercury Flows Report: Mercury Flows in Europe and the World, The Impact of Decommissioned Chlor-alkali Plants. European Commission. Accessible at: <http://europa.eu.int/comm/environment/chemicals/mercury/pdf/report.pdf>.
3. Maxson, 2004.
4. The Chlorine Institute, Inc., 2006.
5. 69 Federal Register 23733, 4/30/04.
6. Quicksilver Caucus, 2003. Mercury Stewardship Storage of Mercury, October 2003. Accessible at: [www.ecos.org/files/721\\_file\\_QSC\\_STOR\\_Oct\\_03.pdf](http://www.ecos.org/files/721_file_QSC_STOR_Oct_03.pdf).
7. EPA, 2005f. Economic and Environmental Analysis of Technologies to Treat Mercury and Dispose in a Waste Containment Facility. See: [www.epa.gov/ORD/NRMRL/pubs/600r05157/600r05157.pdf](http://www.epa.gov/ORD/NRMRL/pubs/600r05157/600r05157.pdf).
8. EPA. Mercury Laws and Regulations. For information on how mercury is regulated under RCRA, see: [www.epa.gov/epaoswer/hazwaste/mercury/reg\\_stand.htm](http://www.epa.gov/epaoswer/hazwaste/mercury/reg_stand.htm).

### IV. Communicating to the Public About Mercury Exposure Risks

1. Figure 1: The Mercury Cycle. Adapted from EPA, 1997. Mercury Study Report to Congress. EPA-452/R-97-003, December 1997. Accessible at: [www.epa.gov/ttn/oarpg/t3/reports/volume1.pdf](http://www.epa.gov/ttn/oarpg/t3/reports/volume1.pdf).
2. EPA and FDA, 2004. What You Need to Know About Mercury in Fish and Shellfish. EPA-823-F-04-009. Accessible at: [www.epa.gov/waterscience/fishadvice/advice.html](http://www.epa.gov/waterscience/fishadvice/advice.html).
3. EPA, 2005c.
4. "EPA Releases 12th Annual National Listing of Fish Advisories." Press release. August 24, 2004.
5. EPA, 2002a. Task Force on Ritualistic Uses of Mercury Report, Dec. 2002. EPA-540-R-01-005. Accessible at: [www.epa.gov/superfund/action/community/mercury.pdf](http://www.epa.gov/superfund/action/community/mercury.pdf).
6. EPA. Mercury Web site. For information, see: [www.epa.gov/mercury/](http://www.epa.gov/mercury/).
7. Minnesota Pollution Control Agency. Mercury-Free Zone Program. For information, see: [www.pca.state.mn.us/programs/mercury-free/](http://www.pca.state.mn.us/programs/mercury-free/).

### V. Addressing International Mercury Sources

1. Figure 5: Where are Man-Made Mercury Emissions Originating? Source of figure: Pacyna, J., S. Wilson, F. Steenhuisen and E. Pacyna. 2005. Spatially Distributed Inventories of Global Anthropogenic Emissions of Mercury to the Atmosphere. Accessible at: ([www.amap.no/Resources/HgEmissions/](http://www.amap.no/Resources/HgEmissions/)). Original figure presented courtesy of AMAP, Arctic Monitoring and Assessment Programme, Oslo, Norway.

