City of Goshen

2025

National Pollution Discharge Elimination System

Streamline Mercury Variance

(NPDES # IN0025755)

Opportunity for Public Comment and Review
Comment Period Opens: November 28, 2025
Comment Period Closes; December 28, 2025

Address comments to:

PMPP
Jim Kerezman, Superintendent
Goshen Wastewater Treatment Plant
1000 W. Wilden Avenue
Goshen, IN 46528

Or email comments to:
wastewater@goshencity.com (include PMPP in the subject line)

Mercury Pollutant Minimization Program Plan

Goshen, IN

NPDES Permit No. IN0025755

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
City of Goshen Wastewater Treatment Plant

Facility Address
1000 W. Wilden Avenue

City or Town
Goshen

State	ZIP Code	County
IN	46528	Elkhart

National Pollutant Discharge Elimination System (NPDES) Permit No.:
IN0025755

Owner or Person in Responsible Charge *(i.e., Town Board President/Mayor)*
Mayor, Gina Leichty

Title
Mayor

Address
202 S. 5th Street

City or Town
Goshen

State	ZIP Code
IN	46528

Name of Primary Contact Person
Jim Kerezman

Address
1000 W. Wilden Avenue

City or Town
Goshen

State	ZIP code	Telephone No.
IN	46528	574-534-4003

E-mail Address *(if available)*
jimkerezman@goshencity.com

NPDES Outfall(s) Affected by Streamlined Mercury Variance Request:
Outfall 001

Receiving Stream(s) Affected by Streamlined Mercury Variance Request:
Elkhart River

Facility Design Flow:
5.0 MGD Dry Weather & 12.5 MDG Wet Weather

Population Served:
33,722 (2020 Census)

Number of Significant Industrial Users *(as defined in 327 IAC 5-17-23)*:
7

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
Jim Kerezman	Superintendent
Signature	Date Signed *(month, day, year)*

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

☐ Manometers	☐ Ion exchange cartridges for lab water purification system
☒ Barometers (Non-mercury)	Hanging mercury drop electrodes for polarographic analyzers
☒ Thermometers (1 Certified)	☐ Mercury Hallow Cathode lamp for AA analysis

LABORATORY CHEMICALS

☐ COD analysis reagent *(mercuric sulfate)*	☐ Mercury or mercurous chloride
☒ TKN and TP analysis digestion reagents	☐ Mercury iodide
☐ Nessler reagent	☐ Mercury nitrate
☐ Mercury analytical standards	☐ Mercury (II) oxide
☐ Gas chromatograph sample interferences *(elemental mercury)*	☐ Mercury (II) sulfate
☐ Sodium hypochlorite *(Clorox)*	☐ Merthiolate

BULK CHEMICALS

☒ Phosphorus removal chemicals	☐ Chlorine
☒ Dechlorination chemicals	☒ Sodium hypochlorite
☒ Sludge thickening polymers	☐ Sulfuric acid
☐ Potassium hydroxide	☐ Nitric acid
☐ Sodium hydroxide	☒ Ferric or ferrous chloride
☐ Sodium chloride	☐ Pickling liquor *(for phosphorus removal)*

PROCESS CONTROL AND MEASURING EQUIPMENT

☐ Accustats	☐ Ring balances
☐ Barometers	☐ Shunt trips
☐ Counterweights	☐ Steam flow meters
☐ Elemental mercury for refilling mercury-containing equipment	☐ Stokes gauges
	Switches and relays:
☒ Flow meters	☐ Displacement plunger relays
☒ Gas regulators and meters	☐ Mercoid 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	☐ Mercury displacement relays *(found in motors)*
☐ Mercury-sealed pistons	☒ Sump pump, bilge pump and other float controls
☐ Permeters	☒ Tilt switches
☐ Pressure-trols	☐ Thermometers *(including industrial dial face thermostats with capillary tubes.)*
☐ Pyrometers	☐ Thermostats and thermoregulators
☐ Rectifiers	☐ Transmitters

BUILDINGS

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

* This checklist was borrowed from the Delta Institute.

PART TWO (CONTINUED)

BUILDINGS (continued)

Switches and relays:

☐ Fire alarm box switches	☐ Mercury displacement relays *(found in lighting, resistance heating and motors)*
☒ Silent light switches	
☐ Relay switches	☒ Sump pump, bilge pump, flow monitor, float switches, and other float controls
☐ Mercury wetted relays	
	☒ Tilt switches

Phosphorus removal chemicals:

- ☒ Ferric or ferrous chloride
- ☐ Pickling liquor

☐ Thermostats

BEARINGS AND SEALS

☐ Trickling filter Pivot Arm Bearings *(mercury bearings/water seals)*

LAMPS

☐ Fluorescent	☐ Mercury vapor lamps
☐ High-pressure sodium	☐ Metal halide (All lights in all buildings and outside parking lot are LED)
☐ Mercury arc	☐ Ultraviolet disinfection

BATTERIES

☐ Mercury-zinc *(button)* batteries	☐ Mercury alkaline batteries
☐ Mercury-cadmium batteries	☐ Mercury oxide batteries

PAINT

☐ Old latex-paint (pre-1990)	☐ Marine paint

FIRST AID/MEDICAL

☐ Mercurochrome	☐ Thermometers
☐ Sphygmomanometers	☐ Thimerosal *(contained in eye wash)*

OTHER

☐ Old pesticides, fungicides and herbicides	☒ Fleet vehicles may contain ABS, convenience and trunk lighting switches and HID headlamps
☐ Tree root growth control products	
☒ Computer monitors	

COLLECTION SYSTEM

☒ Lift station equipment	☒ Sewer lines with accumulated mercury
☒ Traps with accumulated mercury	☐ Other mercury containing equipment
☐ Sumps with accumulated mercury	☐ Mercury-containing chemicals used and/or stored on-site

MERCURY STORAGE SITES

☐ Elemental mercury	☐ Mercury-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.
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.

PART THREE (CONTINUED)

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
12/14/2023	21.1	ng/l	1631E	Pace Analytical
02/26/2024	13.4	ng/l	1631E	Pace Analytical
04/25/2024	8.3	ng/l	1631E	Pace Analytical
06/28/2024	25.7	ng/l	1631E	Pace Analytical
08/20/2024	25.5	ng/l	1631E	Pace Analytical
10/22/2024	15.2	ng/l	1631E	Pace Analytical
12/17/2024	20.7	ng/l	1631E	Pace Analytical
02/17/2025	9.07	ng/l	1631E	Pace Analytical
04/23/2025	14.8	ng/l	1631E	Pace Analytical
06/11/2025	11.0	ng/l	1631E	Pace Analytical
08/21/2025	14.6	ng/l	1631E	Pace Analytical
10/16/2025	18.5	ng/l	1631E	Pace Analytical

Effluent

Date *(month, day, year)*	Result	ng/l	U.S. EPA Method	Analytical Laboratory
12/14/2023	0.79	ng/l	1631E	Pace Analytical
02/26/2024	55.2	ng/l	1631E	Pace Analytical
04/25/2024	0.66	ng/l	1631E	Pace Analytical
06/28/2024	1.01	ng/l	1631E	Pace Analytical
08/20/2024	0.73	ng/l	1631E	Pace Analytical
10/22/2024	0.73	ng/l	1631E	Pace Analytical
12/17/2024	0.74	ng/l	1631E	Pace Analytical
02/17/2025	0.727	ng/l	1631E	Pace Analytical
04/23/2025	2.23	ng/l	1631E	Pace Analytical
06/11/2025	0.585	ng/l	1631E	Pace Analytical
08/21/2025	0.95	ng/l	1631E	Pace Analytical
10/16/2025	0.68	ng/l	1631E	Pace Analytical

PART FOUR (CONTINUED)				
Biosolids				
Date *(month, day, year)*	Result	Unit	U.S. EPA Method	Analytical Laboratory
06/22/2022	< 1.97	mg/kg	7471 A	Pace Analytical
09/07/2022	< 2.82	mg/kg	7471 A	Pace Analytical
12/05/2022	< 2.98	mg/kg	7471 A	Pace Analytical
03/08/2023	< 2.30	mg/kg	7471 A	Pace Analytical
06/28/2023	0.31	mg/kg	7471 A	Pace Analytical
09/11/2023	0.66	mg/kg	7471 A	Pace Analytical
12/12/2023	1.26	mg/kg	7471 A	Pace Analytical
03/27/2024	< 0.05	mg/kg	7471 A	Pace Analytical
06/12/2024	< 0.05	mg/kg	7471 A	Pace Analytical
09/25/2024	< 0.50	mg/kg	7471 A	Pace Analytical
12/18/2024	< 0.05	mg/kg	7471 A	Pace Analytical
03/19/2025	< 0.02	mg/kg	7471 A	CF Environmental 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.

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.

PART TWO A

Complete Inventory	Plan	Schedule
Laboratory 1 – Mercury Certified Thermometer No Barometers on site	No replacement at this time	None
Bulk Chemicals Sodium Hypochlorite Sodium Bisulfite Ferric Chloride	Mercury Reduced/Free requested during bidding process	Every three years
Process Controls a. Flow Meters b. Gas regulators and meters c. Mercoid control switches and tilt switches d. Relay switches e. Float switches	All replaced with non-mercury controls	Completed February 2011
Buildings – a. Flame Sensors b. Aqua Stats c. Limit Switches d. Flow Controls e. Light Switches f. Relay Switches	All of the following have been researched and found to be non-mercury bearing:	None
Lamps a. Fluorescent Lamps b. High Pressure Sodium-Necessary for explosion proof settings.	Over half of the WWTPs fluorescent lamps and fixtures were replaced with LED lighting in 2014-2015. Buildings include the office administration, laboratory, maintenance offices and lounge. Replaced the remaining fluorescent lamps and fixtures with LED lighting which was completed in early 2020.	ALL lights and fixtures at the WWTP including all buildings, driveway lights and tank lighting are LED. Completed in 2020.
First Aid/Medical Thimerosal – Found in eye wash solutions.	Researching alternatives	Laboratory has a permanent eyewash connected to city water.
Other a. Computer monitors and equipment	The City's IT department recycles all computers and electronic equipment.	Ongoing
b. Fleet vehicles	All vehicle maintenance is performed by the City's Central Garage. All fluids are recycled. Vehicles taken out of service are sold at auctions or properly disposed.	Ongoing
Collection System Sewer lines	Sewer lines are cleaned by the Water/Sewer Utility. Private lines are cleaned by the owner.	This process is ongoing with 20 – 25 percent of the sewer mains are televised and cleaned annually.

Complete Evaluation	Plan	Schedule
Complete Inventory Plan		
	Researching alternatives for Ferric Chloride	

PART TWO B

At this time, the City of Goshen WWTP has no known mercury bearing products onsite except the following.

a. Sodium Hypochlorite – May contain low levels of mercury.
b. Sodium Bisulfite – May contain low levels of mercury.
c. Ferric Chloride – May contain low levels of mercury.
d. 1 – Certified Thermometer for laboratory use.

The following actions are currently in place or scheduled.

1. Suppliers are asked to provide low level or mercury free products during the bidding process every two years.
2. An alternative product will be sought. (ie. Ferric Chloride)
3. If no other product is available, the WWTP will research the need for the product and eliminate it if possible.
4. The product will be removed from the facility as soon as possible.
5. Waste materials or products that are no longer needed are disposed of in accordance with proper disposal procedures, including but not limited to returning them to the supplier or contracting with licensed disposal facilities.
6. The WWTP participates in "Beautify Goshen" week, which is scheduled for the first week in May of each year.
7. The fluorescent lamps and fixtures replacement program was completed in 2020.

PART THREE A & B

Planned Activity	Goal	Measure of Performance	Schedule for Action
Review of purchasing policies and procedures: **Chemical purchases including:** • **Sodium Hypochlorite** • **Sodium Bisulfite** • **Ferric Chloride**	Reduce mercury in effluent		3 year cycle with chemical bids
Staff training	Education & awareness	Participation/Attendance	Ongoing. Part of annual on-line safety program/brochures.
Public education program	Education & awareness	Mercury along with Flushable wipes, Fats, Oils and Grease are discussed during plant tours.	This is ongoing with other articles such as fats, oils and grease, rags and other pretreatment issues.
Other activities **Elimination of mercury switches, equipment, fluorescent lamps and fixtures.**	Eliminate known mercury at the wwtp and lift stations	Participation	WWTP - Completed 2020 Mercury switches were removed from all lift stations prior to 2015. Lift station lighting replacement completed 2020.
Monitoring sewer collection system	Try to locate other sources of mercury from industrial parks, businesses and residential areas.	Participation Mercury sampling and testing	Ongoing

PART THREE C

Sector	Planned Activity	Goal	Measure of Performance	Schedule for Action
Medical facilities, including: ***Hospitals.** ***Clinics.** ***Nursing homes.** ***Veterinary facilities.**	Sample and test hospital lift station annually	Compliance	Mercury levels/Compliance	Ongoing
	The City developed and passed a Mercury Reduction Ordinance 4941on March 12, 2018.	Compliance	Participation/Testing	Ongoing
	Site visits (if applicable – Covid related)	Promote BMP		Ongoing
Dental clinics	The City developed and passed a Mercury Ordinance 4941on March 12, 2018.	Compliance	Inspections	Ongoing
	One-Time Compliance Report for Dental Dischargers	Promote BMP	Compliance	Dental Clinics are in compliance
	Mercury testing	Evaluation of discharge	Mercury levels/Compliance	Ongoing
	Survey(s)	Participation		Industrial surveys are filled out for all new industrial/commercial customers
	Site visits (if applicable – Covid related)	Compliance		
	Amalgam Separators	Compliance	Mercury levels/Compliance Cleaning records	All Dental Clinics have Amalgam Separators installed.
Public and private educational laboratories	Mail Survey(s)	Education & awareness		
	On-site visits (if applicable – Covid related)	Promote BMP	Mercury along with Flushable wipes, Fats, Oils and Grease are discussed during plant tours.	Ongoing – Plant tours with handouts, 3 months after approval - postings on city website
General Industry and all SIU's	Mail Survey(s)	Education & awareness		Every SIU/CIU permit renewals
	On-site visits (if applicable – Covid related)	Promote BMP		Annually- (SIUs), General Industries - Ongoing
	Mercury testing	Evaluation of discharge	Mercury levels/Compliance	Ongoing
Significant sources of residential and retail contributions of mercury, for example, the following: ***Heating, ventilation, and air conditioning contractors.** ***Automobile and appliance repair.** ***Veterinarians.** ***Others specific to the community served.**	Plant tours if applicable	Education & awareness	Mercury along with Flushable wipes, Fats, Oils and Grease are discussed during plant tours.	Ongoing
	Survey(s)	Participation		Industrial surveys are filled out for all new industrial/commercial customers

Part Two

Section A&B: Inventory of Potential Sources of Mercury

The Goshen Wastewater Utility conducted an inventory assessment of the potential sources of mercury within the direct control of the WWTP. Since 2008, the staff at the WWTP identified all mercury bearing equipment and budgets the replacements of each piece. As of early 2020, the wastewater utility replaced all fluorescent lights and fixtures with LED lighting in all buildings, driveway lights, and walkway lighting. All mercury tilt and Mercoid switches were replaced and all mercury was disposed of in 2011.

In addition, all major chemical suppliers for Ferric Chloride, Sodium Hypochlorite and Sodium Bisulfite are asked to supply documentation for non-mercury or low mercury during the bidding process. Any mercury bearing chemicals will be evaluated and if possible, an alternate chemical will be sought after.

Section C: Evaluation of Potential Dischargers

The City of Goshen's Wastewater Utility continues to sample the sewer collection system for potential sources of mercury. Samples collected have mainly identified the sewers where dental clinics are practicing, hospital lift station, industrial parks and the largest residential area in the city.

The wastewater utility sent letters to dental clinics along with a copy of Amalgam Mercury Best Management Practices and survey's. On March 12, 2018, Ordinance 4941 was passed by the City Council. Currently, all dental clinics have complied with the "One Time Compliance Report" and they all have installed amalgam separators.

C.6.

This section is not applicable to the City of Goshen since the WWTP does not sell or supply novelties, products, commodities, or equipment and materials and therefore would not apply to the mercury content of these materials.

Section D: Evaluation Timeline for Future Potential Dischargers

As new industries or businesses that may potentially discharge mercury into the sewer collection system, the pretreatment group will make contact with the business and conduct an inspection within the first three (3) months of operation. Samples may be grabbed for verification. The business will also receive educational materials on the minimization of mercury into the sewer collection system. In addition to identifying new potential sources of mercury dischargers, further inspections of previously identified mercury dischargers will continue.

Jim Kerezman, Superintendent
WASTEWATER UTILITY, CITY OF GOSHEN
1000 West Wilden Avenue • Goshen, IN 46528-2532

Phone (574) 534-4003 • Fax (574) 534-4350 • TDD (574) 534-3185
wastewater@goshencity.com • www.goshenindiana.org

RE: SUBMISSION OF STREAMLINE MERCURY VARIANCE APPLICATION TO THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

The City of Goshen Wastewater Treatment Plant treats an average of 3.0 million gallons of wastewater every day from residential, commercial and industrial customers. The final effluent discharges to the Elkhart River which continues to flow to Lake Michigan. This treated stream of water must meet strict requirements imposed by the US Environmental Protection Agency (USEPA) and Indiana Department of Environmental Management (IDEM).

One of these restrictions imposed on the City of Goshen is Mercury. Atmospheric conditions such as dust, rain, snow, etc. are a result of some sources of mercury in our waterways, but treated discharge from wastewater treatment plants are often sources as well. A typical source of mercury in the wastewater collection system comes from dental clinics, hospitals, auto repair shops, residential areas, industries, medical facilities and laboratories.

Although the City of Goshen removes almost 98% of the mercury that it receives, it is not sufficient to meet IDEM's water quality standards. The City of Goshen's National Pollution Discharge Elimination Systems permit (NPDES) has a limit so stringent it cannot be met without further measures. IDEM is allowing WWTP's to apply for mercury variances with schedules of compliance to help reduce the amount of mercury in the influent/effluent streams of wastewater treatment plants.

Reducing the amount of mercury entering the WWTP will help reduce the amount of mercury in its final effluent being discharged to the Elkhart River. The City of Goshen is reapplying for a Streamline Mercury Variance application to IDEM to help the WWTP meet these stringent limits.

In order to provide an opportunity for citizens to express concerns about the Streamline Mercury Variance, the Mercury Pollutant Minimization Program Plan is being made available for review and comment. All formal questions and comments about this plan can be directed to Jim Kerezman by December 25, 2025, mail to:

PMPP
Jim Kerezman
1000 W. Wilden Avenue
Goshen, IN 46528

Or email – Please include in the subject line: PMPP. Email to wastewater@goshencity.com

POLLUTANT MINIMIZATION PROGRAM PLAN (PMPP) INVENTORY/IDENTIFICATION

Inventory of Potential Sources of Mercury

The Goshen Wastewater Treatment Plant (WWTP) has conducted a complete inventory and assessment of the potential sources of mercury within direct control of the WWTP. The inventory was conducted in 2010 and continues to be updated with new products.

No known mercury bearing equipment currently exists at the WWTP. All lighting and fixtures including all driveway and walkway lights are now LEDs. This project was completed in early 2020. All major chemical suppliers are asked to provide quotes for Non-mercury or reduced mercury chemicals during the bidding process. Laboratory results are obtained if applicable.

All Dental Clinics are currently in compliance with the EPAs "One Time Compliance Report" and they all installed Amalgam Mercury Separators.

Evaluation of Potential Dischargers

The City of Goshen has identified facilities within the sewer collection area that are potential sources of mercury through sampling. Most dental facilities received letters about the importance of proper mercury disposal along with a copy of Best Management Practices for Amalgam Mercury Waste. Sampling will continue to help verify potential areas and businesses that may discharge mercury to the sewer collection system.

Evaluation Timeline for Future Potential Dischargers

As new industries move into the city limits, the pretreatment group will contact the business and conduct an inspection within the first three months of operation. The inspection, among other things, will include the identification of potential mercury bearing sources. The business may also receive educational materials if the possibility of mercury exists to help minimize the release of mercury into the sewer collection system.

POLLUTANT MINIMIZATION PROGRAM (PMPP) PLANNED ACTIVITIES

The City of Goshen Wastewater Treatment Plant has developed a plan to educate the public and local businesses and industries of the sources of mercury. These activities have been developed in accordance with 327 IAC 5-3.5-9(b)(2). A complete description of these activities, goals, measures of performance and schedules are included.

Part Three

Section A: Planned Activities

1. Planned Activities

   During the chemical bidding process, the City asks for quotes for non-mercury or low level mercury for the following products:
   a. Sodium Hypochlorite
   b. Sodium Bisulfite
   c. Ferric Chloride
   d. The WWTP has reduced the amount of mercury at the wastewater treatment plant by eliminating all mercury switches, tilt switches, and cleaned house of old paint and chemicals stored on site.
   e. All fluorescent and incandescent lamps and fixtures were replaced with LED lighting in 2020.

2. Training and Awareness for facility staff.

   a. Staff awareness of potential mercury in products purchased.
   b. Mercury safety training is part of our on-line annual safety training. Awareness brochures and attendance sheet(s).

3. Education program for the public

   a. Articles may be posted on the City's website, Maple City Rag and in the Communicator as well as other pretreatment related issues.
   b. Mercury is discussed along with fats, rags, oil and grease during plant tours.

4. Evaluation of alternatives to the use of Mercury containing equipment or materials

   a. In conjunction with Item #1 above.
   b. GOAL – Mercury reduction.
   c. Currently no known mercury-bearing equipment exists at the WWTP or Lift Stations.
   d. MSDS are reviewed.

5. Other specific activities designed to reduce or eliminate mercury loadings

   a. March 2008 – The City of Goshen WWTP ceased the acceptance of septage waste and trucked wastewater.
   b. Physical inspections of industrial facilities are ongoing.
   c. 2018 - Developed a City ordinance to require all known mercury dischargers to install separators and properly maintain the units. Mercury testing of these facilities will be ongoing to ensure compliance.

6. Identification of the facilities responsibilities....

    a. Residential customer in Elkhart County are encouraged to dispose of any mercury bearing materials at the Elkhart County Household Hazardous Waste collection site, that is setup the first Saturday of every month at the Elkhart County Jail off of County Road 7.
    b. The City of Goshen dedicates the first week in May as "Beautify Goshen Week" and collects household materials such as acrylic paints, tires, batteries, refrigerants, electronic equipment etc.
    c. Public education on reducing mercury and other contaminants in the waste stream is done during plant tours.

Section D: Resources & Staffing for Implementation

The Wastewater Treatment Utility is wholly funded by sewer rates and charges by sanitary users within the City of Goshen. Rates and charges are evaluated annually by the utility's financial consultant, and adjustments are recommended to the City for present and future funding. It is unknown what the true costs are to implement the PMPP. Budgets are adjusted to cover a portion of these costs each year through the pretreatment program.

Implementation of the controls and activities listed herein will be completed by existing positions funded through the wastewater utility.

- Wastewater Superintendent (1)
- Environmental Compliance Administrator (1)
- Maintenance personnel if needed
- Items listed in Section A-6

PART TWO (B)

PMPP INVENTORY/IDENTIFICATION:

The following items have been identified in Part Two, Section A as potential sources of Mercury. A complete inventory will be completed and submitted within 9 months of the effective date of the NPDES Permit renewal.

