

# **Petition to Evaluate Variance from a Treatment Standard for Land Disposal Restrictions for Characteristic, Elemental, and Previously Treated Mercury Wastes**

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**MARCH 2026**

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**PETITIONER CERTIFICATION PER 40 CFR 268.44(c)**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

**Portions of this Petition Contain Confidential Business Information that has been Marked Accordingly – Do Not Release Under FOIA. CBI content is indicated by highlighting in yellow.**

## **I. Introduction**

Veolia Environmental Solutions and Services is submitting this petition to the U.S. Environmental Protection Agency (EPA) to request evaluation and approval of the enclosed, proposed methods, as an alternative treatment for mercury containing wastes. This petition is being submitted under 40 CFR §268.44(h) for formal approval of variance from a treatment (VAT) standard, as well as under 40 CFR §260.20 for rulemaking to amend 40 CFR part 268, subpart D to specifically incorporate Veolia's proposed treatment method.

The VAT spans elemental mercury (CAS #7439097-6), as well as characteristic and previously treated mercury containing materials. Performance of the proposed treatment methods will be supported in this submission with respect to existing methods included in 40 CFR §268.44(h).

## **II. VAT Petition Application**

Purpose:

To demonstrate an acceptable VAT and disposal methods for characteristic, elemental, and previously treated mercury materials. The applicable treatment and disposal facilities are identified below.

This VAT is based on chemical, physicochemical, and physical stabilization treatment of mercury materials. To optimize efficacy of treating the underlying mercury materials, combinations of these treatment methods will be employed as part of a successive treatment process. The resulting treated waste will be evaluated to Land Disposal Regulation (LDR) limits prior to post-treatment stabilization management achieved through pH-mediation in a RCRA Subtitle C landfill. This will be done to ensure compliance with federal, state, and local regulations. In this framework, this treatment process is intended to meet or exceed current regulatory methods and requirements for effective management of characteristic, elemental, and previously treated mercury materials and wastes.

Applicant Name and Facility Identification Numbers:

Treatment Facility Location:

Veolia Environmental Solutions and Services  
Elemental Environmental Solutions  
500 E Reynolds Rd  
Arkadelphia, AR 71923

EPA ID # ARD006354161  
Permit # 30H-RN1

Landfill Facility Location:

Veolia Environmental Solutions and Services  
Elemental Environmental Solutions  
500 E Reynolds Rd  
Arkadelphia, AR 71923  
EPA ID # ARD006354161  
Permit # 30H-RN1

Correspondence Related to this application of variance from a treatment standard should be directed to:

Veolia North America  
Tom Baker, SVP EHS and Government Affairs  
Email: tom.baker@veolia.com

### **III. Background**

#### **A. Summary of Declining Mercury Usage & Outlets**

Historically, mercury has been a significant part of industrial development and technology, with applications spanning amalgams, electronic switches, thermometers, pigments, batteries, and other industrial uses. Due to environmental and health concerns, as well as development of more modern technologies, mercury use has steadily declined over the past several decades. In later years, this led to recycling efforts, by which mercury was recovered from outdated technology, wastes, and contaminated materials.

Today, industrial need and applications for mercury have decreased so much that these recovery and recycling efforts now produce more mercury than the current demand. To further exacerbate the situation, off-shore outlets are no longer viable options, following recent export changes in 2008 Mercury Export Ban Act (MEBA). These challenges have resulted in commercial and government stockpiles of mercury that continue to grow.

#### **B. Limited Treatment Options**

For high concentration (>260 ppm total) mercury containing wastes, retort (RMERC treatment standard) and reuse is currently the best

demonstrated available technology (BDAT). This retort process generates concentrated liquid mercury, which can either be reused in the public market or stockpiled. The declining need for mercury in electronics, pigments, amalgam fillings, and other applications has resulted in stockpiling becoming the current practice.

For low concentration (<260 ppm total) mercury containing wastes, stabilization methods may be employed to treat residual free mercury to levels appropriate for LDR. The LDR treatment level is based on the toxicity characteristic leaching procedure (TCLP) in SW846, and depends on the type of waste. If the low concentration mercury waste is a residue from an RMERC treatment, it requires treatment to 0.20 ppm TCLP, and if the waste is not an RMERC residue, it requires treatment to 0.025 ppm TCLP.

The existing treatment options of RMERC and stabilization, however, do not account for treatment of pure mercury or the retort product. For example, high concentration mercury waste (>260 ppm) would require retort. In that case, however, the original waste might be treated to < 0.20 ppm TCLP mercury, but the retorted mercury could be >99% pure. Since RMERC residues require treatment by retort if >260 ppm, this creates a regulatory loop of perpetual retort.

Furthermore, high concentration mercury wastes that currently require retort do not have an alternative treatment method to manage the high mercury content. As such, current treatment standards for these wastes always result in the production of elemental mercury, thereby increasing the stockpile.

### C. Veolia's Experience and Qualifications

Veolia has significant experience in the management of mercury containing wastes in both the US and globally. Veolia is a 170-year old, global company focused on "Resourcing the World" through water, energy, infrastructure, waste treatment operations, and technology capabilities. Veolia has extensive background in managing and supporting large complex projects for the federal and commercial utilities in radiological, nuclear environments, and other hazardous missions. Veolia is a global leader in the management and treatment of mercury containing wastes and the stabilization and disposal of elemental mercury. Veolia specializes in the recycling and disposal of all waste containing mercury, as well as activated carbons and mercury absorbance. Clients include sectors such

as oil and gas, petrochemical, chemical, wastewater treatment and hazardous industrial waste collection.

Through its subsidiary, Batrec, Veolia has developed a unique stabilization process treating mercury waste received from clients from around the world. This patented process (US2018185685A1) was developed at the Veolia Batrec facility in Switzerland and consists of a conversion unit that is batch fed with liquid mercury from a UN certified tank at a specific rate into a stirred reactor. The process enables the stabilization of metallic mercury, converting it into mercury sulfide to support permanent, environmentally sound storage.

Veolia also operates mercury waste recycling units that treat the mercury used in various fields and processes: Dentist practices, laboratories, gas purification plants, public and private lighting systems, as well as mercury containing sledges. Veolia's Port Washington, Wisconsin facility performs distillation, a process that recovers the mercury, then purifies it to achieve an optimum quality.

Overall, in support of its customers, Veolia offers a complete service, including: trans frontier shipment, waste export formalities, technical support, expertise for hazardous material transport, containers, packaging, in compliance with international regulations, national and international logistics, traceability to verify the operations. These innovative services make Veolia the world's specialist in mercury waste.

#### **IV. Regulatory History**

The Mercury Export Ban Act of 2008 prohibits, as of January 1, 2013, the sale, distribution, or transfer of elemental mercury by Federal agencies to any other Federal agency, any State or local government agency, or any private individual or entity that is under the control of a Federal agency (with certain limited exceptions). It also prohibits the export of elemental mercury from the United States effective January 1, 2013 (subject to certain essential use exceptions). Section 5 of the Act, Long-Term Storage, directs DOE to designate a facility or facilities for the long-term management and storage of elemental mercury generated within the United States.

There are several sources of elemental mercury in the United States, including mercury used in the chlorine and caustic soda manufacturing process in the chlor-alkali industry, mercury reclaimed from recycling and waste recovery activities, and mercury generated as a byproduct of the gold

mining process. In addition, DOE stores approximately 1,200 metric tons of elemental mercury at the Y-12 National Security Complex in Oak Ridge, Tennessee and the Department of Defense (DOD) stores approximately 4,400 metric tons of elemental mercury at various locations.

An EPA report, “Mercury Storage Cost Estimates” (2007), estimates the total amount of elemental mercury from non-governmental sources that would be eligible for DOE storage is between 7,500 and 10,000 metric tons over a 40-year period. For the 2011 Mercury Storage EIS and the 2013 Mercury Storage SEIS, DOE estimated that up to approximately 10,000 metric tons (11,000 tons) of elemental mercury would need to be managed and stored at the DOE-designated facility during a 40-year period assumed for analysis purposes. In the 2011 Mercury Storage EIS and the 2013 Mercury Storage SEIS, DOE identified WCS as the preferred alternative.

Elemental mercury managed under MEBA is a hazardous waste and thus must be treated and disposed of in accordance with applicable statutory and regulatory requirements. Land Disposal Restrictions (LDRs) described in RCRA at 40 CFR part 268, subpart D—Treatment Standards, do not currently include an approved treatment standard for non-radioactively contaminated elemental mercury waste that provides an LDR-compliant waste form acceptable for disposal in a commercial subtitle C landfill. And while RCRA does allow intermediary treatment methods be used to convert waste elemental mercury to a more stable form (e.g., cinnabar/mercury sulfide), the resulting material remains a waste that requires storage pending disposal availability.

The treatment and land disposal path forward for non-radioactively contaminated elemental mercury is limited to (1) EPA promulgating a new rulemaking (per 40 CFR 260.20), or (2) EPA approving a site-specific No Migration Variance (NMV) (per 40 CFR 268.6), or (3) EPA approving a site specific variance from a treatment (VAT) standard (per 40 CFR 268.44h).

## **V. Proposed Action for VAT**

Veolia Environmental Solutions and Services plans to address the limitations in treatment pathways and high concentration mercury outlets. This is accomplished in this submission by proposing a comprehensive means for the treatment and disposal of characteristic, elemental, and previously treated high concentration mercury materials (all HCM). To ensure that HCMs are functionally treated, rather than diluted or containerized, the enclosed details for VAT will include analytical assessment at multiple stages of the proposed treatment. These assessments will be performed in the context of current EPA

and RCRA protocols, methods, and limits.

