

NYSDEC Automotive Mercury Switch Recycling Project

This project will assist in preventing mercury from entering the Great Lakes Basin (GLB) through collection and recycling of hood and truck lid mercury switches from vehicles at salvage yards, voluntary participation of the public at household hazardous waste (HHW) collections, and as a voluntary service provided by auto dealerships. The goal of the collection effort is to remove 250,000 mercury switches from vehicles in the major population centers of New York that are in the GLB. Approximately 500 lbs of mercury will be removed as a threat to the GLB if the goal is realized. Information on pollution prevention for automotive salvage yards will be presented to owners of such facilities through workshops and on-site visits by non-regulatory environmental staff from participating counties. The compliance assistance effort will help to bring the facilities into compliance with federally mandated Storm Water Permitting requirements and prevent mercury and other contaminants from entering the GLB. The on-site compliance assistance approach in this project will also enhance the state pilot enforcement program for automotive salvage yards which is currently focusing on facilities outside the GLB in the Hudson Valley drainage basin. The mercury collection activities will occur in the most populated counties (Erie, Niagara, and Monroe) that border Lake Erie and Lake Ontario. The Buffalo River in Erie County and the Genesee River located in Monroe County are known contributors of non-point source discharges of mercury to the GLB; the removal of mercury from yards adjoining these waterways will reduce the risk associated with these short path non-point sources of pollution. The removal and recycling of vehicle mercury switches prior to the contaminant release associated with crushing and shredding operations at automotive salvage yards is a pro-active approach that certainly meets the definition of pollution prevention. The collection of hood and truck lid switches is also justifiably cost effective; switches contain >85% of the weight of mercury (approx 1gram/vehicle) contained in vehicles with hood and trunk lid switches. The switches are also easily removed (< 1 minute /switch) and each switch removed represents the equivalent of nearly 25 times the quantity of mercury contained in a 4' fluorescent light tube.

Automotive light switches are a source of mercury contamination affecting the Great Lakes. Approximately 100-200 lbs. of mercury per 100,000 vehicles per annum is available to contaminate the environment when automobiles reach the end of their life cycle in automotive salvage yards from just the three counties where this project will be conducted. The EPA has also mandated owners of automotive salvage yards to prepare Storm Water Permit applications that incorporate pollution prevention for toxic substances like mercury. State and Federal funding for new environmental staff to monitor the Storm Water Permit (SWP) applications has not been a high priority. The effort to obtain compliance with the SWP requirements is therefore less aggressive than for other funded programs. Larger quantities of mercury can also be prevented from entering the environment through prevention based programs that remove switches from vehicles prior to salvage yard processing. The major obstacle in achieving success for this project is gaining the cooperation for this type of voluntary action on the part of consumers who own registered vehicles, automobile dealers who would voluntarily remove the switches from customer vehicles, automobile manufacturers who could provide replacement switches, and automobile dismantlers who could remove, collect and recycle the switches. This project seeks to get the required cooperation through: the distribution of information to stakeholders; face to face contacts with stakeholders; and by establishing a low cost voluntary collection and recycling program for Automotive Mercury Switches at automotive salvage yards, car dealerships, and county sponsored household collection events.