1. LABORATORY EQUIPMENT AND CHEMICALS:
    a. Barometers – None
    b. Thermometers – One with certified mercury thermometer.
    c. TP analysis digestion reagents – Recycled. We will seek mercury-free alternatives.
2. BULK CHEMICALS:
    a. Sodium Bisulfite
    b. Thickening polymers
    c. Sodium Hypochlorite Ferric chloride
3. PROCESS CONTROL AND MEASURING EQUIPMENT:
    a. Flow meters
    b. Gas regulators and meters
    c. Mercoid control switches – 39 at wwtp. All were eliminated by end of 2010. Final disposal was in February 2011.
    d. Relay switches – Non-Mercury
    e. Float controls – Non-Mercury
    f. No known Mercury-bearing process control or measuring equipment currently exists at the WWTP.
    g. Tilt switches – All were eliminated by end of 2010.
4. BUILDINGS: All of the following have been researched and found to be non-mercury bearing:
    a. Flame sensors
    b. Aqua stats
    c. Fan limit controls
    d. Pressure/flow controls on air handling units.
    e. Silent light switches
    f. Relay switches
5. LAMPS:
    a. All lighting and fixtures are now LEDs. Our lighting replacement program completed in early 2020.
    b. High-pressure sodium – These were the last to be replaced because of cost. Completed in early 2020.
6. FIRST AID/MEDICAL:
    a. Thimerosal (All eye wash units are connected to city water)
7. OTHER:
    a. Computer monitors – The City's IT department recycles all computers, monitors and keyboards.

b. Fleet vehicles – All vehicle maintenance is performed by the City's Central Garage and all possible care is taken to not allow mercury bearing waste into the sewer system. Vehicles taken out of service are sold at public auction or properly recycled.

8. COLLECTION SYSTEM:
    a. Sewer lines with accumulated mercury – Municipal owned to be cleaned by Utility personnel. Privately owned to be cleaned by owner. Anticipated completion date: Sewer cleaning is ongoing along with televising all sewers.

COMPLETE INVENTORY PLAN

In order to compile the complete inventory of products potentially containing Mercury, The City of Goshen WWTP has commenced contacting suppliers for information on the Mercury content of all products purchased. At the same time, suppliers of alternative products, if available, will be asked for the same information. Once a Mercury bearing product is identified, the following steps are taken:

1. An alternative product will be sought.
2. If no alternative product is available, the WWTP will research the need for the product and eliminate it if possible.
3. The product will be removed from the facility as soon as possible.
4. Waste materials or products that are no longer needed will be disposed of in accordance with proper disposal procedures, including but not limited to returning them to the supplier and contracting with licensed disposal facilities.

PART TWO (C)

PRELIMINARY EVALUATION OF POSSIBLE MERCURY SOURCES IN THE CITY OF GOSHEN WWTP INFLUENT.

1. Medical Facilities:
    a. Hospitals
    b. Clinics
    c. Nursing Homes
    d. Veterinary Facilities
2. Dental Clinics – 15 facilities. Dental Clinics were tested for Mercury and all have been identified as a contributing source. A Mercury Ordinance was adopted, and all dental clinics are in compliance with the "One Time Compliance Report" and all dental facilities installed amalgam separators by the end of 2018.
3. Public and Private Educational Laboratories:
    a. College
    b. High School
    c. Middle School

    Public education on mercury and other pretreatment issues such as fats, rags, oil and grease are conducted during plant tours.

Staff education is part of our safety program.

4. General Industry and all SIU's – 7 SIUs. No known Mercury users in the industrial sector. SIU's are not a source of Mercury at this time.
5. Significant sources of residential and retail contributions of Mercury:
    a. Heating, ventilation and air conditioning contractors
    b. Automobile and appliance repair
    c. Veterinarians
    d. Other – Significant retail areas have been sampled for Mercury at various times. Residential areas are sampled quarterly for background data for Local Limit Review.
6. Identification of responsibilities for the SIUs –This shall be done during the annual audit and inspection of each SIU.

PART TWO (D)

The results of the complete evaluation of the potential sources of Mercury listed in Part Two (C)

PART THREE

PMPP Planned Activities

1. Review of purchasing policies and procedures – Superintendent and Maintenance Manager.
    a. Ask if any mercury-bearing materials are in products purchased.
    b. Request MSDS – train staff to be aware of potential mercury in products purchased.
    c. GOAL - Replace mercury-bearing products with non-mercury-bearing products if possible.
    d. MEASURE OF PERFORMANCE – lower concentration of mercury in WWTP final effluent.
2. Training and Awareness for facility staff – Environmental Compliance Administrator.
    a. Mercury awareness is provided through on-line annual safety training.
    b. GOAL – Education/awareness
    c. MEASURE OF PERFORMANCE - Participation
3. Education program for the public – Environmental Compliance Administrator.
    a. Education during plant tours
    b. GOAL – Education/awareness
    c. MEASURE OF PERFORMANCE - Participation
4. Evaluation of alternatives to the use of Mercury-containing equipment or materials – WWTP Superintendent and Environmental Compliance Administrator.
    a. In conjunction with Item #1 above.
    b. GOAL – Mercury reduction

c. MEASURE OF PERFORMANCE – Lower concentration of mercury in plant influent/effluent.

PART FOUR

Mercury Monitoring Data – Attached to this application.

PART FIVE

PMPP Additional Requirements

1. Proof of Public Notice activities – Public Notice and all associated documents are attached to this application.
2. Annual Reports – Annual reports shall commence on the anniversary date of the effective date of the City of Goshen WWTP NPDES Permit that incorporates the approved SMV.

Additional Attachments

3. Mercury Reduction Ordinance

Not included:

1. Dental – One-Time Compliance Reports. (Submitted in 2020 renewal)

ATTACHMENT – A

PUBLIC NOTICE

ATTACHMENT – B

EDUCATION/TRAINING

Goshen WWTP Safety Training

Mercury Awareness

Materials: Brochures

Print	Signature	Date
Mick Reese	Mick Reese	11/25/25
Tracie Herschberger	Tracie Herschberger	11-25-25
CRISTINA		11.25.25
ANDY BERNEY	Andrew Berney	11-25-25
Rodney Hahn	Rodney Hahn	11/25/25
BRIAN LANG		11-25-25
Charles Riggs	Charles Rigg	11-25-25
Justin Rippey		11-25-25
Timothy Nice	Timothy Nice	11-25-25
Jim Korczyn		11/25/25

Bureau of Environmental Health
Health Assessment Section

"To protect and improve the health of all Ohioans"

Mercury

Answers to Frequently Asked Health Questions

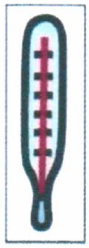
What is mercury?

Mercury is a naturally occurring element found in the environment. Mercury is a metal found in three forms. The three forms of mercury are:

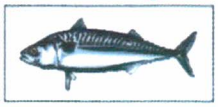
- Elemental (also called Metallic Mercury)
- Organic
- Inorganic

Mercury combines with other elements, such as chlorine, sulfur or oxygen, to form inorganic mercury compounds or "salts," which are usually white powders or crystals. Mercury also combines with carbon to make organic mercury compounds.

Elemental or Metallic Mercury is a shiny, silver, odorless, liquid metal. Metallic mercury is the elemental or "pure" form of mercury because it is not combined with other elements. It is the common liquid metal used in thermometers, dental fillings, blood pressure cuffs, fluorescent light bulbs, barometers, batteries and switches. It can also be found in some older medicines. At room temperature, metallic mercury will vaporize and form mercury vapors. These mercury vapors do not have a color, do not have a smell and are harmful to your health.



Organic Mercury is mercury that combines with carbon and hydrogen to make an organic mercury compound. The most common organic mercury compound is methylmercury. Methylmercury is produced by microscopic bacteria that live on the bottom of lakes and ponds. These bacteria ingest the mercury and turn it into methylmercury. Higher levels of methylmercury in the water build up in the tissue of fish and can be dangerous.



Inorganic Mercury is mercury that combines with other elements such as chlorine, sulfur or oxygen, to form "salts." Mercury salts were once used in skin lightening creams and may be present in old antiseptic creams and ointments.

How does mercury enter the environment?

- Mercury can enter the water or soil from natural ore deposits in rock. Volcanic rock contains higher levels of mercury. Ohio's rocks contain low levels of mercury.
- Metallic mercury and inorganic mercury compounds can enter the air from burning coal and the coal mining waste.
- When mercury is released in the burning of coal, it will come down in the rain that will then run into Ohio's lakes and streams. Microscopic bacteria in the water ingest the mercury and convert it to methylmercury. The more mercury in the environment, the more methylmercury these small organisms in the water make. Higher levels of methylmercury in the water build up in the tissues of fish. The larger and older fish tend to have the highest levels of mercury. Note: Ohio fish advisories suggest limits for eating Ohio's fish.
- Metallic mercury easily evaporates into the air when the liquid metal is spilled. The Ohio Mercury Reduction Group is educating Ohio schools to remove all metallic mercury-containing items from their school grounds.

How does mercury get in your body?

- By breathing the vapors in the air from a mercury spill. If you drop a mercury thermometer on the ground, it may break and the mercury may separate into many small beads and spread throughout the room. At room temperature, metallic mercury will vaporize. The higher the temperature, the more vapors will be released. These vapors are colorless, odorless and are harmful to your health.
- By breathing the smoke, vapors and particles from industries that burn mercury-containing coal.
- By eating fish or shellfish contaminated with methylmercury.
- By the small releases of mercury from dental work and medical treatments.
- By breathing contaminated workplace air or skin contact. There is an increased risk for dental, health services, chemical and other industries that use mercury.

Disposing of Mercury

Dispose of mercury the right way!

Bring the following mercury items to Disposal of Toxics:

- ✔ Thermometers
- ✔ Barometers
- ✔ Auto switches
- ✔ Compact fluorescent tubes/light bulbs
- ✔ Thermostats
- ✔ Button cell batteries

For more information on additional mercury-containing items, please call the Disposal of Toxics Program.

When handling products with mercury:
Do not break, crush, or disassemble the items. Store items out of the way in bubble wrap or boxes until you can take them to the Disposal of Toxics facility:

Disposal of Toxics
3505 Airport Drive, Bellingham
(one block west of the airport entrance)
360-380-4640
Open Monday — Friday 9 am - 4 pm
First Saturday of every month 9 am - 4 pm

If a product is accidentally broken, do NOT touch it, sweep it, or vacuum it. Keep children and pets away from the spill. Call the Whatcom County Health Department for spill assistance 360-676-6724.

Never put mercury-containing products or anything contaminated with mercury in the garbage or down the drain. Call the Disposal of Toxics collection facility for more disposal information.

Questions? Call the Recycling Hotline
360-676-5723

Mercury Resources

For more information on mercury, check out the following:

Environmental Protection Agency mercury information: ***www.epa.gov/mercury***

Mercury Awareness, Washington State Department of Ecology, Publication #01-04-022, Revised December 2003: ***www.ecy.wa.gov/pubs/0104022.pdf***

Mercury Fact Sheet, Washington Toxics Coalition, February 2004:
www.watoxics.org/content/pdf/mercuryfactsheet.pdf

US EPA page on cleaning up small mercury spills:
http://www.epa.gov/hg/spills/

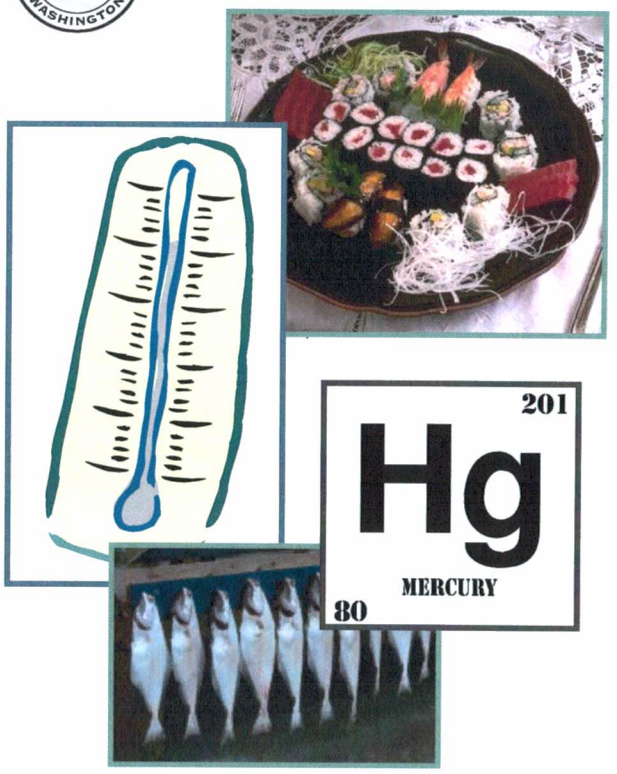
Pictures and information about necklaces with liquid mercury pendants:
www.doh.wa.gov/ehp/ts/iaq/mercurynecklaces.html

Whatcom County Public Works
Solid Waste Division
322 N. Commercial, Suite #220
Bellingham, WA 98225
Phone: 360-676-7695
Recycling Hotline: 360-676-5723
www.whatcomcounty.us/publicworks/solidwaste

Whatcom County Public Works
Solid Waste Division

The Hazards of Mercury

Protecting Your Family



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Mercury Hazards

Mercury is a naturally occurring element that conducts electricity and expands and contracts in response to changes in temperature and pressure. At room temperature, it is a liquid. These properties of mercury have led to its use in the industrial sector as well as in many consumer products. Unfortunately, mercury and its compounds can have serious effects on the health of humans and wildlife.

Mercury is highly toxic and can harm the brain, kidneys, and lungs. Unborn and young children are particularly at risk because their nervous systems are still developing.

Mercury facts:

- *One drop of mercury entering a 20-acre lake annually is enough to elevate the mercury level in fish.*
- *One teaspoon holds about 70 drops of mercury.*
- *The average thermometer holds 1-4 drops depending on size.*

Human exposure to mercury occurs most frequently as a result of eating mercury-contaminated fish. Mercury released to the environment from products such as broken thermometers may ultimately end up in water bodies, contaminating fish and wildlife.

Mercury in Household Products

Mercury is found in many of the everyday items we use, from light bulbs to thermostats. You can properly dispose of all of these products at the Disposal of Toxics facility. In many cases, you can switch to mercury-free alternatives.

Keep reading to learn about some common household products that contain mercury.

Mercury in Household Products

Fluorescent Lamps

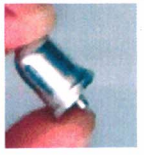
Mercury is used in the fluorescent-tube, compact fluorescent, and high-intensity discharge (HID) lamps. These light bulbs are very energy efficient, but they need to be disposed of properly at Disposal of Toxics.

Thermometers

Mercury's sensitivity to temperature change makes it useful for thermometers. It is used in glass thermometers and can be easily identified by the presence of silver liquid. Digital and ethanol (red liquid) thermometers are mercury-free alternatives.

Thermostats

Mercury is used in older thermostat switches that control temperature changes in heating and air conditioning systems. Newer, digital thermostats do not use mercury.



Automobile Switches

Mercury is used in vehicle mechanisms to turn on lights when the hood, trunk, or doors are opened, and/or to operate some anti-lock brake systems. Mercury-containing auto switches have been phased out of new cars in Washington State beginning January 1, 2006.

Batteries

Mercury prevents internal discharge and gassing in batteries. Since 1994, federal law has prohibited intentional addition of mercury to standard household batteries (dry-cell sizes A, AA, C, D, etc.) and has limited the amount of mercury added to button cell batteries.

Mercury in Fish

Although fish is a nutritious food—it is low in fat and is a good source of protein and other nutrients— some fish contain levels of mercury that are unhealthy for human consumption.

The Department of Health has advised women of childbearing age and children under six to avoid certain types of fish that have high amounts of mercury including shark, swordfish, tilefish, king mackerel and fresh-caught or frozen tuna.

Women of childbearing age should not eat more than one can of tuna fish per week (or six ounces). A woman or child who weighs under 135 pounds should eat less than one can of tuna per week. Children under six should eat less than half of a can of tuna (three ounces) per week.

WHATCOM COUNTY WASHINGTON

For more information on mercury in fish and Fish Consumption Advisories, visit: *www.doh.wa.gov/ehp.*

Goshen Wastewater Treatment Plant

What is the problem with Mercury?

- Mercury has been found in vital organs and tissues, such as the liver, brain, and heart muscle. Major symptoms of mercury toxicity include emotional instability, tremors, gingivitis, and kidney failure. Recent studies have found that substantial amounts of mercury vapor are released from dental amalgam after chewing gum for just ten minutes.
- Mercury has been found in freshwater fish with levels high enough to require consumption advisories.

Where does mercury come from that enters a wastewater treatment plant?

- Mercury found in wastewater treatment plants (WWTP) influent typically comes from dental facilities and residential waste. Dental facilities waste-stream may contain significant amounts of mercury which is found in amalgam. Dental facilities with properly installed and maintained amalgam separators can remove up to 98-99% of mercury in their discharge.
- Mercury found in residential waste-streams include: human waste (ingested mercury from fish and other sources pass through the body), and broken old household thermometers.
- Other sources of mercury come from auto repair shops, medical facilities, heating and cooling, industries and laboratories.

Why can't wastewater treatment plants remove mercury?

- The City of Goshen's Wastewater Treatment Plant removes about 98% of the mercury entering the facility. However, even at these removal percentages, the treatment process cannot remove mercury to the levels of 1.3 parts per trillion required by the US Environmental Protection Agency (EPA). Removing mercury to this level would require millions of dollars in wastewater treatment plant upgrades. It is more cost effective to remove mercury at the source with Amalgam Separators and Best Management Practices (BMPs).

What is being done to reduce mercury entering the sewer collection system?

- WWTPs are required to meet stringent limits for mercury in the final effluent. If these limits cannot be met, they are required to implement a Pollution Minimization Program Plan (PMPP) to help educate the public, businesses and industries about mercury and how they can help reduce the amount of mercury they discharge to the treatment plant.
- The proposed mercury variance includes the steps necessary to help reduce the amount of mercury being discharged to the sewer collection system. Steps include:
    - Completing internal inventory of mercury-bearing equipment and chemicals.
    - Develop policies and programs for mercury management.
    - Continuing with mercury monitoring of the sewer collection system, businesses and industries to characterize mercury discharges.
    - Public education

How much mercury are we talking about?

- The mercury found in the treatment plants effluent is too small for most to imagine.
    - Imagine this: The State of Indiana equals 1 trillion square feet (1,000,000,000,000). If you pickup one and a half twelve inch square tiles, that is more than the daily maximum of 1.3 parts per trillion which is proposed in our National Pollution Discharge Elimination System Permit (NPDES).
    - An Olympic sized swimming pool holds 660,430 gallons of water or 59.6 billion drops of water. 1 part per trillion is equivalent to 1 drop in 16.5 Olympic sized swimming pools.

What can I do to help?

- Properly dispose of household items that may contain mercury. Some items that may contain mercury include: old thermostats, thermometers, irons or space heaters designed to shut off if tipped over, sump pump floats, ballasts, fluorescent lamps just to name a few.

ATTACHMENT – C

MEDICAL/DENTAL/INDUSTRIAL LIST

Goshen Mercury Sampling Report
Summary of Industrial Discharges

Date	Facility	Type of Manufacturing Process	Effluent Results ng/l
12/14/2023	Grant Drive	Domestic Background	10.9
12/14/2023	CR 21 & SR 119	Residental/Medical	15.1
12/14/2023	Dairy Farmers of America	Milk Processing	32.2
12/14/2023	Gleason Reynolds	Metal/Cutting/Welding	1.0
12/14/2023	Gleason Monroe	Metal/Cutting/Welding	2.3
12/14/2023	Deirdorff Rd	Dental/Industrial	3840.0
12/14/2023	CR 38 Lift Station	Industrial/Manufacturing	8.8
2/26/2024	Grant Drive	Domestic Background	6.9
2/26/2024	Dairy Farmers of America	Milk Processing	23.3
2/26/2024	12th Street Lift Station	Industrial/Manufacturing	18.4
2/26/2024	Millers Poultry	Poultry	34.4
2/26/2024	Millers Poultry/SR 15	Poultry	16.1
2/26/2024	Johnston Street	Residental	23.8
4/25/2024	Grant Drive	Domestic Background	10.2
4/25/2024	Ashton Pines	Residental	10.6
4/25/2024	Dairy Farmers of America	Milk Processing	13.7
4/25/2024	Parker Han	Industrial/Rubber Manufacturing	0.9
8/20/2024	Grant Drive	Domestic Background	59.8
8/20/2024	Bashor Lift Station	Residental	8.6
8/20/2024	Middle School	School/Residential	13.4
8/20/2024	Dairy Farmers of America	Milk Processing	30.2
10/22/2024	Grant Drive	Domestic Background	11.5
10/22/2024	Dairy Farmers of America	Milk Processing	59.8
12/17/2024	Grant Drive	Domestic Background	8.1
12/17/2024	Gleason Monroe	Metal/Cutting/Welding	0.7
12/17/2024	Gleason Reynolds	Metal/Cutting/Welding	1.2
4/23/2025	Grant Drive	Domestic Background	14.9
4/23/2025	Midway Lift Station	Dental/Restaurants/Retail	60.2
4/23/2025	Green & Lincoln	Dental/Residential	588.0
6/11/2025	Grant Drive	Domestic Background	18.0
6/11/2025	CR 38 Lift Station	Industrial/Manufacturing	12.8
6/11/2025	CR 27 & Karisa Drive	Industrial/Manufacturing/Medical	14.4
6/11/2025	Shasta Drive	Industrial/Manufacturing/Residential	126.0
6/11/2025	Mill Street	Residential	35.6
6/11/2025	Bashor Lift Station	Residental	8.5
8/21/2025	Grant Drive	Domestic Background	143.0
10/16/2025	Grant Drive	Domestic Background	8.3

Goshen Wastewater Treatment Plant
NPDES Permit No. IN0025755

DENTAL CLINICS

Name	Service_Address
ABG DENTAL OF GOSHEN	622 W LINCOLN AVE
AEGIS DENTAL GROUP	3560 ELKHART RD
ASPEN DENTAL	2909 COUNTY HOME ROAD STE 1
GOSHEN SMILES	1213 W LINCOLN AVE
STUTSMAN DENTISTRY DDS	1801 CHARLTON CT
GOSHEN FAMILY DENTISTRY	1625 SUNNYFIELD DR
SPRINGER DENTAL	1802 CHARLTON CT
PAUL E KELLER	1934 W LINCOLN AVE
ROBERT E BARKER DDS	2046 DORCHESTER CT
ROBERT A BURDEN	1100 COLLEGE AVE
THOMAS P JUDD DDS LLC	201 PRINGLE DR
WHITNEY M RICHMOND DDS	1908 W CLINTON ST
THE DENTAL CENTER OF GOSHEN	4024 ELKHART RD

PUBLIC/PRIVATE LABORATORIES

Name	Service_Address
BASHOR HOME	62226 COUNTY RD 15
BETHANY CHRISTIAN SCHOOLS	2904 S MAIN ST REAR
FAIRFIELD COMMUNITY SCHOOLS	67530 US HIGHWAY 33
GOSHEN COLLEGE-EAST CAMPUS	1700 S MAIN ST
GOSHEN COMMUNITY SCHOOLS	902 E MADISON ST
GOSHEN COMMUNITY SCHOOLS	1216 S INDIANA AVE

