



INVITATION FOR BID  
PUBLICLY OWNED  
TREATMENT WORKS RESIDUALS

CITY OF HOPEWELL  
HOPEWELL REGIONAL WASTEWATER  
TREATMENT FACILITY

BID: **#14-16**

DATE: **May 23, 2016**

Sealed Bids, subject to the general conditions and specifications hereby attached, will be received at the Office of the City Clerk, Second Floor, Municipal Building, 300 North Main Street, Hopewell, Virginia 23860 until, but not later than 11:00 a.m. **THURSDAY, June 16, 2016** and then publicly opened in the Council Chambers, Municipal Building, 300 North Main Street, Hopewell, Virginia on the aforementioned date and time for furnishing the solicited supplies or services.

1. All bids must be submitted in a sealed envelope.
2. Regardless of delivery method of bid, the **outside** of each envelope must clearly indicate the following: *(if bid is delivered by Federal Express, UPS, USPS Priority, etc. or any other means, the outside of **each** envelope **must also** clearly indicate):*

Office of the City Clerk  
Second Floor  
Municipal Building  
300 North Main Street  
Hopewell, Virginia 23860  
Closing Date of Bid: **JUNE 16, 2016**  
Commodity Name: **Publicly Owned Treatment Works Residuals**  
Bid # **14-16**

FOR YOUR BID TO BE CONSIDERED, IT MUST BE SUBMITTED ON THIS INVITATION FOR BID IN THE PLACES PROVIDED. BIDDERS SHALL SIGN THIS FORM (PAGE 3) WITHOUT DETACHING FROM REST OF BID AND MUST RETURN BID IN ITS ENTIRETY.

**ANY BID RECEIVED AFTER THE ANNOUNCED TIME AND DATE OF OPENING, WHETHER BY MAIL OR OTHERWISE, WILL NOT BE CONSIDERED AND WILL BE RETURNED UNOPENED.**

The right is reserved to reject any or all Bids submitted and also to place the order where it appears it will be to the best interest of the city. All quoted prices shall be FOB locations.

If you desire not to bid on this invitation, please forward your acknowledgement of NO BID.

Term of contract shall be from award to June 30, 2019.

The right is reserved to extend this contract, to be mutually negotiated at a reasonable time prior to the expiration date; same to be agreeable to both buyer and seller.

All bid quotations are subject to general terms and conditions hereby attached and will be rejected if not properly executed.

Individual contractors must provide their social security numbers and other types of firms must provide their federal employer identification numbers in the payment clauses to be included in contracts.

Quantities indicated herein are estimates of anticipated usage. It is understood and agreed to between the parties of a resulting contract that the City may increase or decrease quantities at the quoted price. Furthermore, it is agreed to between the parties of a resulting contract that the City shall not be obligated to purchase or pay for materials by such contract unless and until they are ordered and delivered.

The City reserves the right to be sole judge and to make the award in accordance with its own judgement as to what will best meet its requirements and be in the best interest of the City. The City reserves the right to reject any or all bids, to waive all informalities, and to reject any or all items of any bid.

AVAILABILITY OF FUNDS: It is understood and agreed between the Bidder and the City that the City shall be bound hereunder only to the extent of the funds available or which may hereafter become available for the purpose of this quotation or agreement.

WITHDRAWAL OF BID: No bid may be withdrawn for a period of ninety (90) days from the date of bid opening unless the bidder has made a clerical error. The bidder shall give notice in writing of his claim of right to withdraw his bid within two (2) business days after the conclusion of the bid opening procedure and shall submit original work papers substantiating the error with such notice.

Bidding and contracting procedures shall conform to all applicable regulations and provisions of the *City of Hopewell Procurement Ordinance* effective July 1, 2005, as amended; a copy of which is available on the City Attorney's website ([www.hopewellva.net](http://www.hopewellva.net)) under the tab CODE, Hopewell City Code. Click Chapter 2A-Procurement to view the Procurement Ordinance.



