Opportunity for Public Comment and Review

Comment Period Opens: May 24, 2012

Closes: June 24, 2012

Streamlined Mercury Variance Application

& Proposed Pollutant Minimization Program Plan

Angola, Indiana

NPDES Permit No. IN0021296

May 21, 2011

Angola Wastewater Treatment Plant
Mercury Variance Questions & Answers

What is the problem?

- Mercury has been found in most Midwestern freshwater fish in levels high enough to require fish consumption advisories. This mercury is primarily from air deposition (from coal-fired power plants), but is also typically found in the treated water (effluent) from wastewater treatment plants.

Where does the mercury that ends up in a wastewater treatment plant come from?

- Residential wastewater is the source of most of the mercury discharged to the WWTP. This comes from human waste (ingested mercury can pass through the gut & go down the toilet) and household cleaners. Others sources of mercury include medical facilities, dental offices, auto repair shops, industries and laboratories.

Why can't wastewater treatment plants remove this mercury?

- The Angola WWTP removes a vast majority of mercury through the treatment process, almost 98% was removed over the last 2 ½ years. Installing equipment to remove mercury beyond this level is unrealistic. Removing/reducing mercury at the source is much more practical and cost effective.

What is being done to reduce mercury discharge from treatment plants?

- Treatment plants must meet extremely stringent requirements for mercury levels in treated effluent. If they cannot meet these limits (few can), they are required to implement a Pollution Minimization Program to help educate citizens, businesses and industries about mercury and how they can reduce the amount of mercury that they discharge to the treatment plant.

How does IDEM make sure that improvements are being made?

- Wastewater Treatment Plants are required to submit an application for a mercury variance. This variance includes specific requirements, goals, actions and ways to measure the progress that is being made by the WWTP. An approved variance becomes part of their discharge permit and is enforced through the terms and conditions of the permit.

Just how much mercury are we talking about, anyway?

- The extremely small amount of mercury that is comes in & out of the treatment plant is almost too small for most of us to imagine.
    - On average, the WWTP receives 0.0013 pounds of mercury each day. If you were to divide the head of a sewing pin into **100 equal pieces**, 0.0013 pounds would be the approximate volume of 4 of those pieces.
    - On average, the amount that leaves the treatment plant in finished water each day is 0.000029 pounds. If you divided the pin head into **1000 equal pieces**, this is the equivalent volume of 1 of those pieces.
    - The value that IDEM wants us to get below is 0.0000013 pounds per day, which is less than ½ of the average amount currently leaving the WWTP.

What can I do?

Properly dispose of household items that may contain mercury. These include: older thermostats and thermometers, irons or space heaters designed to shut off if they fall over, sump pumps with float a float switch, any light bulb requiring a ballast to operate (all florescent light bulbs), to name a few.

In order to provide an opportunity for citizens to express concerns about this variance application, the Mercury Pollution Minimization Program Plan is being made available for review and comment. Questions about this plan can be directed to Craig Williams at the phone number or email address listed above. Formal comments should be legibly written and mailed or hand-delivered to: **SMV Comments, c/o Craig Williams, 210 N. Public Sq., Angola, IN 46703**.

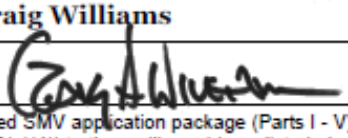
Part 1 – General Information

PART ONE: General Information		
Name of Facility: City of Angola WWTP		
Facility Address: 1095 Redding Road		
City or Town: Angola		
State: IN	ZIP Code: 46703	County: Steuben
National Pollutant Discharge Elimination System (NPDES) Permit No.: IN0021296		
Owner or Person in Responsible Charge *(i.e., Town Board President/Mayor)*: Richard M. Hickman		
Title: Mayor		
Address: 210 N Public Square		
City or Town: Angola		
State: IN	ZIP Code: 46703	
Name of Primary Contact Person: Craig Williams		
Address: 210 N Public Square		
City or Town: Angola		
State: IN	ZIP code: 46703	Telephone No.: 260.665.6806
E-mail Address *(if available)*		
NPDES Outfall(s) Affected by Streamlined Mercury Variance Request: 001		
Receiving Stream(s) Affected by Streamlined Mercury Variance Request: H.D Wood Ditch to Mud Creek to Pigeon Creek		
Facility Design Flow: 1.7 MGD		
Population Served: 8612		
Number of Significant Industrial Users *(as defined in 327 IAC 5-17-23)*: 3		

