

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.e., Town Board	l President/Mayor)				
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 (if available)					
NPDES Outfall(s) Affected by Streamlined Mercury Variand	ce Request:				
Receiving Stream(s) Affected by Streamlined Mercury Vari	ance Request:				
Facility Design Flow:					
Population Served:					
Number of Significant Industrial Users (as defined in 327 IAC 5-17-23):					
	SIGNATU	RE BLOCK			
This application must be signed by a person in respon			-		
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 (month, day, year)					
Return the completed SMV application package (Parts (see IC 13-18-20-12(a)(4)) to the mailing address lister		ee			

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					
☐ Manometers	☐ Ion exchange cartridges for lab water purification system				
☐ Barometers	☐ Hanging mercury drop electrodes for polarographic analyzers				
☐ Thermometers	☐ Mercury Hallow Cathode lamp for AA analysis				
LABORATORY CHEMICALS					
☐ COD analysis reagent (mercuric sul	fate)		☐ Mercury or mercurous chloride		
☐ TKN and TP analysis digestion reag	ents		☐ Mercury iodide		
☐ Nessler reagent			☐ Mercury nitrate		
☐ Mercury analytical standards		☐ Mercury (II) oxide			
☐ Gas chromatograph sample interfere	ences (elemental n	nercury)	rcury)		
☐ Sodium hypochlorite (Clorox)			☐ Merthiolate		
BULK CHEMICALS					
☐ Phosphorus removal chemicals		☐ Chlori	ne		
☐ Dechlorination chemicals		☐ Sodiu	m hypochlorite		
□ Dechlorination chemicals □ □ Sludge thickening polymers □ □ Potassium hydroxide □ □ Sodium hydroxide □ □ Sodium chloride □ PROCESS CONTROL AND MEASURING EQUIPMENT		☐ Sulfur	ic acid		
□ Potassium hydroxide		□ Nitric	acid		
☐ Sodium hydroxide		☐ Ferric	or ferrous chloride		
☐ Sodium hydroxide		☐ Picklir	ng liquor (for phosphorus removal)		
PROCESS CONTROL AND MEASUR	ING EQUIPMENT				
☐ Accustats		☐ Ring balar	nces		
□ Barometers		☐ Shunt trips	3		
□ Counterweights		☐ Steam flow	w meters		
☐ Elemental mercury for refilling		☐ Stokes ga	uges		
mercury-containing equipment		Switches and	d relays:		
☐ Flow meters		□ Displa	cement plunger relays		
☐ Gas regulators and meters		☐ Merco	id control switches		
☐ Gyroscopes		☐ Pressure control switches (mounted on bourdon tube or diaphragm)			
☐ Hydrometers with thermometers		☐ Relay switches			
□ Level and rotation sensors		☐ Mercury wetted relays			
☐ Manometers, pressure gauges and	vacuum gauges	☐ Mercu	ry displacement relays (found in motors)		
☐ Mercury-sealed pistons		☐ Sump	pump, bilge pump and other float controls		
☐ Permeters		☐ Tilt sw	itches		
☐ Pressure-trols		☐ Thermome	eters (including industrial dial face thermostats with capillary tubes.)		
□ Pyrometers		☐ Thermostats and thermoregulators			
☐ Rectifiers		☐ Transmitte	ers		
BUILDINGS					
□ DC watt-hour meters		Hydronic and	warm air controls with tilt switches such as:		
☐ Flame sensors (found in the pilot light and burner		☐ Aquastats			
assembly on gas-fired furnaces, boilers, unit heaters		☐ Pressurestats			
and space heaters)		☐ Firestats			
		☐ Fan limit controls			
* This checklist was borrowed from the Delta Institute.		☐ Pressure/flow controls on air handling units.			

PART TWO (CONTINUED)						
BUILDINGS (continued)						
Switches and relays:						
☐ Fire alarm box switch	es	☐ Mercury displacement relays (found in lighting, resistance heating				
☐ Silent light switches		and motors)				
☐ Relay switches		☐ Sump pump, bilge pump, flow monitor, float switches, and other				
☐ Mercury wetted relays	S	float controls				
		☐ Tilt switches				
Phosphorus removal chemi	icals:					
☐ Ferric or ferrous chlor	ride					
☐ Pickling liquor						
□Thermostats						
BEARINGS AND SEALS						
☐ Trickling filter Pivot Arm	Bearings (n	mercury bearings/water seals)				
LAMPS						
☐ Fluorescent		y vapor lamps				
☐ High-pressure sodium	☐ Metal ha	alide				
☐ Mercury arc	☐ Ultravio	let disinfection				
BATTERIES						
☐ Mercury-zinc (button) ba	tteries	☐ Mercury alkaline batteries				
☐ Mercury-cadmium batter	ies	☐ Mercury oxide batteries				
PAINT						
☐ Old latex-paint (pre-1990	J) ☐ Mari	ine paint				
FIRST AID/MEDICAL						
☐ Mercurochrome		rmometers				
□ Sphygmomanometers	☐ Thim	nerosal (contained in eye wash)				
OTHER						
☐ Old pesticides, fungicide	s and herbi					
☐ Tree root growth control	products	switches and HID headlamps				
☐ Computer monitors						
COLLECTION SYSTEM						
☐ Lift station equipment		☐ Sewer lines with accumulated mercury				
☐ Traps with accumulated	mercury	☐ Other mercury containing equipment				
☐ Sumps with accumulated		☐ Mercury-containing chemicals used and/or stored on-site				
MERCURY STORAGE SITES						
☐ Elemental mercury	☐ Me	ercury-containing items collected for disposal				
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.
 - 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.

