



**MUNICIPAL STREAMLINED
MERCURY VARIANCE (SMV) APPLICATION**
State Form 52112 (5-05)
Approved by State Board of Accounts, 2005
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Indiana Department of Environmental Management
Office of Water Quality – Mail Code 65-42
NPDES Permits Branch
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

PART ONE: General Information

Name of Facility		
Facility Address		
City or Town		
State	ZIP Code	County
National Pollutant Discharge Elimination System (NPDES) Permit No.:		
Owner or Person in Responsible Charge (<i>i.e., Town Board President/Mayor</i>)		
Title		
Address		
City or Town		
State	ZIP Code	
Name of Primary Contact Person		
Address		
City or Town		
State	ZIP code	Telephone No.
E-mail Address (<i>if available</i>)		
NPDES Outfall(s) Affected by Streamlined Mercury Variance Request:		
Receiving Stream(s) Affected by Streamlined Mercury Variance Request:		
Facility Design Flow:		
Population Served:		
Number of Significant Industrial Users (<i>as defined in 327 IAC 5-17-23</i>):		

SIGNATURE BLOCK

This application must be signed by a person in responsible charge (*see 327 IAC 5-2-22*) to be valid. This signature attests to the following:
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name	Title
Signature	Date Signed (<i>month, day, year</i>)

Return the completed SMV application package (Parts I - V) and \$50 application fee (see IC 13-18-20-12(a)(4)) to the mailing address listed above.

PART TWO – POLLUTANT MINIMIZATION PROGRAM PLAN (PMPP) INVENTORY/IDENTIFICATION

A. Provide a preliminary inventory of potential uses and sources of mercury in all buildings and departments, as well as a preliminary identification of known mercury-bearing equipment, wastestreams, and mercury storage sites. The following checklist* includes many of the chemicals, equipment, locations, etc. where mercury may be present at your site. For the purpose of satisfying the requirements of this section, you may submit the completed checklist as a preliminary inventory/identification. While the checklist is intended to facilitate the inventory/identification process, it should not be considered as all-inclusive for purposes of establishing a complete inventory. (see 327 IAC 5-3.5-9(a)(1) and 327 IAC 5-3.5-9(a)(2))

LABORATORY EQUIPMENT

<input type="checkbox"/> Manometers	<input type="checkbox"/> Ion exchange cartridges for lab water purification system
<input type="checkbox"/> Barometers	<input type="checkbox"/> Hanging mercury drop electrodes for polarographic analyzers
<input type="checkbox"/> Thermometers	<input type="checkbox"/> Mercury Hallow Cathode lamp for AA analysis

LABORATORY CHEMICALS

<input type="checkbox"/> COD analysis reagent (<i>mercuric sulfate</i>)	<input type="checkbox"/> Mercury or mercurous chloride
<input type="checkbox"/> TKN and TP analysis digestion reagents	<input type="checkbox"/> Mercury iodide
<input type="checkbox"/> Nessler reagent	<input type="checkbox"/> Mercury nitrate
<input type="checkbox"/> Mercury analytical standards	<input type="checkbox"/> Mercury (II) oxide
<input type="checkbox"/> Gas chromatograph sample interferences (<i>elemental mercury</i>)	<input type="checkbox"/> Mercury (II) sulfate
<input type="checkbox"/> Sodium hypochlorite (<i>Clorox</i>)	<input type="checkbox"/> Merthiolate

BULK CHEMICALS

<input type="checkbox"/> Phosphorus removal chemicals	<input type="checkbox"/> Chlorine
<input type="checkbox"/> Dechlorination chemicals	<input type="checkbox"/> Sodium hypochlorite
<input type="checkbox"/> Sludge thickening polymers	<input type="checkbox"/> Sulfuric acid
<input type="checkbox"/> Potassium hydroxide	<input type="checkbox"/> Nitric acid
<input type="checkbox"/> Sodium hydroxide	<input type="checkbox"/> Ferric or ferrous chloride
<input type="checkbox"/> Sodium chloride	<input type="checkbox"/> Pickling liquor (<i>for phosphorus removal</i>)