Starting with an HCM, the proposed process begins with chemical stabilization of all residual leachable or free (unbound / elemental) mercury. In this document, we refer to this as the “Primary Stabilization,” as it is intended to chemically stabilize any mercury to a very low leachable level (<10 ppm). Concurrent (synergistic) or subsequent chemical and physico-chemical stabilization may be employed based on the composition and metal-bearing nature of a given HCM. These “Secondary Stabilization” steps allow more direct tunability for tailoring the residual free and leachable mercury treatment specifically to mixed metal waste or materials susceptible to potential destabilization.

In many cases, the primary and secondary stabilization methods in this proposed process are sufficient to treat HCMs of simple mixtures to trace leachable levels meeting existing land disposal regulation limits (LDR of <0.025 ppm TCLP mercury). To ensure long term management of these treated materials, final disposal for this process is in a RCRA Subtitle-C Hazardous Waste Landfill. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] will ensure that waste materials may be co-mingled or disposed adjacent to other treated waste materials in a Subtitle-C landfill.

This proposed sequence of the primary and secondary stabilization methods, [REDACTED], has demonstrated highly effective treatment of the underlying mercury for HCMs. Post treatment leachability of residual free mercury is well below LDR limits, often in the low ppb range, and further improved to ultra trace levels in ppt. As such, the proposed action offers a comprehensive treatment solution for a wide range of HCMs (inclusive of pure liquid mercury and complex mixed metal materials). It also addresses the need to functionally and chemically treat the mercury, as well as ensure continued stabilization during long term disposal management.

## **VI. Applicable Waste Codes**

This application spans high concentration mercury materials holding D009 and U151 codes.

## **VII. Review of Existing LDR Treatment Standards**

Regulatory requirements related to mercury waste LDR treatment standards have been included here. This includes current standards, gaps or needs in current standards, and the basis for existing standards presented in context of the needs for this VAT application.

### **A. Applicable Land Disposal Regulatory Requirements**

1. At the time of this submission, two LDR treatment standards are defined for mercury residues:
  - a) Technology Standards – These define specific treatments that may be used to treat mercury containing materials.
  - b) Numerical Standards (Limit or Concentration Standards) – These define the limits for mercury concentrations in treated materials.

### **B. Current Scope of LDR Standards**

1. Non-wastewater mercury wastes must currently follow universal treatment standards (UTS) in 40 CFR 268.48:
  - a) RMERC of residues above 260 ppm leachable mercury to reduce leachable mercury to levels below 0.20 ppm. The leachable mercury level must be evaluated by the Toxicity Characteristic Leaching Procedure (TCLP) for the retorted residue.
  - b) Treatment of residues below 260 ppm leachable mercury to reduce levels below 0.025 ppm. The leachable mercury level must be evaluated by the Toxicity Characteristic Leaching Procedure (TCLP) for the treated residue.
2. RMERC By-product is Mercury
  - a) When performed properly, the RMERC process effectively removes mercury from wastes and waste residues, yet produces high purity mercury by isolation from the original residue. This resulting mercury is, by nature, above 260 ppm total mercury.

- b) Currently, there is no applicable LDR standard for treating this resulting high-purity mercury by-product, which is produced by the retort treatment. (I.e., The produced mercury would be above 260 ppm total mercury, which currently requires RMERC, which produces the mercury as a by-product.)

C. Applicable Variance Process and Criteria

- 1. For cases in which a waste is not able to meet existing LDR standards, the EPA has a defined variance process and equivalency requirements for evaluating efficacy of the proposed treatment.

- a) The Variance from a Treatment Standard (VAT) requirements are defined in 40 CFR 268.44(h). A proposed variance must show that it is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner must either demonstrate that:

- (1) Treatment to the specified level or by the specified method is technically inappropriate (for example, resulting in combustion of large amounts of mildly contaminated environmental media); ***or***
- (2) For remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.

- b) Treatability variance submissions also require evaluation of applicable numerical standards pertaining to LDR requirements as outlined in 40 CFR 268.44. In this context, any variances to treatment, analytical methods, etc, must be defined and evaluated in terms of numerical efficacy of the proposed treatment submitted in the variance application.

D. Scope of Variance Application

Existing approved treatment methods for mercury containing materials include RMERC above 260 ppm total mercury and stabilization treatment below 260 ppm total mercury. RMERC produces high-purity mercury as a byproduct, which does not have an approved treatment process or defined treatment level (LDR limit).

This application will address relevant VAT components for high concentration mercury containing materials (above 260 ppm total free mercury content). This will include the proposed variance process and demonstration of equivalency for treatment standards, evaluation, and numerical performance in the context of established LDR requirements.

As such, this application for VAT demonstrates that the proposed alternative treatment provides effective performance equivalent to or better than existing treatment and measurement standards specified in the 40 CFR 268.40. The proposed treatment included in this application for VAT was prepared in compliance with federal, state, and local requirements for the protection of the environment and human health. Associated treatment steps include primary and secondary physicochemical stabilization of HCMs (including those with additional heavy metal constituents), subsequent dispersive and distributive compounding into polymer materials, and co-deposition with stabilization-enhancing materials in a subtitle-C landfill.

E. Measurement and Performance Validation Discussion for VAT

For consistency, the measurement and assessment of performance for the proposed treatment process has been performed to meet or exceed existing EPA treatability standards.

1. Determination of appropriate concentration-based universal treatment standard (UTS) in 40 CFR 268.48.

RMERC (retort-based) residues must be below 0.20 ppm (mg/L) TCLP leachable mercury, and all other mercury residues must be below 0.025 ppm TCLP leachable mercury.

RMERC is currently applicable in cases of high total mercury content above 260 ppm. The process included in this application for VAT seeks to address the gap in treatment standards for HCMs (above 260 ppm total mercury), which have been treated to leachable levels below 260 ppm TCLP mercury. In this context, total mercury levels are above 260 ppm, while leachable (TCLP) mercury is below 260 ppm.

Current treatment standards require RMERC for such cases, which does allow for treatment of HCMs. For example, the liquid, elemental mercury produced as a byproduct of the RMERC process is by

definition above 260 ppm total mercury and currently requires further retort indefinitely. Additionally, current treatment standards require RMERC for HCMs above the 260 ppm total mercury limit, so stabilization and other treatment methods applicable below the 260 ppm level, cannot currently be used.

Due to the high temperatures used for the RMERC process, elemental mercury is collected, and stabilized forms of mercury revert to elemental mercury and associated stabilization reagents. As such, RMERC is not a suitable treatment for many HCMs above 260 ppm total mercury, and specifically elemental mercury.

In such cases where an HCM is not suitable for RMERC treatment, the RMERC concentration-based UTS is not applicable. Furthermore, physico-chemical stabilization methods and subsequent disposal in a subtitle-C landfill are part of the proposed variance treatment process included in this application. These treatment methods, which are currently applicable for cases below 260 ppm total mercury, follow the 0.025 ppm TCLP leachable mercury limit for treated materials. As such, this application maintains the lower, more stringent requirement of treatment to below 0.025 ppm TCLP leachable mercury.

## **VIII. Proposed Treatment and Characterization of High Concentration Mercury Materials that are Not Suitable for RMERC.**

This section is intended to outline details for the proposed variance in treatment, as well as applicable characterization of these materials. Characterization methods will be presented in terms of existing treatment standards and waste characterization. Since characterization methods and standards are applicable to materials before, during, and after treatment, they have been presented first in this section.

### **A. Waste Characterization Methods**

Waste materials are often characterized by generator knowledge as well as the following analytical methods, which are applicable to mercury wastes:

1. SW846 Test Method 1311: Toxicity Characteristic Leaching Procedure (TCLP);
2. SW846 Test Method 7470A Mercury in Liquid Waste (Manual Cold-Vapor Technique); and

3. SW846 Test Method 7473 Mercury in Solids and Solutions by Thermal Decomposition, Amalgamation, and Atomic Absorption Spectrophotometry. ("Total" Mercury)

It should be noted that other extraction and characterization methods may be used to assess mercury concentration; however, current regulatory standards are given in the context of TCLP and total mercury extraction.

#### B. Current Mercury Waste Treatment Process

1. Retort (RMERC) Process for Materials above 260 ppm Total Mercury Content

Within the retort process, wastes for treatment and recovery are heated to vaporize mercury, which is then collected. Following the initial retort, the collected mercury may be further distilled to reach high levels of purity, >99%. Oxidized mercurous salts may also require reduction (redox) treatment to convert to elemental form. The resulting retort product is high-purity elemental mercury, which either re-enters the industrial market or requires further treatment.

2. Stabilization Process for Materials below 260 ppm Total Mercury Content

Within the stabilization process, mercury in waste materials is reacted with chemical reagents to form highly stable compounds. These compounds have very low solubility and can bind the mercury chemically and physically. As such, stabilization can effectively treat mercury on a molecular level, offering a long-term solution.

HCMs above 260 ppm total mercury have been stabilized, however, the resulting mercuric compounds retain a total mercury above 260 ppm. In other words, current regulations in the U.S. require such stabilized residues to either be stockpiled or continuously (re)treated by retort, regardless of stabilization treatment efficacy.

#### C. Proposed Mercury Waste Treatment Process

The proposed mercury waste treatment process begins with materials that have been previously treated by chemical fixation methods, which produce chemically stabilized mercury based compounds. This initial chemical fixation step provides above 99.999% stabilization treatment of the mercury to form the red cinnabar allotrope of mercuric sulfide, which

may contain as much as 1 ppm of free or leachable residual mercury.

The treatment process described in this application focuses on subsequent treatment steps of high mercury containing residues that have previously been treated by formation of cinnabar allotropes, whether by Veolia or received for further treatment. Here, cinnabar is by definition an HCM, which has more than 260 ppm total mercury, but less than 1 ppm TCLP leachable or free mercury. Since 1 ppm is 0.975 ppm above the TCLP mercury limit of 0.025 ppm for non-retort treatment, a secondary chemical fixation step is used to treat the material to below 0.025 ppm.