SIUs/CIUs

Name	Service_Address
BEARCAT CORP	2431 E KERCHER RD
BENTELER INDUSTRIES INC	811 EISENHOWER DR S
GLEASON INDUSTRIAL PRODUCTS	612 E REYNOLDS ST
GLEASON INDUSTRIAL PRODUCTS	517 E. Monroe St
LIPPERT COMPONENTS INC - 45	2703 COLLEGE AVE
LIPPERT COMPONENTS INC - 85	3325 HACKBERRY DR
VIEWRAIL	1815 ARDMORE CT

HVAC

Name	Service_Address
BILL'S HEATING INC	803 LINWAY DR A
REX'S HEATING & COOLING	204 JOHNSTON ST

NURSING FACILITIES

Name	Service_Address
GREENCROFT	1225 GREENCROFT DR 2STOR
LRC MGMT dba COURTYARD HEALTH	2400 COLLEGE AVE
The Maples	1212 Waterford Crossing

VETERINARY FACILITIES

Name	Service_Address
MAPLECREST ANIMAL HOSPITAL	1214 N MAIN ST
WELDY ASSOC INC	2806 S MAIN ST
WHITE VETERINARY HOSPITAL	1014 LINCOLNWAY EAST

AUTOMOTIVE REPAIR

Name	Service_Address
AG TRUCKING&KROPF FAMILY REAL	15952 COUNTY RD 38 EAST
BERKEY'S GARAGE	1715 E LINCOLN AVE
BMS AUTOMOTIVE	708 LOGAN ST
BYRON'S CAR CARE	1502 VIRGINIA ST
CONCORD CARS INC	2228 LINCOLNWAY EAST
DAVE'S AUTO REPAIR, LLC	2130 ELKHART RD
DOUG'S ALIGNMENT SERVICES	2456 ELKHART RD
EBY FORD	2714 ELKHART RD
GOSHEN COLLISION CENTER INC	1303 E LINCOLN AVE
GOSHEN HYUNDAI % DZUNG NGUYEN	3216 ELKHART RD
GOSHEN MOTORS INC	3220 ELKHART RD
HERR CUSTOM PAINT	2927 LINDEN DR
HOFFMAN BROTHERS INC	106 W JEFFERSON ST
INDIANA PAINT & COLLISION	416 N MAIN ST
JENKINS AUTOMOTIVE	1202 LINCOLNWAY EAST
KABARDIN AUTO RESTORATION & SA	1527 W WILDEN AVE
LG AUTOMOTIVE LLC	1515 W WILDEN AVE
LUIS MOTORS	630 LINCOLNWAY EAST
MARTY'S GARAGE, LLC	2112 W WILDEN AVE
MASTER CAR CARE	1008 N GREENE RD
MC QUICK'S #9682	115 W PIKE ST
MINGUCHA SERVICE CENTER	402 E LINCOLN AVE
MONTEITH TIRE	2390 ELKHART RD
MONTEITH TIRE	2613 CARAGANA CT
MULLET BATTERY	1513 E LINCOLN AVE 1
O'REILY AUTOMOTIVE INC	1613 ELKHART RD
PREMIER MOTORS	2507 ELKHART RD
PRO MOTOR ENGINES	1814 LINCOLNWAY EAST
SORG DODGE INC	1811 ELKHART RD
STUTZMAN MOTORS	1304 ELKHART RD
TRANSMISSION CLINIC	1822 LINCOLNWAY EAST
WAL MART STORE INC #01-1378	2304 LINCOLNWAY EAST
WALMART STORES EAST L.P.	4024 ELKHART RD 2

MEDICAL FACILITIES

Name	Service_Address
COLLEGE GREEN MEDICAL OFFICES	1615 WINSTED DR
DR BRIAN KING	2014 S MAIN ST
DR ELAINE BIGLER	210 W WASHINGTON ST
DR KENT SIFFORD CLINIC	1720 W LINCOLN AVE
DR MAX MERTZ	1814 CHARLTON CT
DR MAXIM IVANOV	1609 ELKHART RD
DR. MICHELLE SHELLY	400 W LINCOLN AVE
ELKHART GENERAL HOSPITAL	2120 RIETH BLVD
ELKHART GENERAL HOSPITAL	2222 RIETH BLVD
FAIRHAVEN OB-GYN	1111 LIGHTHOUSE LN 1
FRESENIUS MEDICAL CARE NEPHROL	2257 KARISA DR
GERIG SURGICAL ASSOCIATES	2006 S MAIN ST STE A
GOSHEN BIRTH CENTER, INC	1155 LIGHTHOUSE LN 2
IU Health Family Med/Urgent Care	2824 ELKHART RD
GOSHEN FAMILY PHYSICIANS	1811 CHARLTON CT
GOSHEN HEALTH SURGERY CENTER	1605 WINSTED DR
GOSHEN HOSPITAL	200 HIGH PARK AVE
GOSHEN HOSPITAL	2012 S MAIN ST C
GOSHEN HOSPITAL	1701 S MAIN ST
GOSHEN HOSPITAL	1855 S MAIN ST A
GOSHEN HOSPITAL	200 HIGH PARK AVE
GOSHEN HOSPITAL	2006 S MAIN ST STE B
GOSHEN HOSPITAL	2016 S MAIN ST A
GOSHEN HOSPITAL	2067 DORCHESTER CT
GOSHEN HOSPITAL	2100 S MAIN ST
GOSHEN HOSPITAL	2104 S MAIN ST
GOSHEN HOSPITAL	2820 ELKHART RD
GOSHEN HOSPITAL	2832 ELKHART RD
GOSHEN PHYSICIANS	2120 S MAIN ST
GOSHEN PHYSICIANS HOME MEDICAL	1501 S MAIN ST
GOSHEN PHYSICIANS-PEDIATRICS	1852 ASHBURN DR
H2 AVIATION	17077 COUNTY ROAD 42
KRABILL FAMILY MEDICINE	1806 CHARLTON CT
MAPLE CITY HEALTH CENTER	215 MIDDLEBURY ST
MAPLE CITY HEALTHCARE	814 N 3RD ST
MICROLOGY LABORATORIES	1303 EISENHOWER DR S
OAKLAWN HOSPITAL	330 LAKEVIEW DR
PAUL H BULLER MD	1302 COLLEGE AVE 1
UROLOGY ASSOCIATES OF ELKHART	1302 COLLEGE AVE 2
YATIN J PATEL MD	2417 S BERKSHIRE DR

ATTACHMENT – D

LABORATORY DATA

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

January 02, 2024

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50361831

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on December 15, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: LL Mercury
Pace Project No.: 50361831

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50361831002	**Plant Effluent**					
EPA 1631E	Mercury	0.790	ng/L	0.50	12/27/23 15:21	
50361831003	**Plant Influent**					
EPA 1631E	Mercury	21.1	ng/L	1.6	12/28/23 19:06	
50361831004	**Grant Drive**					
EPA 1631E	Mercury	10.9	ng/L	1.6	12/28/23 19:13	
50361831005	**CR 21&119**					
EPA 1631E	Mercury	15.1	ng/L	2.0	12/28/23 00:11	
50361831006	**DFA**					
EPA 1631E	Mercury	32.2	ng/L	0.51	12/27/23 23:20	
50361831008	**Gleason Reynolds**					
EPA 1631E	Mercury	0.967	ng/L	0.52	12/28/23 19:21	
50361831009	**Gleason Monroe**					
EPA 1631E	Mercury	2.33	ng/L	0.51	12/27/23 23:27	
50361831010	**Deirdorff Rd**					
EPA 1631E	Mercury	3840	ng/L	510	12/28/23 00:32	
50361831011	**CR 38 Lift Station**					
EPA 1631E	Mercury	8.82	ng/L	0.51	12/27/23 23:35	

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

MTJL Log-in Numb

WO# : 50361831

50361831

Company: City Of Goshen	Billing Information: Attn: Tracie Hershberger 1000 West Wilden Ave. Goshen, IN 46528
Address: 1000 West Wilden Ave.	
Report To: jimkerezman@goshencity.com	Email To: tracieherschberger@goshencity.com
Copy To: mickreese@goshencity.com	Site Collection Info/Address: Various City sites
Customer Project Name/Number: LL Mercury 9733/1	State: IN County/City: Elkhart / Goshen Time Zone Collected: [ ]PT [ ]MT [ ]CT

(6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Phone: 574-534-4102 Email:goshenwastewater@goshencity.com	Site/Facility ID #:	Compliance Monitoring? [X] Yes [ ] No [X]Varies
Collected By (print):Micky Reese Jim Kerezman	Purchase Order # : Quote #:	DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: Standard	Immediately Packed on Ice: [ ] Yes [X] No
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [X] No Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses: LL Mercury
Effl. Blank	WW	G	12/14/23	9:55				1	G	X
Plant Effluent	WW	G	12/14/23	9:55				1	G	X
Plant Influent	WW	G	12/14/23	10:03				1	G	X
Grant Drive	WW	G	12/14/23	10:15				1	G	X
CR 21&119	WW	G	12/14/23	10:25				1	G	X
DFA	WW	G	12/14/23	10:40				1	G	X
DFA Blank	WW	G	12/14/23	10:40				1	G	X
Gleason Reynolds	WW	G	12/14/23	11:00				1	G	X
Gleason Monroe	WW	G	12/14/23	11:15				1	G	X
Deirdorff Rd	WW	G	12/14/23	11:30				1	G	X
CR 38 Lift Station	WW	G	12/14/23	11:40				1	G	X

Customer Remarks / Special Conditions / Possible Hazards:	Type of Ice Used: Wet Blue Dry None Packing Material Used: Radchem sample(s) screened (<500 cpm): Y N NA	SHORT HOLDS PRESENT (<72 hours) : Y N N/A Lab Tracking #: Samples received via: FEDEX UPS Client Courier Pace Courier

Relinquished by/Company: (Signature)	12/14/2023 12:06PM	Received by/Company: (Signature) UPS	Date/Time:	MTJL LAB USE ONLY Table #:
Relinquished by/Company: (Signature) UPS	Date/Time: 12-15-23 1000	Received by/Company: (Signature)	Date/Time: 12-15-23 1000	Acctnum: Template: Prelogin:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	PM: PB:

F-IN-Q-290-rev.23, 26Jun2023

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 12-15-23 1509 CMC

1. **Courier:** ☐ FED EX ☑ UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT ☐ OTHER _____

2. **Custody Seal on Cooler/Box Present:** ☑ Yes ☐ No

(If yes)Seals Intact: ☑ Yes ☐ No **(leave blank if no seals were present)**

3. **Thermometer:** 1 2 3 4 5 6 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 16.9 / 16.9 | | | |

(Initial/Corrected) **RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)**

5. **Packing Material:** ☑ Bubble Wrap ☐ None

6. **Ice Type:** ☐ Wet ☐ Blue ☑ Nc

7. **If temp. is over 6°C or under 0°C, was the F**
Cooler temp should be above f

All discrepancies will be written out in the comments section below.

	Yes	No	
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, an any container with a septum cap or preserved with HCl.** **Circle:** **HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the containe count form
Short Hold Time Analysis (48 hours or less)? **Analysis:**		✓	
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (Total/Amenable/Free Cyanide)
Custody Signatures Present?	✓		Headspace Wisconsin Sulfide?
Containers Intact?:	✓		Headspace in VOA Vials (>6mm): See Containter Count form for details
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID		✓	Trip Blank Present?
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:

COMMENTS: CG3H for IDS Plant Effluent and Plant Influent don't have (Plant) on labe
is different from Container Grant SE (12-15-23 CMC)

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

March 11, 2024

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50366879

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on February 27, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: LL Mercury
Pace Project No.: 50366879

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50366879001	**Plant Effluent**					
EPA 1631E	Mercury	55.2	ng/L	5.0	03/08/24 09:50	
50366879002	**Plant Influent**					
EPA 1631E	Mercury	13.4	ng/L	5.2	03/08/24 11:12	
50366879004	**Grant Dr.**					
EPA 1631E	Mercury	6.86	ng/L	1.6	03/08/24 12:01	
50366879005	**DFA**					
EPA 1631E	Mercury	23.3	ng/L	5.2	03/08/24 11:29	
50366879006	**12TH Street LS**					
EPA 1631E	Mercury	18.4	ng/L	5.2	03/08/24 12:10	
50366879007	**Millers Poultry**					
EPA 1631E	Mercury	34.4	ng/L	5.2	03/08/24 11:41	
50366879008	**Millers/SR 15**					
EPA 1631E	Mercury	16.1	ng/L	5.2	03/08/24 12:17	
50366879010	**Johnston St.**					
EPA 1631E	Mercury	23.8	ng/L	5.2	03/08/24 11:51	

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

WO# : 50366879

ALL BOLD O

ompany: City Of Goshen	Billing Information: Attn: Tracie Hershberger 1000 West Wilden Ave. Goshen, IN 46528
ddress: 1000 West Wilden Ave.	
eport To: jimkerezman@goshencity.com	Email To: tracieherschberger@goshencity.com
opy To: mickreese@goshencity.com	Site Collection Info/Address: Various City sites
ustomer Project Name/Number: LL Mercury 9733/1	State: IN County/City: Elkhart / Goshen Time Zone Collected: [ ]PT [ ]MT [ ]CT

hone: 574-534-4102 ail:goshenwastewater@goshencity.com	Site/Facility ID #:	Compliance Monitoring? [X] Yes [ ] No [X]Varies
ollected By (print):Mick Reese m Kerezman	Purchase Order # : Quote #:	DW PWS ID #: DW Location Code:
ollected By (signature):	Turnaround Date Required: Standard	Immediately Packed on Ice: [ ] Yes [X] No
ample Disposal: X] Dispose as appropriate] Return] Archive: _____] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [X] No Analysis: _____

Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochlori
(6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane
(C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Container Preservativ

Analyses

ustomer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	LL Mercury
lant Effluent	WW	G	2/26/24	0935				1	G	X
lant Influent	WW	G	2/26/24	0945				1	G	X
lant Blank	WW	G	2/26/24	0937				2	G	X
Grant Dr.	WW	G	2/26/24	1015				1	G	X
DFA	WW	G	2/26/24	1040				1	G	X
12TH Street LS	WW	G	2/26/24	1150				1	G	X
Millers Poultry	WW	G	2/26/24	1205				1	G	X
Millers/SR 15	WW	G	2/26/24	1225				1	G	X
Millers/SR15 Blank	WW	G	2/26/24	1230				1	G	X
lohnston St.	WW	G	2/26/24	1250				1	G	X

Customer Remarks / Special Conditions / Possible Hazards:

10 Samples Hg

Type of Ice Used: Wet Blue Dry (None)

Packing Material Used: bubble bags

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y (N) N/A

Lab Tracking #:

Samples received via: FEDEX (UPS) Client Courier Pace Courier

Relinquished by/Company: (Signature)	Date/Time: 12/26/2024 1330 (1:30 PM)	Received by/Company: (Signature) UPS	Date/Time: 12/26/24 1330
Relinquished by/Company: (Signature) UPS	Date/Time: 2/27/24 945	Received by/Company: (Signature)	Date/Time: 2/27/24 945
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONL

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

-IN-Q-290-rev.23, 26Jun2023

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 2/27/24 1634 mw

1. Courier: ☐ FED EX ☑ UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT ☐ OTHER ______

2. Custody Seal on Cooler/Box Present: ☐ Yes ☑ No

(If yes)Seals Intact: ☐ Yes ☐ No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 7 8 A B (C) D E F G H

4. Cooler Temperature(s): 20.9 / 21 | | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: ☐ Bubble Wrap ☐ None

6. Ice Type: ☐ Wet ☐ Blue ☑ N

7. If temp. is over 6°C or under 0°C, was the
Cooler temp should be above

All discrepancies will be written out in the comments section below.

	Yes	No	
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base preservation have been pH CHECKED?: Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, any container with a septum cap or preserved with HCl. Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the contai count form
Short Hold Time Analysis (48 hours or less)? Analysis:		✓	
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (Total/Amenable/Free Cyanide)
Custody Signatures Present?	✓		Headspace Wisconsin Sulfide?
Containers Intact?:	✓		Headspace in VOA Vials (>6mm): See Containter Count form for details
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	~~✓~~ mw 2/27/24	✓	Trip Blank Present?
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:

COMMENTS: COC lists 2 containers for Sample ID: Plant blank. Received 1. mw 2/27/24

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

March 27, 2024

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50368326

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on March 14, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: LL Mercury
Pace Project No.: 50368326

Sample: Plant Effluent **Lab ID: 50368326001** Collected: 03/12/24 09:25 Received: 03/14/24 09:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1631E Mercury, Low Level	Analytical Method: EPA 1631E Preparation Method: EPA 1631E Pace Analytical Services - Indianapolis							
Mercury	**1.00**	ng/L	0.50	1	03/25/24 17:47	03/26/24 10:46	7439-97-6	

REPORT OF LABORATORY ANALYSIS

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or

WO# : 50368326

50368326

LAB USE ONLY

Manager:

Company: City Of Goshen	Billing Information: Attn: Tracie Hershberger 1000 West Wilden Ave. Goshen, IN 46528
Address: 1000 West Wilden Ave.	
Report To: jimkerezman@goshencity.com	Email To: tracieherschberger@goshencity.com
Copy To: mickreese@goshencity.com	Site Collection Info/Address: ~~Various City sites~~ Plant
Customer Project Name/Number: LL Mercury 9733/1	State: IN County/City: Elkhart / Goshen Time Zone Collected: [ ]PT [ ]MT [ ]CT

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Phone: 574-534-4102 Email:goshenwastewater@goshencity.com	Site/Facility ID #:	Compliance Monitoring? [X] Yes [ ] No [X]Varies
Collected By (print):Mick Reese Jim Kerezman	Purchase Order # : Quote #:	DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: Standard	Immediately Packed on Ice: [ ] Yes [X] No
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [X] No Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	LL Mercury
Plant Effluent	WW	G	3/12/24	9:25AM				1	G	X
Plant Blank	WW	G	3/12/24	9:27AM				1	G	X

Lab Profile/Line:

Lab Sample Receipt Checklist:	
Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

See Scur

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry (None)

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y (N) N/A

Lab Tracking #:

Samples received via: FEDEX (UPS) Client Courier Pace Courier

LAB Sample Temperature Info:

Temp Blank Received: (Y) N NA
Therm ID#: C
Cooler 1 Temp Upon Receipt: 20.5 °C
Cooler 1 Therm Corr. Factor: +0.1 °C
Cooler 1 Corrected Temp: 20.6 °C
Comments:

Trip Blank Received: Y (N) NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 1

Relinquished by/Company: (Signature)	Date/Time: 3/12/24 10:30AM	Received by/Company: (Signature)	Date/Time:	MTJL LAB USE ONLY Table #:
Relinquished by/Company: (Signature) UPS	Date/Time: 0955 3/14/24	Received by/Company: (Signature)	Date/Time: 0955 3/14/24	Acctnum: Template: Prelogin:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	PM: PB:

F-IN-Q-290-rev.23, 26Jun2023

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 3/14/24 21:33 TH

1. Courier: ☐ FED EX ☑ UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT ☐ OTHER _____

2. Custody Seal on Cooler/Box Present: ☐ Yes ☑ No

(If yes) Seals Intact: ☐ Yes ☐ No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 7 8 A B C D E F G H

4. Cooler Temperature(s): 20.5/20.1 (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

6. Ice Type: ☐ Wet ☐ Blue ☑ None

7. If temp. is over 6°C or under 0°C, was the PM notified?: ☐ Yes ☐ No

Cooler temp should be above freezing to 6°C

All discrepancies will be written out in the comments section below.

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	✓
Rush TAT Requested (4 days or less):	✓	✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			✓
	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace Wisconsin Sulfide?			✓
	Present	Absent	No VOA Vials Sent
Headspace in VOA Vials (>6mm): See Containter Count form for details		✓	
Trip Blank Present?			
Trip Blank Custody Seals?:			✓

COMMENTS:

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

May 10, 2024

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50371714

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on April 27, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: LL Mercury
Pace Project No.: 50371714

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50371714001	**Effluent**					
EPA 1631E	Mercury	0.660	ng/L	0.50	05/09/24 18:14	
50371714003	**Influent**					
EPA 1631E	Mercury	8.30	ng/L	0.51	05/09/24 18:58	
50371714004	**Grant Dr.**					
EPA 1631E	Mercury	10.2	ng/L	0.51	05/09/24 19:05	
50371714005	**Ashton Pines**					
EPA 1631E	Mercury	10.6	ng/L	0.51	05/09/24 18:50	
50371714006	**DFA**					
EPA 1631E	Mercury	13.7	ng/L	0.51	05/09/24 18:42	
50371714008	**Parker Han**					
EPA 1631E	Mercury	0.930	ng/L	0.50	05/09/24 18:22	

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or

WO#: 50371714

50371714

Company: City Of Goshen	Billing Information: Attn: Tracie Hershberger 1000 West Wilden Ave. Goshen, IN 46528
Address: 1000 West Wilden Ave.	
Report To: jimkerezman@goshencity.com	Email To: tracieherschberger@goshencity.com
Copy To: mickreese@goshencity.com	Site Collection Info/Address: Various City sites
Customer Project Name/Number: LL Mercury 9733/1	State: IN County/City: Elkhart / Goshen Time Zone Collected: [ ]PT [ ]MT [

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Phone: 574-534-4102 Email: goshenwastewater@goshencity.com	Site/Facility ID #:	Compliance Monitoring? [X] Yes [ ] No [X]Varies
Collected By (print): Mick Reese	Purchase Order # : Quote #:	DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: Standard	Immediately Packed on Ice: [ ] Yes [X] No
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [X] No Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses: LL Mercury
Effluent	W	G	4/25/2024	0756				1	G	X
Plant Effluent Blank	W	G	4/25/2024	0800				1	G	X
Influent	W	G	4/25/2024	0806				1	G	X
Grant Dr.	W	G	4/25/2024	0823				1	G	X
Ashton Pines	W	G	4/25/2024	0826				1	G	X
DFA	W	G	4/25/2024	0900				1	G	X
Field Blank	W	G	4/25/2024	0904				1	G	X
Parker Han	W	G	4/25/2024	0910				1	G	X

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:
See Scan

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry (None)

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX (UPS) Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y (N) NA
Therm ID#: 248625 FOUR
Cooler 1 Temp Upon Receipt: 11.5 oC
Cooler 1 Therm Corr. Factor: 0 oC
Cooler 1 Corrected Temp: 11.5 oC
Comments:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page 17 of 19

Relinquished by/Company: (Signature)	Date/Time: 4/25/24 1100	Received by/Company: (Signature) UPS	Date/Time: 4/25/24 1100
Relinquished by/Company: (Signature) UPS	Date/Time: 4/26/24 945	Received by/Company: (Signature) Chelsea Brady	Date/Time: 4/26/24 945
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

F-IN-Q-290-rev.25, 25Apr2024

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: CB 4/26/24 17:00

1. Courier: ☐ FED EX ☑ UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT ☐ OTHER _____
2. Custody Seal on Cooler/Box Present: ☐ Yes ☑ No
   (If yes)Seals Intact: ☐ Yes ☐ No (leave blank if no seals were present)
3. Thermometer: 1 2 3 (4) 5 6 7 8 A B C D E F G H
4. Cooler Temperature(s): (Initial/Corrected) 18.5/18.5 RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)
5. Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other _____
6. Ice Type: ☐ Wet ☐ Blue ☑ None
7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No
   Cooler temp should be above freezing to 6°C
8. EZ Bottle Order? ☐ Yes ☑ No
   EZ Bottle Order Number:

All discrepancies will be written out in the comments section below.