PROCESS CONTROL AND MEASURING EQUIPMENT

<input type="checkbox"/> Accustats	<input type="checkbox"/> Ring balances
<input type="checkbox"/> Barometers	<input type="checkbox"/> Shunt trips
<input type="checkbox"/> Counterweights	<input type="checkbox"/> Steam flow meters
<input type="checkbox"/> Elemental mercury for refilling mercury-containing equipment	<input type="checkbox"/> Stokes gauges
<input type="checkbox"/> Flow meters	Switches and relays:
<input type="checkbox"/> Gas regulators and meters	<input type="checkbox"/> Displacement plunger relays
<input type="checkbox"/> Gyroscopes	<input type="checkbox"/> Mercoid control switches
<input type="checkbox"/> Hydrometers with thermometers	<input type="checkbox"/> Pressure control switches (<i>mounted on bourdon tube or diaphragm</i>)
<input type="checkbox"/> Level and rotation sensors	<input type="checkbox"/> Relay switches
<input type="checkbox"/> Manometers, pressure gauges and vacuum gauges	<input type="checkbox"/> Mercury wetted relays
<input type="checkbox"/> Mercury-sealed pistons	<input type="checkbox"/> Mercury displacement relays (<i>found in motors</i>)
<input type="checkbox"/> Perimeters	<input type="checkbox"/> Sump pump, bilge pump and other float controls
<input type="checkbox"/> Pressure-trols	<input type="checkbox"/> Tilt switches
<input type="checkbox"/> Pyrometers	<input type="checkbox"/> Thermometers (<i>including industrial dial face thermostats with capillary tubes.</i>)
<input type="checkbox"/> Rectifiers	<input type="checkbox"/> Thermostats and thermoregulators
	<input type="checkbox"/> Transmitters

BUILDINGS

<input type="checkbox"/> DC watt-hour meters	Hydronic and warm air controls with tilt switches such as:
<input type="checkbox"/> Flame sensors (<i>found in the pilot light and burner assembly on gas-fired furnaces, boilers, unit heaters and space heaters</i>)	<input type="checkbox"/> Aquastats
	<input type="checkbox"/> Pressurestats
	<input type="checkbox"/> Firestats
	<input type="checkbox"/> Fan limit controls
	<input type="checkbox"/> Pressure/flow controls on air handling units.

* This checklist was borrowed from the Delta Institute.

PART TWO (CONTINUED)

BUILDINGS (continued)

Switches and relays:

<input type="checkbox"/> Fire alarm box switches	<input type="checkbox"/> Mercury displacement relays (<i>found in lighting, resistance heating and motors</i>)
<input type="checkbox"/> Silent light switches	
<input type="checkbox"/> Relay switches	<input type="checkbox"/> Sump pump, bilge pump, flow monitor, float switches, and other float controls
<input type="checkbox"/> Mercury wetted relays	
<input type="checkbox"/> Tilt switches	

Phosphorus removal chemicals:

<input type="checkbox"/> Ferric or ferrous chloride
<input type="checkbox"/> Pickling liquor
<input type="checkbox"/> Thermostats

BEARINGS AND SEALS

<input type="checkbox"/> Trickling filter Pivot Arm Bearings (<i>mercury bearings/water seals</i>)
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LAMPS

<input type="checkbox"/> Fluorescent	<input type="checkbox"/> Mercury vapor lamps
<input type="checkbox"/> High-pressure sodium	<input type="checkbox"/> Metal halide
<input type="checkbox"/> Mercury arc	<input type="checkbox"/> Ultraviolet disinfection

BATTERIES

<input type="checkbox"/> Mercury-zinc (<i>button</i>) batteries	<input type="checkbox"/> Mercury alkaline batteries
<input type="checkbox"/> Mercury-cadmium batteries	<input type="checkbox"/> Mercury oxide batteries