2. EPA, 2005a.
3. Figure 6: Man-Made Air Emissions of Mercury: Distribution by Region in 1990 and 2000. Source: Pacyna, J. and J. Munthe, 2004. Summary of research projects on mercury conducted by researchers in Norway and Sweden. Presentation at Workshop on Mercury, Brussels, March 29-30, 2004. Accessible at: [www.ivl.se/nytt/konferenset/mercury/pacyna.pdf](http://www.ivl.se/nytt/konferenset/mercury/pacyna.pdf).
4. UNEP, 2002. United Nations Environment Programme. Global Mercury Assessment. Accessible at: [www.chem.unep.ch/mercury/Report/GMA-report-TOC.htm](http://www.chem.unep.ch/mercury/Report/GMA-report-TOC.htm).
5. EPA estimate based on UNEP 2002.
6. EIA, 2004. Energy Information Administration. International Energy Outlook 2004 (annual report). Report #DOE/EIA-0484(2004), April, 2004. Accessible at: [www.eia.doe.gov/oiaf/ieo/](http://www.eia.doe.gov/oiaf/ieo/).
7. UNEP, 2002.
8. Veiga, M. and R. Baker, 2004. Protocols for Environmental and Health Assessment of Mercury Released by Artisanal and Small-scale Gold Miners, Report to the Global Mercury Project: Removal to Barriers of Introduction to Cleaner Artisanal Gold Mining and Extraction Technologies, GEF/UNDP/UNIDO, Vienna, Austria, 170. Accessible at: [www.unites.uqam.ca/gmf/intranet/gmp/files/doc/gmp/Protocols\\_for\\_Environmental%20Assessment\\_2005\\_08\\_11.pdf](http://www.unites.uqam.ca/gmf/intranet/gmp/files/doc/gmp/Protocols_for_Environmental%20Assessment_2005_08_11.pdf).
9. Veiga, M.M. and J.J. Hinton, 2002. Abandoned Artisanal Gold Mines in the Brazilian Amazon: A Legacy of Mercury Pollution. Natural Resources Forum, February, 2002.
10. UNEP, 2002.
11. This estimate is based on communication with The Chlorine Institute and review of the following two pamphlets: The Chlorine Institute, Inc., 2004b. Pamphlet 10, North American Chlor-Alkali Industry Plants and Production Data Report 2003, Updated June, 2004. The Chlorine Institute, Inc., 2004c. Pamphlet 16, Chlor-Alkali Plants Outside North America, Updated October 2004.
12. Source of 2,000 estimate is Lawrence, 2002. Source of 3,400 estimate is Maxson, 2004.
13. Figure 7: Global Mercury Consumption, 2000. Source: Maxson, 2004.
14. Environment Canada and EPA, 2005. Great Lakes Binational Toxics Strategy: Assessment of Level 1 Substances, Summary Report. Accessible at: <http://binational.net/bns/2005/index.html>.
15. Conference of New England Governors/Eastern Canadian Premiers, 2003. Report to the New England Governors and Eastern Canadian Premiers on Mercury Projects, August 2003. Accessible at: <http://cap-cpma.ca/images/pdf/eng/2003reportmercury.pdf>.
16. CEC. Commission for Environmental Cooperation. North American Regional Action Plan on Mercury. Accessible at: [www.cec.org/programs\\_projects/pollutants\\_health/smoc/merc134.cfm?varlan=english](http://www.cec.org/programs_projects/pollutants_health/smoc/merc134.cfm?varlan=english).
17. UNECE, 1998. United Nations Economic Commission for Europe. Convention on Long-Range Transboundary Air Pollution. Protocol on Heavy Metals. Accessible at: [www.unece.org/env/lrtap/hm\\_h1.htm](http://www.unece.org/env/lrtap/hm_h1.htm).
18. UNEP Mercury Programme. For information, see: [www.chem.unep.ch/mercury/default.htm](http://www.chem.unep.ch/mercury/default.htm).
19. UNEP, 2005. Results of the Governing Council's discussions on chemicals management, including mercury programme, at its 23rd session in February, 2005. Accessible at: [www.chem.unep.ch/mercury/GC23-results.htm](http://www.chem.unep.ch/mercury/GC23-results.htm).
20. UNEP Mercury Programme Partnerships. For information, see: [www.chem.unep.ch/mercury/partnerships/default.htm](http://www.chem.unep.ch/mercury/partnerships/default.htm).
21. UNIDO. United Nations Industrial Development Organization. Global Mercury Project. For information, see: [www.unido.org/en/doc/4571](http://www.unido.org/en/doc/4571).
22. AMAP. Arctic Monitoring and Assessment Programme. For information, see: [www.amap.no/](http://www.amap.no/).
23. UNEP. Basel Convention. For information, see: [www.basel.int/index.html](http://www.basel.int/index.html).