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCa, which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl. Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			✓

	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace Wisconsin Sulfide?			✓
Headspace in VOA Vials (>6mm): See Containter Count form for details			✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?:			✓

COMMENTS:

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 01, 2024

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50376569

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on June 24, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: LL Mercury
Pace Project No.: 50376569

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50376569002	**Plant Influent**					
EPA 1631E	Mercury	25.7	ng/L	1.6	06/28/24 13:39	
50376569003	**Plant Effluent**					
EPA 1631E	Mercury	1.01	ng/L	0.50	06/28/24 12:58	

REPORT OF LABORATORY ANALYSIS

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or

WO# : 50376569

50376569

ALL BOLD OUTL

Container Preservative Ty

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Company: City Of Goshen	Billing Information: Attn: Tracie Hershberger 1000 West Wilden Ave. Goshen, IN 46528
Address: 1000 West Wilden Ave.	
Report To: jimkerezman@goshencity.com	Email To: tracieherschberger@goshencity.com
Copy To: mickreese@goshencity.com	Site Collection Info/Address: Various City sites
Customer Project Name/Number: LL Mercury 9733/1	State: IN County/City: Elkhart / Goshen Time Zone Collected: [ ]PT [ ]MT [ ]CT
Phone: 574-534-4102 Email:goshenwastewater@goshencity.com	Site/Facility ID #:
Collected By: Mick Reese Jim Kerezman	Purchase Order # : Quote #:
Collected By (signature):	Turnaround Date Required: Standard
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Compliance Monitoring?	[X] Yes [ ] No [X]Varies
DW PWS ID #:	
DW Location Code:	
Immediately Packed on Ice:	[ ] Yes [X] No
Field Filtered (if applicable):	[ ] Yes [X] No
Analysis: _____	

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	LL Mercury	Analyses	Lab Profile/Line:
Blank	WW	G	6/20/2024	11:10AM				1	G	X		001
Plant influent	WW	G	6/20/2024	11:22AM				1	G	X		002
Plant Effluent	WW	G	6/20/2024	11:15AM				1	G	X		003

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

SCC SCUR

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y (0) NA
Therm ID#: 04
Cooler 1 Temp Upon Receipt: 2.0 oC
Cooler 1 Therm Corr. Factor: 0.0 oC
Cooler 1 Corrected Temp: 2.0 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time: 6/20/24 11:30AM	Received by/Company: (Signature) UPS	Date/Time:
Relinquished by/Company: (Signature) UPS	Date/Time: 6-24-24 11:20	Received by/Company: (Signature)	Date/Time: 6-24-24 11:20
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

F-IN-Q-290-rev.27, 13Jun2024

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: RC 6-24-24 1136

1. **Courier:** ☐ FED EX ☑ UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT ☐ OTHER _____
2. **Custody Seal on Cooler/Box Present:** ☐ Yes ☑ No
   (If yes)Seals Intact: ☐ Yes ☐ No **(leave blank if no seals were present)**
3. **Thermometer:** 1 2 3 4 5 6 7 8 9 A B C D E F G H I
4. **Cooler Temperature(s):** 26.0/26.0 | | | |
   (Initial/Corrected) **RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)**
5. **Packing Material:** ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____
6. **Ice Type:** ☐ Wet ☐ Blue ☑ None
7. **Was the PM notified of out of temp cooler?:** ☐ Yes ☐ No
   Cooler temp should be above freezing to 6°C
8. **EZ Bottle Order?** ☐ Yes ☑ No
   If yes but not on COC what is the EZ Bottle Order Number?:

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: **HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A ✓
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Custody Signatures Present?	✓		Headspace Wisconsin Sulfide?			✓
Containers Intact?:	✓		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent ✓
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Trip Blank Present?		✓	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			✓

COMMENTS:

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

September 05, 2024

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50380792

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on August 21, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: LL Mercury
Pace Project No.: 50380792

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50380792002	**Plant Influent**					
EPA 1631E	Mercury	25.5	ng/L	0.52	09/04/24 12:41	
50380792003	**Plant Effluent**					
EPA 1631E	Mercury	0.730	ng/L	0.50	09/04/24 11:53	
50380792004	**Grant Drive**					
EPA 1631E	Mercury	49.8	ng/L	0.52	09/04/24 12:49	
50380792005	**Bashor Road**					
EPA 1631E	Mercury	8.61	ng/L	0.52	09/04/24 12:57	
50380792006	**Middle School**					
EPA 1631E	Mercury	13.4	ng/L	0.52	09/04/24 13:05	
50380792007	**DFA**					
EPA 1631E	Mercury	30.2	ng/L	0.52	09/04/24 13:12	

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

WO# : 50380792

50380792

Pace Workorder Number or

LAB USE ONLY

Project Manager:

Company: City Of Goshen	Billing Information: Attn: Tracie Hershberger 1000 West Wilden Ave. Goshen, IN 46528
Address: 1000 West Wilden Ave.	
Report To: jimkerezman@goshencity.com	Email To: tracieherschberger@goshencity.com
Copy To: mickreese@goshencity.com	Site Collection Info/Address: Various City sites
Customer Project Name/Number: LL Mercury 9733/1	State: IN County/City: Elkhart / Goshen Time Zone Collected: [ ]PT [ ]MT [ ]CT
Phone: 574-534-4102 Email:goshenwastewater@goshencity.com	Site/Facility ID #:
Collected By: Mick Reese Jim Kerezman	Purchase Order # : Quote #:
Collected By (signature):	Turnaround Date Required: Standard
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Compliance Monitoring? [X] Yes [ ] No [X]Varies	
DW PWS ID #:	
DW Location Code:	
Immediately Packed on Ice: [ ] Yes [X] No	
Field Filtered (if applicable): [ ] Yes [X] No Analysis: _____	

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses: LL Mercury	Lab Profile/Line:
Blank 1	WW	G	8/20/2024	9:38am				1	G	X	001
Plant influent	WW	G	8/20/2024	9:45 AM				1	G	X	002
Plant Effluent	WW	G	8/20/2024	9:36am				1	G	X	003
Grant Drive	WW	G	8/20/2024	10:07am				1	G	X	004
Bashor road	WW	G	8/20/2024	9:57am				1	G	X	005
Middle School	WW	G	8/20/2024	10:34am				1	G	X	006
DFA	WW	G	8/20/2024	10:45am				1	G	X	007
Blank 2	WW	G	8/20/2024	10:45am				1	G	X	008
Showwalter LS	WW	G	8/20/2024	10:19am				1	G	X	

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments: see SCUR

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: 0 Y N NA
Therm ID#: 4
Cooler 1 Temp Upon Receipt: 21.0 °C
Cooler 1 Therm Corr. Factor: -0.2 °C
Cooler 1 Corrected Temp: 19.8 °C
Comments:

Relinquished by/Company: (Signature)	Date/Time: 8/20/24	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time: 8-21-24 10:00	Received by/Company: (Signature)	Date/Time: 8-21-24 10:00
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

F-IN-Q-290-rev.28, 29Jul2024

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: RC 8-21-24 16:58

1. Courier: ☐ FED EX ☑ UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT ☐ OTHER ______

2. Custody Seal on Cooler/Box Present: ☐ Yes ☑ No

(If yes) Seals Intact: ☐ Yes ☐ No (leave blank if no seals were present)

3. Thermometer: 1 2 3 (4) 5 6 7 8 9 A B C D E F G H I

4. Cooler Temperature(s): 20.0/19.8

(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other ______

6. Ice Type: ☐ Wet ☐ Blue ☑ None

7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No

Cooler temp should be above freezing to 6°C

All discrepancies will be written out in the comments section below.

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact? RC 8-21-24	~~✓~~	✓
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID		✓
Extra labels on Terracore Vials? (soils only)		

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl. Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			✓
	Present	**Absent**	**N/A**
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace Wisconsin Sulfide?			✓
	Present	**Absent**	**No VOA Vials Sent**
Headspace in VOA Vials (>6mm): See Containter Count form for details			✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?:			✓

COMMENTS: Bashor Road sample had time of 9:51 instead of 9:57. Shawwaltor LS rcvd broken samples is not salvageable RC 8-21-24

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

November 05, 2024

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50385746

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: LL Mercury
Pace Project No.: 50385746

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50385746002	**Plant Effluent**					
EPA 1631E	Mercury	0.730	ng/L	0.50	11/05/24 07:49	
50385746003	**Plant Influent**					
EPA 1631E	Mercury	15.2	ng/L	0.52	11/05/24 09:50	
50385746004	**Grant Drive**					
EPA 1631E	Mercury	11.5	ng/L	0.52	11/05/24 09:58	
50385746006	**DFA**					
EPA 1631E	Mercury	59.8	ng/L	2.6	11/05/24 10:28	

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ON: WO# : 50385746 — Lab Pace Workorder Number or

ALL 50385746

Company: City Of Goshen	Billing Information: Attn: Tracie Hershberger 1000 West Wilden Ave. Goshen, IN 46528
Address: 1000 West Wilden Ave.	
Report To: jimkerezman@goshencity.com	Email To: tracieherschberger@goshencity.com
Copy To: mickreese@goshencity.com	Site Collection Info/Address: Various City sites
Customer Project Name/Number: LL Mercury 9733/1	State: IN — County/City: Elkhart / Goshen — Time Zone Collected: [ ]PT [ ]MT [ ]CT

Container Preservative

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Phone: 574-536-5080 Email:goshenwastewater@goshencity.com	Site/Facility ID #:	Compliance Monitoring? [X] Yes [ ] No [X]Varies
Collected By (print): Mick Reese Jim Kerezman	Purchase Order # : Quote #:	DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: Standard	Immediately Packed on Ice: [ ] Yes [X] No
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [X] No Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	LL Mercury	Lab Profile/Line:
Plant Blank	WW	G	10/22/24	9:27 AM				1	G	X	001
Plant Effluent	WW	G	10/22/24	9:25 AM				1	G	X	002
Plant Influent	WW	G	10/22/24	9:35 AM				1	G	X	003
Grant Drive	WW	G	10/22/24	10:13 AM				1	G	X	004
Gleason Reynolds	WW	G	10/22/24	10:33 AM				1	G	X	005
DFA	WW	G	10/22/24	10:41 AM				1	G	X	006
DFA Blank	WW	G	10/22/24	10:42 Am				1	G	X	007

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry (None)

Packing Material Used: Bubble

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX (UPS) Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: C
Cooler 1 Temp Upon Receipt: 22.1 oC
Cooler 1 Therm Corr. Factor: 0 oC
Cooler 1 Corrected Temp: 22.1 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time: 10/22/24 12:00 pm	Received by/Company: (Signature) UPS	Date/Time:
Relinquished by/Company: (Signature) UPS	Date/Time: 10/23/24 9:50	Received by/Company: (Signature) Tabitha Schelvan Pace	Date/Time: 10/23/24 9:50
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y (N) NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

F-IN-Q-290-rev.29, 4Oct2024

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and initials of person examining contents: 10/23/24 12.30 TS

1. Thermometer: 1 2 3 4 5 6 7 8 9 A B C D E F G H I

2. Cooler Temperature(s): (Initial/Corrected) 22.1/22.1 RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

3. Courier: Circle One — Fed Ex (UPS) Client Pace Now/Jett Other

4. Custody Seal on Cooler/Box Present: ☑ Yes ☐ No

(If yes)Seals Intact: ☑ Yes ☐ No (leave blank if no seals were present)

5. Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

6. Ice Type: ☐ Wet ☐ Blue ☑ None

7. Was the PM notified of out of temp cooler? ☐ Yes ☑ No

Cooler temp should be above freezing to 6°C

If the PM was contacted in the comments below please write how they instructed the project to proceed

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A ✓
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Custody Signatures Present?	✓		Headspace in **VOA Vials** (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent ✓
Containers Intact?:	✓		Trip Blank Present?		✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Trip Blank Custody Seals?:			✓
Extra labels on Terracore Vials? (soils only)			Out Of Temp Instructions if applicable:			

COMMENTS:

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

January 03, 2025

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50390494

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on December 18, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: LL Mercury
Pace Project No.: 50390494

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50390494002	**Effluent**					
EPA 1631E	Mercury	0.740	ng/L	0.50	01/03/25 12:15	
50390494003	**Influent**					
EPA 1631E	Mercury	20.7	ng/L	0.52	01/03/25 13:42	
50390494004	**Grant Drive**					
EPA 1631E	Mercury	8.08	ng/L	0.52	01/03/25 13:49	
50390494005	**Gleason-M**					
EPA 1631E	Mercury	0.680	ng/L	0.50	01/03/25 12:22	
50390494006	**Gleason-R**					
EPA 1631E	Mercury	1.22	ng/L	0.52	01/03/25 13:57	

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgement and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or

WO# : 50390494

50390494

ALL BOLD OUT

Container Preservative Ty

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Company: City Of Goshen

Address: 1000 West Wilden Ave.

Report To: jimkerezman@goshencity.com

Copy To: mickreese@goshencity.com

Customer Project Name/Number: LL Mercury 9733/1

Billing Information: Attn: Tracie Hershberger
1000 West Wilden Ave.
Goshen, IN 46528

Email To: tracieherschberger@goshencity.com

Site Collection Info/Address: Various City sites

State: IN | County/City: Elkhart / Goshen | Time Zone Collected: [ ]PT [ ]MT [ ]CT

Phone: 574-534 4102
Email:goshenwastewater@goshencity.com

Collected By (print):M. Reese J. Kerezman

Collected By (signature):

Sample Disposal:
[X] Dispose as appropriate
[ ] Return
[ ] Archive: _____
[ ] Hold _____

Site/Facility ID #:

Purchase Order # :

Quote #:

Turnaround Date Required: Standard

Rush: (Expedite Charges Apply)
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day
[ ] 4 Day [ ] 5 Day

Compliance Monitoring?
[X] Yes [ ] No [X]Varies

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice:
[ ] Yes [X] No

Field Filtered (if applicable):
[ ] Yes [X] No

Analysis: _____

* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	LL Mercury	
Blank	WW	G	12/17/24	9:55 AM				1	G	X	001
Effluent	WW	G	12/17/24	9:56 AM				1	G	X	002
Influent	WW	G	12/17/24	10:05 AM				1	G	X	003
Grant Drive	WW	G	12/17/24	10:28 AM				1	G	X	004
Gleason -M	WW	G	12/17/24	11:09 AM				1	G	X	005
Gleason-R	WW	G	12/17/24	11:25 AM				1	G	X	006

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact: Y N NA
Custody Signatures Present: Y N NA
Collector Signature Present: Y N NA
Bottles Intact: Y N NA
Correct Bottles: Y N NA
Sufficient Volume: Y N NA
Samples Received on Ice: Y N NA
VOA - Headspace Acceptable: Y N NA
USDA Regulated Soils: Y N NA
Samples in Holding Time: Y N NA
Residual Chlorine Present: Y N NA
Cl Strips:
Sample pH Acceptable: Y N NA
pH Strips:
Sulfide Present: Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry (None)

Packing Material Used: Bubble Wrap

Radchem sample(s) screened (<500 cpm): Y N (NA)

SHORT HOLDS PRESENT (<72 hours): Y N (N/A)

Lab Tracking #:

Samples received via: (FEDEX) UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: (Y) N NA
Therm ID#: T
Cooler 1 Temp Upon Receipt: 19.8°C
Cooler 1 Therm Corr. Factor: -1.0°C
Cooler 1 Corrected Temp: 19.7°C
Comments:

Relinquished by/Company: (Signature)	Date/Time: 12/17/24 12:30 PM	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature) FedEx	Date/Time: 12/18/24 925	Received by/Company: (Signature) PACE	Date/Time: 12/18/24 925
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N (NA)
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of ____

F-IN-C-290-rev.29, 4Oct2024

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: TW 12/18/24 1605

1. Thermometer: 1 2 3 4 5 6 7 8 9 A B C D E F G H (1)

2. Cooler Temperature(s): (Initial/Corrected) 19.8/19.7 RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

3. Courier: Circle One — Fed Ex UPS Client Pace Now/Jett Other

4. Custody Seal on Cooler/Box Present: ☑ Yes ☐ No

(If Yes)Seals Intact: ☑ Yes ☐ No (leave blank if no seals were present)

5. Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

6. Ice Type: ☐ Wet ☐ Blue ☑ None

7. Was the PM notified of out of temp cooler? ☐ Yes ☑ No

Cooler temp should be above freezing to 6°C

If the PM was contacted in the comments below please write how they instructed the project to proceed

All discrepancies will be written out in the comments section below.

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?	✓	
Sample Label (IDs/Dates/Times) Match COC? Except TCs which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED? **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: **HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			✓
Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A ✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace in **VOA Vials** (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent ✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?			✓
Out Of Temp Instructions if applicable:			

COMMENTS:

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 21, 2025

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50394065

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on February 18, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: LL Mercury
Pace Project No.: 50394065

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50394065002	**Plant Influent**					
EPA 1631E	Mercury	9.07	ng/L	0.52	02/20/25 11:41	
50394065003	**Plant Effluent**					
EPA 1631E	Mercury	0.727	ng/L	0.50	02/20/25 11:33	

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workord

WO#: 50394065

ALL BOLD OUTLI 50394065

Company: City Of Goshen	Billing Information: Attn: Tracie Hershberger 1000 West Wilden Ave. Goshen, IN 46528
Address: 1000 West Wilden Ave.	
Report To: jimkerezman@goshencity.com	Email To: tracieherschberger@goshencity.com
Copy To: mickreese@goshencity.com	Site Collection Info/Address: Various City sites
Customer Project Name/Number: LL Mercury 9733/1	State: IN County/City: Elkhart / Goshen Time Zone Collected: [ ]PT [ ]MT [ ]CT

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Phone: 574-534-4102 Email:goshenwastewater@goshencity.com	Site/Facility ID #:	Compliance Monitoring? [X] Yes [ ] No [X]Varies	
Collected By: Mick Reese Jim Kerezman	Purchase Order # : Quote #:	DW PWS ID #: DW Location Code:	
Collected By (signature):	Turnaround Date Required: Standard	Immediately Packed on Ice: [ ] Yes [X] No	
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [X] No Analysis: _____	

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses: LL Mercury	Lab Profile/Line:
Blank 1	WW	G	2/17/2025	8:38AM				1	G	X	001
Plant influent	WW	G	2/17/2025	8:42AM				1	G	X	002
Plant Effluent	WW	G	2/17/2025	8:35AM				1	G	X	003

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:
See SCNR

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #:
Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: 5
Cooler 1 Temp Upon Receipt: 12.7 oC
Cooler 1 Therm Corr. Factor: 0.2 oC
Cooler 1 Corrected Temp: 12.9 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time: 2/17/2025 9:00AM	Received by/Company: (Signature) UPS	Date/Time:
Relinquished by/Company: (Signature) UPS	Date/Time: 2-18-25 10:15	Received by/Company: (Signature) Pace	Date/Time: 2-18-25 10:15
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

-IN-Q-290-rev.29, 4Oct2024

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: BC 2-18-25 12:17

1. Thermometer: 1 2 3 4 5 6 7 8 9 A B C D E F G H I

2. Cooler Temperature(s): (Initial/Corrected) 12.9/12.9

RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

3. Courier: Circle One — Fed Ex, UPS, Client, Pace, Now/Jett, Other

4. Custody Seal on Cooler/Box Present: ☐ Yes ☑ No

(If yes)Seals Intact: ☐ Yes ☐ No (leave blank if no seals were present)

5. Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

6. Ice Type: ☐ Wet ☐ Blue ☑ None

7. Was the PM notified of out of temp cooler? ☐ Yes ☐ No

Cooler temp should be above freezing to 6°C

If the PM was contacted in the comments below please write how they instructed the project to proceed

All discrepancies will be written out in the comments section below.

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	✓
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			✓
	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
	Present	Absent	No VOA Vials Sent
Headspace in **VOA Vials** (>6mm): See Containter Count form for details			✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?:			✓
Out Of Temp Instructions if applicable:			

COMMENTS:

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

May 07, 2025

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50399627

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on April 24, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:
- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: LL Mercury
Pace Project No.: 50399627

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50399627002	**Plant influent**					
EPA 1631E	Mercury	14.8	ng/L	1.0	05/07/25 12:24	
50399627003	**Plant Effluent**					
EPA 1631E	Mercury	2.23	ng/L	0.52	05/07/25 11:47	
50399627004	**Grant Street**					
EPA 1631E	Mercury	14.9	ng/L	1.0	05/07/25 12:32	
50399627005	**Midway L.S.**					
EPA 1631E	Mercury	60.2	ng/L	1.0	05/07/25 12:39	
50399627006	**Green & Lincoln**					
EPA 1631E	Mercury	588	ng/L	10.4	05/07/25 13:32	

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or

WO# : 50399627

50399627

Company: City Of Goshen	Billing Information: Attn: Tracie Hershberger 1000 West Wilden Ave. Goshen, IN 46528
Address: 1000 West Wilden Ave.	
Report To: jimkerezman@goshencity.com	Email To: tracieherschberger@goshencity.com
Copy To: mickreese@goshencity.com	Site Collection Info/Address: Various City sites
Customer Project Name/Number: LL Mercury 9733/1	State: IN County/City: Elkhart / Goshen Time Zone Collected: [ ]PT [ ]MT [ ]CT

Phone: 574-534-4102 Email:goshenwastewater@goshencity.com	Site/Facility ID #:	Compliance Monitoring? [X] Yes [ ] No [X]Varies
Collected By (print): Micky Reese	Purchase Order # : Quote #:	DW PWS ID #: DW Location Code:
Collected By (signature): Micky Reese	Turnaround Date Required: Standard	Immediately Packed on Ice: [ ] Yes [X] No
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [X] No Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	LL Mercury
Blank	WW	G	4/23/2024	9:10 AM				1	G	X
Plant influent	WW	G	4/23/2024	9:15 AM				1	G	X
Plant Effluent	WW	G	4/23/2024	9:10 AM				1	G	X
Grant Street	WW	G	4/23/2024	9:30 AM				1	G	X
Midway L.S.	WW	G	4/23/2024	10:05 AM				1	G	X
Green & Lincoln	WW	G	4/23/2024	10:35 AM				1	G	X

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

See SCUR

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry (None)

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: (FEDEX) UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: (Y) N NA
Therm ID#: 4
Cooler 1 Temp Upon Receipt: 1.9 oC
Cooler 1 Therm Corr. Factor: 0.0 oC
Cooler 1 Corrected Temp: 1.9 oC
Comments:

Relinquished by/Company: (Signature) Micky Reese	Date/Time: 4/23/25 12:00 pm	Received by/Company: (Signature) Fedex	Date/Time:
Relinquished by/Company: (Signature) Fedex	Date/Time: 4/24/25 0850	Received by/Company: (Signature) JL	Date/Time: 4/24/25 0850
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and initials of person examining contents: 15:05 4/23/25 IL

1. Thermometer: 1 2 3 (4) 5 6 7 8 9 A B C D E F G H I

2. Cooler Temperature(s): (Initial/Corrected) 19.9/19.9 | | | |

RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

3. Was the PM notified of out of temp cooler? (leave blank if samples are in temp) Yes (No) LLHg only IL 4/23

Cooler temp should be above freezing to 6°C

If the PM was contacted in the comments below please write how they instructed the project to proceed

3. Packing Material: (Bubble Wrap) Bubble Bags None Other ____

4. Ice Type: Wet Blue (None)

5. Courier: (Fed Ex) UPS Client Pace Now/Jett Other

6. Custody Seal on Cooler/Box Present: (Yes) No

(If yes)Seals Intact: Yes No (leave blank if no seals were present)

All discrepancies will be written out in the comments section below.

