



United States Environmental Protection Agency
Office of Enforcement and Compliance Assurance
Office of Criminal Enforcement, Forensics and Training

National Enforcement Investigations Center

NEIC

NEICVP1499E01

NEIC CIVIL INVESTIGATION REPORT

Raymond POTW East
Raymond, Mississippi 39154

Investigation Dates:

January 30-31 & February 3, 2023

**MICHAEL
LUKOWICH**

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APPENDICES (*NEIC-created)

A	Raymond POTW East Permit (32 pages)
B*	Raymond POTW East Effluent Exceedances (2 pages)
C	Sewage Collection Transmission System (5 pages)
D	Aerial View Raymond POTW East (4 pages)
E	Raymond POTW East Flow Records (1 page)
F	Regional Sewer Authority (16 pages)
G*	Raymond POTW East Photo Log (7 pages)
H	Sludge Profile Report 5-19-22 (7 pages)
I	Raymond POTW East Informal Compliance Schedule Report 12-14-21 (29 pages)
J	Raymond POTW East Lagoon Breach Chronology (6 pages)
K	Hunter Engineering Permit MSP090222 (29 pages)
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and provides a clear indication of the end of this report.**

INVESTIGATION OVERVIEW

PROJECT OBJECTIVE

U.S. Environmental Protection Agency (EPA) Region 4 (Region) requested EPA's National Enforcement Investigations Center (NEIC) to conduct a Clean Water Act (CWA) compliance investigation of the Raymond publicly owned treatment works East (Raymond POTW East) facility located at Hinds Boulevard in Raymond, Mississippi (latitude: 32.259778, longitude: -90.409083). The investigation assessed the publicly owned treatment works' (POTW) compliance with federal environmental statutes and permit requirements.

Table 1 lists the project team members.

Table 1. PROJECT TEAM MEMBERS		
Team Member	Organization	Project Role
Mike Lukowich P.E.	NEIC	Project manager (PM)
Alex Flevarakis	NEIC	Field team member
Mike Solter	NEIC	Field team member
REGIONAL AND OTHER CONTACTS		
Tristen Odekirk	EPA Region 4	Regional field team member
James Gammill	Mississippi Department of Environmental Quality (MDEQ)	State of Mississippi representative

FACILITY CONTACT INFORMATION

Table 2 lists the primary facility contacts.

Table 2. FACILITY CONTACT INFORMATION		
Name, Title	Phone No.	Email Address
Jim Harvey, operations coordinator	601-925-9344	James.Harvey@inframark.com
James "Eddy" Russell, area manager	662-449-7010	Eddy.Russell@inframark.com
John Stallard, vice president (south region)	304-687-0250	John.Stallard@inframark.com

FACILITY OVERVIEW

Raymond POTW East has been authorized to discharge treated wastewater in accordance with the effluent limitations, monitoring requirements and other conditions set forth in the National Pollutant Discharge Elimination System (NPDES) permit No. MS0025852 (**Appendix A**). The NPDES permit was issued in accordance with the provisions of the Mississippi Water Pollution Control Law (Section 49-17-1 et seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder, and under authority granted pursuant to Section 402(b) of the Federal Water Pollution Control Act. The NPDES permit was issued on April 28, 2021 and expires on March 31, 2026.

The Raymond POTW East domestic/municipal treated wastewater is authorized to discharge from outfall 001 to Snake Creek under NPDES permit No. MS0025852. Outfall 001 is subject to effluent limitations and monitoring requirements. All monitoring samples are grab samples except for whole effluent toxicity (WET) testing, which requires a composite sample. Effluent flow and total residual chlorine are monitored on a weekly basis. All other parameters are sampled or monitored quarterly.

Mississippi is authorized to administer the NPDES program and the pretreatment program in accordance with CWA Section 402(b) and 40 Code of Federal Regulations (CFR) Part 123. In accordance with 40 CFR § 403.10(e), Mississippi assumes responsibility for implementing the publicly owned treatment works pretreatment program requirements set forth in 40 CFR § 403.8(f), in lieu of requiring the POTW to develop a pretreatment program, thus Mississippi assumes the role of control and approval authority in the state. Raymond POTW East does not have a pretreatment program requirement in their NPDES permit.