## VI. Conducting Mercury Research and Monitoring

1. EPA, 2000. Mercury Research Strategy. EPA-600-R-00-073. Accessible at: <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=20853>.
2. EPA, 2003a. Mercury Research Multi-Year Plan. Accessible at: [www.epa.gov/osp/myr/mercury.pdf](http://www.epa.gov/osp/myr/mercury.pdf).

3. EPA. Science To Achieve Results (STAR) Program. For information, see:  
[http://cfpub.epa.gov/ncer\\_abstracts/index.cfm/fuseaction/recipient.display/rfa\\_id/109](http://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/recipient.display/rfa_id/109).  
[http://cfpub.epa.gov/ncer\\_abstracts/index.cfm/fuseaction/research.display/rpt/abs/rfa\\_id/2](http://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/research.display/rpt/abs/rfa_id/2).
4. USGS. The Mercury Roundtable. For information, see: <http://minerals.usgs.gov/mercury/roundtable.html>.
5. EPA, 2003d. Performance and Cost of Mercury and Multipollutant Emission Control Technology Applications on Electric Utility Boilers; EPA/600/R-03/110; October, 2003.  
  
 Srivastava, R.K., J.E. Staudt, and W. Jozewicz, 2004. Preliminary Estimates of Performance and Cost of Mercury Emission Control Technology Applications on Electric Utility Boilers: An Update. Prepared for presentation at The Combined Power Plant Air Pollutant Control Mega Symposium, Washington, DC, August 30–September 2, 2004.
6. EPA, 2005a.
7. EPA, 2005a.
8. [www.epa.gov/mercury](http://www.epa.gov/mercury).
9. Revision of December 2000 Regulatory Finding on the Emissions of Hazardous Air Pollutants From Electric Utility Steam Generating Units and the Removal of Coal- and Oil-Fired Electric Utility Steam Generating Units from the Section 112(c) List” (The Section 112(n) Revision Rule) (70 FR 15994 (Mar. 29, 2005) and “Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units” (“The Clean Air Mercury Rule” or “CAMR”) (70 FR 28606 (May 18, 2005).
10. Landis, M.S., R.K. Stevens, F. Shaedlich, and E.M. Presbo, 2002. Development and Characterization of an Annular Denuder Methodology for the Measurement of Divalent Inorganic Reactive Mercury in Ambient Air. *Environmental Science Technology* 26: 3000–3009.
11. Bullock, R. and Brehme, K. 2002. “Atmospheric Mercury Simulation Using the CMAQ Model: Formulation, Description, and Analysis of Wet Deposition Results”, *Atmos. Envi.*, 36, pg. 2135-2146.
12. EPA, 2003d.  
  
 Srivastava, R.K., J.E. Staudt, and W. Jozewicz, 2004.
13. EPA, 2005e. Control of Mercury Emissions from Coal-Fired Electric Utility Boilers: an Update, 02/18/05. Accessible at: [www.epa.gov/ttn/atw/utility/ord\\_whtpaper\\_hgcontroltech\\_oar-2002-0056-6141.pdf](http://www.epa.gov/ttn/atw/utility/ord_whtpaper_hgcontroltech_oar-2002-0056-6141.pdf).
14. Kosson, D.S., H.A. van der Sloot, F. Sanchez, F. and A.C. Garrabrants, 2002. An Integrated Framework for Evaluating Leaching in Waste Management and Utilization of Secondary Materials. *Environmental Engineering Science* 19(3):159–204.  
  
 Thorneloe, S., 2003. Presentation to EPA Science Advisory Board, Environmental Engineering Committee, Washington, D.C., June 17, 2003.  
  
 Potential for Cross-media Transfers from Management of Mercury-enriched Coal Combustion Residues. Feb. 18, 2005. Available through [www.regulations.gov](http://www.regulations.gov) at EPA-HQ-OAR-2002-0056/6139.
15. EPA. Mercury Continuous Emission Monitors. For information, see: [www.epa.gov/etv/verifications/vcenter1-11.html](http://www.epa.gov/etv/verifications/vcenter1-11.html).
16. Wang, Q., D. Kim, D. Dionysiou, G. Sorial and D. Timberlake, 2004. “Sources and Remediation for Mercury Contamination in Aquatic Sediments—A Literature Review,” *Environmental Pollution* 131 (2004) 323–336.  
  