Shayna Jones Johnson  
Purchasing Agent

Please return the bids to the Office of the City Clerk, Second Floor, Municipal Building, 300 North Main Street, Hopewell, Virginia 23860. Regardless of delivery method of bid, the **outside** of each envelope must clearly indicate the following: *(if bid is delivered by Federal Express, UPS, USPS Priority, etc. or any other means, the outside of **each** envelope **must also** clearly indicate):*

**Office of the City Clerk  
Second Floor  
Municipal Building  
300 North Main Street  
Hopewell, Virginia 23860  
Closing Date of Bid: June 16, 2016  
Commodity Name: Publicly Owned Treatment Works Residuals  
Bid # 14-16**

In compliance with Invitation for Bid # 14-16 and subject to all conditions thereof and attached thereto, the undersigned offers and agrees if the Bid price and conditions will be accepted within ninety (90) calendar days from the date of opening to evaluate, to furnish any and all of the items upon which the prices are quoted, at the price set opposite each item, delivered at the points as specified and as scheduled.

NAME OF ORGANIZATION	TELEPHONE NUMBER
STREET ADDRESS	FAX NUMBER
CITY, STATE, ZIP CODE	EMAIL ADDRESS
NAME (TYPE OR PRINT)	OFFICIAL TITLE
SIGNATURE	DATE
STATE CORPORATION COMMISSION ID#	IRS I.D. #

**VIRGINIA STATE CORPORATION COMMISSION FORM:**

**The bidder shall submit the State Corporation Commission Form (located on page 5) with their bid. If bid submission does not include this form, the bid will be considered non-responsive.**

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State Corporation Commission Form

Virginia State Corporation Commission ("SCC") registration information:

The undersigned Offeror:

is a corporation or other business entity with the following SCC identification number:

\_\_\_\_\_ -OR-

is not a corporation, limited liability company, limited partnership, registered limited liability partnership, or business trust -OR-

is an out-of-state business entity that does not regularly and continuously maintain as part of its ordinary and customary business any employees, agents, offices, facilities, or inventories in Virginia (not counting any employees or agents in Virginia who merely solicit orders that require acceptance outside Virginia before they become contracts, and not counting any incidental presence of the Offeror in Virginia that is needed in order to assemble, maintain, and repair goods in accordance with the contracts by which such goods were sold and shipped into Virginia from bidder's out-of-state location) -OR-

is an out-of-state business entity that is including with this bid an opinion of legal counsel which accurately and completely discloses the undersigned Offeror's current contacts with Virginia and describes why those contacts do not constitute the transaction of business in Virginia within the meaning of § 13.1-757 or other similar provisions in Titles 13.1 or 50 of the Code of Virginia.

**\*\*NOTE\*\*** >> Check the following box if you have not completed any of the foregoing options but currently have pending before the SCC an application for authority to transact business in the Commonwealth of Virginia and wish to be considered for a waiver to allow you to submit the SCC identification number after the due date for proposals (the City reserves the right to determine in its sole discretion whether to allow such waiver):

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Name: \_\_\_\_\_  
(Print)

Title: \_\_\_\_\_

Name of Firm: \_\_\_\_\_

## GENERAL TERMS AND CONDITIONS

- A. **APPLICABLE LAWS AND COURTS:** This solicitation and any resulting contract shall be governed in all respects by the laws of the Commonwealth of Virginia and the City of Hopewell, Virginia; any litigation with respect thereto shall be brought in the courts of the City. The contractor shall comply with all applicable federal, state and local laws, rules and regulations. This compliance includes obtaining a City business license, if required, before work is performed.
- B. **EMPLOYMENT DISCRIMINATION/DRUG-FREE WORKPLACE BY CONTRACTOR:** By submitting the bids/proposals, the bidders/offerors certify to the City that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act and §2.2-4311 of the *Virginia Public Procurement Act*. If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the contract on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with the City to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the City. (Code of Virginia, § 2.2-4343.1E).