The facility receives industrial wastewater from one source, Hunter Engineering Company (Hunter Engineering). Hunter Engineering designs, manufactures, and sells a wide range of auto service equipment. Facility products include wheel alignment systems, computerized wheel balancers, tire changers, on- and off-car brake lathes, vehicle lifts and inspection equipment. The facility in Raymond, Mississippi opened in 1986 and operates in one building with two departments: a metal fabrication manufacturing plant and an electronics plant that was added in 2014.

The State of Mississippi determined Hunter Engineering is subject to general pretreatment regulations for existing and new sources of pollution under 40 CFR Part 403 and 40 CFR Part 433 for the metal finishing point source category. Hunter Engineering is authorized to indirectly discharge to the Raymond POTW East facility under Mississippi's pretreatment water pollution control permit No. MSP090222. Both Hunter Engineering and Raymond POTW East have had permit exceedances for copper in their discharge. The industrial user, Hunter Engineering, may be causing pass through and/or interference in the Raymond POTW East treatment system.

There was an NEIC inspection of Hunter Engineering conducted during the same week as the Raymond POTW East inspection. NEIC inspection report NEICVP1498E01 documents NEIC's inspection at the Hunter Engineering facility.

According to EPA's Enforcement and Compliance History Online (ECHO) website, Raymond POTW East was last inspected for CWA requirements in October 2021 (listed as a state-conducted base program evaluation). The facility has been in non-compliance 11 out of the past 12 quarters (January 2020 – December 2022), with 5 of those quarters listed as having a

significant violation. A summary of the effluent exceedances since January 2020 is in **Appendix B**.

According to the EPA EnviroFacts database, Raymond POTW East (EPA FRS number 110011056007) has the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes (**Table 3**):

Table 3. APPLICABLE SIC/NAICS CODES	
NAICS Code	Description
4952 (SIC)	Sewerage Systems
221320 (NAICS)	Sewage Treatment Facilities

FACILITY OPERATIONS SUMMARY

Raymond POTW East collects sanitary wastewater through a sewage collection/transmission system located throughout the township. The sewer system is composed of gravity sewer lines as well as lift stations and force mains that ultimately transport the wastewater from residents and businesses to the POTW. A list of lift stations and their locations associated with the POTW is in **Appendix C**.

Raymond POTW East is a single pond lagoon treatment system. A lagoon treatment system, also known as a stabilization pond system, is a wastewater treatment technology that uses natural biological and physical processes to remove pollutants from wastewater. The Raymond POTW East system consists of a headworks, a single cell pond lagoon with baffles, aerators, sonic control devices for algae, chlorination/dechlorination, and post aeration. The lagoon is used to remove suspended matter from the influent while promoting the growth of microorganisms that break down organic matter and remove nutrients from the wastewater. The design capacity of the lagoon is 600,000 gallons per day. An aerial view of the treatment lagoon system is in **Appendix D**.

The wastewater enters the treatment system at the headworks. The headworks consists of a basket screen which removes large debris from the influent. The debris/trash is collected and disposed off-site in a sanitary landfill. Three submersible pumps transport the influent from the headworks to two inlet pipes located along the west side of the lagoon.

The lagoon has an approximate surface area of 20 acres, with an average depth of 4 feet. Over the last 60 years of operation, the lagoon has accumulated a large volume of sludge, and the clear water depth in places is as little as 2 feet. This has reduced the actual hydraulic retention time of the lagoon, which has impacted treatment.

In 2021, improvements were made to the treatment system. The original baffle system was examined, and in some parts was creating dead zones in the lagoon. Those baffles were

removed to eliminate the dead zones. The remaining baffle system was upgraded and installed with a subsurface flow path to prevent surface algae and floatables from entering the final settling cell. The float system for the existing baffle system is failing near a corner of the final settling cell. The baffle system was in disrepair at the time of the inspection.

