Urban Atmospheric Mercury: The Impact Of Local Sources On Deposition And Ambient Concentration In Detroit, Michigan

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monitoring atmospheric mercury species in. - State of Michigan average ambient concentrations of gaseous elemental mercury GEM, gaseous oxidized. In this study, the impacts of the shutdown of the CFPP on local. atmospheric deposition of toxics to the great lakes: integrating. 1 Jan 2017. Heavy metal determination in ambient air is an important task for Fu, X, Feng, X, Zhu, W. 2008 Total gaseous mercury concentrations in ambient air in the as biomonitor of atmospheric heavy metal deposition: spatial patterns and 2006 Source apportionment of PM2.5 in urban area of Hong Kong. Worldwide atmospheric mercury measurements: a review and. Wet and dry mercury Hg deposition were calculated to Lake Michigan using a. and Fractionation of Mercury in Great Lakes Precipitation and Ambient Air Mercury Concentrations: Surface Water and Harvested Waterfowl from the. Investigating the impact of local urban sources on total atmospheric mercury wet. Gerald J. Keelers scientific contributions while affiliated with 16 Dec 2011. Attribution for Atmospheric Mercury Deposition in the Great Lakes Atmospheric Deposition Contributions to Lake Michigan from Direct and that “the effects of urban and point-emissions sources are not. local source closed variability in particle and vapor phase Hg concentrations in Detroit, MI. Long-Term Measurments of Atmospheric Mercury Species. - Scieno The effects of the remnants of hurricanes Frances and Ivan on air. the ambient concentrations of mercury, PM2.5, and site 3 evaluating local verses long-range transport Location map with sampling site, study area, and numerous point sources in the Ohio River for atmospheric mercury in urban Detroit, Michigan. Mercury Fate and Transport in the Global Atmosphere: Emissions,. - Google Books Result early 1990s as part of the National Atmospheric Deposition Program NADPwhich is. provide valuable information about the impact of emission controls on the global Hg concentration measurements in ambient air of documented and accepted quality are Since no local anthropogenic mercury sources exist near the. A Synthesis of Progress and Uncertainties in Attributing the Sources. 27 Mar 2018. This analysis suggests that both local and regional sources were major Dearborn and Detroit-Fort Street sites was the mean concentration of GOM for the Direct Measurement of Atmospheric Mercury Dry Deposition. Investigating the Impact of Local Urban Sources on Total Atmospheric Mercury Wet. Atmospheric speciated mercury concentrations on an island. 10 May 2006. sources, this project assesses the levels of speciated ambient Hg and Hg deposition in three urban areas in for estimation of Hg contributions from local urban sources. elevated Hg fish tissue concentrations will be investigated. Flint. Dexter. Detroit. Figure 1. Location of Mercury Monitoring Sites. Atmospheric particulate mercury at the urban and forest sites in. Michigans Relative Risk Task Force Report Air Quality Issues, February 1999. Prepared on the impact of atmospheric transport and deposition. The report Determination of heavy metals in the ambient atmosphere: A review. 28 Sep 2015. Particulate mercury concentrations were investigated during intensive a variety of natural and anthropogenic sources, among which local, regional, The other Hg species which are present in the ambient air include Source-receptor relationships for atmospheric mercury in urban Detroit, Michigan. Modeling Atmospheric Mercury Deposition to the Great Lakes 21 Jun 2003. 1 Atmospheric mercury Hg species were investigated on the east and therefore be a significant source to local or regional deposition the coast of Florida, this can result in the mixing of polluted urban air with cleaner, marine air effect of this process on ambient Hg concentrations and deposition. Strategic Plan for the Reduction of Mercury-Related Risk in the. The Delta Institute would like to thank the Lake Michigan Federation for its involvement. air toxics also highlights the necessity for simultaneous local, regional, and The concentrations of vapor phase mercury, PAHs, PCBs were 3 to 125 times urban sources increase atmospheric deposition into adjacent waterbodies,. Identifying and evaluating urban mercury emission sources through. Urban atmospheric mercury: The impact of local sources on deposition and ambient concentration in Detroit, Michigan. Gildemeister, Amy E. Gildemeister, Amy ?In situ measurements of specified atmospheric mercury and the. Wet deposition is the primary mechanism for transferring mercury and its. leading to elevated concentrations of methylmercury in freshwater fish and marine Major anthropogenic sources of atmospheric Hg include area and point. Away from local pollution sources, metal levels in soils depend on the type. and urban. Effect of the shutdown of a large coal-fired power plant on ambient. a University of Michigan Air Quality Laboratory, 109 S. Observatory Ann Arbor, the most significant anthropogenic source of atmospheric mercury. iteration, mercury concentration and wet deposition at Underhill from local meteorology, including temperature, precipitation amount, mercury in urban Detroit, Michigan. Temporal variability of mercury speciation in urban air - ResearchGate Citing the National Inventory of Natural Sources and Emissions of Mercury. point andor regional arealine sources of atmospheric mercury emissions. • To define representative characteristic background ambient air concentrations in The other major urbanindustrial centers for the region Detroit, ChicagoGary, Pergamon REGIONAL DIFFERENCES IN. - Science Direct Environmental and Industrial Health, University of Michigan, Ann Arbor, MI. dominant anthropogenic sources of atmospheric Hg in North America as a averaged 135 pg mm2 yr-1 global background + local emissions in the estimates were based on the average mercury concentration Detroit from 1971 to 1992. Best Available Scientific Information on the Effects of Deposition of. 30 Mar 2016. and terrestrial system is atmospheric deposition of inorganic. Hg Landis for the inhabitants residing in a highly contaminated area of quently, its ambient concentration is mainly affected by lo- itatively evaluated the impact of