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? **Analysis:**		✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	
Comments:		

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			✓
Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A ✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace in **VOA Vials** (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent ✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?:			✓
Extra labels on Terracore Vials? (soils only)			✓

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

June 26, 2025

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50404592

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on June 14, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: LL Mercury
Pace Project No.: 50404592

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50404592001	**Effluent**					
EPA 1631E	Mercury	0.585	ng/L	0.50	06/26/25 11:52	
50404592003	**Influent**					
EPA 1631E	Mercury	11.0	ng/L	0.52	06/26/25 12:36	
50404592004	**Grant Dr**					
EPA 1631E	Mercury	18.0	ng/L	0.52	06/26/25 12:44	
50404592006	**CR 38 LS**					
EPA 1631E	Mercury	12.8	ng/L	0.52	06/26/25 12:51	
50404592007	**CR 27&Karisa**					
EPA 1631E	Mercury	14.4	ng/L	0.52	06/26/25 12:59	
50404592008	**Shasta Dr**					
EPA 1631E	Mercury	126	ng/L	5.2	06/26/25 13:17	
50404592009	**Mill Street**					
EPA 1631E	Mercury	35.6	ng/L	0.52	06/26/25 13:28	
50404592010	**Bashor LS**					
EPA 1631E	Mercury	8.53	ng/L	0.52	06/26/25 13:36	

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: City Of Goshen

Address: 1000 West Wilden Ave.

Billing Information: Attn: Tracie Hershberger 1000 West Wilden Ave. Goshen, IN 46528

Report To: jimkerezman@goshencity.com

Email To: tracieherschberger@goshencity.com

Copy To: mickreese@goshencity.com

Site Collection Info/Address: Various City sites

Customer Project Name/Number: LL Mercury 9733/1

State: IN County/City: Elkhart / Goshen Time Zone Collected: [ ]PT [ ]MT [ ]CT [

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses

Phone: 574-534-4102

Email:goshenwastewater@goshencity.com

Site/Facility ID #:

Compliance Monitoring? [X] Yes [ ] No [X]Varies

Collected By (print): Mick Reese

Collected By (signature): Mick Reese

Purchase Order # :

Quote #:

DW PWS ID #:

DW Location Code:

Turnaround Date Required: Standard

Immediately Packed on Ice: [ ] Yes [X] No

Sample Disposal:
[X] Dispose as appropriate
[ ] Return
[ ] Archive: _____
[ ] Hold: _____

Rush: (Expedite Charges Apply)
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day
[ ] 4 Day [ ] 5 Day

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

WO# : 50404592

50404592

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	LL Mercury	Lab Sample # / Comments:
Effluent	WW	G	6/11/25	8:46 AM					G	X	001
Blank 1	WW	G	6/11/25	8:47 AM					G	X	002
Influent	WW	G	6/11/25	8:55 AM					G	X	003
Grant Dr.	WW	G	6/11/25	9:10 AM					G	X	004
Blank 2 Karisa	WW	G	6/11/25	9:50 AM					G	X	005
CR 38 LS	WW	G	6/11/25	9:40 AM					G	X	006
CR 27&Karisa	WW	G	6/11/25	9:50 AM					G	X	007
Shasta Dr.	WW	G	6/11/25	10:00 AM					G	X	008
Mill Street	WW	G	6/11/25	10:10 AM					G	X	009
Bashor LS	WW	G	6/11/25	9:17 AM					G	X	010

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:

See SW

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: A
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Mick Reese	6/11/25 12:00 PM	FedEx	
FedEx	6/14/25 1125	Tracy Hunter Pace	6/14/25 1125

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 1

F-IN-Q-290-rev.31, 10Apr2025

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and initials of person examining contents: 6/14/25 12:48 TBH

1. Thermometer: 1 2 3 4 5 6 7 8 9 (A) B C D E F G H I

2. Cooler Temperature(s): (Initial/Corrected) 19.2/19.8 | | | |

RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

3. Packing Material: (Bubble Wrap) Bubble Bags None Other _____

4. Ice Type: Wet Blue (None)

3. Was the PM notified of out of temp cooler?: (leave blank if samples are in temp) Yes No

5. Courier: (Fed Ex) UPS Client Pace Now/Jett Other

Cooler temp should be above freezing to 6°C

If the PM was contacted in the comments below please write how they instructed the project to proceed

6. Custody Seal on Cooler/Box Present: (Yes) No

(If yes)Seals Intact: (Yes) No (leave blank if no seals were present)

All discrepancies will be written out in the comments section below.

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			✓
Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A ✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace in **VOA Vials** (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent ✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?:			✓
Extra labels on Terracore Vials? (soils only)			✓

Comments:

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

August 28, 2025

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50410750

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on August 22, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: LL Mercury
Pace Project No.: 50410750

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50410750001	**Effluent**					
EPA 1631E	Mercury	0.950	ng/L	0.50	08/27/25 16:30	
50410750003	**Influent**					
EPA 1631E	Mercury	14.6	ng/L	0.52	08/27/25 18:01	
50410750004	**Grant Dr.**					
EPA 1631E	Mercury	143	ng/L	26.0	08/27/25 18:21	

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical™

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workord

WO# : 50410750

50410750

ALL BOLD OUTL

Container Preservative Typ

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Company: City Of Goshen	Billing Information: Attn: Tracie Hershberger 1000 West Wilden Ave. Goshen, IN 46528
Address: 1000 West Wilden Ave.	
Report To: jimkerezman@goshencity.com	Email To: tracieherschberger@goshencity.com
Copy To: mickreese@goshencity.com	Site Collection Info/Address: Various City sites
Customer Project Name/Number: LL Mercury 9733/1	State: IN County/City: Elkhart / Goshen Time Zone Collected: [ ]PT [ ]MT [ ]CT [
Phone: 574-534-4102 Email:goshenwastewater@goshencity.com	Site/Facility ID #: Compliance Monitoring? [X] Yes [ ] No [X]Varies
Collected By (print):Mick Reese Rodney Hahn	Purchase Order # : Quote #: DW PWS ID #: DW Location Code:
Collected By (signature): Mick Reese	Turnaround Date Required: Standard Immediately Packed on Ice: [ ] Yes [X] No
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day Field Filtered (if applicable): [ ] Yes [X] No Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	LL Mercury										Lab Profile/Line:
Effluent	WW	G	8/21/25	9:05 AM					G	X										
Blank 1	WW	G	8/21/25	9:00 AM					G	X										
Influent	WW	G	8/21/25	9:20 AM					G	X										
Grant Dr.	WW	G	8/21/25	9:30 AM					G	X										

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

SCR SCUr

Customer Remarks / Special Conditions / Possible Hazards:
Please Note: The sample bottle for Grant Dr. is labelled Grant Place. The sampler didn't want to relabel the sample due to concern of contamination. Grant Dr. is the correct Labeling.

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: _____oC
Comments:

Relinquished by/Company: (Signature) Mick Reese	Date/Time: 8/21/25 12:00 PM (MR)	Received by/Company: (Signature) Fedex	Date/Time:
Relinquished by/Company: (Signature) Fedex	Date/Time: 8/22/25 9:15	Received by/Company: (Signature) Pace	Date/Time: 8/22/25 9:15
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: of: _____

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents:
8/22/25 19:09 JG

1. **Thermometer:** 1 2 3 4 5 6 7 8 9 A B C D E F G H I

Cooler temp should be above freezing to 6°C

2A. **Cooler Temperature(s):** 19.9/19.9 | | | |

(Initial/Corrected) *RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)*

2B. Was the PM notified of out of temp cooler?: (leave blank if samples are in temp) Yes (No)

3. **Packing Material:** Bubble Bags Bubble Wrap None Other: _____

4. **Ice Type:** ~~Wet~~ Blue (None)

5. **Courier:** (FedEx) UPS Client Pace NOW Jett Other

6. **Custody Seal on Cooler/Box Present:** (Yes) No

(If yes)Seals Intact: (Yes) No *Leave blank if no seals were present*

All discrepancies will be written out in the comments section below.

	Yes	No	N/A
7. USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)			—
8. Short Hold Time Analysis (48 hours or less)?:		—	
9. Time 5035A TC placed in Freezer or Short Holds To Lab:	**Time:**		
10. Rush TAT Requested (4 days or less):		—	
11. Custody Signatures Present?	—		
12. Containers intact?	—		
13. Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID		—	
14. All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			—
15. Residual Chlorine Check (SVOC 625 Pest/PCB 608)			—
16. Residual Chlorine Check (Total/Amenable/Free Cyanide)			—
17. Headspace in **VOA Vials** (>6mm): See Containter Count form for details			—
18. Trip Blank Present?			—
19. Trip Blank Custody Seals?:			—
20. Extra labels on Terracore Vials? (soils only)			

Comments: Grant Dr sample point labeled as "Grant Place" JG 8/22/25

Client included note on chain regarding sample labeling/ 082525kj

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

October 23, 2025

Mick Reese
City of Goshen
1000 W. Wilden Ave
Goshen, IN 46528

RE: Project: LL Mercury
Pace Project No.: 50415655

Dear Mick Reese:

Enclosed are the analytical results for sample(s) received by the laboratory on October 17, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kelly M Jones

Kelly Jones
kelly.jones@pacelabs.com
(317)228-3125
Project Manager

Enclosures

cc: Jim Kerezman, City of Goshen

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: LL Mercury
Pace Project No.: 50415655

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50415655001	**Effluent**					
EPA 1631E	Mercury	0.680	ng/L	0.50	10/23/25 18:49	
50415655003	**Influent**					
EPA 1631E	Mercury	18.5	ng/L	0.52	10/23/25 20:33	
50415655004	**Grant Dr.**					
EPA 1631E	Mercury	8.28	ng/L	0.52	10/23/25 20:41	

4

Date: 10/23/2025 09:46 PM

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or

WO# : 50415655

ALL BOLD O

50415655

Container Preservati

** Preservative Types. (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Company: City Of Goshen

Billing Information: Attn: Tracie Hershberger 1000 West Wilden Ave. Goshen, IN 46528

Address: 1000 West Wilden Ave.

Report To: jimkerezman@goshencity.com

Email To: tracieherschberger@goshencity.com

Copy To: mickreese@goshencity.com

Site Collection Info/Address: Various City sites

Customer Project Name/Number: LL Mercury 9733/1

State: IN County/City: Elkhart / Goshen Time Zone Collected: [ ]PT [ ]MT [ ]CT [

Phone: 574 534 4102

Email: goshenwastewater@goshencity.com

Site/Facility ID #:

Compliance Monitoring? [X] Yes [ ] No [X]Varies

Collected By (print): Micky Reese

Purchase Order #:

Quote #:

DW PWS ID #:

DW Location Code:

Collected By (signature):

Turnaround Date Required: Standard

Immediately Packed on Ice: [ ] Yes [X] No

Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive _____ [ ] Hold _____

Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	LL Mercury							
Effluent	WW	G	10/16/25	9:25 AM					G	X							
Blank 1	WW	G	10/16/25	9:30 AM					G	X							
Influent	WW	G	10/16/25	9:41 AM					G	X							
Grant Dr.	WW	G	10/16/25	10:15 AM					G	X							
									G	X							
									G	X							
									G	X							
									G	X							
									G	X							
									G	X							

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry (None)

Tracking Material Used: Dubble bags

Radchem sample(s) screened (<500 cpm): Y N (NA)

SHORT HOLDS PRESENT (<72 hours): Y N (N/A)

Lab Tracking #:

Samples received via: (FEDEX) UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: (Y) N NA
Therm ID#: 4
Cooler 1 Temp Upon Receipt: 1.4 °C
Cooler 1 Therm Corr. Factor: 0.0 °C
Cooler 1 Corrected Temp: 1.4 °C
Comments:

Relinquished by/Company: (Signature)	Date/Time: 10/16/25 11:00 AM	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature) fedex	Date/Time: 10/17/25 0730	Received by/Company: (Signature) pace	Date/Time: 10/17/25 0730
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table#:
Acctnum:
Template:
Prelog:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: of:

50415655

Brookside Laboratories, Inc.
Analysis Report

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Kiefer Consulting
Date Collected: 03/07/2022
Date Received: 03/08/2022

Lab Number: VE0308042
Location: DIGESTER
Description:
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	2.003	2000	40	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	11.20	0.22	0.0224	0.0004	
CADMIUM	3.40	0.07	0.0068	1.3E-4	
CHROMIUM-TOTAL (Cr)	60.60	1.21	0.1212	0.0024	
COPPER	199.10	3.99	0.3982	0.0080	
LEAD	7.10	0.14	0.0142	0.0003	
MERCURY	< 3.00	< 0.06	< 0.0060	< 1.2E-4	
MOLYBDENUM	20.10	0.40	0.0402	0.0008	
NICKEL	21.00	0.42	0.0420	0.0008	
SELENIUM	< 2.00	< 0.04	< 0.0040	< 8.0E-5	
ZINC	113.70	2.28	0.2274	0.0046	

MAXIMUM AWSAR (BASED ON POLLUTANT LOADING) 79.64 Dry Ton/Acre 3976.18 Wet Ton/Acre
LIMITING POLLUTANT: ARSENIC

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Comments:

Erica Huber
Environmental Laboratory Manager

60213
Kiefer
-146

Brookside LABS

Environmental Department
200 White Mountain Dr.
New Bremen, OH 45869
(419)977-2766

CHAIN OF CUSTODY

3-15-2

In order for analysis to be completed correctly, please fill this out this form completely.
If you have any questions please contact the laboratory or the environmental manager.

CLIENT: Goshen WW	ACCOUNT NO: 60213
REPORT ADDRESS:	INVOICE ADDRESS: P.O. Box 342 Bremen, IN 46506
	ATTN: Steve Kiefer
ATTN: Jim Kerezman	SAMPLED BY: SK
PHONE NO:	P.O. NO:
EMAIL:	QUOTE NO:

TURNAROUND TIME (additional fees)
- ☑ Standard (none)
- ☐ 3 Day (+50%)
- ☐ 5 Day (+25%)
- ☐ 24 hr Rush (+100%)

Date Needed: _____

TEST METHODS: (IF SPECIFIED)

Chain of Custody Protocol is:
☑ Mandatory ☐ Optional

TESTS REQUESTED

State Samples Collected:

AND TYPE OF CONTAINERS

SAMPLE ID	DATE	TIME	C/G	MATRIX	FIELD pH	503 Metals	Fecal Coliform	HCl / NaOH	HNO_3	H_2SO_4	Other	None	LAB USE ONLY
Digester	3/1/21	11:00 a.m.		SD		✓						1000P	VE0308042
F201							✓					100P	VE0308043
F202													VE0308044
F211													VE0308045
F221													VE0308046
F231													VE0308047
F232													VE0308048
F242													VE0308049

QC DELIVERABLES:
☐ Level 1 ☐ Level 2
☐ Level 3 ☐ Level 4 ☐ Other

COMMENTS: Please return cooler + bottles.
3/7/21 Thanks, Steve

RELINQUISHED BY: Steve Kiefer	DATE/TIME: 12:00 P.M.	RECEIVED BY: Stacy Houlton	DATE/TIME: 3-8-22
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:

MATRIX CODES: DE-drinking water SE-soil OE-oil IS-industrial solid IL-industrial liquid WE-groundwater UE-wastewater VE-sludge TE-tissue XE-fertilizer

Brookside Laboratories, Inc.
Analysis Report

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Kiefer Consulting
Date Collected: 06/22/2022
Date Received: 06/23/2022

Lab Number: VE0623005
Location: DIGESTER
Description:
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	2.714	2000	54	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	17.10	0.46	0.0342	0.0009	
CADMIUM	2.40	0.07	0.0048	1.3E-4	
CHROMIUM-TOTAL (Cr)	47.20	1.28	0.0944	0.0026	
COPPER	293.00	7.95	0.5860	0.0159	
LEAD	15.90	0.43	0.0318	0.0009	
MERCURY	< 1.97	< 0.05	< 0.0039	< 1.0E-4	
MOLYBDENUM	24.80	0.67	0.0496	0.0013	
NICKEL	22.50	0.61	0.0450	0.0012	
SELENIUM	< 2.00	< 0.05	< 0.0040	< 1.0E-4	
ZINC	618.50	16.79	1.2370	0.0336	

MAXIMUM AWSAR (BASED ON POLLUTANT LOADING) LIMITING POLLUTANT: ARSENIC — 52.16 Dry Ton/Acre — 1922.02 Wet Ton/Acre

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Comments:

Erica Huber
Environmental & Geotechnical Manager

60213 Kef 7/11/22

Brookside LABS

Environmental Department
200 White Mountain Dr.
New Bremen, OH 45869
(419)977-2766

-147

CHAIN OF COUNTODY

In order for analysis to be completed correctly, please fill this out this form completely.
If you have any questions please contact the laboratory or the environmental manager.

CLIENT: Goshen WW | ACCOUNT NO: 60213

REPORT ADDRESS:

INVOICE ADDRESS: P.O. Box 372, Bremen, IN 46506

ATTN: Steve Kiefer

ATTN: Jim Kercsman

SAMPLED BY: SK

PHONE NO:

P.O. NO:

EMAIL:

QUOTE NO:

TURNAROUND TIME (additional fees)
- ☑ Standard (none)
- ☐ 5 Day (+25%)
- ☐ 3 Day (+50%)
- ☐ 24 hr Rush (+100%)

Date Needed:

TEST METHODS: (IF SPECIFIED)

Chain of Custody Protocol is: ☑ Mandatory ☐ Optional

State Samples Collected:

SAMPLE ID	DATE	TIME	C/G	MATRIX	FIELD pH	503 Metals	Fecal Coliform	HCl / NaOH	HNO_3	H_2SO_4	Other	None	LAB USE ONLY
Digester	6/22/22	11:45 A.M.	C	SD		✓							VE0623005
M106	|	|	G	|			✓						VE0623006
M107	|	|	|	|			|						VE0623007
M108	|	|	|	|			|						VE0623008
M117	|	|	|	|			|						VE0623009
M126	|	|	|	|			|						VE0623010
M127	|	|	|	|			|						VE0623011
M131	|	|	|	|			|						VE0623012

(# AND TYPE OF CONTAINERS: HCl / NaOH, HNO_3, H_2SO_4, Other, None)

QC DELIVERABLES: ☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Other

COMMENTS: Please return cooler + bottles. Thanks, Steve

RELINQUISHED BY: Steve Kiefer	DATE/TIME: 6/22/22 11:00 AM	RECEIVED BY: SO	DATE/TIME: 6/23
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:

MATRIX CODES: DE-drinking water SE-soil OE-oil IS-industrial solid IL-industrial liquid WE-groundwater UE-wastewater VE-sludge TE-tissue XE-fertilizer

Brookside LABS

Brookside Laboratories, Inc.

Analysis Report

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Kiefer Consulting
Date Collected: 09/07/2022
Date Received: 09/08/2022

Lab Number: VE0908026
Location: BELT FILTER
Description: COMP
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	1.988	2000	40	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	22.00	0.44	0.0440	0.0009	
CADMIUM	2.90	0.06	0.0058	1.1E-4	
CHROMIUM-TOTAL (Cr)	48.50	0.96	0.0970	0.0019	
COPPER	324.00	6.44	0.6480	0.0129	
LEAD	15.20	0.30	0.0304	0.0006	
MERCURY	< 2.82	< 0.06	< 0.0056	< 1.1E-4	
MOLYBDENUM	21.20	0.42	0.0424	0.0008	
NICKEL	12.90	0.26	0.0258	0.0005	
SELENIUM	< 2.00	< 0.04	< 0.0040	< 7.9E-5	
ZINC	664.50	13.21	1.3290	0.0264	

MAXIMUM AWSAR (BASED ON POLLUTANT LOADING) LIMITING POLLUTANT: ARSENIC — 40.55 Dry Ton/Acre — 2039.51 Wet Ton/Acre

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Comments:

Erica Cheek
Environmental & Geotechnical Manager

60213 Kiefer

-148

Brookside LABS

Environmental Department
200 White Mountain Dr.
New Bremen, OH 45869
(419)977-2766

CHAIN OF CUSTODY 9/6

In order for analysis to be completed correctly, please fill this out this form completely.
If you have any questions please contact the laboratory or the environmental manager.

CLIENT: Goshen WW	ACCOUNT NO: 60213	TEST METHODS: (IF SPECIFIED)
REPORT ADDRESS:	INVOICE ADDRESS: P.O. Box 372 Bremen, IN 46506	
	ATTN: Steve Kiefer	TESTS REQUESTED
ATTN: Jim Kerezman	SAMPLED BY: SK	
PHONE NO:	P.O. NO:	
EMAIL:	QUOTE NO:	

Chain of Custody Protocol is: ☒ Mandatory ☐ Optional

State Samples Collected: IN

TURNAROUND TIME (additional fees)
☒ Standard (none) ☐ 3 Day (+50%)
☐ 5 Day (+25%) ☐ 24 hr Rush (+100%)
Date Needed: _____

SAMPLE ID	DATE	TIME	C/G	MATRIX	FIELD pH	503 Metals	Fecal Coliform	# AND TYPE OF CONTAINERS: HCl / NaOH	HNO_3	H_2SO_4	Other	None	LAB USE ONLY
Belt Filter Cake	9/7/22	9:30 AM	C	SD		✓						1000P	VE0908026
B071			G				✓					100P	VE0908027
B072													VE0908028
B073													VE0908029
B074													VE0908030
B081													VE0908031
B082													VE0908032
B091													VE0908033

QC DELIVERABLES:
☐ Level 1 ☐ Level 2
☐ Level 3 ☐ Level 4 ☐ Other

COMMENTS:

RELINQUISHED BY: Steve Kiefer	DATE/TIME: 9/7/22 11:00 AM	RECEIVED BY: [illegible]	DATE/TIME: 9-8-22
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:

MATRIX CODES: DE-drinking water SE-soil OE-oil IS-industrial solid IL-industrial liquid WE-groundwater UE-wastewater VE-sludge TE-tissue XE-fertilizer

Brookside LABS

Brookside Laboratories, Inc.