In December 2020 only one aerator was operational. Since then, two existing aerators were repaired and two new ones were installed, for a current total of five operational aerators. The aerators tend to stir up sludge that is settled to the bottom of the lagoon. The facility and their consultants plan on monitoring the effectiveness of the aeration moving forward and will make operational changes as needed.

To prevent algae growth in the lagoon a sonic treatment system was installed. A sonic algae control system works best at preventing algae growth rather than killing established algae. The facility and their consultants plan on monitoring the effectiveness of the sonic algae control system moving forward and will make operational changes as needed.

Effluent from the lagoon is piped into the chlorine contact chamber, with flow regulated by an inline valve. Chlorine gas is used to provide disinfection in the contact chamber. The chlorine solution is also used to help control and remove algae from building up in the contact chamber. Using a blower, sulfur dioxide gas is mixed with the effluent from the chlorine contact chamber for dechlorination. The blower also provides aeration and oxygen to the final effluent. The treated effluent is discharged through outfall 001 into Snake Creek.

Plant flow is measured at the v-notch weir after dechlorination. Plant flow is logged and continuously recorded. Plant flows for the past 3 years is in **Appendix E**. This is also the designated sampling point for outfall 001.

Raymond, Mississippi is in the process of developing a Regional Sewer Authority in collaboration with neighboring communities which may result in taking the Raymond POTW East facility offline. Details of the regional sewer authority is contained in **Appendix F**.

FIELD ACTIVITIES SUMMARY

NEIC conducted the field inspection from January 30-31, 2023. NEIC inspectors, along with regional EPA and state inspectors, arrived at the facility at 9 a.m. on January 30, 2023, at which time credentials were presented to facility contacts listed in **Table 2** of this report. NEIC conducted an opening conference that explained the purpose and scope of the inspection.

During the inspection, NEIC inspectors reviewed discharge monitoring reports (DMRs), laboratory sampling data, process flow diagrams, and self-reported noncompliance notifications. Inspectors also interviewed personnel at the facility.

In addition, NEIC inspectors conducted a walk-through inspection of the facility and observed the treatment lagoon system, along with the designated outfall. NEIC took photographs of the treatment works and outfall. A photo log is contained in **Appendix G**. After completing the inspection, on February 3, 2023, NEIC inspectors, regional EPA and state inspectors, and facility representatives had a closing conference and discussed initial observations. NEIC inspectors departed the closing conference at approximately 11 a.m. on February 3, 2023.

INVESTIGATION OBSERVATIONS

NEIC identified the following observations during the CWA compliance inspection. NEIC field team members discussed all observations with facility representatives during the closeout meeting unless otherwise noted in the observation description.

These observations are not final compliance determinations. EPA Region 4 will make the final compliance determinations based on its review of this report and other technical, regulatory, and facility information.

Observation: 1
Observation Summary: Raymond POTW East is not properly operating and maintaining the treatment lagoon which may be causing exceedances in NPDES permit effluent limits.
Citation: NPDES Permit No. MS0025852 Condition T-28: Proper Operation, Maintenance and Replacement <i>The permittee shall at all times properly operate, maintain, and when necessary, promptly replace all facilities and systems of collection, treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures. Proper replacement includes maintaining an adequate inventory of replacement equipment and parts for prompt replacement when necessary to maintain continuous collection and treatment of wastewater. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. [11 Miss. Admin. Code Pt. 6, R. 1.1.4.A(18).]</i>
Evidence Appendix A – NPDES Permit Appendix B – Effluent Exceedances Appendix H – Sludge Profile Report Appendix I – Raymond POTW East Informal Compliance Schedule Report 12-14-21 Appendix G – Raymond POTW East Photo Log
Description of Observation: Raymond POTW East is authorized to discharge domestic/municipal treated wastewater from outfall 001 to Snake Creek under NPDES permit No. MS0025852 (Appendix A). Outfall 001 is subject to effluent limitations and monitoring requirements. All monitoring samples are grab samples except for whole effluent toxicity (WET) testing, which requires a composite sample. Effluent flow and total residual chlorine are monitored on a weekly basis. All other parameters are sampled or monitored quarterly.