 Kim, D., Q. Wang, G. Sorial, D. Dionysiou and D. Timberlake, 2004. “A Model Approach for Evaluating Effects of Remedial Actions on Mercury Speciation and Transport in a Lake System,” *Science of the Total Environment* 327 (2004) 1–15.
17. Randall, P.M., Chattopadhyay, S., and Ickes, J.A., 2004. Influence of pH and Oxidation-Reduction (Eh) Potential on the Dissolution of Mercury-Containing Mine Wastes from the Sulfur Bank Mercury Mine, *Minerals & Metallurgical Processing Journal* 21:93–98, May 2004.
18. Randall, P.M., L. Brown, L. Deschaine, J. Dimarzio, G. Kaiser, and J. Vierow, 2004. Application of the Analytic Hierarchy Process to Compare Alternatives for the Long-Term Management of Surplus Mercury, *Journal of Environmental Management* 71(1):35–43. Accessible at: <http://dx.doi.org/10.1016/j.jenvman.2004.01.004>.  
  
 Porter, S., et al., 2004. Toxic Metals in the Environment: Thermodynamic Considerations for Possible Immobilization Strategies for Pb, Cd, As, and Hg, *Critical Reviews in Environmental Science and Technology*, 34:395–604.  
  
 EPA, 2002b. Preliminary Analysis of Alternatives for the Long Term Management of Excess Mercury. EPA/600/R-03/048. Accessible at: [www.epa.gov/ORD/NRMRL/Pubs/600R03048/600R03048.html](http://www.epa.gov/ORD/NRMRL/Pubs/600R03048/600R03048.html).



19. Discussions of the fish sample data gathered by Region 8 will be included in the Human Health and Ecological Risk Assessment for the Cheyenne River Basin Site.
20. MDN. Mercury Deposition Monitoring Network. NADP. National Air Deposition Monitoring Program. For information see: <http://nadp.sws.uiuc.edu/mdn/>.
21. FDA. U.S. Food and Drug Administration. Mercury in Fish: FDA Monitoring Program. For information, see: [www.cfsan.fda.gov/~frf/seamehg2.html](http://www.cfsan.fda.gov/~frf/seamehg2.html).
22. EPA. National Fish Tissue Study. For information, see: [www.epa.gov/waterscience/fishstudy/](http://www.epa.gov/waterscience/fishstudy/).
23. EPA, 2005c.
24. Mahaffey, K.R., 2005. Exposures to Mercury in the Americas. In: Pirrone, N. and K.R. Mahaffey, Dynamics of Mercury Pollution on Regional and Global Scales. Springer-Verlag, New York.
25. CDC. National Health and Nutrition Examination Survey, (NHANES). For information, see: [www.cdc.gov/nchs/about/major/nhanes/growthcharts/charts.htm](http://www.cdc.gov/nchs/about/major/nhanes/growthcharts/charts.htm).
26. CDC, 2003. Mercury, PP. 17-19 in Second National Report on Human Exposure to Environmental Chemicals, January 2003. Accessible at: [www.cdc.gov/exposurereport/2nd/](http://www.cdc.gov/exposurereport/2nd/).
27. CDC, 2004. Blood Mercury Levels in Young Children and Childbearing-Aged Women—United States, 1999–2002. Morbidity and Mortality Weekly Report, November 5, 2004/53(43):1018–1020. Accessible at: [www.cdc.gov/mmwr/preview/mmwrhtml/mm5343a5.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5343a5.htm).
28. NHANES 2005-2006 Ethics Review Board Protocol. CDC, National Center for Health Statistics, Division of Health and Nutrition Examination Survey.
29. EPA, 2003b. America's Children and the Environment: Measures of Contaminants, Body Burden, and Illness. EPA 240-R-03-001, February 2003. Accessible at: [www.epa.gov/envirohealth/children/](http://www.epa.gov/envirohealth/children/).
30. EPA, 2003c. Draft Report on the Environment. Accessible at: [www.epa.gov/indicators/roe/html/roeTOC.htm](http://www.epa.gov/indicators/roe/html/roeTOC.htm).