Due to the high concentration of metals (primarily mercury), this secondary chemical fixation step may also require synergistic chemico-physical stabilization methods, which ensure long-term stabilization across a wide range of chemical and matrix conditions. TCLP mercury levels following these secondary treatments are often in the low ppb to ppt levels. As such, these treatments meet the 0.025 ppm limit by treating the mercury without dilution effects.

[REDACTED]

1. Chemical Fixation and Chemico-Physical Fixation Secondary Treatment Process

For HCM residues that have been previously treated to low levels (less than 1 ppm leachable by TCLP) would require treatment to below 0.025 ppm to meet the non-retort (RMERC), stabilization LDR limit. In the case of liquid mercury that is 99.999% treated to red cinnabar, the residual untreated mercury is chemically fixated [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

2. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3. Disposal in a Subtitle-C Hazardous Waste Landfill

A RCRA Subtitle C Landfill will be used for disposal and long term management of HCMs that have been treated by processes included in this proposal. The disposal managed by Veolia will be located at the Veolia Environmental Solutions and Services Gum Springs, Arkansas facility. This facility provides hazardous waste storage, treatment, and subtitle C disposal and management. Additionally, the RCRA subtitle C landfill manages all RCRA metals, including mercury, often treated concurrently with other metals and chemistries.

a) Concurrent Chemico-Physical Stabilization Management

The Gum Springs, AR location manages chemical and physical stabilization of all RCRA metals. In the context of the compounded physico-chemically stabilized mercury HCMs, disposal would be concurrent and comingled with other stabilized waste materials. This ensures that the treated HCMs would have the following physico-chemical treatments, ensuring long-term stabilization:

- (1) Primary treatment to red cinnabar (99.999%), and residual stabilization of levels below 10 ppm free mercury [REDACTED]

- (2) [REDACTED]

- (3) [REDACTED]  
[REDACTED]  
[REDACTED]
- (4) Co-deposition of treated HCMs (from this process) along with nearby stabilized materials and their excess stabilization reagents.

From a chemical perspective, these four steps optimize chemical treatment of the waste, physico-chemical management of the stabilization, physico-chemical reduction of leachability / destabilization effects, and long-term stabilization management (even in the presence of potential destabilization factors).

b) Subtitle-C Landfill Construction and Leachate Management

(1) Landfill Construction

The Veolia landfill located in Gum Springs, AR, has been designed with a composite bottom liner system. A professional engineer has designed the landfill to meet or exceed 40 CFR § 264.301: Design and operating requirements of Rule 23.

This design includes an engineered liner system and leachate collection system which are designed by experienced professional engineers and approved by the Arkansas Department of Environmental Quality (ADEQ), in accordance with federal and state regulations for hazardous waste landfill design. To further protect the environment, the ADEQ requires the liner system to be separated from historically high groundwater by at least 10 feet.

The permitted liner and leachate collection system consists of (from bottom up) a 3' thick compacted clay liner with a hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec, a 60 mil high density polyethylene (HDPE) membrane liner, a 330 mil geocomposite drainage layer for leak detection, a second 60 mil HDPE geomembrane liner, a 12 OSY (oz/yd<sup>2</sup>) cushion geotextile to protect the plastic liner and a leachate collection layer containing a leachate collection system consisting of perforated pipes and a

granular protective cover system. By using a composite liner system (plastic plus clay), the site combines the advantages of two materials which have different hydraulic, physical, and endurance properties.

(2) Leachate Management

The Gum Springs, AR site has been designed to capture and remove all leachate and prevent releases to the groundwater and the underlying soils and to the surface water. This is accomplished by the composite liner system, described above.

The liner system collects and prevents the leachate from migrating downward, and the leachate collection and removal system is positioned on top of the composite liner system, removing the leachate from the liner system. The bottom liner of the landfill has been designed and has been constructed on a grade to drain leachate to low points throughout the landfill. These low points, called leachate sumps, then collect and drain the leachate flowing on top of the primary liner as well as liquid flowing in the leak detection layer to a storage tank. The leachate collection system collects the leachate and then removes it continuously throughout the day by a system of sumps that remove liquid.

Leachate is removed from the sumps by a series of dual contained gravity lines which transfer the leachate to on-site storage tanks. The dual containment of both the pipes and the tank systems provide independent redundancy with leak detection systems in place as part of the system. When the storage tanks reach capacity or when leachate needs to be extracted, the leachate will be transported to the on-site RCRA C incinerator and or other applicable treatment technology.

(3) Environmental Management and Contingency

The 60 mil HDPE liner component is very beneficial due to its extremely low permeability and flexibility. However, if the 60 mil HDPE liner were punctured, the 3' thick clay liner produces a very low permeable zone to prevent

leachate from migrating off-site. Additionally, Gum Springs has a leak detection layer. Thus, if the primary (upper) 60 mil liner developed a leak, the liquid would be collected in the leak detection zone. The geocomposite drainage layer is a thin layer of geosynthetics that allows a very high permeability laterally. Therefore, any liquid that leaks through the primary liner is collected and gravity drains to the leak detection tank. Both the primary and leak detection systems gravity flow via sumps into leachate tanks located in a concrete, epoxy coated containment that is large enough to manage the volume capacity of the tank plus a 24 hr storm event.

D. Proposed Compliance Testing

To be consistent with current treatment standards, all proposed compliance testing is to be evaluated by TCLP in the context of RCRA LDR limits. To ensure that waste is treated rather than diluted, TCLP will be performed to evaluate leachability across major treatment steps. TCLP will be performed:

1. Following primary conversion of HCMs or liquid mercury to high purity mercuric sulfide (above 99.999%). Materials received by the facility that have already been treated to such levels will require TCLP analysis and/or documentation of equivalent treatment. This will serve as the primary baseline for initial treatment and conversion to red cinnabar.
2. Following secondary physico-chemical stabilization of HCMs prior to land disposal in a RCRA subtitle-C hazardous waste landfill.

This analysis will serve as the basis for treatment of underlying constituents (UHCs) and verification of treatments meeting regulatory conditions suitable for land disposal. To be consistent with existing regulatory requirements for non-retort (non-RMERC) treatments, the more stringent LDR requirement of 0.025 ppm TCLP mercury will be used.

E. Analytical Testing and Statistical Validation of Proposed Treatment

1. Initial mercury levels following 99.999% conversion to red cinnabar.

To validate the efficacy of the proposed treatment process, HCM samples were treated by the proposed method of 99.999% primary

conversion of elemental mercury to red cinnabar. Samples of red cinnabar were analyzed in triplicate for baseline mercury concentration; the average TCLP mercury for this baseline was 0.561 ppm.

2. Efficacy of Physico-Chemical Stabilization Alone

The red cinnabar (>99.999%) was then treated by the proposed physico-chemical stabilization process. Preliminary samples following this process were then analyzed in triplicate to determine treatment efficacy at this point; the average TCLP mercury for this baseline was 0.633 ppb (0.000633 ppm). This demonstrates effective mercury treatment of the HCM to levels below the regulatory limit prior to compounding.

3. Improved Efficacy of Physico-Chemical Stabilization with [REDACTED]

After evaluating the preliminary physico-chemically stabilized samples, the entire proposed treatment process was evaluated. [REDACTED]

[REDACTED]. Associated samples were then collected across 46 different trials and treatment performance was statistically evaluated. Replicate samples were also evaluated for confirming detection at different concentration levels (ppm, ppb, ppt, etc).

A comprehensive statistical analysis was conducted on mercury content measurements of TCLP extractions over 46 total trials, each with a replicate sample. Measurements were performed by Arkansas Analytical Laboratories in Little Rock, AR, using Cold Vapor Atomic Absorption (CVAA) spectroscopic methods. Detection was obtained at trace (ppb) levels, with improved ultra-trace (ppt) detection by purge and trap with CVAA (PT-CVAA).

Each trace level CVAA measurement was below the method detection limit (MDL), reported at < 2.0 ppb. Quantitation was obtained for all samples at ultra-trace levels in the ppt range using PT-CVAA. As such, statistical analysis was performed both including and excluding the CVAA-only MDL values of 2.0 ppb.

The population mean of TCLP mercury across the full sample set of 138 measurements (PT-CVAA results *and* CVAA MDLs) was **719.5**

**ppt (0.7195 ppb, 0.0007195 ppm)**. This result is validated to a high level of statistical confidence, having a 99.7% ( $3\sigma$ ) confidence interval between 508 ppt to 931 ppt. It should be noted that this sample set includes the MDL values which overreport detection at 2.0 ppb for the 46 CVAA-only measurements. In other words, this set includes 46 values that are only reporting the minimum *possible* detection not reflective of the *actual* detection value, which is below 2.0 ppb. This statistical analysis was included for completeness of all measurements performed for the full sample set.

To better account for the actual mercury concentration, statistical analysis was also performed for the sample PT-CVAA analysis alone (without the CVAA MDLs). The sample set consists of 46 original and 46 replicate samples, with all 92 measurements quantitated above the MDL. The population mean of TCLP mercury across this sample set was **79.3 ppt (0.0793 ppb, 0.0000793 ppm)**. These results are validated to a high level of statistical confidence, having a 99.7% ( $3\sigma$ ) confidence interval between 21.1 ppt to 137 ppt. These results are a more accurate representation of the detected mercury concentration, as the associated statistics have removed the MDL over-reporting bias.

In both cases, the statistical values show a clear and notable improvement over physico-chemical stabilization alone. More importantly, the analysis demonstrates that effective treatment across all trials is robust, remaining well below the RCRA LDR limit of 0.025 ppm. Even for the statistical analysis including CVAA MDL values, average treatment performance is nearly 35x better than the LDR limit. Furthermore, analysis of detected values alone shows a remarkable 315x improvement over the LDR limit, which is well below the ppb range.