PAINT

<input type="checkbox"/> Old latex-paint (pre-1990)	<input type="checkbox"/> Marine paint
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FIRST AID/MEDICAL

<input type="checkbox"/> Mercurochrome	<input type="checkbox"/> Thermometers
<input type="checkbox"/> Sphygmomanometers	<input type="checkbox"/> Thimerosal (<i>contained in eye wash</i>)

OTHER

<input type="checkbox"/> Old pesticides, fungicides and herbicides	<input type="checkbox"/> Fleet vehicles may contain ABS, convenience and trunk lighting switches and HID headlamps
<input type="checkbox"/> Tree root growth control products	
<input type="checkbox"/> Computer monitors	

COLLECTION SYSTEM

<input type="checkbox"/> Lift station equipment	<input type="checkbox"/> Sewer lines with accumulated mercury
<input type="checkbox"/> Traps with accumulated mercury	<input type="checkbox"/> Other mercury containing equipment
<input type="checkbox"/> Sumps with accumulated mercury	<input type="checkbox"/> Mercury-containing chemicals used and/or stored on-site

MERCURY STORAGE SITES

<input type="checkbox"/> Elemental mercury	<input type="checkbox"/> Mercury-containing items collected for disposal
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B. Provide a plan and schedule for providing a complete inventory initiated under Section A. above. (*see 327 IAC 5-3.5-9(a)(1)*) The schedule required under this part should be expressed in terms of months from the date of NPDES permit issuance, renewal, or modification that incorporates the approved SMV. It is recommended that the schedule required under this part be developed in conjunction with the other schedules for action required by the SMV application.

A complete inventory should include an estimate of quantities (*i.e., volume of chemicals used annually, or numbers of mercury containing equipment*) for each item identified in Part II.A. Additionally, a complete inventory should include documentation from chemical suppliers and equipment suppliers of the mercury content in your most commonly purchased items. Mercury may not be present in a concentration great enough to appear on an MSDS, yet still contribute to the overall level of mercury in the influent.

PART TWO (CONTINUED)

- C. Provide the results of a preliminary evaluation of possible mercury sources in the facility's influent. The preliminary evaluation must include an initial list identifying all potential sources of mercury in the POTW's influent by name and address. The preliminary evaluation shall take into consideration, at a minimum, the following: (see 327 IAC 5-3.5-9(b)(1))
1. Medical facilities, for example, the following:
 - a. Hospitals.
 - b. Clinics.
 - c. Nursing homes.
 - d. Veterinary facilities.
 2. Dental clinics.
 3. Public and private educational laboratories.
 4. General industry and all SIU's.
 5. Significant sources of residential and retail contributions of mercury, for example, the following:
 - a. Heating, ventilation, and air conditioning contractors.
 - b. Automobile and appliance repair.
 - c. Veterinarians.
 - d. Others specific to the community served.
 6. An identification of the responsibilities under P.L.225-2001 (*also known as House Enrolled Act 1901 of the 2001 legislative session*) for the significant industrial users for the POTW. P.L.225-2001 outlines the restrictions on the sale or supply of mercury-added novelties, mercury-added products, and mercury commodities, and on the use or purchase of mercury commodities, compounds, or mercury-added instructional equipment and materials by public and non-public schools. In order to satisfy the requirement of this part, include a written statement that attests to the fact that an identification of the responsibilities under P.L.225-2001 has been undertaken.
- D. Provide a plan and schedule for completion of the evaluation initiated under Section C. above. A complete evaluation should include a list identifying all confirmed sources of mercury in the POTW's influent by name and address. The schedule required under this part should be expressed in terms of months from the date of NPDES permit issuance, renewal, or modification that incorporates the approved SMV. It is recommended that the schedule required under this part be developed in conjunction with the other schedules for action required by the SMV application. (see 327 IAC 5-3.5-9(b)(1))