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: Craig Williams	Title: Superintendent
Signature: 	Date Signed *(month, day, year)*: May 17, 2012

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 2 – Pollutant Minimization Program Plan Inventory and Identification

Section A – Preliminary Internal Inventory and Identification

The Angola Wastewater Treatment Plant (WWTP) has conducted a preliminary assessment of potential uses and sources of mercury within direct control of the WWTP, as required by 327 IAC 5-3.5-9(a)(1) & (2). This preliminary inventory includes the following items:

- Laboratory Chemicals and Equipment
    - Thermometers
    - Barometers
    - Digestion reagents for Total Phosphorus analysis
    - Colorimetric kits for analysis of Nitrites, Nitrates, Ammonia-Nitrogen, etc
    - Sodium Hypochlorite (bleach)
    - Sodium Hydroxide
    - Sodium Chloride
    - Sodium Hypochlorite
    - Sulfuric Acid
    - Nitric Acid
    - Ferrous Chloride
- Process Control and Measuring Equipment
    - Flow meters
    - Level sensors
    - Manometers
    - Relay switches
    - Float controls
    - Thermometers
    - Thermostats
- Building Structures & Grounds
    - Flame sensors
    - Thermostats
    - Fluorescent, high pressure sodium, mercury vapor and metal halide lamps
- Treatment Processes
    - Ferrous Chloride for phosphorus removal
    - Cationic polymer for sludge treatment/thickening
    - UV Bulbs for effluent disinfection
- Other Potential Sources
    - Batteries of all types containing mercury
    - Computer monitors
    - Fleet vehicles with various switches containing mercury
    - Mercury-containing items collected for disposal
        - Old flow metering equipment from Water Department
        - Mercury-containing bulbs from all City Departments

Part 2 – Pollutant Minimization Program Plan Inventory and Identification

Section B – Schedule for Complete Internal Inventory

The Angola WWTP will begin actions to determine a complete inventory of mercury containing chemicals, supplies and equipment, and will report this updated inventory listing no later than nine (9) months after the incorporation of the SMV into the permit. This inventory will include, when available, estimated quantities for each item identified in the updated inventory.

No later than six (6) months after the incorporation of the SMV into the permit, a standard operating procedure (SOP) will be developed to include a letter requesting trace mercury content (when available) from suppliers of the most commonly purchased items. This letter will be sent out as items are ordered and responses will be documented.

A complete timeline is included in Attachment 01, Planned Sector Activities.

Part 2 – Pollutant Minimization Program Plan Inventory and Identification

Section C – Preliminary Evaluation of Potential Dischargers

The Angola WWTP has completed a preliminary review of the potential sources of mercury discharge to the POTW's collection system. This evaluation has been completed in compliance with 327 IAC 5-3.5-9(b)(1). A complete list of this evaluation is included as Attachment 02, Preliminary Evaluation of Potential Mercury Sources. Generally speaking the following categories have been identified:

- Major Medical Facilities (hospitals, general practitioners, clinics, etc)
- Nursing Homes
- Veterinary Facilities
- Dental Clinics
- Public and Private Laboratories (university, public schools, etc)
- General Industry and Significant Industrial Users
- HVAC Contractors
- Automobile Repair
- Appliance Repair
- Multi-family Residential (apartment buildings, trailer parks, etc.)
- Stormwater from Precipitation and Atmospheric Deposition

The Angola WWTP is aware of their responsibilities under Public Law (P.L.) 225-2001 (also known as the House Enrolled Act 1901 of the 2001 legislative session and codified at IC 13-20-17.5), though it is not applicable due to the nature of their business. The Angola WWTP does not sell or supply novelties, products, commodities, or instructional equipment and materials and therefore would not be applicable with respect to the restrictions of the mercury content of these materials.

Part 2 – Pollutant Minimization Program Plan Inventory and Identification

Section D – Schedule for Complete Discharger Evaluation

The Angola WWTP will refine the Potential Contributors of Mercury list within the first nine (9) months of the incorporation of the SMV into the permit. Revision of this list will be completed utilizing current phone listings, water/sewer account records through the City's Department of the Clerk Treasurer and other methods pertinent to this section.