Statistical data is summarized in Table 1, with associated calculations for CVAA with PT-CVAA (trace and ultratrace) in Table 2, and for PT-CVAA alone (ultratrace only) in Table 3. Raw reports are included as appendix.

## **IX. Long-Term Environmental Management at Subtitle-C Landfill Site**

The Veolia Gum Springs, AR landfill has a defined environmental sampling, monitoring, and maintenance plan for closure and aftercare. This comprehensive plan was compiled in accordance with applicable 40 CFR 264 subsections, and is included in the site's RCRA Part B Permit. This plan

ensures long-term management of environmental sampling, groundwater monitoring, cover materials, maintenance, leachate system, leak detection system, and run-on / run-off damage prevention.

A. Environmental Monitoring

The Veolia Gum Springs, AR landfill maintains an environmental sampling and monitoring program applicable to the site permitting. Long-term closure and aftercare plans are bonded to ensure proper fiscal management of aftercare. Planned aftercare includes a full 30-year post-closure monitoring of groundwater, as required by 40 CFR 264.118(b)(1) of Rule 23 on a semi-annual basis. The leachate collection system and the leak detection system will be inspected and monitored in accordance with the guidelines outlined in 40 CFR 264.118(b)(1) and 264.310 of Rule 23. Run-off and surface waters collected during the post-closure period will be managed in accordance with the facility's NPDES permit.

B. Landfill Aftercare Management

The inspection and maintenance activities necessary to protect the integrity of the landfill cover system and ensure that it functions as designed. During the Post-Closure period, the Final Cover System will:

- Minimize Liquids Infiltration Through Landfill (264.310)(a)(1)
- Function with Minimum Maintenance (264.310)(a)(2)
- Promote Drainage and Minimize Erosion (264.310)(a)(3)
- Accommodate Settling and Subsidence (264.310)(a)(4)
- Maintain Cap Permeability Less than Bottom Liner (264.310)(a)(5)

The control of infiltration associated with the final cover system will be achieved by controlling and managing surface water run-off effectively. The landfill has been designed such that the final surface will be graded to facilitate run-off while minimizing erosion.

In order to promote long-term effectiveness of the erosion layer, a thick stand of grass will be established and maintained. Locally adapted perennial plants with root systems that will not disperse the low permeability layer, which grow with sufficient density to prevent erosion, which require little to no maintenance over time, and can survive in a low-nutrient soil will be considered for use as part of the final cover system.

**X. Conclusions and Recommendations**

This petition is being submitted under 40 CFR §268.44(h) for formal approval of variance from a treatment standard (VAT ), as well as under 40 CFR §260.20 for rulemaking to amend 40 CFR part 268, subpart D to specifically incorporate Veolia’s proposed treatment method.

The proposed treatment included in this application for VAT offers an effective means to manage high concentration mercury materials that currently do not have an available treatment option. This includes liquid mercury produced as a byproduct of mercury retort treatment (RMERC), as well as other HCM wastes in the industrial and commercial markets. Existing stabilization treatment methods are widely used for lower level mercury wastes (below 260 ppm), and this new treatment protocol will enable effective treatment and post-treatment management for higher level mercury materials. Furthermore, this allows for functional treatment of the mercury, rather than dilution or encapsulation which ultimately may result in subsequent leaching, accumulation, or other environmental concerns.

[REDACTED]

[REDACTED] Additionally, the Gum Springs, AR site maintains an existing Subtitle C permitted landfill. This landfill is fully equipped with a primary liner, a dedicated leachate collection system, a secondary liner, a secondary isolated leak detection layer, and engineered clay layer for effective containment and leachate management. Additionally, the facility already processes low level stabilization of mercury (below 260 ppm TCLP). Continued groundwater, leachate, and landfill management testing are part of the site permitting, and will ensure effective long-term HCM waste management.

Initial laboratory analysis of the stabilized and compounded HCMs consistently demonstrated very low levels of free or leachable mercury following treatment by the proposed process. These treatments have an average TCLP mercury of **79.3 ppt** (for detected values), which is well below the RCRA LDR limit of 0.025 ppm, with a high degree of statistical confidence. As such, the proposed treatment and analysis plan are not only consistent with meeting existing regulatory limits, but also demonstrate a highly effective means to manage mercury within thresholds far below established risks for human health and environmental concern.

The proposed treatment and disposal process for mercury-containing wastes and elemental mercury, as outlined in this petition, represents a significant advancement in environmental protection and public health. This innovative approach effectively mitigates the risks associated with these hazardous materials, eliminating the current necessity for indefinite long-term storage of mercury-containing waste materials, for which there is currently no EPA-approved treatment standard.

By treating these wastes to levels below the existing referenced Land Disposal Restrictions standards and subsequently disposing of them in a commercial Subtitle C landfill, as detailed within this document, a demonstrably more protective and environmentally sound waste management solution is achieved.

TABLE 1 Statistical Data Summary

Count	Sample	CVAA Result, ppb (reporting the MDL)	Result (ug/L, ppb)	ppt	Duplicate Result (ug/L)	ppt	Sample Mean (Ultra Trace)	Sample Standard Deviation	Sample Mean (CVAA and Ultra Trace)
1	Run 4	2	0.0256	25.6	0.0253	25.3	0.02545	0.0002121320344	0.6836
2	Run 4.a	2	0.0286	28.6	0.0297	29.7	0.02915	0.0007778174593	0.6861
3	Run 5	2	0.0606	60.6	0.0618	61.8	0.0612	0.0008485281374	0.7075
4	Run 5.a	2	0.0187	18.7	0.0157	15.7	0.0172	0.002121320344	0.6781
5	Run 5.b	2	0.0153	15.3	0.0155	15.5	0.0154	0.0001414213562	0.6769
6	Run 5.c	2	0.037	37	0.0377	37.7	0.03735	0.0004949747468	0.6916
7	Run 6	2	0.0059	5.9	0.0061	6.1	0.006	0.0001414213562	0.6707
8	Run 6.a	2	0.0052	5.2	0.0044	4.4	0.0048	0.0005656854249	0.6699
9	Run 7.a	2	0.895	895	0.878	878	0.8865	0.01202081528	1.2577
10	Run 1	2	0.0726	72.6	0.0718	71.8	0.0722	0.0005656854249	0.7148
11	Run 1.a	2	0.0721	72.1	0.0721	72.1	0.0721	0	0.7147
12	Run 2	2	0.0668	66.8	0.0653	65.3	0.06605	0.001060660172	0.7107
13	Run 2.a	2	0.0501	50.1	0.049	49	0.04955	0.0007778174593	0.6997
14	Run 3	2	0.0299	29.9	0.0274	27.4	0.02865	0.001767766953	0.6858
15	Run 3.a	2	0.0435	43.5	0.042	42	0.04275	0.001060660172	0.6952
16	Run 4.12.9	2	0.0274	27.4	0.0273	27.3	0.02735	0.0000707106781	0.6849
17	Run 4.a.12.9	2	0.0122	12.2	0.0123	12.3	0.01225	0.0000707106781	0.6748
18	Run 1.12.6	2	0.0833	83.3	0.0821	82.1	0.0827	0.0008485281374	0.7218
19	Run 1.12.8	2	0.0421	42.1	0.0426	42.6	0.04235	0.0003535533906	0.6949
20	Run 1.a.12.8	2	0.0214	21.4	0.0226	22.6	0.022	0.0008485281374	0.6813
21	Run 2.12.8	2	0.0204	20.4	0.0184	18.4	0.0194	0.001414213562	0.6796
22	Run 2.a.12.8	2	0.0601	60.1	0.0542	54.2	0.05715	0.004171930009	0.7048
23	Run 3.12.8	2	0.0204	20.4	0.0221	22.1	0.02125	0.001202081528	0.6808
24	Run 3.a.12.8	2	0.0278	27.8	0.0281	28.1	0.02795	0.0002121320344	0.6853

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25	R1 (12.06) (12.08)x2	2	0.0448	44.8	0.0419	41.9	0.04335	0.002050609665	0.6956
26	R2 R2ax2	2	0.0273	27.3	0.0276	27.6	0.02745	0.0002121320344	0.6850
27	R5 R5ax2	2	0.111	111	0.109	109	0.11	0.001414213562	0.7400
28	R5b R5cx2	2	0.107	107	0.172	172	0.1395	0.04596194078	0.7597
29	R6 R6ax2	2	0.0303	30.3	0.0307	30.7	0.0305	0.0002828427125	0.6870
30	R7a R1x2	2	0.0554	55.4	0.0528	52.8	0.0541	0.001838477631	0.7027
31	R1a R2x2	2	0.0856	85.6	0.0851	85.1	0.08535	0.0003535533906	0.7236
32	R3a R4x2	2	0.0556	55.6	0.0571	57.1	0.05635	0.001060660172	0.7042
33	R4 R4ax2	2	0.0346	34.6	0.034	34	0.0343	0.0004242640687	0.6895
34	R2a (12.08) (12.09)x2	2	0.0283	28.3	0.0285	28.5	0.0284	0.0001414213562	0.6856
35	R6a R4x2	2	0.192	192	0.183	183	0.1875	0.006363961031	0.7917
36	R1 R4x2	2	0.0861	86.1	0.087	87	0.08655	0.0006363961031	0.7244
37	R2 R4x2	2	0.147	147	0.145	145	0.146	0.001414213562	0.7640
38	Run 4x2	2	0.0518	51.8	0.058	58	0.0549	0.004384062043	0.7033
39	Run 4.ax2	2	0.0233	23.3	0.0247	24.7	0.024	0.0009899494937	0.6827
40	Run 5.ax2	2	0.028	28	0.0279	27.9	0.02795	0.0000707106781	0.6853
41	Run 5cx2	2	0.0343	34.3	0.0338	33.8	0.03405	0.0003535533906	0.6894
42	Run 1.ax2	2	0.392	392	0.339	339	0.3655	0.0374766594	0.9103
43	Run 2.ax2	2	0.106	106	0.101	101	0.1035	0.003535533906	0.7357
44	Run 3x2	2	0.175	175	0.174	174	0.1745	0.0007071067812	0.7830
45	Run 3.ax2	2	0.0826	82.6	0.089	89	0.0858	0.0045254834	0.7239
46	Run 3.12.8x2	2	0.0205	20.5	0.0209	20.9	0.0207	0.0002828427125	0.6805