Observation: 1

Raymond POTW East has had numerous effluent limit exceedances for:

- Biological Oxygen Demand, 5-day (BOD5)
- BOD5, percent removal
- Nitrogen, ammonia total (as N)
- Solids, total suspended
- Solids, suspended percent removal

A list of complete effluent exceedances for the past 3 years is in **Appendix B**. The treatment lagoon system is designed to remove organics, nutrients, and solids from the waste stream. The lagoon has biological solids which settle to the bottom of the pond. These solids must be maintained at a level so that they do not get entrained in the discharge with the effluent. A sludge profile report is contained in **Appendix H**. Over the last 60 years of operation, the lagoon has accumulated a large volume of sludge and the clear water depth in places is as little as 2 feet. This has reduced the hydraulic detention time of the lagoon. Reducing the hydraulic detention time may reduce the treatment effectiveness.

Inframark took over operations of Raymond POTW East in December 2020. An Informal Compliance Schedule (ICS) report dated December 14, 2021, was submitted to MDEQ (**Appendix I**). The report outlines improvements made to the treatment system in 2021. The improvements include repairing and replacing baffles, installation of a sonic algae control device, and repair and installation of new aerators. The report states an additional aerator may need to be installed as well as finishing repairs and upgrades to the baffle system. Picture P1300007 taken on January 30, 2023 displays a gap in the existing baffle curtain (**Appendix G**).

Observation: 2

Observation Summary: There was a breach in the lagoon treatment system resulting in an unanticipated bypass.

Citation:

NPDES Permit No. MS0025852

Condition T-33: Bypassing- Prohibition of Bypass

(1) Bypass is prohibited, and the Commission may take enforcement action against a permittee unless:

(i) Bypass was unavoidable to prevent loss of life, personal injury, or sever property damage.

(ii) There was no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been

Observation: 2

installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

(iii) The permittee submitted notices as required under the Twenty-Four Hour reporting requirements set forth in this permit.

(2) The Commission may approve an anticipated bypass, after considering its adverse affects, if the Commission determines that it will meet the three conditions listed above in paragraph (1) of this permit condition. [40 CFR 122.41(m)]

Evidence:

Appendix J – Raymond POTW East Lagoon Breach Chronology

Description of Observation:

On Monday August 29, 2022, there was a breach in the lagoon. The operator noticed unusually low water levels in the treatment system and upon further investigation discovered a breach in the northeast corner of the lagoon. The breach may have been caused by beaver activities in the area, but the ultimate cause was never determined.

Corrective actions were taken such as chlorine tablets placed in the flow path. The facility also conducted sampling of the bypassed wastewater. A few days later, on September 1, 2022, the breach had been repaired and the bypass was concluded. A chronology of events with supporting pictures is in **Appendix J**.

Observation: 3

Observation Summary: Raymond POTW East is receiving wastewater from an industrial user that may be causing pass through or interference with the POTW.

Citation:

§ 403.5 National pretreatment standards: Prohibited discharges.

*(a) (1) **General prohibitions.** A User may not introduce into a POTW any pollutant(s) which cause Pass Through or Interference. These general prohibitions and the specific prohibitions in paragraph (b) of this section apply to each User introducing pollutants into a POTW whether or not the User is subject to other National Pretreatment Standards or any national, State, or local Pretreatment Requirements.*

Evidence

Appendix A – NPDES Permit

Appendix K – Hunter Engineering Permit MSP090222

Appendix B – Effluent Exceedances

Observation: 3**Description of Observation:**

Mississippi is authorized to administer the NPDES program and the pretreatment program in accordance with CWA Section 402(b) and 40 CFR Part 123. In accordance with 40 CFR § 403.10(e), Mississippi assumes responsibility for implementing the publicly owned treatment works pretreatment program requirements set forth in 40 CFR § 403.8(f) in lieu of requiring the POTW to develop a pretreatment program, thus Mississippi assumes the role of control and approval authority in the state. Raymond POTW East does not have a pretreatment program requirement in their NPDES permit (**Appendix A**).