Sampling of each individual discharger's effluent to assess mercury loading is unrealistic due to staffing resources and the costs associated with low level mercury analysis. The Angola WWTP will continue to conduct periodic sampling of the collection system to characterize and verify mercury loading to the POTW. As elevated levels of mercury identified, contributing sewer sheds will be targeted for additional sampling in an attempt to identify the discharger(s) contributing to the elevated mercury loading. The Angola WWTP will work with identified dischargers to help them implement BMPs to reduce mercury loading to the POTW.

A complete timeline is included in Attachment 01, Planned Sector Activities.

Part 3 – Pollutant Minimization Program Plan Planned Activities

Sections A, B – Internal Mercury Discharge Reduction

The Angola WWTP has developed a preliminary plan to implement various procedures and controls aimed at reducing the amount of mercury discharged in accordance with 327 IAC 5-3.5-9(a)(3) & (4). A list of these activities, goals, measures of performance and schedules are identified in Attachment 01, Planned Sector Activities.

Programs that will enhance employee awareness and understanding of how to handle and dispose of mercury containing chemicals and equipment will be developed and implemented in accordance to the PMPP schedule. Topics may include:

- Purchasing policies;
- Good housekeeping practices;
- Recycling practices;
- Proper handling & disposal procedures ;
- Spill response procedures;
- Evaluation of alternate mercury-free or reduced mercury chemicals, equipment, supplies, etc .

The Angola WWTP is aware of their responsibilities under Public Law (P.L.) 225-2001 (also known as the House Enrolled Act 1901 of the 2001 legislative session and codified at IC 13-20-17.5), though it is not applicable due to the nature of their business. The Angola WWTP does not sell or supply novelties, products, commodities, or instructional equipment and materials and therefore would not be applicable with respect to the restrictions of the mercury content of these materials.

Part 3 – Pollutant Minimization Program Plan Planned Activities

Section C – Sector Mercury Discharge Reduction

The Angola WWTP has developed a preliminary plan to work with residents, businesses and public/quasi-public sources of mercury to the POTW, as identified in Part 2, Section C of this document. These activities have been developed in accordance to 327 IAC 5-3.5-9(b)(2). A complete description of these activities, goals, measures of performance and schedules are identified in Attachment 01, Planned Sector Activities.

General Timeline:

- **3 Months**
  - Mail ADA Best Management Practices Literature to Dental Facilities;
  - Begin Public Education & Outreach effort to general public.
- **6 Months**
  - Complete SOP for requesting trace mercury data from suppliers;
  - Conduct education/awareness training for Wastewater staff.
- **9 Months**
  - Updated facility inventory of mercury-bearing items;
  - Updated list of potential commercial and industrial contributors to POTW;
  - Begin Collection System sampling.
- **12 Months**
  - Mail AHA Best Management Practices Literature to Medical Facilities;
  - Begin Industrial Education and Outreach.
- **15 Months**
  - Follow-up with Dental Facilities;
  - Mail literature on mercury-bearing compounds to laboratories and BMP's to keep mercury from the POTW.
- **18 Months**
  - Follow-up with Medical Facilities;
  - Begin Commercial Education and Outreach.
- **24 Months**
  - Follow-up with Laboratories.
- **On-going Efforts & As Occurs Efforts**
  - Battery Collection at City Hall for general public;
  - Bulb recycling for all City-owned departments;
  - Replace failed equipment with low/no mercury products, when appropriate;
  - Industrial inspections;
  - Application of Local Limits;
  - Conduct Trade Association Presentations for Education & Outreach.

Part 3 – Pollutant Minimization Program Plan Planned Activities

Section D – Resources & Staffing for Implementation

The Angola Wastewater Utility is wholly funded by rates and charges by sanitary and stormwater users within the City of Angola and extra-territorial jurisdictions. Rates and charges are evaluated annually by the utility's financial consultant, and adjustments are recommended to the City Council for near and long term funding. Currently, the annual wastewater utility budget is approximately $1.2 million. It is unknown what the net costs to implement this PMPP are, but we fully anticipate the existing operations and maintenance budget will be sufficient for implementation of the activities defined herein.

The implementation of the controls and activities listed herein will be completed by existing positions funded through the wastewater utility. This includes:

- Wastewater Superintendent (1)
- Pretreatment Coordinator (1)
- Wastewater Operators (6)
- Wastewater Laboratory Technician (1)
- Other part-time/contract resources, as needed.