TABLE 2 Statistical Analysis, Inclusive of CVAA MDL Data (Trace & Ultra Trace)

Population Mean	Population Standard Deviation	95% CI Sample Mean Population, lower bound (2 $\sigma$ )	95% CI Mean Population, upper bound (2 $\sigma$ )	99.7% CI Sample Mean Population, lower bound (3 $\sigma$ )	99.7% CI Sample Mean Population, upper bound (3 $\sigma$ )
0.7195217391	0.9154809355	0.5948634327	0.8441800456	0.5084463595	0.9305971188

TABLE 3 Statistical Analysis, Exclusive of CVAA MDL Data (PT-CVAA Only)

Population Mean	Population Standard Deviation	95% CI Sample Mean Population, lower bound (2 $\sigma$ )	95% CI Mean Population, upper bound (2 $\sigma$ )	99.7% CI Sample Mean Population, lower bound (3 $\sigma$ )	99.7% CI Sample Mean Population, upper bound (3 $\sigma$ )
0.0792826087	0.1363517546	0.04542606128	0.1131391561	0.0211366469	0.1374285705

APPENDIX 1

Trial Analytical Reports - SW846 1311, 1631, and 7470

Arkansas Analytical Laboratory reports have been included on the following pages.

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**Veolia North America**  
100 Federal Street, 3rd Floor / Boston, MA 02110  
[veolianorthamerica.com](http://veolianorthamerica.com)

25 April 2025



Adam Bruner  
Veolia Gum Springs Facility  
500 East Reynolds Rd.  
Arkadelphia, AR 71923  
Project: Sample(s)

Project Number: February 2025 -- 25021-9796  
Date Received: 21-Feb-25 11:13

REVISED REPORT

ANALYTICAL RESULTS

Lab Number: 2502478-01RE1  
Sample Name: Run 5.c 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0343	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 11:25	B504365	SW 1311,7470A

ANALYTICAL RESULTS

Lab Number: 2502478-02RE1  
Sample Name: Run 5.c 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0338	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/24/25 15:41	B504365	SW 1311,7470A

QUALITY CONTROL RESULTS

TCLP Metals -- Batch: B504365 (Water)  
Prepared: 17-Apr-25 14:45 By: ST -- Analyzed: 18-Apr-25 12:48 By: KW

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 mg/L	81.4% / NA	81.0% / 82.7%		2.09%	

TCLP Low Level Mercury -- Batch: B504436 (Water)  
Prepared: 22-Apr-25 13:35 By: ST -- Analyzed: 23-Apr-25 12:30 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 ug/L	90.3% / NA	90.5% / 90.7%		0.0691%	

QUALIFIER(S)

\*E2: Estimated Result; Analyzed Outside of Holding Time

All Analysis performed according to EPA approved methodology when available :  
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by:   
Norma James  
Technical Director

25 April 2025



Adam Bruner  
Veolia Gum Springs Facility  
500 East Reynolds Rd.  
Arkadelphia, AR 71923  
Project: Sample(s)

Project Number: February 2025 -- 25021-9804  
Date Received: 21-Feb-25 11:13

**REVISED REPORT**

**ANALYTICAL RESULTS**

Lab Number: 2502486-01RE1  
Sample Name: Run 3 12/9/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.175	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 10:02	B504365	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502486-02RE1  
Sample Name: Run 3 12/9/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.174	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 10:06	B504365	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B504365 (Water)  
Prepared: 17-Apr-25 14:45 By: ST -- Analyzed: 18-Apr-25 12:48 By: KW

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 mg/L	81.4% / NA	81.0% / 82.7%		2.09%	

TCLP Low Level Mercury -- Batch: B504436 (Water)  
Prepared: 22-Apr-25 13:35 By: ST -- Analyzed: 23-Apr-25 12:30 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 ug/L	90.3% / NA	90.5% / 90.7%		0.0691%	

**QUALIFIER(S)**

\*E2: Estimated Result; Analyzed Outside of Holding Time

All Analysis performed according to EPA approved methodology when available :  
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by:   
Norma James  
Technical Director

Adam Bruner  
Veolia Gum Springs Facility  
500 East Reynolds Rd.  
Arkadelphia, AR 71923  
Project: Sample(s)

Project Number: February 2025 -- Mercury Project  
Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: **2504035-01**  
Sample Name: Run 1 (12/6/24) + Run 1 (12/8/24)  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0448</b>	E2, E20	4/21/25 14:34	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-02**  
Sample Name: Run 1 (12/6/24) + Run 1 (12/8/24) Dup  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0419</b>	E2	4/21/25 15:26	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-03**  
Sample Name: Run 2 (12/8/24) + Run 2.a (12/8/24)  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0273</b>	E2	4/21/25 15:40	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-04**  
Sample Name: Run 2 (12/8/24) + Run 2.a (12/8/24) Dup  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0276</b>	E2	4/21/25 15:45	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

Adam Bruner  
Veolia Gum Springs Facility  
500 East Reynolds Rd.  
Arkadelphia, AR 71923  
Project: Sample(s)

Project Number: February 2025 -- Mercury Project  
Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: **2504035-05**  
Sample Name: Run 5 (12/8/24) + Run 5.a (12/8/24)  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.111</b>	E2	4/24/25 15:31	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-06**  
Sample Name: Run 5 (12/8/24) + Run 5.a (12/8/24) Dup  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.109</b>	E2	4/24/25 15:31	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-07**  
Sample Name: Run 5.b (12/8/24) + Run 5.c (12/8/24)  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.107</b>	E2	4/22/25 9:12	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-08**  
Sample Name: Run 5.b (12/8/24) + Run 5.c (12/8/24) Dup  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.172</b>	E2	4/22/25 9:16	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

Adam Bruner  
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Project: Sample(s)

Project Number: February 2025 -- Mercury Project  
Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: **2504035-09**  
Sample Name: Run 6 (12/8/24) + Run 6.a (12/8/24)  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0303</b>	E2	4/22/25 9:21	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 9:29	B504365	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-10**  
Sample Name: Run 6 (12/8/24) + Run 6.a (12/8/24) Dup  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0307</b>	E2	4/22/25 9:26	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 9:32	B504365	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-11**  
Sample Name: Run 7.a (12/8/24) + Run 1 (12/9/24)  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0554</b>	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 9:35	B504365	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-12**  
Sample Name: Run 7.a (12/8/24) + Run 1 (12/9/24) Dup  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0528</b>	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 9:39	B504365	SW 1311,7470A

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Project: Sample(s)

Project Number: February 2025 -- Mercury Project  
Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: **2504035-13**  
Sample Name: Run 1.a (12/9/24) + Run 2 (12/9/24)  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0856</b>	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 9:42	B504365	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-14**  
Sample Name: Run 1.a (12/9/24) + Run 2 (12/9/24) Dup  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0851</b>	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 9:45	B504365	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-15**  
Sample Name: Run 3.a (12/9/24) + Run 4 (12/9/24)  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0556</b>	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 10:09	B504365	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-16**  
Sample Name: Run 3.a (12/9/24) + Run 4 (12/9/24) Dup  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0571</b>	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 10:12	B504365	SW 1311,7470A

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Project: Sample(s)

Project Number: February 2025 -- Mercury Project  
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**ANALYTICAL RESULTS**

Lab Number: **2504035-17**  
Sample Name: Run 4 (12/9/24) + Run 4.a (12/9/24)  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0346</b>	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 10:15	B504365	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-18**  
Sample Name: Run 4 (12/9/24) + Run 4.a (12/9/24) Dup  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0340</b>	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 10:19	B504365	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-19**  
Sample Name: Run 2.a (12/8/24) + Run 2.a (12/9/24)  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0283</b>	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 10:22	B504365	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-20**  
Sample Name: Run 2.a (12/8/24) + Run 2.a (12/9/24) Dup  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0285</b>	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 11:00	B504365	SW 1311,7470A

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Project: Sample(s)

Project Number: February 2025 -- Mercury Project  
Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: **2504035-21**  
Sample Name: Run 6.a (12/8/24) + Run 4 (12/9/24)  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.192</b>	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 11:45	B504366	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-22**  
Sample Name: Run 6.a (12/8/24) + Run 4 (12/9/24) Dup  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.183</b>	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 11:48	B504366	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-23**  
Sample Name: Run 1 (12/9/24) + Run 4 (12/9/24)  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0861</b>	E2	4/23/25 9:28	B504489	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 12:13	B504366	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: **2504035-24**  
Sample Name: Run 1 (12/9/24) + Run 4 (12/9/24) Dup  
Date/Time Collected: **2/21/25 7:43**  
Sample Matrix: **Solid**

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	<b>0.0870</b>	E2	4/23/25 9:59	B504489	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 12:17	B504366	SW 1311,7470A

25 April 2025



Adam Bruner  
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Project: Sample(s)

Project Number: February 2025 -- Mercury Project  
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**ANALYTICAL RESULTS**

Lab Number: 2504035-25  
Sample Name: Run 2 (12/9/24) + Run 4 (12/9/24)  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.147	E2	4/23/25 10:39	B504489	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 12:20	B504366	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2504035-26  
Sample Name: Run 2 (12/9/24) + Run 4 (12/9/24) Dup  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.145	E2	4/23/25 10:44	B504489	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 12:23	B504366	SW 1311,7470A