Every contract over Ten Thousand Dollars (\$10,000) shall include the provisions below. During the performance of this contract, the contractor agrees as follows:

1. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability or other basis prohibited by state law relating to discrimination employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
2. The contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such contractor is an equal opportunity employer.
3. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting these requirements of this section.
4. To provide a drug-free workplace for the contractor's employees.
5. To post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's

workplace and specifying the actions that will be taken against employees for violations of such prohibition.

6. To state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace.

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For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

The contractor will include the provisions of the foregoing paragraphs 1, 2, 3, 4, 5 and 6 in every subcontract or purchase order over Ten Thousand Dollars (\$10,000) so that the provisions will be binding upon each subcontractor or vendor.

- C. **DIRECT TAXES:** All bids/proposals shall be submitted exclusive of direct federal, state, and local taxes. However, if the bidder/offeror believes that certain taxes are properly payable by the City, he may list such taxes separately in each case directly below the respective item bid/proposal price. Tax exemption certification will be furnished on request.
- D. **INDEMNITY:** All contractors agree to defend, indemnify and hold harmless, the City and its council, officers, employees, agents, and other representatives from and against any and all claims, damages, demands, losses, costs and expenses, including attorney's fees, and any other losses of any kind or nature whatsoever including claims for bodily injuries, illness, disease, or death and physical property loss or damage in favor of contractor, its sub-contractors, their employees, agents, and third parties arising during the performance of services and resulting from tort, strict liability, or negligent acts or omissions of contractor, its sub-contractors and their employees or agents under the agreement, or resulting from breaches of contract, whatever by statute or otherwise.  
Each contractor shall assume the responsibility for damage to or loss of its material, equipment or facilities located at any site and, in order to effect this limitation of liability, each contractor will agree to insure or self-insure such property against any such risk.
- E. **SALES TAXES:** The City is exempt from payment of state sales and use tax on all tangible personal property purchased or leased for the City's use or consumption and a certificate of exemption will be furnished upon request.
- F. **QUOTATION FORM:** The bidder/offeror must sign and properly fill out all forms in this invitation for bid/proposal or be subject to being declared unresponsive. If unable to submit a bid/proposal, please sign and return this solicitation form, advising reason for no bid/proposal.
- G. **CONTRACTOR'S DEFAULT:** In case of default of a contractor, the City may procure the articles or service from other sources and hold the contractor responsible for any excess cost incurred.

- H. **COMPUTATION OF TIME FOR DISCOUNTS:** Time in connection with discount offered will be computed from date of delivery of the supplies or materials to carrier when final inspection and acceptance are at those points or from date correct invoice is received if latter is later than the date of delivery.
- I. **ETHICS IN PUBLIC CONTRACTING:** By submitting bids/proposals, the bidders/offerors certify that the bids/proposals are made without collusion or fraud and that the bidders/offerors have not offered or received any kickbacks or inducements from any other bidder/offeror, supplier, manufacturer or subcontractor in connection with the bid/proposal, and that they have not conferred on any public employee having official responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.
- J. **GOVERNMENTAL RESTRICTIONS:** In the event any governmental restrictions may be imposed which would necessitate alteration of the materials, quality, workmanship, or performance of the items offered in this bid/proposal prior to their delivery, it shall be the responsibility of the successful bidder/offeror to notify the City at once, indicating in writing the specific regulation which requires such alterations. The City reserves the right to accept any such alterations, including any price adjustments occasioned thereby, or to cancel the contract.
- K. **IMMIGRATION REFORM AND CONTROL ACT OF 1986:** By entering into a written contract with the City, the contractor will certify that the contractor does not, and shall not during the performance of the contract for goods and services in or for the City, knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.
- L. **DEBARMENT STATUS:** By submitting bids/proposals, the bidders/offerors certify that they are not currently debarred by the Commonwealth of Virginia from submitting bids or proposals on contracts for the type of goods and/or services covered by this solicitation, nor are they an agent of any person or entity that is currently so debarred.
- M. **ANTITRUST:** By entering into a contract, the contractor will convey, sell, assign, and transfer to the City all rights, title and interest in and to all causes of action they may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular goods or services purchased or acquired by the City under said contract.
- N. **PAYMENT:** Payment by the City is due thirty days (30) after delivery is made to the City and inspected unless otherwise specifically provided: subject to any discounts allowed.