The City of Angola works closely with the Northeast Indiana Solid Waste Management District (NISWMD), and actively sponsors a number of programs that are designed to reduce the improper disposal of household hazardous waste and consumer electronics. These programs are synergistic with the efforts that the WWTP has made and is planning to make. Some of the activities that have already been implemented include:

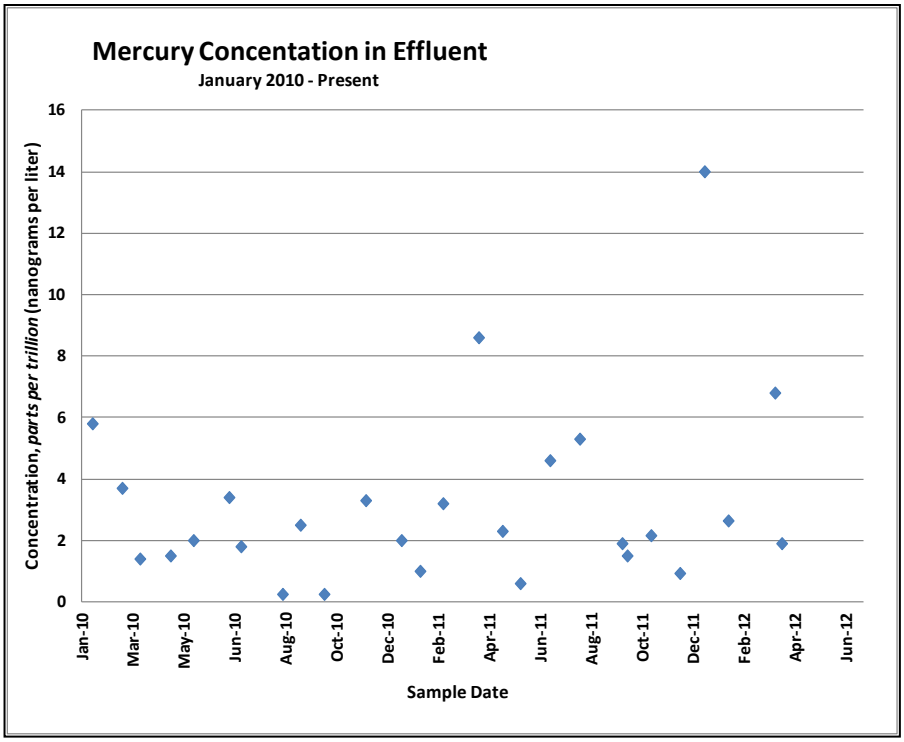
- Battery collection point at City Hall for all city residents. Batteries are picked up on an as needed basis by the NISWMD.
- Annual Citywide Cleanup days, in cooperation with the City's contract refuse collection company.
- Free electronics collection for the general public annually;
- The WWTP provides a collection point for discarded mercury-containing bulbs from all municipal departments funded and operated by the city. These bulbs are safely transported to the NISWMD on an as needed basis.
- The WWTP provides a collection point for major electronic items generated from all municipal departments. This equipment is safely transported to the NISWMD on an as needed basis.
- The WWTP works with the water utility to collect and safely store mercury containing devices found in old water meters and in other operations of the water treatment utility. All collected mercury containing devices are safely transported to the NISWMD on an as needed basis.

Part 4 – Mercury Monitoring Data

The Angola WWTP has historically conducted influent/effluent monitoring of mercury on a monthly basis, as opposed to a bi-monthly basis as required by our NPDES Permit. Analysis of mercury in our stabilized biosolids is conducted in compliance with our Class A Marketing & Distribution Permit and our Class B Land Application Permit. All data collected since January 1, 2010 has been included below.

Testing Method	EPA 1631E	
	MDL =	0.2 ng/L
	Reporting Limit =	0.5 ng/L
Date	**Influent (ng/L)**	**Effluent (ng/L)**
1/13/10	41.6	5.8
2/17/10	837.0	3.7
3/10/10	8.7	1.4
4/15/10	868.0	1.5
5/12/10	20.6	2.0
6/23/10	277.0	3.4
7/7/10	14.2	1.8
8/25/10	2.0	<0.5
9/15/10	150.0	2.5
10/13/10	48.2	<0.5
12/1/10	33.2	3.3
1/12/11	103.0	2.0
2/3/11	127.0	1.0
3/2/11	69.7	3.2
4/13/11	145.0	8.6
5/11/11	182.0	2.3
6/1/11	14.1	0.6
7/6/11	45.3	4.6
8/10/11	179.0	5.3
9/29/11	21.1	1.9
10/5/11	98.4	1.5
11/2/11	66.7	2.2
12/6/11	11.4	0.9
1/4/12	27.0	0.6
2/1/12	74.6	2.6
3/27/12	96.4	6.8
4/4/12	38.0	1.9
All Samples Analyzed by:		Mercury One LTD