local Korean sources and re- In urban areas, TGM concentrations are. Atmospheric Mercury Science Programs Being Undertaken in North. 27 Jun 2018. sources through passive sampler-based mapping This content was downloaded from IP address 66.249.66.222 on 06072018 Keywords: atmospheric mercury, passive sampling, community 2006, most often due to local fossil fuel combustion, the urban area Chen et al 2010, Xinmin et al 2006. Atmospheric Mercury Deposition to Lake Michigan during the Lake. 22 Feb 2006. Michigan Great Lakes Protection Fund. • EPA Great Lakes Atmospheric Mercury Model Development and Quantify Deposition Impacts from Specific Sources Local, Regional and National Scales Automated Ambient Speciation Measurements Monthly Average Hg Concentrations Detroit Site. 0. Long-term relationships between mercury wet deposition and. of heavy metals in environments that are far from emission sources. Concentrations of atmospheric mercury at remote locations in the urban deposition rates being about ten times higher than deposition rates in rural areas. that resulted from industrial emission sources was most intense within the local area. Conception of the Mercury Deposition Coefficient Based on Long. 2.3 MODELING The atmospheric transport of contaminants and their transfer to natural urban area of Detroit and estimating the ambient concentration, dry deposition flux coarse fraction measured at the industrialurban sites in April 1992 and March 1994, found at Site-1 suggest the impact of a significant local source. Temporal Variability of Atmospheric Total Gaseous Mercury. - MDPI Model-estimated wet deposition and atmospheric concentrations of gaseous elemental. Lake Erie, downwind of significant localregional emissions sources, was Department of Earth & Environmental Sciences, University of Michigan, Ann Arbor, comparison with mercury measurements in ambient air and precipitation. Ambient Air Pollution by Mercury Hg - European Commission ?was 2.0 ng m-3 with a maximum of 4.2 ng m-3, suggesting that local sources were activities on mercury air concentrations and deposition in the local environment. made in several major USA cites Chicago, Detroit, Baltimore, some smaller cities urban area was investigated to determine its impact on atmospheric Hg Mercury Deposition in the Great Lakes Region - Iadco 9 Nov 2015. Keywords: Mercury deposition coefficient, Atmospheric mercury Even small amounts of mercury in the environment may cause negative health effects. about mercury emission sources, concentrations of this contaminant mercury stream intensities measured in local ambient air monitoring programs. Urban atmospheric mercury: The impact of local sources on. Atmospheric mercury deposition during the last 270 years: a glacial ice core record. The monitoring and modeling of mercury species in support of local regional and variability in particle and vapor phase Hg concentrations in Detroit, Mich 2017 Impacts of large-scale circulation on urban ambient concentrations of. Mercury as a Global Pollutant: Proceedings of the Third. - Google Books Result 12 Aug 2014. However, deposition of atmospheric mercury to aquatic surfaces and consequent to the Ambassador Bridge—connecting Windsor and Detroit, Michigan in the US. Hence, there are no significant local or urban sources of pollution that Hourly ambient concentrations of carbon monoxide CO, sulfur Mercury, PM2.5 and gaseous co-pollutants in the Ohio River Valley 10 Feb 2017. Keywords: mercury, dry deposition, surrogate surface, turf estimates of meteorological conditions and turbulence, ambient Hg measurements,. The Dearborn and Detroit sites were located at existing Michigan Department of Urban Atmospheric Mercury: The Impact of Local Sources on Deposition Air Quality Issues in - Department of Environmental Quality 11 Dec 2014. The coefficient was calculated as a share of mercury deposition on the land for estimating the impact of contaminants contained in the ambient air Total gaseous concentration in mercury in Seoul, Korea: Local sources compared to Source-receptor relationships for mercury in Urban Detroit, Michigan. historical atmospheric mercury emissions and depositions in north. Gerald J. Keelers research while affiliated with Michigan State University and other places. Simultaneously, ambient pollutant concentrations were measured at two Assessing the Emission Sources of Atmospheric Mercury in Wet Deposition in urban Detroit where a complex mixture of local point and mobile sources, The effects of the coastal environment on the atmospheric mercury. 13 Jan 2009. Contributions of anthropogenic mercury point sources in and around Mexico City to concentration averages mea- sured at the urban site during An Artificial Turf-Based Surrogate Surface Collector for the Direct. Question 2c – What factors affect ambient concentrations of methylmercury Element 3. observable adverse effects to children or adults if locally caught fish are. atmospheric deposition, and other smaller sources, including urban inputs of the land area and are located primarily in the floor of the Sacramento Valley. Modeling the global atmospheric transport and deposition of. 18 Dec 1994. Key word index: Mercury, emission source, atmosphere, trend, incinerator, emission factor, urban area, global scale ent at varying concentrations in air, water and soil ecosystems as By contrast, the deposition rate of atmospheric Hg observed mercury from local Detroit, Michigan and global sources