Adam Bruner  
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 Project: Sample(s)

Project Number: February 2025 -- Mercury Project  
 Date Received: 21-Feb-25 11:13

**QUALITY CONTROL RESULTS**

**TCLP Metals -- Batch: B504364 (Water)**

Prepared: 17-Apr-25 14:05 By: ST -- Analyzed: 17-Apr-25 15:08 By: KW

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	80.4% / NA	100% / 115%		13.6%	

**TCLP Metals -- Batch: B504365 (Water)**

Prepared: 17-Apr-25 14:45 By: ST -- Analyzed: 18-Apr-25 12:48 By: KW

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	81.4% / NA	81.0% / 82.7%		2.09%	

**TCLP Metals -- Batch: B504366 (Water)**

Prepared: 17-Apr-25 14:51 By: ST -- Analyzed: 18-Apr-25 11:42 By: KW

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	81.9% / NA	86.0% / 84.9%		1.33%	

**TCLP Low Level Mercury -- Batch: B504434 (Water)**

Prepared: 21-Apr-25 08:00 By: ST -- Analyzed: 21-Apr-25 15:16 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	87.6% / NA	58.9% / 83.9%		8.59%	%D1

**TCLP Low Level Mercury -- Batch: B504436 (Water)**

Prepared: 22-Apr-25 13:35 By: ST -- Analyzed: 23-Apr-25 12:30 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	90.3% / NA	90.5% / 90.7%		0.0691%	

**TCLP Low Level Mercury -- Batch: B504489 (Water)**

Prepared: 23-Apr-25 08:49 By: ST -- Analyzed: 23-Apr-25 09:37 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	96.1% / NA	102% / 105%		0.598%	

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*E2: Estimated Result; Analyzed Outside of Holding Time
- \*E20: Estimated Result Due to Matrix Spike and/or Matrix Spike Duplicate Failure; This sample was used as the "parent sample" in MS/MSD prep.



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 Project: Sample(s)

Project Number: February 2025 -- 25021-9789  
 Date Received: 21-Feb-25 11:13

**REVISED REPORT**

**ANALYTICAL RESULTS**

Lab Number: 2502471-01RE1  
 Sample Name: Run 3 12/8/2024  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0205	E2	4/21/25 15:50	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502471-02RE1  
 Sample Name: Run 3 12/8/2024 - Duplicate  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0209	E2	4/21/25 15:54	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B504364 (Water)  
 Prepared: 17-Apr-25 14:05 By: ST -- Analyzed: 17-Apr-25 15:08 By: KW

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 mg/L	80.4% / NA	100% / 115%		13.6%	

TCLP Low Level Mercury -- Batch: B504434 (Water)  
 Prepared: 21-Apr-25 08:00 By: ST -- Analyzed: 21-Apr-25 15:16 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 ug/L	87.6% / NA	58.9% / 83.9%		8.59%	%D1

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*E2: Estimated Result; Analyzed Outside of Holding Time



Adam Bruner  
 Veolia Gum Springs Facility  
 500 East Reynolds Rd.  
 Arkadelphia, AR 71923  
 Project: Sample(s)

Project Number: February 2025 -- 25021-9790  
 Date Received: 21-Feb-25 11:13

**REVISED REPORT**

**ANALYTICAL RESULTS**

Lab Number: 2502472-01RE1  
 Sample Name: Run 3.a 12/8/2024  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0826	E2	4/21/25 16:04	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502472-02RE1  
 Sample Name: Run 3.a 12/8/2024 - Duplicate  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0890	E2	4/21/25 16:09	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B504364 (Water)  
 Prepared: 17-Apr-25 14:05 By: ST -- Analyzed: 17-Apr-25 15:08 By: KW

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 mg/L	80.4% / NA	100% / 115%		13.6%	

TCLP Low Level Mercury -- Batch: B504434 (Water)  
 Prepared: 21-Apr-25 08:00 By: ST -- Analyzed: 21-Apr-25 15:16 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 ug/L	87.6% / NA	58.9% / 83.9%		8.59%	%D1

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*E2: Estimated Result; Analyzed Outside of Holding Time



Adam Bruner  
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 Project: Sample(s)

Project Number: February 2025 -- 25021-9786  
 Date Received: 21-Feb-25 11:13

**REVISED REPORT**

**ANALYTICAL RESULTS**

Lab Number: 2502468-01RE1  
 Sample Name: Run 1.a 12/8/2024  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.392	E2	4/22/25 8:58	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502468-02RE1  
 Sample Name: Run 1.a 12/8/2024 - Duplicate  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.339	E2	4/22/25 9:05	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B504364 (Water)  
 Prepared: 17-Apr-25 14:05 By: ST -- Analyzed: 17-Apr-25 15:08 By: KW

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 mg/L	80.4% / NA	100% / 115%		13.6%	

TCLP Low Level Mercury -- Batch: B504434 (Water)  
 Prepared: 21-Apr-25 08:00 By: ST -- Analyzed: 21-Apr-25 15:16 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 ug/L	87.6% / NA	58.9% / 83.9%		8.59%	%D1

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*E2: Estimated Result; Analyzed Outside of Holding Time



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 Project: Sample(s)

Project Number: February 2025 -- 25021-9791  
 Date Received: 21-Feb-25 11:13

**REVISED REPORT**

**ANALYTICAL RESULTS**

Lab Number: 2502473-01RE1  
 Sample Name: Run 4 12/8/2024  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0518	E2	4/21/25 16:13	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502473-02RE1  
 Sample Name: Run 4 12/8/2024 - Duplicate  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0580	E2	4/21/25 16:18	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**QUALITY CONTROL RESULTS**

**TCLP Metals -- Batch: B504364 (Water)**

Prepared: 17-Apr-25 14:05 By: ST -- Analyzed: 17-Apr-25 15:08 By: KW

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 mg/L	80.4% / NA	100% / 115%		13.6%	

**TCLP Low Level Mercury -- Batch: B504434 (Water)**

Prepared: 21-Apr-25 08:00 By: ST -- Analyzed: 21-Apr-25 15:16 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 ug/L	87.6% / NA	58.9% / 83.9%		8.59%	%D1

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*E2: Estimated Result; Analyzed Outside of Holding Time

25 April 2025



Adam Bruner  
Veolia Gum Springs Facility  
500 East Reynolds Rd.  
Arkadelphia, AR 71923  
Project: Sample(s)

Project Number: February 2025 -- 25021-9794  
Date Received: 21-Feb-25 11:13

REVISED REPORT

ANALYTICAL RESULTS

Lab Number: 2502476-01RE1  
Sample Name: Run 5.a 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0280	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 11:18	B504365	SW 1311,7470A

ANALYTICAL RESULTS

Lab Number: 2502476-02RE1  
Sample Name: Run 5.a 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0279	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 11:22	B504365	SW 1311,7470A

QUALITY CONTROL RESULTS

TCLP Metals -- Batch: B504365 (Water)  
Prepared: 17-Apr-25 14:45 By: ST -- Analyzed: 18-Apr-25 12:48 By: KW

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 mg/L	81.4% / NA	81.0% / 82.7%		2.09%	

TCLP Low Level Mercury -- Batch: B504436 (Water)  
Prepared: 22-Apr-25 13:35 By: ST -- Analyzed: 23-Apr-25 12:30 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 ug/L	90.3% / NA	90.5% / 90.7%		0.0691%	

QUALIFIER(S)

\*E2: Estimated Result; Analyzed Outside of Holding Time

All Analysis performed according to EPA approved methodology when available :  
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by:   
Norma James  
Technical Director



Adam Bruner  
 Veolia Gum Springs Facility  
 500 East Reynolds Rd.  
 Arkadelphia, AR 71923  
 Project: Sample(s)

Project Number: February 2025 -- 25021-9792  
 Date Received: 21-Feb-25 11:13

**REVISED REPORT**

**ANALYTICAL RESULTS**

Lab Number: 2502474-01RE1  
 Sample Name: Run 4.a 12/8/2024  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0233	E2	4/21/25 16:23	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502474-02RE1  
 Sample Name: Run 4.a 12/8/2024 - Duplicate  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0247	E2	4/21/25 16:28	B504434	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/17/25 15:08	B504364	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B504364 (Water)  
 Prepared: 17-Apr-25 14:05 By: ST -- Analyzed: 17-Apr-25 15:08 By: KW

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 mg/L	80.4% / NA	100% / 115%		13.6%	

TCLP Low Level Mercury -- Batch: B504434 (Water)  
 Prepared: 21-Apr-25 08:00 By: ST -- Analyzed: 21-Apr-25 15:16 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 ug/L	87.6% / NA	58.9% / 83.9%		8.59%	%D1

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*E2: Estimated Result; Analyzed Outside of Holding Time

25 April 2025



Adam Bruner  
Veolia Gum Springs Facility  
500 East Reynolds Rd.  
Arkadelphia, AR 71923  
Project: Sample(s)

Project Number: February 2025 -- 25021-9803  
Date Received: 21-Feb-25 11:13

REVISED REPORT

ANALYTICAL RESULTS

Lab Number: 2502485-01RE1  
Sample Name: Run 2.a 12/9/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.106	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 9:56	B504365	SW 1311,7470A

ANALYTICAL RESULTS

Lab Number: 2502485-02RE1  
Sample Name: Run 2.a 12/9/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Low Level Mercury</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.101	E2	4/23/25 12:30	B504436	1311, EPA 1631 E
<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	mg/L	< 0.0020	E2	4/18/25 9:59	B504365	SW 1311,7470A

QUALITY CONTROL RESULTS

TCLP Metals -- Batch: B504365 (Water)  
Prepared: 17-Apr-25 14:45 By: ST -- Analyzed: 18-Apr-25 12:48 By: KW