EPA Test Method	EPA 6020		
Biosolids Analysis			
Date	**mg/kg**	**Reporting Limit**	**Testing Laboratory**
2/26/10	<0.59	0.59	A&L Great Lakes
3/25/10	<0.59	0.59	
10/4/10	0.23	0.096	
3/25/11	<0.24	0.24	
3/25/11	0.29	0.24	
3/25/11	<0.24	0.24	
10/27/11	<0.59	0.59	
3/21/12	<0.02	0.015	Sherry Labs
4/25/12	0.02	0.014	



Part 5 – Pollutant Minimization Program Plan Additional Requirements

Section A – Proof of Public Notice

In accordance with 327 IAC 5-3.5-9(c), the Angola WWTP will provide public notice of this variance application. The certified Publisher's Claim and Affidavit of the public notification will be included as Attachment 03 Evidence of Public Notice.

The Angola WWTP attests that copies of the Streamlined Mercury Variance (SMV) Application, including the proposed Mercury Pollutant Minimization Program Plan (PMPP), were made available for public review at:

- Angola City Hall, Office of the Clerk-Treasurer, 210 North Public Square;
- Angola Wastewater Treatment Plant, Superintendent's Office, 1095 Redding Road;
- United States Post Office, 110 Harcourt Road, Angola
- Carnegie Public Library of Steuben County, 322 South Wayne Street, Angola

In accordance with 327 IAC 5-3.5-9(d), the public notice shall read:

PUBLIC NOTICE OF AVAILABLITY AND COMMENT:
CITY OF ANGOLA, INDIANA
WASTEWATER TREATMENT PLANT
NPDES PERMIT NO: IN0021296
POLLUTANT MINIMIZATION PROGRAM PLAN (PMPP)
STREAMLINED MERCURY VARIANCE APPLICATION

The City of Angola Wastewater Treatment Plant (WWTP), 1095 Redding Road, Angola, Indiana submits for public comment, the Pollutant Minimization Program Plan (PMPP) submitted as part of its Streamlined Mercury Variance Application, as required by 327 IAC 5-3.5-9(c).

The Angola WWTP operates a Class 3 Activated Sludge Treatment Facility which discharges an average of 1.2 million gallons per day of treated effluent to Lake Michigan via the St. Joseph River via the Pigeon River via the H. D. Wood Ditch.

The WWTP is submitting a Streamlined Mercury Variance Application to the Indiana Department of Environmental Management (IDEM) to provide statutory relief from Water Quality Based Effluent Limits (WQBEL's) for mercury. As part of this application, a PMPP has been developed to help implement controls that will reduce mercury loading into the WWTP, subsequently reducing mercury discharges.

The proposed PMPP provides a structured method to identify and reduce sources of mercury discharge to the WWTP. The PMPP includes mercury-bearing chemical and mechanical inventories, evaluations of potential mercury sources, planned activities to address mercury-bearing chemicals and equipment and public education and outreach methods.

The proposed PMPP is available for public review and comment in accordance to 327 IAC 5-3.5-9(c). This office will receive written comments regarding the proposed PMPP for 30 days after the first day of publication in The Herald Republican. Comments will be considered as the final PMPP is prepared, and will be submitted to IDEM as part of the variance request. Comments may be submitted to:

Angola WWTP, PMPP Comments
c/o Craig Williams, Superintendent
210 N. Public Square
Angola, IN 46703

The PMPP may be viewed in person at the following locations: 1) United States Post Office, Angola Branch, 110 Harcourt Road; 2) Carnegie Public Library, 322 South Wayne Street, 3) Angola City Hall, 210 North Public Square, and, 4) at the Wastewater Treatment Plant, 1095 Redding Road. Copies of the proposed PMPP may be obtained at the Angola City Hall for a fee. Questions regarding this public notice or PMPP may be addressed to Superintendent Craig Williams at (260) 624-2699, Monday – Friday, 7:00 a.m. to 3:30 p.m.

Part 5 – Pollutant Minimization Program Plan Additional Requirements

Section B – Submission of Annual Reports

The City of Angola will submit an annual report of progress in PMPP implementation no later than April 1 of each year the SMV is in effect.