Analysis Report

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Kiefer Consulting
Date Collected: 12/05/2022
Date Received: 12/06/2022

Lab Number: VE1206006
Location: DIGESTER
Description:
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	1.764	2000	35	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	22.10	0.39	0.0442	0.0008	
CADMIUM	4.80	0.08	0.0096	1.6E-4	
CHROMIUM-TOTAL (Cr)	61.40	1.08	0.1228	0.0022	
COPPER	381.60	6.73	0.7632	0.0135	
LEAD	10.00	0.18	0.0200	0.0004	
MERCURY	< 2.98	< 0.05	< 0.0060	< 1.0E-4	
MOLYBDENUM	24.60	0.43	0.0492	0.0009	
NICKEL	9.50	0.17	0.0190	0.0003	
SELENIUM	< 2.00	< 0.04	< 0.0040	< 7.0E-5	
ZINC	715.50	12.62	1.4310	0.0252	

MAXIMUM AWSAR (BASED ON POLLUTANT LOADING) LIMITING POLLUTANT: ARSENIC — 40.36 Dry Ton/Acre — 2288.09 Wet Ton/Acre

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Comments: *Recheck requested. Report revised. 1/18/23 EC

Erica Cheek
Environmental & Geotechnical Manager

-149

Brookside LABS

Environmental Department
200 White Mountain Dr.
New Bremen, OH 45869
(419)977-2766

CHAIN OF CUSTODY

In order for analysis to be completed correctly, please fill this out this form completely.
If you have any questions please contact the laboratory or the environmental manager.

CLIENT: Goshen WW	ACCOUNT NO: 60213	TEST METHODS: (IF SPECIFIED)
REPORT ADDRESS:	INVOICE ADDRESS: P.O. Box 372 Bremen, IN 46506	
	ATTN: Steve Kiefer	TESTS REQUESTED
ATTN: Jim Kerezman	SAMPLED BY: SK	State Samples Collected: IN
PHONE NO:	P.O. NO:	# AND TYPE OF CONTAINERS
EMAIL:	QUOTE NO:	

TURNAROUND TIME (additional fees)
☑ Standard (none) ☐ 3 Day (+50%)
☐ 5 Day (+25%) ☐ 24 hr Rush (+100%)
Date Needed:_____

SAMPLE ID	DATE	TIME	C/G	MATRIX	FIELD pH	503 Metals	Fecal Coliform	HCl / NaOH	HNO_3	H_2SO_4	Other	None	LAB USE ONLY
Digester	12/5/22	9:30AM	C	SD		✓						1000 P	VE1206006
RP02			G				✓					1000P	VE1206007
R107													VE1206008
R108													VE1206009
R109													VE1206010
R112													VE1206011
R113													VE1206012
R114													VE1206013

QC DELIVERABLES:
☐ Level 1 ☐ Level 2
☐ Level 3 ☐ Level 4 ☐ Other

COMMENTS: Please return coolers + bottles
Thanks, Steve

RELINQUISHED BY: Steve Kiefer	DATE/TIME: 12/5/22 11:00 AM	RECEIVED BY: Betty Wellman	DATE/TIME: 12/6/22 9:45am
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:

MATRIX CODES: DE-drinking water SE-soil OE-oil IS-industrial solid IL-industrial liquid WE-groundwater UE-wastewater VE-sludge TE-tissue XE-fertilizer

Brookside LABS

Brookside Laboratories, Inc.

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Analysis Report

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Kiefer Consulting
Date Collected: 03/08/2023
Date Received: 03/09/2023

Lab Number: VE0309014
Location: DIGESTER
Description:
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	2.215	2000	44	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	31.30	0.69	0.0626	0.0014	
CADMIUM	4.50	0.10	0.0090	1.9E-4	
CHROMIUM-TOTAL (Cr)	48.20	1.07	0.0964	0.0021	
COPPER	234.50	5.19	0.4690	0.0104	
LEAD	11.40	0.25	0.0228	0.0005	
MERCURY	< 2.30	< 0.05	< 0.0046	< 1.0E-4	
MOLYBDENUM	17.30	0.38	0.0346	0.0008	
NICKEL	16.90	0.37	0.0338	0.0007	
SELENIUM	< 2.00	< 0.04	< 0.0040	< 8.8E-5	
ZINC	499.50	11.06	0.9990	0.0221	

MAXIMUM AWSAR (BASED ON POLLUTANT LOADING) LIMITING POLLUTANT: ARSENIC — 28.50 Dry Ton/Acre — 1286.61 Wet Ton/Acre

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Comments:

Erica Cheek
Environmental & Geotechnical Manager

-150

CHAIN OF CUSTODY

Instructions: In order for analysis to be completed correctly, please fill out this form completely. Test Method Codes are located on the back of this form.

White = Original - send to lab w/samples
Yellow = Copy - send to lab w/samples
Pink = Client Copy - Keep for your records

BROOKSIDE LABORATORIES, INC.
Environmental Services Department
200 White Mountain Drive
New Bremen, Ohio 45869
Tel. (419) 977-2766
FAX (419) 977-2767

Client: Goshen WW
Report Address:
Account No: 60213
Invoice Address: P.O. Box 372 Bremen, IN 46506
ATTN: Steve Kiefer
Sampled By: SK
ATTN: Jim Kerezman
P.O. No:
Phone No:
Quote No:
Fax Results: Yes ☐ ☑ No Fax No:

TURNAROUND TIME (additional fees)
☐ Standard (none) ☐ 3 Day (+ 50%)
☐ 5 Day (+25%) ☐ 24 Hour Rush (+ 100%)
Date Needed:

TEST METHODS (If SpecificMethods Required)

State in which samples were collected: IN

MATRIX CODES:
DW = Drinking Water
O = Oil
WW = Wastewater
M = Manure
S = Soil
IL = Industrial Liquid
IS = Industrial Solid
SD = Sludge

TESTS REQUESTED

Sample ID	Date	Time	Comp (C) Grab (G)	Matrix	Field pH	LDL	503 Metals	Fecal Coliform	# and type of containers: HCl/NaOH	HNO_3	H_2SO_4	Other	None	LAB USE ONLY
Digester	3/8/23	10:00 A.M.	C	SD		✓							100P	VE0309014
Q325			G				✓						100P	VE0309015
Q345														VE0309016
Q351														VE0309017
Q352														VE0309018
Q358														VE0309019
Q354														VE0309020
Q355														VE0309021

QC Deliverables:
☐ Level 1 ☐ Level 2 ☐ Level 3
☐ Level 4 ☐ Other

COMMENTS: Please return coolers + bottles.
Thanks, Steve
3/8/23

Chain of Custody Protocol is:
☑ Mandatory ☐ Optional

Relinquished By: Steve Kiefer	Date/Time 11:30A.M.	Rec'd By: Betty Wellman	Date/Time 3/9/23 9:45am	Rec Lab Temp:
Relinquished By:	Date/Time	Rec'd By:	Date/Time	Rec Lab Temp:

N:\OFFICE\BETTY\FORMS\Coc.p65

Brookside LABS

Brookside Laboratories, Inc.

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Analysis Report

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Kiefer Consulting
Date Collected: 06/28/2023
Date Received: 06/29/2023

Lab Number: VE0629009
Location: DIGESTER
Description:
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	1.860	2000	37	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	38.20	0.71	0.0764	0.0014	
CADMIUM	6.90	0.13	0.0138	0.0003	
CHROMIUM-TOTAL (Cr)	61.90	1.15	0.1238	0.0023	
COPPER	308.50	5.74	0.6170	0.0115	
LEAD	11.10	0.21	0.0222	0.0004	
MERCURY	0.31	0.01	0.0006	1.1E-5	
MOLYBDENUM	31.00	0.58	0.0620	0.0012	
NICKEL	59.80	1.11	0.1196	0.0022	
SELENIUM	< 2.00	< 0.04	< 0.0040	< 7.4E-5	
ZINC	615.50	11.45	1.2310	0.0229	

MAXIMUM AWSAR (BASED ON POLLUTANT LOADING) LIMITING POLLUTANT: ARSENIC — 23.35 Dry Ton/Acre — 1255.42 Wet Ton/Acre

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Comments:

Erica Cheek
Environmental & Geotechnical Manager

-151

60213 Kiefer

Brookside LABS

Environmental Department
200 White Mountain Dr.
New Bremen, OH 45869
(419)977-2766

CHAIN OF CUSTODY

7/13/23

In order for analysis to be completed correctly, please fill this out this form completely.
If you have any questions please contact the laboratory or the environmental manager.

CLIENT: Goshen WW	ACCOUNT NO: 60213	TEST METHODS: (IF SPECIFIED)
REPORT ADDRESS:	INVOICE ADDRESS: P.O. Box 372 Bremen, IN 46506	
	ATTN: Steve Kiefer	TESTS REQUESTED
ATTN: Jim Kerezman	SAMPLED BY: SK	State Samples Collected: IN
PHONE NO:	P.O. NO:	# AND TYPE OF CONTAINERS
EMAIL:	QUOTE NO:	

TURNAROUND TIME (additional fees)
- ☑ Standard (none)
- ☐ 3 Day (+50%)
- ☐ 5 Day (+25%)
- ☐ 24 hr Rush (+100%)

Date Needed: _____

SAMPLE ID	DATE	TIME	C/G	MATRIX	FIELD pH	503 metals	fecal coliform	HCl / NaOH	HNO_3	H_2SO_4	Other	None	LAB USE ONLY
Digester	6/28/23	9:30 A.M.	C	SD		✓						100 P	VE0629009
x210			G				✓					100 P	VE0629010
x215													VE0629011
x214													VE0629012
x219													VE0629013
x222													VE0629014
x227													VE0629015
x232													VE0629016

QC DELIVERABLES:
- ☐ Level 1 ☐ Level 2
- ☐ Level 3 ☐ Level 4 ☐ Other

COMMENTS: Please return bottles & cooler.
Thanks, Steve

RELINQUISHED BY: Steve Kiefer	DATE/TIME: 6/28/23 10:30AM	RECEIVED BY: Kelly Wellman	DATE/TIME: 6/29/23 9:45am
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:

MATRIX CODES: DE-drinking water SE-soil OE-oil IS-industrial solid IL-industrial liquid WE-groundwater UE-wastewater VE-sludge TE-tissue XE-fertilizer

Brookside LABS

Brookside Laboratories, Inc.

Analysis Report

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Kiefer Consulting
Date Collected: 09/11/2023
Date Received: 09/12/2023

Lab Number: VE0912005
Location: DIGESTER
Description:
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	2.270	2000	45	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	16.30	0.37	0.0326	0.0007	
CADMIUM	5.60	0.13	0.0112	0.0003	
CHROMIUM-TOTAL (Cr)	44.50	1.01	0.0890	0.0020	
COPPER	229.50	5.21	0.4590	0.0104	
LEAD	11.60	0.26	0.0232	0.0005	
MERCURY	0.66	0.02	0.0013	3.0E-5	
MOLYBDENUM	19.70	0.45	0.0394	0.0009	
NICKEL	24.40	0.55	0.0488	0.0011	
SELENIUM	< 2.00	< 0.05	< 0.0040	< 9.0E-5	
ZINC	479.00	10.87	0.9580	0.0217	

MAXIMUM AWSAR (BASED ON POLLUTANT LOADING) 54.72 Dry Ton/Acre 2410.75 Wet Ton/Acre
LIMITING POLLUTANT: ARSENIC

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Comments:

Erica Cheek
Environmental & Geotechnical Manager

6021 Kiefer 9/21/23

-152-

Brookside LABS

Environmental Department
200 White Mountain Dr.
New Bremen, OH 45869
(419)977-2766

CHAIN OF CUSTODY

In order for analysis to be completed correctly, please fill this out this form completely.
If you have any questions please contact the laboratory or the environmental manager.

CLIENT: Gosher	ACCOUNT NO: 6021 3	TEST METHODS: (IF SPECIFIED)
REPORT ADDRESS:	INVOICE ADDRESS: P.O. Box 372 Bremen, IN 46506	
	ATTN: Steve Kiefer	TESTS REQUESTED
ATTN: Jim Kerczynski	SAMPLED BY: SK	
PHONE NO:	P.O. NO:	
EMAIL:	QUOTE NO:	

TURNAROUND TIME (additional fees)
☑ Standard (none) ☐ 3 Day (+50%)
☐ 5 Day (+25%) ☐ 24 hr Rush (+100%)
Date Needed:_____

State Samples Collected:

AND TYPE OF CONTAINERS

SAMPLE ID	DATE	TIME	C/G	MATRIX	FIELD pH	503 Metals	Fecal Coliform						HCl / NaOH	HNO_3	H_2SO_4	Other	None	LAB USE ONLY
Digester	9/11/23	9:30 A.m	C	~~SD~~VE		✓											1000	VE0912005
G64	✓	✓	G				✓										100	VE0912006
G-67																		VE0912007
G-71																		VE0912008
G-74																		VE0912009
G-75																		VE0912010
G-78																		VE0912011
G-79																		VE0912012

QC DELIVERABLES:
☐ Level 1 ☐ Level 2
☐ Level 3 ☐ Level 4 ☐ Other

COMMENTS: Please return cooler + bottle
9/11/23 Phone, Steve

RELINQUISHED BY: Steve Kiefer	DATE/TIME:	RECEIVED BY: Cathy Wellman	DATE/TIME: 9/12/23 9:45 am
RELINQUISHED BY:	DATE/TIME: 10:30 AM	RECEIVED BY:	DATE/TIME:

MATRIX CODES: DE-drinking water SE-soil OE-oil IS-industrial solid IL-industrial liquid WE-groundwater UE-wastewater VE-sludge TE-tissue XE-fertilizer

Brookside LABS

Brookside Laboratories, Inc.

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Analysis Report

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Kiefer Consulting
Date Collected: 12/12/2023
Date Received: 12/14/2023

Lab Number: VE1214013
Location: DIGESTER
Description:
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	1.453	2000	29	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	< 2.00	< 0.03	< 0.0040	< 5.8E-5	
CADMIUM	< 0.50	< 0.01	< 0.0010	< 1.4E-5	
CHROMIUM-TOTAL (Cr)	23.00	0.33	0.0460	0.0007	
COPPER	243.50	3.54	0.4870	0.0071	
LEAD	11.70	0.17	0.0234	0.0003	
MERCURY	1.26	0.02	0.0025	3.6E-5	
MOLYBDENUM	21.40	0.31	0.0428	0.0006	
NICKEL	14.30	0.21	0.0286	0.0004	
SELENIUM	2.00	0.03	0.0040	5.8E-5	
ZINC	405.00	5.88	0.8100	0.0118	

MAXIMUM AWSAR (BASED ON POLLUTANT LOADING) LIMITING POLLUTANT: COPPER — 137.37 Dry Ton/Acre — 9454.35 Wet Ton/Acre

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Comments:

Luke Baker
CEO/President

40213 Kiefer 4/21/2_

-153

Brookside LABS

Environmental Department
200 White Mountain Dr.
New Bremen, OH 45869
(419)977-2766

CHAIN OF CUSTODY

In order for analysis to be completed correctly, please fill this out this form completely.
If you have any questions please contact the laboratory or the environmental manager.

CLIENT: Goshen WW | ACCOUNT NO: 60213

REPORT ADDRESS:

INVOICE ADDRESS: P.O. Box 372 Bremen, IN 46506

ATTN: Steve Kiefer

ATTN: Jim Kerezman | SAMPLED BY: SK

PHONE NO: | P.O. NO:

EMAIL: | QUOTE NO:

TURNAROUND TIME (additional fees)
- ☑ Standard (none)
- ☐ 5 Day (+25%)
- ☐ 3 Day (+50%)
- ☐ 24 hr Rush (+100%)

Date Needed:

TEST METHODS: (IF SPECIFIED)

State Samples Collected: IN

SAMPLE ID	DATE	TIME	C/G	MATRIX	FIELD pH	TESTS REQUESTED: 503 Metals								# AND TYPE OF CONTAINERS: HCl / NaOH	HNO_3	H_2SO_4	Other	None	LAB USE ONLY
Digester	12/12/23	2:00 p.m.	G	UE		✓												1000 P	VE1714013

QC DELIVERABLES:
- ☐ Level 1 ☐ Level 2
- ☐ Level 3 ☐ Level 4 ☐ Other

COMMENTS: Please return cooler + bottle.

RELINQUISHED BY: Steve Kiefer	DATE/TIME: 12/12/23 4:00 PM	RECEIVED BY: [illegible signature]	DATE/TIME: 12/14/23 9:45 am
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:

MATRIX CODES: DE-drinking water SE-soil OE-oil IS-industrial solid IL-industrial liquid WE-groundwater UE-wastewater VE-sludge TE-tissue XE-fertilizer

Brookside LABS

Brookside Laboratories, Inc.

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Analysis Report

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Crop Tech Inc.
Date Collected: 03/27/2024
Date Received: 03/28/2024

Lab Number: VE0328004
Location: BIOSOLIDS
Description:
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	2.809	2000	56	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	< 7.12	< 0.20	< 0.0142	< 0.0004	
CADMIUM	< 1.78	< 0.05	< 0.0036	< 1.0E-4	
CHROMIUM-TOTAL (Cr)	28.48	0.80	0.0570	0.0016	
COPPER	211.82	5.95	0.4236	0.0119	
LEAD	< 17.80	< 0.50	< 0.0356	< 0.0010	
MERCURY	< 0.05	< 0.00	< 1.0E-4	< 2.8E-6	
MOLYBDENUM	20.65	0.58	0.0413	0.0012	
NICKEL	11.75	0.33	0.0235	0.0007	
SELENIUM	< 7.12	< 0.20	< 0.0142	< 0.0004	
ZINC	359.20	10.09	0.7184	0.0202	

MAXIMUM AWSAR 157.92 Dry Ton/Acre 5621.85 Wet Ton/Acre
(BASED ON POLLUTANT LOADING)
LIMITING POLLUTANT: COPPER

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Comments:

Greg Meyer
Ag Lab Manager

GUWW CropTech 4/4/2

CHAIN OF CUSTODY

Brookside LABS

Environmental Department
200 White Mountain Dr.
New Bremen, OH 45869
(419)977-2766

-154

In order for analysis to be completed correctly, please fill this out this form completely.
If you have any questions please contact the laboratory or the environmental manager.

CLIENT: City of Goshen
ACCOUNT NO: 60213
REPORT ADDRESS:
INVOICE ADDRESS: PO Box 365, Millersburg, IN 46543
ATTN: Cory Bowman
ATTN: Jim Kerezman
SAMPLED BY: Cory
PHONE NO:
P.O. NO:
EMAIL:
QUOTE NO:
TEST METHODS: (IF SPECIFIED)
State Samples Collected:

TURNAROUND TIME (additional fees)
- ☑ Standard (none)
- ☐ 3 Day (+50%)
- ☐ 5 Day (+25%)
- ☐ 24 hr Rush (+100%)
- Date Needed:

SAMPLE ID	DATE	TIME	C/G	MATRIX	FIELD pH	TESTS REQUESTED: IB007 - 503 Metals	# AND TYPE OF CONTAINERS: HCl / NaOH	HNO_3	H_2SO_4	Other	None	LAB USE ONLY
Biosolids	3/27/24	7:00	C	VE		X						VE0328004

QC DELIVERABLES: ☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Other

COMMENTS: Please return cooler and 1 1000ml bottle to Crop Tech Inc. 66808 CR 37, Millersburg, IN 46543

RELINQUISHED BY: Cory Bowman	DATE/TIME: 3/27/24 8:30	RECEIVED BY: Betty Wellman	DATE/TIME: 3/28/24
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:

MATRIX CODES: DE-drinking water SE-soil OE-oil IS-industrial solid IL-industrial liquid WE-groundwater UE-wastewater VE-sludge TE-tissue XE-fertilizer

Brookside LABS

Brookside Laboratories, Inc.

Analysis Report

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Crop Tech Inc.
Date Collected: 06/12/2024
Date Received: 06/13/2024

Lab Number: VE0613003
Location: BIOSOLIDS
Description:
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	2.810	2000	56	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	16.01	0.45	0.0320	0.0009	
CADMIUM	3.20	0.09	0.0064	1.8E-4	
CHROMIUM-TOTAL (Cr)	61.21	1.72	0.1224	0.0034	
COPPER	240.21	6.75	0.4804	0.0135	
LEAD	< 17.79	< 0.50	< 0.0356	< 0.0010	
MERCURY	< 0.05	< 0.00	< 1.0E-4	< 2.8E-6	
MOLYBDENUM	21.71	0.61	0.0434	0.0012	
NICKEL	22.42	0.63	0.0448	0.0013	
SELENIUM	< 7.12	< 0.20	< 0.0142	< 0.0004	
ZINC	488.26	13.72	0.9765	0.0274	

MAXIMUM AWSAR (BASED ON POLLUTANT LOADING) 55.70 Dry Ton/Acre 1982.22 Wet Ton/Acre
LIMITING POLLUTANT: ARSENIC

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Comments:

Jackie Brackman
Chief Operating Officer

Please Send Results to: Cory Bowman
Crop Tech Inc
P.O. Box 365
Millersburg, IN 46543

ASTBURY WATER TECHNOLOGY, INC.
Astbury Water Technology, Inc.
Northeast Regional Office
601 West 400 North * Angola, Indiana 46703
Phone (260) 668-8900 * Fax (260) 668-8900

CHAIN OF CUSTODY

Client Name	ESG Work Order #	Filtered (Y or N)										
City of Goshen	24009936	Preserv. Code										
Sampling Frequency	PWS ID#		Analysis Required									
Sampler(s) Signature: G Bo			Fecal Coliform									

Stat.No	DATE	TIME	COMP	GRAB	SAMPLE-ID	Total number of Containers										Comments
	6/12/24	7:00AM		X	Biosolids	7	✓									

PRESERVATION CODES

N = HNO3 / Nitric Acid — U = Unpreserved, Cooled to 4°C
S = H2SO4 / Sulfuric Acid — OH = NaOH / Sodium Hydroxide
H = HCl / Hydrochloric Acid — SO = Na2S2O3 / Sodium Thiosul

TRANSFER OF CUSTODY

Relinquished by: DATE/TIME	Storage Temp /Temp Blank	Received by: DATE/TIME	Storage Temp /Temp Blank
Cory Bowman 6/12/24 7:30 AM	2°C (If Applicable)	[signature] 6-12-24 8:27	(If Applicable)
Relinquished by: DATE/TIME	Storage Temp /Temp Blank	Received by: DATE/TIME	Storage Temp /Temp Blank
[signature] 6-12-24 12:12	(If Applicable)	SE 12:14 6/12/24	(If Applicable)
Relinquished by: DATE/TIME	Storage Temp /Temp Blank	Received by: DATE/TIME	Storage Temp /Temp Blank
	(If Applicable)		(If Applicable)

Please note Temperature of On-site Storage if used and Temperature Blank if in Transit.

SAMPLE CONDITION UPON RECEIPT

Date: _____ Time: _____
Sample Temp: 2.7 °C
Received on Ice: Y Y N Y / N
Appropriate Preservation: Y / N
Samples Intact: Y / N
Within Hold Time: Y / N
Adequate Volume: Y / N
Head Space Absent: Y / N / N
Appropriate Containers: Y / N

Turn Around Time

Normal Rush Requested due Date:

SAMPLE COMMENTS

Please not if sample(s) suspected to be hazardous, corrosive or requires special handling for any reason.

AWT-Nero completes TSS, CBOD5, BOD, NH3, TP, Ecoli
ESG performs other analysis

Brookside LABS

Brookside Laboratories, Inc.