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 mg/L	81.4% / NA	81.0% / 82.7%		2.09%	

TCLP Low Level Mercury -- Batch: B504436 (Water)  
Prepared: 22-Apr-25 13:35 By: ST -- Analyzed: 23-Apr-25 12:30 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 ug/L	90.3% / NA	90.5% / 90.7%		0.0691%	

QUALIFIER(S)

\*E2: Estimated Result; Analyzed Outside of Holding Time

All Analysis performed according to EPA approved methodology when available :  
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by:   
Norma James  
Technical Director

Adam Bruner  
Veolia Gum Springs Facility  
500 East Reynolds Rd.  
Arkadelphia, AR 71923  
Project: Sample(s)

Project Number: February 2025 -- 25021-9805

Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502487-01  
Sample Name: Run 3.a 12/9/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0435	N	3/5/25 16:43	B503042	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502564	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502487-02  
Sample Name: Run 3.a 12/9/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0420	N	3/5/25 16:43	B503042	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502564	SW 1311,7470A

**QUALITY CONTROL RESULTS****TCLP Metals -- Batch: B502564 (Water)**

Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 mg/L	104% / NA	105% / 102%		2.96%	

**TCLP Metals -- Batch: B503042 (Water)**

Prepared: 04-Mar-25 16:43 By: ST -- Analyzed: 05-Mar-25 16:43 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 ug/L	98.0% / NA	73.1% / 70.4%		1.24%	%D1

**QUALIFIER(S)**

\*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria

\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by:



Norma James  
Technical Director

06 March 2025



Adam Bruner  
Veolia Gum Springs Facility  
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Arkadelphia, AR 71923  
Project: Sample(s)

Project Number: February 2025 -- 25021-9795  
Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502477-01  
Sample Name: Run 5.b 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0153	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502477-02  
Sample Name: Run 5.b 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0155	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502563 (Water)  
Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	107% / NA	103% / 109%		5.98%	

TCLP Metals -- Batch: B503041 (Water)  
Prepared: 04-Mar-25 14:29 By: ST -- Analyzed: 04-Mar-25 14:29 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	96.8% / NA	56.4% / 49.5%		4.81%	%D1

**QUALIFIER(S)**

\*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria  
\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: \_\_\_\_\_  
Norma James  
Technical Director

06 March 2025



Adam Bruner  
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500 East Reynolds Rd.  
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Project: Sample(s)

Project Number: February 2025 -- 25021-9797  
Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502479-01  
Sample Name: Run 6 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0059	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502479-02  
Sample Name: Run 6 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0061	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502563 (Water)  
Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	107% / NA	103% / 109%		5.98%	

TCLP Metals -- Batch: B503041 (Water)  
Prepared: 04-Mar-25 14:29 By: ST -- Analyzed: 04-Mar-25 14:29 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	96.8% / NA	56.4% / 49.5%		4.81%	%D1

**QUALIFIER(S)**

\*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria  
\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: \_\_\_\_\_  
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Project: Sample(s)

Project Number: February 2025 -- 25021-9798

Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502480-01  
Sample Name: Run 6.a 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0052	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502480-02  
Sample Name: Run 6.a 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0044	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**QUALITY CONTROL RESULTS**

## TCLP Metals -- Batch: B502563 (Water)

Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	107% / NA	103% / 109%		5.98%	

## TCLP Metals -- Batch: B503041 (Water)

Prepared: 04-Mar-25 14:29 By: ST -- Analyzed: 04-Mar-25 14:29 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	96.8% / NA	56.4% / 49.5%		4.81%	%D1

**QUALIFIER(S)**

\*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria

\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by:


  
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 Project: Sample(s)

Project Number: February 2025 -- 25021-9801  
 Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502483-01  
 Sample Name: Run 1.a 12/9/2024  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0721	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502483-02  
 Sample Name: Run 1.a 12/9/2024 - Duplicate  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0721	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502563 (Water)  
 Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	107% / NA	103% / 109%		5.98%	

TCLP Metals -- Batch: B503041 (Water)  
 Prepared: 04-Mar-25 14:29 By: ST -- Analyzed: 04-Mar-25 14:29 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	96.8% / NA	56.4% / 49.5%		4.81%	%D1

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
 SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
 Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: \_\_\_\_\_  
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 Project: Sample(s)

Project Number: February 2025 -- 25021-9793  
 Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502475-01  
 Sample Name: Run 5 12/8/2024  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0606	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502475-02  
 Sample Name: Run 5 12/8/2024 - Duplicate  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0618	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502561 (Water)  
 Prepared: 28-Feb-25 11:43 By: JY -- Analyzed: 28-Feb-25 11:43 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	110% / NA	108% / 111%		2.73%	

TCLP Metals -- Batch: B503011 (Water)  
 Prepared: 04-Mar-25 11:09 By: ST -- Analyzed: 04-Mar-25 11:09 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	99.3% / NA	MBA / MBA		3.17%	MBA

**QUALIFIER(S)**

\*MBA: Masked By Analyte  
 \*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
 SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
 Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

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Project: Sample(s)

Project Number: February 2025 -- 25021-9796

Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502478-01  
Sample Name: Run 5.c 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0370	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502478-02  
Sample Name: Run 5.c 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0377	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**QUALITY CONTROL RESULTS**

## TCLP Metals -- Batch: B502563 (Water)

Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	107% / NA	103% / 109%		5.98%	

## TCLP Metals -- Batch: B503041 (Water)

Prepared: 04-Mar-25 14:29 By: ST -- Analyzed: 04-Mar-25 14:29 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	96.8% / NA	56.4% / 49.5%		4.81%	%D1

**QUALIFIER(S)**

\*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria

\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by:



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Project: Sample(s)

Project Number: February 2025 -- 25021-9803

Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502485-01  
Sample Name: Run 2.a 12/9/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0501	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502485-02  
Sample Name: Run 2.a 12/9/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0490	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**QUALITY CONTROL RESULTS**

## TCLP Metals -- Batch: B502563 (Water)

Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	107% / NA	103% / 109%		5.98%	

## TCLP Metals -- Batch: B503041 (Water)

Prepared: 04-Mar-25 14:29 By: ST -- Analyzed: 04-Mar-25 14:29 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	96.8% / NA	56.4% / 49.5%		4.81%	%D1

**QUALIFIER(S)**

\*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria

\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by:


  
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06 March 2025



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Project: Sample(s)

Project Number: February 2025 -- 25021-9799  
Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502481-01  
Sample Name: Run 7.a 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.895	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502481-02  
Sample Name: Run 7.a 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.878	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502563 (Water)  
Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	107% / NA	103% / 109%		5.98%	

TCLP Metals -- Batch: B503041 (Water)  
Prepared: 04-Mar-25 14:29 By: ST -- Analyzed: 04-Mar-25 14:29 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	96.8% / NA	56.4% / 49.5%		4.81%	%D1

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: \_\_\_\_\_  
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06 March 2025



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Project: Sample(s)

Project Number: February 2025 -- 25021-9804  
Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502486-01  
Sample Name: Run 3 12/9/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0299	E20, N	3/5/25 16:43	B503042	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502564	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502486-02  
Sample Name: Run 3 12/9/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0274	N	3/5/25 16:43	B503042	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502564	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502564 (Water)  
Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	104% / NA	105% / 102%		2.96%	

TCLP Metals -- Batch: B503042 (Water)  
Prepared: 04-Mar-25 16:43 By: ST -- Analyzed: 05-Mar-25 16:43 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	98.0% / NA	73.1% / 70.4%		1.24%	%D1

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*E20: Estimated Result Due to Matrix Spike and/or Matrix Spike Duplicate Failure; This sample was used as the "parent sample" in MS/MSD prep.
- \*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: \_\_\_\_\_  
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06 March 2025



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Project: Sample(s)

Project Number: February 2025 -- 25021-9800  
Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502482-01  
Sample Name: Run 1 12/9/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0726	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502482-02  
Sample Name: Run 1 12/9/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0718	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502563 (Water)  
Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	107% / NA	103% / 109%		5.98%	

TCLP Metals -- Batch: B503041 (Water)  
Prepared: 04-Mar-25 14:29 By: ST -- Analyzed: 04-Mar-25 14:29 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	96.8% / NA	56.4% / 49.5%		4.81%	%D1

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

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Project: Sample(s)

Project Number: February 2025 -- 25021-9806

Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502488-01  
Sample Name: Run 4 12/9/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0274	N	3/5/25 16:43	B503042	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502564	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502488-02  
Sample Name: Run 4 12/9/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0273	N	3/5/25 16:43	B503042	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502564	SW 1311,7470A

**QUALITY CONTROL RESULTS**

## TCLP Metals -- Batch: B502564 (Water)

Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	104% / NA	105% / 102%		2.96%	

## TCLP Metals -- Batch: B503042 (Water)

Prepared: 04-Mar-25 16:43 By: ST -- Analyzed: 05-Mar-25 16:43 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	98.0% / NA	73.1% / 70.4%		1.24%	%D1

**QUALIFIER(S)**

\*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria

\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by:


  
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06 March 2025



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Project: Sample(s)

Project Number: February 2025 -- 25021-9807  
Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502489-01  
Sample Name: Run 4.a 12/9/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0122	N	3/5/25 16:43	B503042	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502564	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502489-02  
Sample Name: Run 4.a 12/9/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0123	N	3/5/25 16:43	B503042	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502564	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502564 (Water)  
Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	104% / NA	105% / 102%		2.96%	

TCLP Metals -- Batch: B503042 (Water)  
Prepared: 04-Mar-25 16:43 By: ST -- Analyzed: 05-Mar-25 16:43 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	98.0% / NA	73.1% / 70.4%		1.24%	%D1

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: \_\_\_\_\_  
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 Project: Sample(s)