The facility receives industrial wastewater from one source, Hunter Engineering. The state of Mississippi determined Hunter Engineering is subject to general pretreatment regulations for existing and new sources of pollution under 40 CFR Part 403 and 40 CFR Part 433 for the metal finishing point source category. Hunter Engineering is authorized to discharge to the Raymond POTW East facility under Mississippi's pretreatment water pollution control permit No. MSP090222 (**Appendix K**).

Both Hunter Engineering and Raymond POTW East have had permit exceedances for copper in their discharge. The industrial user, Hunter Engineering, may be causing pass through and/or interference in the Raymond POTW East treatment system.

There was an NEIC inspection of Hunter Engineering conducted during the same week as the Raymond POTW East inspection. NEIC inspection report NEICVP1498E01 documents NEIC inspection at the Hunter Engineering facility.

A list of complete effluent exceedances, including copper, for the past 3 years is in **Appendix B**.

Observation: 4

Observation Summary: Raymond POTW East was given an Informal Compliance Schedule by MDEQ on November 9, 2020, for suspected fraudulent sampling and reporting of effluent discharges.

Citation:

NPDES Permit No. MS0025852

Condition T-28: Proper Operation, Maintenance and Replacement

The permittee shall at all times properly operate, maintain, and when necessary, promptly replace all facilities and systems of collection, treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance include adequate laboratory controls and appropriate quality assurance procedures. Proper replacement includes maintaining an adequate inventory of replacement equipment and parts for prompt replacement when necessary to maintain continuous collection and treatment of wastewater. This provision requires the operation of back-up or auxiliary facilities or similar systems that

Observation: 4

are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. [11 Miss. Admin. Code Pt. 6, R. 1.1.4.A(18).]

Condition S-6: Noncompliance Notification - Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Permit Board, it shall promptly submit such facts or information. [11 Miss. Admin. Code Pt. 6, R. 1.1.4.A(29)(g).]

Evidence

Appendix A – NPDES Permit

Appendix L – Raymond POTW East Chronology

Appendix I – Raymond POTW East Informal Compliance Schedule Report 12-14-21

Description of Observation:

The Raymond POTW East domestic/municipal treated wastewater is authorized to discharge from outfall 001 to Snake Creek under NPDES permit No. MS0025852 (**Appendix A**). Outfall 001 is subject to effluent limitations and monitoring requirements. All monitoring samples are grab samples except for whole effluent toxicity (WET) testing, which requires a composite sample. Effluent flow and total residual chlorine are monitored on a weekly basis. All other parameters are sampled or monitored quarterly.

In 2019, when the city learned that the outside analytical lab used for compliance samples, Davis Research, and its' owner and Lab Director, John H. Couey, were being investigated by the U.S. EPA for potential falsification of lab analyses, the city of Raymond made the decision to change its outside laboratory and began using Waypoint Analytical.

Beginning in the third quarter of 2019, the analytical results from Waypoint indicated that the facility was not meeting the NPDES permit limits. At the suggestion of the city's consultant, WGK Engineering, the city began contract discussions with Inframark LLC to bring them on as the new operator of the plant. As part of Inframark's due diligence process, the physical plant and the records were reviewed. During this due diligence process, Inframark noted that the operator records and monthly DMR submissions were incomplete and questions regarding the accuracy of the data were raised. A complete chronology of the events is contained in **Appendix L**.

The former contract operator's services were terminated as of October 31, 2020. Inframark took over operations of Raymond POTW East in December 2020. The City of Raymond requested an informal compliance schedule (ICS) from MDEQ. An ICS report dated December 14, 2021, was submitted to MDEQ (**Appendix I**) from the City of Raymond.