Analysis Report

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Crop Tech Inc.
Date Collected: 09/25/2024
Date Received: 09/27/2024

Lab Number: VE0927001
Location: BIOSOLIDS
Description:
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	2.485	2000	50	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	< 1.00	< 0.02	< 0.0020	< 4.9E-5	
CADMIUM	< 0.25	< 0.01	< 0.0005	< 1.2E-5	
CHROMIUM	1.45	0.04	0.0029	7.2E-5	
COPPER	7.10	0.18	0.0142	0.0004	
LEAD	< 2.50	< 0.06	< 0.0050	< 1.2E-4	
MERCURY	< 0.50	< 0.01	< 0.0010	< 2.4E-5	
MOLYBDENUM	< 1.00	< 0.02	< 0.0020	< 4.9E-5	
NICKEL	0.80	0.02	0.0016	3.9E-5	
SELENIUM	< 1.00	< 0.02	< 0.0020	< 4.9E-5	
ZINC	15.20	0.38	0.0304	0.0008	

MAXIMUM AWSAR (BASED ON POLLUTANT LOADING) LIMITING POLLUTANT: ARSENIC — 1274.29 Dry Ton/Acre — 51279.10 Wet Ton/Acre

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Comments:

Malorie Dirksen
Malorie Dirksen
Ag & Environmental Lab Manager

CROP TECH

Please email results to cory@croptechinc.net

574-536-4837

Astbury Water Technology, Inc.
Northeast Regional Office

ASTBURY WATER TECHNOLOGY, INC.

601 West 400 North * Angola, Indiana 46703
Phone (260) 668-8900 * Fax (260) 668-8900

CHAIN OF CUSTODY

Client Name: City of Goshen
ESG Work Order #: 24019414
Sampling Frequency: 3 month
PWS ID#:
Sampler(s) Signature: Cory Bow

Stat.No	DATE	TIME	COMP	GRAB	SAMPLE ID	Total number of Containers	Filtered (Y or N)	Preserv. Code	Analysis Required: Fecal Coliform
	10/31/24	2:00 pm		X	Digester	7			X

PRESERVATION CODES

N = HNO3 / Nitric Acid
S = H2SO4 / Sulfuric Acid
H = HCl / Hydrochloric Acid
U = Unpreserved, Cooled to 4°C
OH = NaOH / Sodium Hydroxide
SO = Na2S2O3 / Sodium Thiosulfa

Comments:

TRANSFER OF CUSTODY

Relinquished by: DATE/TIME	Storage Temp /Temp Blank	Received by: DATE/TIME	Storage Temp /Temp Blank
Cory Bowman 10/31/24 2:30 pm	(If Applicable)	8:21 11-1-24	(If Applicable)
Relinquished by: DATE/TIME	Storage Temp /Temp Blank	Received by: DATE/TIME	Storage Temp /Temp Blank
11:18 11-1-24	(If Applicable)	SE 11/1/24 11:18	(If Applicable)
Relinquished by: DATE/TIME	Storage Temp /Temp Blank	Received by: DATE/TIME	Storage Temp /Temp Blank
	(If Applicable)		(If Applicable)

Please note Temperature of On-site Storage if used and Temperature Blank if in Transit.

SAMPLE CONDITION UPON RECEIPT

Date: Time:
Sample Temp: 1.7 °C
Received on Ice: Y / N
Appropriate Preservation: Y / N
Samples Intact: Y / N
Within Hold Time: Y / N
Adequate Volume: Y / N
Head Space Absent: Y / N / N
Appropriate Containers: Y / N

Turn Around Time

Normal Rush Requested due Date:

SAMPLE COMMENTS

Please not if sample(s) suspected to be hazardous, corrosive or requires special handling for any reason.

AWT-Nero completes TSS, CBOD5, BOD, NH3, TP, Ecoli
ESG performs other analysis

Brookside LABS

Brookside Laboratories, Inc.

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Analysis Report

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Crop Tech Inc.
Date Collected: 12/18/2024
Date Received: 12/19/2024

Lab Number: VE1219008
Location: BIOSOLIDS
Description:
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	2.903	2000	58	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	< 2.00	< 0.06	< 0.0040	< 1.1E-4	
CADMIUM	< 0.50	< 0.01	< 0.0010	< 2.9E-5	
CHROMIUM	2.50	0.07	0.0050	1.4E-4	
COPPER	7.60	0.22	0.0152	0.0004	
LEAD	< 5.00	< 0.15	< 0.0100	< 0.0003	
MERCURY	< 0.05	< 0.00	< 1.0E-4	< 2.9E-6	
MOLYBDENUM	< 2.00	< 0.06	< 0.0040	< 1.1E-4	
NICKEL	1.20	0.03	0.0024	6.9E-5	
SELENIUM	< 2.00	< 0.06	< 0.0040	< 1.1E-4	
ZINC	14.20	0.41	0.0284	0.0008	

MAXIMUM AWSAR (BASED ON POLLUTANT LOADING) 2230.00 Dry Ton/Acre 76817.09 Wet Ton/Acre
LIMITING POLLUTANT: ARSENIC

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Comments:

Malorie Dirksen
Malorie Dirksen
Ag & Environmental Lab Manager

60213

-157

Brookside LABS

Environmental Department
200 White Mountain Dr.
New Bremen, OH 45869
(419)977-2766

CHAIN OF CUSTODY

In order for analysis to be completed correctly, please fill this out this form completely.
If you have any questions please contact the laboratory or the environmental manager.

CLIENT:	ACCOUNT NO: 60213	TEST METHODS: (IF SPECIFIED)	
REPORT ADDRESS:	INVOICE ADDRESS:		
	ATTN:	TESTS REQUESTED	State Samples Collected:
ATTN:	SAMPLED BY:		
PHONE NO:	P.O. NO:		# AND TYPE OF CONTAINERS
EMAIL:	QUOTE NO:		

TURNAROUND TIME (additional fees)
☒ Standard (none) ☐ 3 Day (+50%)
☐ 5 Day (+25%) ☐ 24 hr Rush (+100%)
Date Needed:

SAMPLE ID	DATE	TIME	C/G	MATRIX	FIELD pH								HCl / NaOH	HNO_3	H_2SO_4	Other	None	LAB USE ONLY
	12/18/24	7:15 Am	G	VE		X										1		VE1219008

QC DELIVERABLES:
☐ Level 1 ☐ Level 2
☐ Level 3 ☐ Level 4 ☐ Other

COMMENTS:

RELINQUISHED BY: Cory Bowman	DATE/TIME: 12/18/24 2:00 pm	RECEIVED BY: Betty Wellman	DATE/TIME: 12/19/24 9:30 am
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:

MATRIX CODES: DE-drinking water SE-soil OE-oil IS-industrial solid IL-industrial liquid WE-groundwater UE-wastewater VE-sludge TE-tissue XE-fertilizer

Brookside LABS

Brookside Laboratories, Inc.

200 White Mountain Drive
New Bremen, OH 45869
Phone: (419) 977-2766
Fax: (419) 977-2767

Analysis Report

Client Number: 60213
Client Name: City of Goshen
Consultant Name: Crop Tech Inc.
Date Collected: 03/19/2025
Date Received: 03/25/2025

Lab Number: VE0325005
Location: DIGESTER
Description:
Sub Description:

	% Dry Basis	% Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
TOTAL SOLIDS	100	3.515	2000	70	

	mg/kg Dry Basis	mg/kg Wet Basis	lbs/Ton Dry	lbs/Ton Wet	lbs/ 1000 gal
ARSENIC	< 0.98	< 0.03	< 0.0020	< 6.8E-5	
CADMIUM	< 0.24	< 0.01	< 0.0005	< 1.7E-5	
CHROMIUM	4.20	0.15	0.0084	0.0003	
COPPER	10.94	0.38	0.0219	0.0008	
LEAD	< 2.44	< 0.09	< 0.0049	< 1.7E-4	
MERCURY	< 1.44	< 0.05	< 0.0029	< 1.0E-4	
MOLYBDENUM	1.12	0.04	0.0022	7.8E-5	
NICKEL	2.15	0.08	0.0043	1.5E-4	
SELENIUM	< 0.98	< 0.03	< 0.0020	< 6.8E-5	
ZINC	20.31	0.71	0.0406	0.0014	

MAXIMUM AWSAR (BASED ON POLLUTANT LOADING) LIMITING POLLUTANT: MERCURY — 613.65 Dry Ton/Acre — 17457.98 Wet Ton/Acre

PLEASE NOTE: Maximum Annual Whole Sludge Application Rate (AWSAR) is calculated based on Part 503 regulations which were published in Fed. Reg. 2/19/93 and subsequently revised (Fed. Reg. 2/25/94). Each State where the sludge is used may have more stringent requirement based on other factors such as nutrient or hydraulic loading limits. Please use the most restrictive limit when applying sludge to crop land.

Approval:

Luke Baker
CEO/President

Comments:

-158

60213 Crop Tech 4/7/

CHAIN OF CUSTODY

Brookside LABS

Environmental Department
200 White Mountain Dr.
New Bremen, OH 45869
(419)977-2766

In order for analysis to be completed correctly, please fill this out this form completely.
If you have any questions please contact the laboratory or the environmental manager.

CLIENT: City of Goshen	ACCOUNT NO: 60213	TEST METHODS: (IF SPECIFIED)
REPORT ADDRESS:	INVOICE ADDRESS: Crop Tech Inc.	
	ATTN:	TESTS REQUESTED
ATTN: Jim Kerezman	SAMPLED BY:	
PHONE NO:	P.O. NO:	
EMAIL:	QUOTE NO:	

TURNAROUND TIME (additional fees)
☒ Standard (none) ☐ 3 Day (+50%)
☐ 5 Day (+25%) ☐ 24 hr Rush (+100%)
Date Needed: _____

State Samples Collected: IN

SAMPLE ID	DATE	TIME	C/G	MATRIX	FIELD pH	503 Metals	# AND TYPE OF CONTAINERS: HCl / NaOH	HNO_3	H_2SO_4	Other	None	LAB USE ONLY
Digester	3/19/25	0730	G	VE		✔	1					VE0325005

QC DELIVERABLES:
☐ Level 1 ☐ Level 2
☐ Level 3 ☐ Level 4 ☐ Other

COMMENTS: Please return cooler and 1 1000 ML Bottle

RELINQUISHED BY: Cory Burnett	DATE/TIME: 3/24/25 0800	RECEIVED BY: Betty Wellman	DATE/TIME: 3/25/26 9:30 am
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:

MATRIX CODES: DE-drinking water SE-soil OE-oil IS-industrial solid IL-industrial liquid WE-groundwater UE-wastewater VE-sludge TE-tissue XE-fertilizer

ATTACHMENT – E

ANNUAL MERCURY REPORTS

Jim Kerezman, Superintendent
WASTEWATER UTILITY, CITY OF GOSHEN
1000 West Wilden Avenue • Goshen, IN 46528-2532

Phone (574) 534-4003 • Fax (574) 534-4350 • TDD (574) 534-3185
wastewater@goshencity.com • www.goshenindiana.org

06/25/2021

IN0025755

IDEM
OWQ-Mail Code 65-42
Compliance Data Section
100 North Senate Avenue
Indianapolis, IN 46204-2251

RE: POLLUTION MINIMIZATION PROGRAM PLAN - ANNUAL REPORT

The City of Goshen's Annual Mercury Pollutant Minimization Program Report for 2020-2021 is submitted in accordance with 327 IAC 5-3.3-9.

Process Control

Currently, no known Mercury bearing controls or measuring equipment exist at the WWTP or sewage pump stations.

Chemicals

Bulk chemicals were analyzed for Hg in 2008 such as Ferric Chloride, Sodium Bisulfite and Sodium Hypochlorite. Low levels of mercury were found in the sodium hypochlorite and ferric chloride. The City's annual Chemical Bid packet includes language for Mercury Free or Mercury Reduced chemicals. However, some laboratories will not analyze Ferric or Hypochlorite due to the damage it may cause to the analytical equipment.

Lighting

2020 – The lighting replacement program at the wastewater treatment plant is completed. All lighting at the wwtp are LEDs.

Collection System

Sewers are televised and cleaned on a continuous basis using two Sewer Vactors and one TVI vehicle. The City has approximately 130 miles of sanitary and combined sewers to maintain.

Mercury Ordinance

On March 12, 2018, the City of Goshen passed ordinance 4941 – Regulate the Discharge of Mercury by Dental Practices, which requires all dental clinics to install and maintain amalgam separators by the end on 2018.

ALL dental clinics are in compliance with the installation of amalgam separators as of December 2018.

All dental clinics have submitted a One-Time Compliance Report to comply with 40 CFR 441.50.

Mercury Results

The following mercury samples were collected in 2016 - 2021. These sampling sites contain flows from Dental/Medical Clinics, Domestic Background and Metal Finishing.

2016

Location	Sample Date	Results (ng/l)
Aegis Dental	03/01/16	505
CR 28 Lift Station	03/01/16	16.0
Grant Street (Domestic)	03/01/16	15.1
Lincoln Ave & Greene Rd	03/01/16	635
Hospital Lift Station	03/01/16	14.5
12th Street Lift Station	03/01/16	37.6
Berkshire Dr (Barker DDS)	03/01/16	3150
CR 27 (Roundabout)	03/01/16	892
Greene Rd	06/13/16	34.4
Aspen Dental	08/16/16	3980
Aegis Dental	08/16/16	391
Judd Dentistry	08/16/16	30900
Richmond Dentistry	08/16/16	7020
Lincoln Ave & Greene Rd	08/16/16	4520
Lehman	08/16/16	13.2
The Dental Center	10/27/16	8.11
ABG Dental	10/27/16	2890
Family Dentistry (Sunny Rd)	10/27/16	7900
Galen Court	10/27/16	19
14th & College Ave	10/27/16	53
CR 27 (Stutsman & Beachy)	10/27/16	102000

2017

Location	Sample Date	Results (ng/l)
Aegis Dental	10/12/17	141
Barker DDS	10/12/17	4180
Keller DDS	10/12/17	191
CR 27 (Stutsman & Beachy)	10/12/17	7290

2018

Location	Sample Date	Results (ng/l)
Goshen Family Dentistry	04/12/18	172
Judd DDS	04/12/18	100
CR 27 (Stutsman & Beachy)	04/12/18	5910
ABG Dental	08/09/18	487
Aspen Dental	08/09/18	16000
Stanley DDS	08/09/18	4530

2019

Location	Sample Date	Results (ng/l)
Aegis Dental	04/11/19	724
Family Dentistry (Richmond)	04/11/19	4540
Judd DDS	04/11/19	532000
Keller DDS	04/11/19	301
Hospital Lift Station	06/07/19	2.76

2020

Location	Sample Date	Results (ng/l)
Grant Street (Domestic)	08/12/2020	26
Hospital Lift Station	08/12/2020	112
12th St Lift Station (Industrial Park)	08/12/2020	21.8
Shasta Drive (Commercial/Industrial)	08/12/2020	53.8

2021

Location	Sample Date	Results (ng/l)
Starcraft Lift Station (Industrial Park)	04/27/2021	22
CR 21 and SR 119 (Medical)	04/27/2021	50.4
Middle School and Residential	04/27/2021	524
Bashor Lift Station (Commercial/Residential)	04/27/2021	9.9
Indiana and WWDF	04/27/2021	15.3

Plant Influent and Effluent 2018 - 2021

Date	Influent (ng/l)	Effluent (ng/l)
02/02/2018	206	1.06
04/12/2018	18.6	1.75
06/07/2018	42.9	1.16
08/09/2018	457	1.39
10/11/2018	24	2.28
12/13/2018	57.9	1.77
02/14/2019	35	1.2
04/11/2019	59.5	0.75
06/07/2019	12.0	0.561
08/29/2019	46.5	0.75
10/17/2019	4.74	1.3
12/11/2019	25	0.99
02/20/2020	24.4	0.949
04/14/2020	20.6	0.95
06/11/2020	23.7	2.64
08/12/2020	1150	1.51
10/15/2020	31.9	1.94
12/10/2020	296	0.88
02/23/2021	28.2	1.29
04/27/2021	100	0.86

With the dental clinics in compliance with ordinance 4941 and the One-Time Compliance Report to comply with 40 CFR 441.50, we are focusing our sampling on other areas of the city, such as, veterinary clinics, medical facilities and areas with spikes in mercury. Our goal is to sample all areas of the city in the next 5 years. We are committed on finding and reducing sources of mercury in the City of Goshen.

Respectfully submitted,

Jim Kerezman
Superintendent

Goshen
THE MAPLE CITY

Jim Kerezman, Superintendent
WASTEWATER UTILITY, CITY OF GOSHEN
1000 West Wilden Avenue • Goshen, IN 46528-2532

Phone (574) 534-4003 • Fax (574) 534-4350 • TDD (574) 534-3185
wastewater@goshencity.com • www.goshenindiana.org

06/24/2022

IN0025755

IDEM
OWQ-Mail Code 65-42
Compliance Data Section
100 North Senate Avenue
Indianapolis, IN 46204-2251

RE: POLLUTION MINIMIZATION PROGRAM PLAN - ANNUAL REPORT

The City of Goshen's Annual Mercury Pollutant Minimization Program Report for 2021-2022 is submitted in accordance with 327 IAC 5-3.3-9.

Process Control

Currently, no known Mercury bearing controls or measuring equipment exist at the WWTP or sewage pump stations.

Chemicals

Bulk chemicals were analyzed for Hg in 2008 such as Ferric Chloride, Sodium Bisulfite and Sodium Hypochlorite. Low levels of mercury were found in the sodium hypochlorite and ferric chloride. The City's annual Chemical Bid packet includes language for Mercury Free or Mercury Reduced chemicals. However, some laboratories will not analyze Ferric or Hypochlorite due to the damage it may cause to the analytical equipment.

Lighting

2020 – The lighting replacement program at the wastewater treatment plant is completed. All lighting at the wwtp are LEDs.

Collection System

Sewers are televised and cleaned on a continuous basis using two Sewer Vactors and one TVI vehicle. The City has approximately 130 miles of sanitary and combined sewers to maintain.

Mercury Ordinance

On March 12, 2018, the City of Goshen passed ordinance 4941 – Regulate the Discharge of Mercury by Dental Practices, which requires all dental clinics to install and maintain amalgam separators by the end on 2018.

ALL dental clinics are in compliance with the installation of amalgam separators as of December 2018.

All dental clinics have submitted a One-Time Compliance Report to comply with 40 CFR 441.50.

Mercury Results

The following mercury samples were collected in 2018 - 2022. These sampling sites contain flows from Dental/Medical Clinics, Domestic Background and Metal Finishing.

2018

Location	Sample Date	Results (ng/l)
Goshen Family Dentistry	04/12/18	172
Judd DDS	04/12/18	100
CR 27 (Stutsman & Beachy)	04/12/18	5910
ABG Dental	08/09/18	487
Aspen Dental	08/09/18	16000
Stanley DDS	08/09/18	4530

2019

Location	Sample Date	Results (ng/l)
Aegis Dental	04/11/19	724
Family Dentistry (Richmond)	04/11/19	4540
Judd DDS	04/11/19	532000
Keller DDS	04/11/19	301
Hospital Lift Station	06/07/19	2.76

2020

Location	Sample Date	Results (ng/l)
Grant Street (Domestic)	08/12/2020	26
Hospital Lift Station	08/12/2020	112
12th St Lift Station (Industrial Park)	08/12/2020	21.8
Shasta Drive (Commercial/Industrial)	08/12/2020	53.8

2021

Location	Sample Date	Results (ng/l)
Starcraft Lift Station (Industrial Park)	04/27/2021	22
CR 21 and SR 119 (Medical)	04/27/2021	50.4
Middle School and Residential	04/27/2021	524
Bashor Lift Station (Commercial/Residential)	04/27/2021	9.9

Indiana and WWDF	04/27/2021	15.3
CR 21 (Medical)	06/22/2021	33.8
Professional Drive (Medical)	06/22/2021	30.4
Goshen Animal Clinic	06/22/2021	326
CR 27 Roundabout (Medical)	06/22/2021	241
Plymouth/US 33	06/22/2021	10.4
Grant Street (Residential)	06/22/2021	4.21
Grant Street (Residential)	08/31/2021	4.83
Bearcat	10/13/2021	1.7
DFA	10/13/2021	146
Gleason Reynolds	10/13/2021	2.35
Gleason Monroe	10/13/2021	9.27

2022

Location	Sample Date	Results (ng/l)
Grant Street (Residential)	02/21/2022	18.6
CR 38 Lift Station (Industrial)	02/21/2022	186
Kercher Lift Station	02/21/2022	45.1
12th Street Lift Station	02/21/2022	17.4
Greencroft	02/21/2022	20.7

Plant Influent and Effluent 2018 - 2022

Date	Influent (ng/l)	Effluent (ng/l)
02/02/2018	206	1.06
04/12/2018	18.6	1.75
06/07/2018	42.9	1.16
08/09/2018	457	1.39
10/11/2018	24	2.28
12/13/2018	57.9	1.77
02/14/2019	35	1.20
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08/29/2019	46.5	0.75
10/17/2019	4.74	1.30
12/11/2019	25	0.99
02/20/2020	24.4	0.949
04/14/2020	20.6	0.95
06/11/2020	23.7	2.64
08/12/2020	1150	1.51
10/15/2020	31.9	1.94
12/10/2020	296	0.88
02/23/2021	28.2	1.29
04/27/2021	100	0.86
06/22/2021	27.8	1.43
08/30/2021	31.8	1.30
10/13/2021	36.1	2.92
12/14/2021	46.1	1.74

02/24/2022	12.4	0.80
04/27/2022	22.4	1.34

With the dental clinics in compliance with ordinance 4941 and the One-Time Compliance Report to comply with 40 CFR 441.50, we are focusing our sampling on other areas of the city, such as, veterinary clinics, medical facilities and areas with spikes in mercury. Our goal is to sample all areas of the city in the next 5 years. We are committed on finding and reducing sources of mercury in the City of Goshen.

Respectfully submitted,

Jim Kerezman
Superintendent

Jim Kerezman, Superintendent
WASTEWATER UTILITY, CITY OF GOSHEN
1000 West Wilden Avenue • Goshen, IN 46528-2532

Phone (574) 534-4003 • Fax (574) 534-4350 • TDD (574) 534-3185
wastewater@goshencity.com • www.goshenindiana.org

06/27/2023

IN0025755

IDEM
OWQ-Mail Code 65-42
Compliance Data Section
100 North Senate Avenue
Indianapolis, IN 46204-2251

RE: POLLUTION MINIMIZATION PROGRAM PLAN - ANNUAL REPORT

The City of Goshen's Annual Mercury Pollutant Minimization Program Report for 2022-2023 is submitted in accordance with 327 IAC 5-3.3-9.

Process Control

Currently, no known Mercury bearing controls or measuring equipment exist at the WWTP or sewage pump stations.

Chemicals

Bulk chemicals were analyzed for Hg in 2008 such as Ferric Chloride, Sodium Bisulfite and Sodium Hypochlorite. Low levels of mercury were found in the sodium hypochlorite and ferric chloride. The City's annual Chemical Bid packet includes language for Mercury Free or Mercury Reduced chemicals. However, some laboratories will not analyze Ferric or Hypochlorite due to the damage it may cause to the analytical equipment.

Lighting

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Collection System

Sewers are televised and cleaned on a continuous basis using two Sewer Vactors and one TVI vehicle. The City has approximately 130 miles of sanitary and combined sewers to maintain.

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ALL dental clinics are in compliance with the installation of amalgam separators as of December 2018.

All dental clinics have submitted a One-Time Compliance Report to comply with 40 CFR 441.50.