Project Number: February 2025 -- 25021-9802  
 Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502484-01  
 Sample Name: Run 2 12/9/2024  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0668	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502484-02  
 Sample Name: Run 2 12/9/2024 - Duplicate  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0653	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502563 (Water)  
 Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	107% / NA	103% / 109%		5.98%	

TCLP Metals -- Batch: B503041 (Water)  
 Prepared: 04-Mar-25 14:29 By: ST -- Analyzed: 04-Mar-25 14:29 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	96.8% / NA	56.4% / 49.5%		4.81%	%D1

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
 SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
 Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

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Project: Sample(s)

Project Number: February 2025 -- 25021-9784

Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502466-01  
Sample Name: Run 1 12/6/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0833	E20, N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502466-02  
Sample Name: Run 1 12/6/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0821	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**QUALITY CONTROL RESULTS**

## TCLP Metals -- Batch: B502561 (Water)

Prepared: 28-Feb-25 11:43 By: JY -- Analyzed: 28-Feb-25 11:43 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	110% / NA	108% / 111%		2.73%	

## TCLP Metals -- Batch: B503011 (Water)

Prepared: 04-Mar-25 11:09 By: ST -- Analyzed: 04-Mar-25 11:09 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	99.3% / NA	MBA / MBA		3.17%	MBA

**QUALIFIER(S)**

\*E20: Estimated Result Due to Matrix Spike and/or Matrix Spike Duplicate Failure; This sample was used as the "parent sample" in MS/MSD prep.  
\*MBA: Masked By Analyte  
\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.



Reviewed by:

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 Project: Sample(s)

Project Number: February 2025 -- 25021-9790  
 Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502472-01  
 Sample Name: Run 3.a 12/8/2024  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0278	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502472-02  
 Sample Name: Run 3.a 12/8/2024 - Duplicate  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0281	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502561 (Water)  
 Prepared: 28-Feb-25 11:43 By: JY -- Analyzed: 28-Feb-25 11:43 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	110% / NA	108% / 111%		2.73%	

TCLP Metals -- Batch: B503011 (Water)  
 Prepared: 04-Mar-25 11:09 By: ST -- Analyzed: 04-Mar-25 11:09 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	99.3% / NA	MBA / MBA		3.17%	MBA

**QUALIFIER(S)**

\*MBA: Masked By Analyte  
 \*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
 SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
 Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

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Project: Sample(s)

Project Number: February 2025 -- 25021-9785

Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502467-01  
Sample Name: Run 1 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0421	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502467-02  
Sample Name: Run 1 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0426	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**QUALITY CONTROL RESULTS**

## TCLP Metals -- Batch: B502561 (Water)

Prepared: 28-Feb-25 11:43 By: JY -- Analyzed: 28-Feb-25 11:43 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	110% / NA	108% / 111%		2.73%	

## TCLP Metals -- Batch: B503011 (Water)

Prepared: 04-Mar-25 11:09 By: ST -- Analyzed: 04-Mar-25 11:09 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	99.3% / NA	MBA / MBA		3.17%	MBA

**QUALIFIER(S)**

\*MBA: Masked By Analyte

\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :

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Project: Sample(s)

Project Number: February 2025 -- 25021-9786

Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502468-01  
Sample Name: Run 1.a 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0214	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502468-02  
Sample Name: Run 1.a 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0226	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**QUALITY CONTROL RESULTS**

## TCLP Metals -- Batch: B502561 (Water)

Prepared: 28-Feb-25 11:43 By: JY -- Analyzed: 28-Feb-25 11:43 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	110% / NA	108% / 111%		2.73%	

## TCLP Metals -- Batch: B503011 (Water)

Prepared: 04-Mar-25 11:09 By: ST -- Analyzed: 04-Mar-25 11:09 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	99.3% / NA	MBA / MBA		3.17%	MBA

**QUALIFIER(S)**

\*MBA: Masked By Analyte

\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

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SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.



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 Project: Sample(s)

Project Number: February 2025 -- 25021-9787  
 Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502469-01  
 Sample Name: Run 2 12/8/2024  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0204	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502469-02  
 Sample Name: Run 2 12/8/2024 - Duplicate  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0184	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502561 (Water)  
 Prepared: 28-Feb-25 11:43 By: JY -- Analyzed: 28-Feb-25 11:43 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	110% / NA	108% / 111%		2.73%	

TCLP Metals -- Batch: B503011 (Water)  
 Prepared: 04-Mar-25 11:09 By: ST -- Analyzed: 04-Mar-25 11:09 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	99.3% / NA	MBA / MBA		3.17%	MBA

**QUALIFIER(S)**

\*MBA: Masked By Analyte  
 \*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
 SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
 Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

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 Project: Sample(s)

Project Number: February 2025 -- 25021-9791  
 Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502473-01  
 Sample Name: Run 4 12/8/2024  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0256	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502473-02  
 Sample Name: Run 4 12/8/2024 - Duplicate  
 Date/Time Collected: 2/21/25 7:43  
 Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0253	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502561 (Water)  
 Prepared: 28-Feb-25 11:43 By: JY -- Analyzed: 28-Feb-25 11:43 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	110% / NA	108% / 111%		2.73%	

TCLP Metals -- Batch: B503011 (Water)  
 Prepared: 04-Mar-25 11:09 By: ST -- Analyzed: 04-Mar-25 11:09 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	99.3% / NA	MBA / MBA		3.17%	MBA

**QUALIFIER(S)**

\*MBA: Masked By Analyte  
 \*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
 SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
 Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

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Project: Sample(s)

Project Number: February 2025 -- 25021-9788

Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502470-01  
Sample Name: Run 2.a 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0601	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502470-02  
Sample Name: Run 2.a 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0542	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**QUALITY CONTROL RESULTS**

## TCLP Metals -- Batch: B502561 (Water)

Prepared: 28-Feb-25 11:43 By: JY -- Analyzed: 28-Feb-25 11:43 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	110% / NA	108% / 111%		2.73%	

## TCLP Metals -- Batch: B503011 (Water)

Prepared: 04-Mar-25 11:09 By: ST -- Analyzed: 04-Mar-25 11:09 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	99.3% / NA	MBA / MBA		3.17%	MBA

**QUALIFIER(S)**

\*MBA: Masked By Analyte

\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.



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Project: Sample(s)

Project Number: February 2025 -- 25021-9789

Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502471-01  
Sample Name: Run 3 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0204	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502471-02  
Sample Name: Run 3 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0221	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**QUALITY CONTROL RESULTS****TCLP Metals -- Batch: B502561 (Water)**

Prepared: 28-Feb-25 11:43 By: JY -- Analyzed: 28-Feb-25 11:43 By: JY

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 mg/L	110% / NA	108% / 111%		2.73%	

**TCLP Metals -- Batch: B503011 (Water)**

Prepared: 04-Mar-25 11:09 By: ST -- Analyzed: 04-Mar-25 11:09 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 ug/L	99.3% / NA	MBA / MBA		3.17%	MBA

**QUALIFIER(S)**

\*MBA: Masked By Analyte

\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

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Project: Sample(s)

Project Number: February 2025 -- 25021-9792

Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502474-01  
Sample Name: Run 4.a 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0286	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502474-02  
Sample Name: Run 4.a 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

<u>TCLP Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Mercury	ug/L	0.0297	N	3/4/25 11:09	B503011	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 11:43	B502561	SW 1311,7470A

**QUALITY CONTROL RESULTS****TCLP Metals -- Batch: B502561 (Water)**

Prepared: 28-Feb-25 11:43 By: JY -- Analyzed: 28-Feb-25 11:43 By: JY

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 mg/L	110% / NA	108% / 111%		2.73%	

**TCLP Metals -- Batch: B503011 (Water)**

Prepared: 04-Mar-25 11:09 By: ST -- Analyzed: 04-Mar-25 11:09 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.0020 ug/L	99.3% / NA	MBA / MBA		3.17%	MBA

**QUALIFIER(S)**

\*MBA: Masked By Analyte

\*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by:


  
Norma James  
Technical Director

06 March 2025



Adam Bruner  
Veolia Gum Springs Facility  
500 East Reynolds Rd.  
Arkadelphia, AR 71923  
Project: Sample(s)

Project Number: February 2025 -- 25021-9794  
Date Received: 21-Feb-25 11:13

**ANALYTICAL RESULTS**

Lab Number: 2502476-01  
Sample Name: Run 5.a 12/8/2024  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0187	E20, N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**ANALYTICAL RESULTS**

Lab Number: 2502476-02  
Sample Name: Run 5.a 12/8/2024 - Duplicate  
Date/Time Collected: 2/21/25 7:43  
Sample Matrix: Solid

TCLP Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Mercury	ug/L	0.0157	N	3/4/25 14:29	B503041	SW 1311,1631 E
Mercury	mg/L	< 0.0020	N	2/28/25 12:02	B502563	SW 1311,7470A

**QUALITY CONTROL RESULTS**

TCLP Metals -- Batch: B502563 (Water)  
Prepared: 28-Feb-25 12:02 By: JY -- Analyzed: 28-Feb-25 12:02 By: JY

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 mg/L	107% / NA	103% / 109%		5.98%	

TCLP Metals -- Batch: B503041 (Water)  
Prepared: 04-Mar-25 14:29 By: ST -- Analyzed: 04-Mar-25 14:29 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Mercury	<0.0020 ug/L	96.8% / NA	56.4% / 49.5%		4.81%	%D1

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*E20: Estimated Result Due to Matrix Spike and/or Matrix Spike Duplicate Failure; This sample was used as the "parent sample" in MS/MSD prep.
- \*N: Reduced sample weight used for extraction. Data cannot be used to demonstrate regulatory compliance.

All Analysis performed according to EPA approved methodology when available :  
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: \_\_\_\_\_  
Norma James  
Technical Director