PART THREE - POLLUTANT MINIMIZATION PROGRAM PLAN (PMPP) PLANNED ACTIVITIES

- A. Provide a list of planned activities to be conducted to eliminate or minimize the release of mercury to waters of the state. The list of planned activities may consider technical and economic feasibility and must include, at a minimum: (see 327 IAC 5-3.5-9(a)(3))
1. A review of purchasing policies and procedures.
 2. Necessary training and awareness for facility staff including an education program.
 3. An education program for the public within the service area of the facility.
 4. Evaluation of alternatives to the use of any mercury-containing equipment or materials.
 5. Other specific activities designed to reduce or eliminate mercury loadings.
 6. An identification of the facility's responsibilities under P.L.225-2001 (*also known as House Enrolled Act 1901 of the 2001 legislative session*). Under P.L.225-2001, a municipality may, in cooperation and with the support of IDEM, implement education programs for the public regarding the reuse and recycling of, or independently implement collection programs for, mercury commodities and mercury-added products. In order to satisfy the requirement of this part, include a written statement that attests to the fact that an identification of the responsibilities under P.L.225-2001 has been undertaken.
- B. For each planned activity identified under section A. above, include the following: (see 327 IAC 5-3.5-9(a)(4))
1. The goal to be accomplished.
 2. A measure of performance.

ATTACHMENT A

Sector	Planned Activity	Goal	Measure of Performance	Schedule of Action
Medical facilities, including <ul style="list-style-type: none"> • hospitals • clinics • nursing homes • veterinary facilities 	Mail AHA BMP literature	Education/awareness	Date mailed and content	9 months from SMV approval
	On-site visits	Promote BMP implementation	Participation	9 months from SMV approval
	Workshops	Education/awareness	Participation	6 months from SMV approval
	BMP requirements	Mercury-free where ever practicable	Progress, quantity recycled	9 months from SMV approval
Dental clinics	Mail appropriate BMP literature	Education/awareness	Date mailed and content	6 months from SMV approval
	Meetings with dentists	Education/awareness	Participation	6 months from SMV approval
	On-site visits	Promote BMP implementation	Participation	6 months from SMV approval
	Survey(s)	Participation	Participation	9 months from SMV approval
	Adherence to ADA's BMP (<i>voluntary or mandatory</i>)	Minimize mercury discharged	Adoption/implementation	9 months from SMV approval
	Mercury recycling (<i>voluntary or mandatory</i>)	Minimize mercury discharged	Quantity recycled	12 months from SMV approval
	Adoption of removal equipment meeting ISO standards	Adoption/implementation	Adoption/implementation	12 months from SMV approval
Public and private educational laboratories	Mail appropriate BMP literature	Education/awareness	Date mailed and content	6 months from SMV approval
	Workshops	Education/awareness	Participation	12 months from SMV approval
	On-site visits	Promote BMP implementation	Participation	9 months from SMV approval
General industry and all SIU's	Mail chemical/equipment literature	Education/awareness	Date mailed and content	6 months from SMV approval
	On-site visit during pretreatment inspection	Ensure permit compliance Education/awareness	Compliance evaluation	To coincide with annual pretreatment inspection
	Application of local limits	Mercury reduction	Compliance evaluation	To coincide with permit renewal
Significant sources of residential and retail contribution of mercury, for example, the following: <ul style="list-style-type: none"> • heating, ventilation, and air conditioning contractors • automobile and appliance repair • veterinarians • others specific to the community served 	Mail appropriate BMP literature	Education/awareness	Participation	12 months from SMV approval
	Workshops	Education/awareness	Participation	12 months from SMV approval
	On-site visits	Promote BMP implementation	Participation	9 months from SMV approval
	Trade association coordination, where appropriate	Increased participation	Participation	9 months from SMV approval
	Survey(s)	Participation	Participation	9 months from SMV approval