Mercury Results

The following mercury samples were collected in 2021 - 2023. These sampling sites contain flows from Dental/Medical Clinics, Domestic Background and Metal Finishing.

2021

Location	Sample Date	Results (ng/l)
Starcraft Lift Station (Industrial Park)	04/27/2021	22
CR 21 and SR 119 (Medical)	04/27/2021	50.4
Middle School and Residential	04/27/2021	524
Bashor Lift Station (Commercial/Residential)	04/27/2021	9.9
Indiana and WWDF	04/27/2021	15.3
CR 21 (Medical)	06/22/2021	33.8
Professional Drive (Medical)	06/22/2021	30.4
Goshen Animal Clinic	06/22/2021	326
CR 27 Roundabout (Medical)	06/22/2021	241
Plymouth/US 33	06/22/2021	10.4
Grant Road - (Residential)	06/22/2021	4.21
Grant Road - (Residential)	08/31/2021	4.83
Bearcat	10/13/2021	1.7
DFA	10/13/2021	146
Gleason Reynolds	10/13/2021	2.35
Gleason Monroe	10/13/2021	9.27

2022

Location	Sample Date	Results (ng/l)
Grant Road - (Residential)	02/21/2022	18.6
CR 38 Lift Station (Industrial)	02/21/2022	186
Kercher Lift Station	02/21/2022	45.1
12th Street Lift Station	02/21/2022	17.4
Greencroft	02/21/2022	20.7
Burdick Lift Station	06/23/2022	43.9
DFA	08/11/2022	143
Aegis Dental	10/24/2022	3.41
Grant Road – (Residential)	10/24/2022	39.3
Linway Plaza	10/24/2022	7
DFA	10/24/2022	145

Berkshire & CR 27	10/24/22022	173
DFA	12/15/2022	70.7

2023

Location	Sample Date	Results (ng/l)
DFA	02/23/2023	25.8
Meijer Lift Station	02/23/2023	9.71
Bearcat	02/23/2023	1.44
Grant Road – (Residential)	02/23/2023	11.2
Johnston & Michigan	04/24/2023	8.22
DFA	04/24/2023	24.7
Bashor & CR 17	04/24/2023	42.7
CR 21 & SR 119	04/24/2023	9.33
Midway Lift Station	06/20/2023	8.24
Grant Road – (Residential)	06/20/2023	16.7
DFA – (Dairy Farmers of America)	06/20/2023	34.5
CR 38 Lift Station	06/20/2023	13.2
Century Drive Lift Station	06/20/2023	27.7

Plant Influent and Effluent 2018 - 2023

Date	Influent (ng/l)	Effluent (ng/l)
02/02/2018	206	1.06
04/12/2018	18.6	1.75
06/07/2018	42.9	1.16
08/09/2018	457	1.39
10/11/2018	24	2.28
12/13/2018	57.9	1.77
02/14/2019	35	1.20
04/11/2019	59.5	0.75
06/07/2019	12.0	0.561
08/29/2019	46.5	0.75
10/17/2019	4.74	1.30
12/11/2019	25	0.99
02/20/2020	24.4	0.949
04/14/2020	20.6	0.95
06/11/2020	23.7	2.64
08/12/2020	1150	1.51
10/15/2020	31.9	1.94
12/10/2020	296	0.88
02/23/2021	28.2	1.29
04/27/2021	100	0.86
06/22/2021	27.8	1.43
08/30/2021	31.8	1.30
10/13/2021	36.1	2.92
12/14/2021	46.1	1.74

02/24/2022	12.4	0.80
04/27/2022	22.4	1.34
06/23/2022	17.2	1.13
08/11/2022	20.9	3.43
10/24/2022	23.1	1.02
12/15/2022	24.5	1.55
02/23/2023	16.3	3.26
04/24/2023	19.10	1.02
06/20/2023	13.2	1.14

With the dental clinics in compliance with Ordinance 4941 and the One-Time Compliance Report to comply with 40 CFR 441.50, we are focusing our sampling on other areas of the city, such as, veterinary clinics, medical facilities and areas with spikes in mercury. Our goal is to sample all areas of the city in the next 5 years. We are committed on finding and reducing sources of mercury in the City of Goshen.

Respectfully submitted,

Jim Kerezman
Superintendent

Jim Kerezman, Superintendent
WASTEWATER UTILITY, CITY OF GOSHEN
1000 West Wilden Avenue • Goshen, IN 46528-2532

Phone (574) 534-4003 • Fax (574) 534-4350 • TDD (574) 534-3185
wastewater@goshencity.com • www.goshenindiana.org

06/21/2024

IN0025755

IDEM
OWQ-Mail Code 65-42
Compliance Data Section
100 North Senate Avenue
Indianapolis, IN 46204-2251

RE: POLLUTION MINIMIZATION PROGRAM PLAN - ANNUAL REPORT

The City of Goshen's Annual Mercury Pollutant Minimization Program Report for 2023-2024 is submitted in accordance with 327 IAC 5-3.3-9.

Process Control

Currently, no known Mercury bearing controls or measuring equipment exist at the WWTP or sewage pump stations.

Chemicals

Bulk chemicals were analyzed for Hg in 2008 such as Ferric Chloride, Sodium Bisulfite and Sodium Hypochlorite. Low levels of mercury were found in the sodium hypochlorite and ferric chloride. The City's annual Chemical Bid packet includes language for Mercury Free or Mercury Reduced chemicals. However, some laboratories will not analyze Ferric or Hypochlorite due to the damage it may cause to the analytical equipment.

Lighting

2020 – The lighting replacement program at the wastewater treatment plant is completed. All lighting at the wwtp are LEDs.

Collection System

Sewers are televised and cleaned on a continuous basis using two Sewer Vactors and one TVI vehicle. The City has approximately 130 miles of sanitary and combined sewers to maintain.

Mercury Ordinance

On March 12, 2018, the City of Goshen passed ordinance 4941 – Regulate the Discharge of Mercury by Dental Practices, which requires all dental clinics to install and maintain amalgam separators by the end on 2018.

ALL dental clinics are in compliance with the installation of amalgam separators as of December 2018.

All dental clinics have submitted a One-Time Compliance Report to comply with 40 CFR 441.50.

Mercury Results

The following mercury samples were collected in 2022 - 2024. These sampling sites contain flows from Dental/Medical Clinics, Domestic Background and Metal Finishing.

2022

Location	Sample Date	Results (ng/l)
Grant Road - (Residential)	02/21/2022	18.6
CR 38 Lift Station (Industrial)	02/21/2022	186
Kercher Lift Station	02/21/2022	45.1
12th Street Lift Station	02/21/2022	17.4
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Burdick Lift Station	06/23/2022	43.9
DFA	08/11/2022	143
Aegis Dental	10/24/2022	3.41
Grant Road – (Residential)	10/24/2022	39.3
Linway Plaza	10/24/2022	7
DFA	10/24/2022	145
Berkshire & CR 27	10/24/2022	173
DFA	12/15/2022	70.7

2023

Location	Sample Date	Results (ng/l)
DFA	02/23/2023	25.8
Meijer Lift Station	02/23/2023	9.71
Bearcat	02/23/2023	1.44
Grant Road – (Residential)	02/23/2023	11.2
Johnston & Michigan	04/24/2023	8.22
DFA	04/24/2023	24.7
Bashor & CR 17	04/24/2023	42.7
CR 21 & SR 119	04/24/2023	9.33
Midway Lift Station	06/20/2023	8.24
Grant Road – (Residential)	06/20/2023	16.7
DFA – (Dairy Farmers of America)	06/20/2023	34.5
CR 38 Lift Station	06/20/2023	13.2
Century Drive Lift Station	06/20/2023	27.7

2023

Location	Sample Date	Results (ng/l)
Grant Drive – (Residential)	08/21/2023	21.8
Bashor Lift Station	08/21/2023	18.2
Johnston & Michigan Street	08/21/2023	29.0
DFA – (Dairy Farmers of America)	08/21/2023	21.8
Midway Lift Station	10/23/2023	27.9
Grant Drive – (Residential)	10/23/2023	33.8
DFA – (Dairy Farmers of America)	10/23/2023	264.0
Green & Lincoln	10/23/2023	346.0
Hospital Lift Station	10/23/2023	23.7
Grant Drive – (Residential)	12/14/2023	10.9
CR 21 & SR 119	12/14/2023	15.1
DFA – (Dairy Farmers of America)	12/14/2023	32.2
Gleason – Reynolds Street	12/14/2023	0.967
Gleason – Monroe Street	12/14/2023	2.33
Deirdorff Road	12/14/2023	3840.0
CR 38 Lift Station	12/14/2023	8.8

2024

Location	Sample Date	Results (ng/l)
Grant Drive – (Residential)	02/26/2024	6.86
DFA – (Dairy Farmers of America)	02/26/2024	23.3
Johnston & Michigan Street	02/26/2024	23.8
12th Street Lift Station	02/26/2024	18.4
Millers Poultry	02/26/2024	34.4
Millers/SR 15	02/26/2024	16.1
DFA – (Dairy Farmers of America)	04/25/2024	13.7
Grant Drive – (Residential)	04/25/2024	10.2
Ashton Pines	04/25/2024	10.6
Parker Han	04/25/2024	0.93

Plant Influent and Effluent 2022 - 2024

Date	Influent (ng/l)	Effluent (ng/l)
02/24/2022	12.4	0.80
04/27/2022	22.4	1.34
06/23/2022	17.2	1.13
08/11/2022	20.9	3.43
10/24/2022	23.1	1.02
12/15/2022	24.5	1.55
02/23/2023	16.3	3.26
04/24/2023	19.1	1.02
06/20/2023	13.2	1.14
08/21/2023	19.0	1.86
10/23/2023	87.0	1.48
12/14/2023	21.1	0.79
02/26/2024	13.4	55.2

04/25/2024	8.3	0.66
04/25/2024	Split sample	1.46

The effluent Mercury sample collected on 02/26/2024 with a result of 55.2 ng/l cannot be explained. I contacted the laboratory for verification, and they stood by this result. We are currently splitting samples between 2 laboratories and averaging the results per IDEM's instruction. We will continue splitting the effluent samples and recording the averages on the MROs. It is interesting to see that even 2 separate laboratories can vary more than doubling the other.

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Respectfully submitted,

Jim Kerezman
Superintendent

Goshen
THE MAPLE CITY

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06/09/2025

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DFA	04/24/2023	24.7
Bashor & CR 17	04/24/2023	42.7
CR 21 & SR 119	04/24/2023	9.33
Midway Lift Station	06/20/2023	8.24
Grant Road – (Residential)	06/20/2023	16.7
DFA – (Dairy Farmers of America)	06/20/2023	34.5
CR 38 Lift Station	06/20/2023	13.2
Century Drive Lift Station	06/20/2023	27.7
Grant Drive – (Residential)	08/21/2023	21.8
Bashor Lift Station	08/21/2023	18.2
Johnston & Michigan Street	08/21/2023	29.0
DFA – (Dairy Farmers of America)	08/21/2023	21.8
Midway Lift Station	10/23/2023	27.9
Grant Drive – (Residential)	10/23/2023	33.8
DFA – (Dairy Farmers of America)	10/23/2023	264.0
Green & Lincoln	10/23/2023	346.0
Hospital Lift Station	10/23/2023	23.7
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CR 38 Lift Station	12/14/2023	8.8

2024

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DFA – (Dairy Farmers of America)	02/26/2024	23.3
Johnston & Michigan Street	02/26/2024	23.8
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Millers Poultry	02/26/2024	34.4
Millers/SR 15	02/26/2024	16.1
DFA – (Dairy Farmers of America)	04/25/2024	13.7
Grant Drive – (Residential)	04/25/2024	10.2
Ashton Pines	04/25/2024	10.6
Parker Han	04/25/2024	0.93
Grant Drive – (Residential)	08/20/2025	49.8
Bashor	08/20/2025	8.61
Middle School	08/20/2025	13.4
DFA	08/20/2025	30.2
Grant Drive – (Residential)	10/22/2024	11.5
DFA	10/22/2024	59.8
Grant Drive – (Residential)	12/17/2024	8.08
Gleason - Monroe	12/17/2024	0.68
Gleason - Reynolds	12/17/2024	1.22

2025

Location	Sample Date	Results (ng/l)
Grant Drive – (Residential)	04/23/2025	14.9
Midway Lift Station	04/23/2025	60.2
Green and Lincoln	04/23/2025	588.0

Plant Influent and Effluent 2022 – 2025

Date	Influent (ng/l)	Effluent (ng/l)
02/24/2022	12.4	0.80
04/27/2022	22.4	1.34
06/23/2022	17.2	1.13
08/11/2022	20.9	3.43
10/24/2022	23.1	1.02
12/15/2022	24.5	1.55
02/23/2023	16.3	3.26
04/24/2023	19.1	1.02
06/20/2023	13.2	1.14
08/21/2023	19.0	1.86
10/23/2023	87.0	1.48
12/14/2023	21.1	0.79
02/26/2024	13.4	55.2
04/25/2024	8.3	0.66
04/25/2024	Split sample	1.46
06/20/2024	25.7	1.01
06/20/2024	Split sample	1.42
08/20/2024	25.5	0.73
10/22/2024	15.2	0.73
12/17/2024	20.7	0.74
02/17/2025	9.07	0.73
02/17/2025	Split sample	2.14
04/23/2025	14.8	2.23
04/23/2025	Split sample	1.70

The effluent Mercury sample collected on 02/26/2024 with a result of 55.2 ng/l cannot be explained. I contacted the laboratory for verification, and they stood by this result. We are currently splitting samples between 2 laboratories and averaging the results per IDEM's instruction. We will continue splitting the effluent samples and recording the averages on the MROs. It is interesting to see that even 2 separate laboratories can vary more than doubling the other.

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Respectfully submitted,

Jim Kerezman
Superintendent

ATTACHMENT – F

MERCURY ORDINANCE 4941

ORDINANCE 4941

Amend Ordinance 4625, Pretreatment Requirements and Standards, to Regulate the Discharge of Mercury by Dental Practices

WHEREAS Ordinance 4625, Pretreatment Requirements and Standards, was adopted February 23, 2011.

WHEREAS Goshen's wastewater eventually enters the Great Lakes, and the US Environmental Protection Agency and Indiana Department of Environmental Management have imposed a stringent mercury discharge limit upon all Great Lake dischargers to no more than 1.3 ng/L.

WHEREAS Goshen has been granted a temporary variance from the mercury level limit under its federal NPDES discharge permit to examine the mercury sources entering the wastewater collection system and to implement strategies in order to come into compliance with the mercury discharge limit.

WHEREAS it was discovered after sampling throughout Goshen's wastewater collection system that sewer lines from dental practices had extremely high levels of mercury ranging from 216 ng/L to 1,020,000 ng/L.

WHEREAS the EPA promulgated pre-treatment standards to reduce discharges of mercury from dental offices, but such standards do not take effect until July 14, 2020.

WHEREAS in order to reduce the amount of mercury discharged into Goshen's wastewater collection system, it is necessary for the City to implement a mercury reduction plan which will require dental practices to implement Best Management Practices (BMPs) that include inspections, compliance and enforcement procedures.

NOW, THEREFORE, BE IT ORDAINED by the Goshen Common Council that Ordinance 4625, Pretreatment Requirements and Standards, shall be amended as follows:

SECTION 1 Dental Practices

Ordinance 4625, Section 4, Pretreatment Requirements, shall be amended by adding the following new section:

4.09 Dental Practices.

(A) For the purposes of this ordinance, any dental facility or other commercial facility performing or associated with dental work shall be referred to as a "Dental Practice."

(B) A Dental Practice that handles mercury or products containing mercury, or otherwise removes or places amalgam fillings, shall properly install, operate, and maintain according to manufacturer's recommendations an appropriately sized amalgam separator that has an efficiency removal rate of at least ninety-nine percent (99%), certified to current, applicable standards, as well as chair-side traps to capture amalgam. Dental Practices shall provide to the Superintendent, upon request, a certification that the installation, operation, and maintenance of the amalgam separator is in accordance with the amalgam separator manufacturer's recommendations, ISO 11143, and/or Best Management Practices.

(C) A Dental Practice that handles mercury or products containing mercury, or otherwise removes or places amalgam fillings, shall be subject to, and must comply with, monitoring, inspection, reporting, and other requirements found in Best Management Practices and City of Goshen Mercury Reduction Plan for Dental Practices as developed by the Superintendent.

(D) A Dental Practice shall report to the Superintendent the model and size of its amalgam separator within ninety (90) days after installation of the separator.

(E) Any new construction of a Dental Practice shall include a sampling manhole, with a sampling port to allow testing of the Dental Practice's waste discharges.

(F) A Dental Practice shall maintain on-site records of the operation, maintenance, and recycling or disposal of amalgam waste for the previous three (3) years.

(G) A Dental Practice that does not handle mercury or products containing mercury, or otherwise remove or place amalgam fillings, can petition the Goshen Board of Public Works and Safety for an exemption from the requirements of this section.

(H) The following types of Dental Practice are exempt from this section 4.09, provided that removal or placement of amalgam fillings occurs at the facility no more than 3 times per year: (1) Orthodontics; (2) Periodontics; (3) Oral and maxillofacial surgery; (4) Radiology; (5) Oral pathology or oral medicine; (6) Endodontistry, and prosthodontistry.

SECTION 2. Definitions

The definition of Best Management Practices set forth in Section 15.04 of Ordinance 4625, Section 15, Definitions and Abbreviations, shall be amended to read as follows:

15.04 Best Management Practices (BMPs). Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in 40 C.F.R. § 403.5(a)(1) and (b), and sections 3 and 4 of this ordinance, except the BMPs required for Dental Practices shall include those practices set forth in City of Goshen Mercury Reduction Plan for Dental Practices. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage. BMPs also include alternative means (i.e., management plans) of complying with, or in place of certain established categorical pretreatment standards and effluent limits.

SECTION 3. Effective Date

This ordinance shall be in full force and effect from and after its passage, approval and adoption according to the laws of the State of Indiana.

PASSED by the Goshen Common Council on March 6, 2018.

Presiding Officer

Attest:

Clerk-Treasurer

PRESENTED to the Mayor of the City of Goshen at 8:45 a.m./p.m. on March 12, 2018.

Clerk-Treasurer

APPROVED and ADOPTED on March 12, 2018.

Mayor

City of Goshen Mercury Reduction Plan for Dental Practices
(Best Management Practices)

Prepared by the City of Goshen for the control of mercury discharged by dental offices to the sanitary collection system.

January 11, 2018

Introduction

The City of Goshen Mercury Reduction Plan for Dental Practices, Best Management Practices (BMPs) for Dental Practices are designed to comply with environmental regulations, to prevent pollution, and to assist Dental Practices in the proper management of products containing mercury and amalgam waste in their day-to-day activities. This document contains a set of required and recommended operating procedures and guidelines designed to reduce the amount of mercury discharged to the City of Goshen sanitary sewer system, a publicly owned treatment works (POTW). Proper implementation of these procedures is intended to protect Indiana's natural environment from the discharge of hazardous mercury-containing compounds.

BMP #1 – Disposal

Waste amalgam including, but not limited to, dental amalgam from chair-side traps, screens, vacuum pump filters, dental tools, cuspidors, or collection devices, must not be discharged to a POTW. Dental Practices shall designate all sinks as "Sanitary Use Only – No Chemical or Amalgam Disposal" to eliminate cleaning of amalgam-contaminated instruments in the sink. Waste amalgam shall be collected, packaged, labeled, stored, and managed in accordance with applicable law and disposed of by a licensed recycler or hauler of such materials. Dental Practices shall never discard elemental mercury or amalgam in any sink or drain, sharps container, biohazard waste bag (red bag), or trash. Each Dental Practice shall follow the requirements of a licensed amalgam handler or recycler for the storage, disinfection, labeling, packaging, and shipping of scrap amalgam.

BMP #2 - Amalgam Retention Equipment and Maintenance

Dental Practices shall maintain and clean chair-side amalgam traps, vacuum pump filter, and amalgam separators as recommended by the equipment manufacturer. No person shall rinse chairside traps, vacuum screens, or amalgam separator equipment in a sink or other connection to the sanitary sewer. Dental unit water lines, chair-side traps, vacuum lines, and amalgam separators that discharge amalgam process wastewater to the POTW must not be cleaned with oxidizing or acidic cleaners, including but not limited to bleach, chlorine, iodine and peroxide that have a pH lower than 6 or greater than 8. A malfunctioning amalgam separator must be repaired or replaced no later than ten days after the malfunction occurs. Every amalgam separator must be replaced every ten years, or at the end of the separator's life, whichever occurs first.

BMP #3 – Storage

Never store amalgam waste under any liquid. Store all amalgam waste dry in a properly labeled, air-tight container. Dispose of any liquids used to disinfect contact amalgam as hazardous. These cannot be discharged to the sewer system.

BMP #4 - Environmental Release

Plumbing Replacement and Repairs: After a Dental Practice adopts its new amalgam management practices, the Dental Practice shall clean or replace sink traps and its service lateral. Mercury from past activity often settles at low points such as sink traps and sumps. The slow dissolution of the mercury in a sink trap or sump can release mercury into the City of Goshen sanitary sewer for years after past disposal practices have been corrected. When plumbing parts are removed or cleaned, caution should be taken to avoid spilling the contents in case amalgam or mercury is present. Pour and brush out the sludge and handle it as if it were contact amalgam, or have it discarded as hazardous waste.

Spills: Do not handle mercury or mix amalgam in carpeted areas because it is very difficult to collect all of the contaminants if there is a spill. In the event of a mercury spill, put on nitrile gloves (do not use latex gloves as mercury can penetrate latex) along with other appropriate proper protective equipment and clean it up immediately using a mercury spill kit. Never clean up a mercury spill using a vacuum cleaner as this has the potential to spread mercury dust and/or vapor throughout the area in the vacuum exhaust. Train staff members in proper spill cleaning procedures.

BMP #5 - Records Requirements

Dental Practices shall maintain a written or electronic log of all of the following:

- Records that document the specifications, installation, operation, cleaning, and maintenance records for the amalgam separator, vacuum system, and chair-side traps in accordance with the manufacturer's recommendations, ISO 11143, and/or best management practices.
- Documentation of the initial cleaning event, including identification of who performed the cleaning, how waste was disposed, and similar information.
- Records that document the disposal or recycling of the waste amalgam, including date sent off site, the name and address of the company receiving the waste.
- Purchasing records of the non-oxidizing cleaner.
- Employee sign-in sheet and training certification letter for BMP training for all employees.

These documents must be kept on file for at least three years, and must be made available to authorized City of Goshen inspectors upon request.

BMP #6 – Training

Dental Practices shall train all staff who may handle or come into contact with mercury or mercury-containing materials on the following topics:

- Why mercury is a pollutant of concern.
- The effects of mercury in the city collection system.
- The effects of mercury in the environment.
- The materials in the dental facility that contain mercury.
- How the amalgam separator works.
- How to operate, maintain, and clean the amalgam separator system.
- The proper storage, handling, management, and disposal of mercury and mercury-containing material and fixer-containing solutions.
- How to properly recycle mercury.

Proper knowledge and handling of mercury and amalgam is vital to preventing accidental exposure and release of hazardous materials into the environment. A proper training program must include all of the City of Goshen Best Management Practices. Anyone who handles or has the potential to come into contact with mercury-containing materials must be trained in these BMPs for proper mercury/amalgam waste handling requirements.