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- 3. A schedule for action. 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.
- C. Provide a list of planned activities designed to reduce or eliminate mercury loadings from each sector identified in Part II.C. of the application, including the goal to be accomplished, a measure of performance, and a schedule for action. (see 327 IAC 5-3.5-9(b)(2))

 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. An example of planned activities, goals, measures of performance and schedules for action for the sectors identified in Part II.C. is provided in Attachment A.
- D. Provide an identification of the resources and staff necessary to implement the Pollutant Minimization Program Plan (PMPP). (see 327 IAC 5-3.5-9(a)(6)) The identification should indicate the source and amount of funding available to implement the PMPP, as well as the number and position of employees that will be devoted to PMPP implementation.

PART FOUR - MERCURY MONITORING DATA

Provide all available influent and effluent mercury data for the two-year period preceding submittal of this application. Additionally, provide any information on mercury in biosolids for the two-year period preceding submittal of this application, if available. The data may be supplied on a separate form, but must include results for each individual sample (including unit of measurement and U.S. EPA method), the date the sample was taken, and the analytical laboratory where the analysis was performed. (see 327 IAC 5-3.5-9(a)(5))

Influent				
Date (month, day, year)	Result	ng/l	U.S. EPA Method	Analytical Laboratory
,				

Effluent					
Date (month, day, year)	Result	ng/l	U.S. EPA Method	Analytical Laboratory	

PART FOUR (CONTINUED)					
Biosolids					
Date (month, day, year)	Result	Unit	U.S. EPA Method	Analytical Laboratory	

PART FIVE - POLLUTANT MINIMIZATION PROGRAM PLAN (PMPP) ADDITIONAL REQUIREMENTS

- A. Proof of Public Notice Activities: Provide proof of the public notice activities identified below: (see 327 IAC 5-3.5-9(c))

 For the notice of availability required under Section A.1. provide a copy of the notice as it appears in the newspaper.

 For the posting requirements under Section A.2. attest to that fact that the information was posted as required in a written statement.
- 1. Publish notice of the availability of the draft pollutant minimization program plan (PMPP) in a daily or weekly newspaper of general circulation throughout the area affected by the discharge.
- 2. Post a copy of the information required by this section at the following:
 - a. Principal office of the municipality or political subdivision affected by the facility or discharge.
 - b. The United States post office.
 - c. If one is available, the library serving those premises.
- 3. All notices published under this section shall contain the following information: (see 327 IAC 5-3.5-9(d))
 - a. The name and address of the applicant that prepared the PMPP.
 - b. A general description of the elements of the PMPP.
 - c. A brief description of the activities or operations that result in the discharge for which an SMV is being requested.
 - d. A brief description of the purpose of this notice and the comment procedures.
 - e. The name of a contact person, a mailing address, an Internet address, if available, and a telephone number where interested persons may obtain additional information and a copy of the PMPP.
- 4. The applicant shall do the following: (see 327 IAC 5-3.5-9(e))
 - a. Provide a minimum comment period of thirty (30) days.
 - b. Include a copy of the comments received and the applicant's responses to those comments in the SMV application submitted to the department.
- B. Annual Reports: Provide a schedule for the submission of the annual reports required under 327 IAC 5-3.5-9(a)(8).

 Generally, the annual reports should be submitted each year on the anniversary of the effective date of the NPDES permit that incorporates the approved SMV. A proposed schedule with an alternative submittal date is subject to IDEM's approval. The annual reports shall include a description of the facility's progress toward fulfilling each PMPP requirement, mercury monitoring results, and steps taken to implement each planned activity developed under the PMPP.

ATTACHMENT A							
Sector	Planned Activity	Goal	Measure of Performance	Schedule of Action			
Medical facilities, including	Mail AHA BMP literature	Education/awareness	Date mailed and content	9 months from SMV approval			
hospitals clinics nursing homes	On-site visits	Promote BMP implementation	Participation	9 months from SMV approval			
nursing homesveterinary facilities	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 (voluntary or mandatory)	Minimize mercury discharged	Adoption/implementation	9 months from SMV approval			
	Mercury recycling (voluntary or mandatory)	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: • heating, ventilation, and air conditioning contractors • automobile and appliance repair • veterinarians	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			
 others specific to the community served 	Survey(s)	Participation	Participation	9 months from SMV approval			