To Prime Contractor:

Invoices for items ordered, delivered and accepted shall be submitted by the contractor directly to the payment address shown on the purchase order/contract. All invoices shall show the

contract number and/or purchase order number, social security number (for individual contractors) or the federal employer identification number (for proprietorships, partnerships, and corporations).

All goods or services provided under this contract or purchase order, that are to be paid for with public funds, shall be billed by the contractor at the contract price, regardless of which public agency is being billed.

The following shall be deemed to be the date of payment: the date of postmark in all cases where payment is made by mail, or the date of offset when offset proceedings have been instituted as authorized.

**Unreasonable Charges:** Under certain emergency procurements and for most time and material purchases, final job costs cannot be accurately determined at the time orders are placed. In such cases, contractors should be put on notice that final payment in full is contingent on a determination of reasonableness with respect to all invoiced charges. Charges, which appear to be unreasonable, will be researched and challenged, and that portion of the invoice held in abeyance until a settlement can be reached. Upon determining that invoiced charges are not reasonable, the City shall promptly notify the contractor, in writing, as to those charges, which it considers unreasonable, and the basis for the determination. A contractor may not institute legal action unless a settlement cannot be reached within thirty (30) days of notification.

To Subcontractors:

A contractor awarded a contract under this solicitation is hereby obligated:

1. To pay the subcontractor(s) within seven (7) days of the contractor's receipt of payment from the City for the proportionate share of the payment received for work performed by the subcontractor(s) under the contract; or
2. To notify the City and the subcontractor(s), in writing, of the contractor's intention to withhold payment and the reason.
3. The contractor is obligated to pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the contract) on all amounts owed by the contractor that remain unpaid seven (7) days following receipt of payment from the City, except for amounts withheld as stated in (2) above. The date of mailing of any payment by U. S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier contractor performing under the primary contract. A contractor's obligation to pay an interest charge to a subcontractor may not be construed to be an obligation of the City.

- O. **PRECEDENCE OF TERMS:** Paragraphs A-N of these General Terms and Conditions shall apply in all instances. In the event there is a conflict between any of the other General Terms and Conditions

and any Special Terms and Conditions in this solicitation, the Special Terms and Conditions shall apply.

P. **TESTING AND INSPECTION:** The City reserves the right to conduct any test/inspection it may deem advisable to assure goods and services conform to the specifications.

Q. **ASSIGNMENT OF CONTRACT:** A contract shall not be assignable by the contractor in whole or in part without the written consent of the City.

R. **CHANGES TO THE CONTRACT:** Changes can be made to the contract in any of the following ways:

1. The parties may agree in writing to modify the scope of the contract. An increase or decrease in the price of the contract resulting from such modification shall be agreed to by the parties as a part of their written agreement to modify the scope of the contract.
2. The Purchasing Department may order changes within the general scope of the contract at any time by written notice to the contractor. Changes within the scope of the contract include, but are not limited to, things such as services to be performed, the method of packing or shipment, and the place of delivery or installation. The contractor shall comply with the notice upon receipt. The contractor shall be compensated for any additional costs incurred as the result of such order and shall give the Purchasing Department a credit for any savings. Said compensation shall be determined by one of the following methods:
  - a. By mutual agreement between the parties in writing; or
  - b. By agreeing upon a unit price or using a unit price set forth in the contract, if the work to be done can be expressed in units, and the contractor accounts for the number of units of work performed, subject to the Purchasing Department's right to audit the contractor's records and/or to determine the correct number of units independently; or
  - c. By ordering the contractor to proceed with the work and keep a record of all costs incurred and savings realized. A markup for overhead and profit may be allowed if provided by the contract. The same markup shall be used for determining a decrease in price as the result of savings realized. The contractor shall present the Purchasing Department with all vouchers and records of expenses incurred and savings realized. The Purchasing Department shall have the right to audit the records of the contractor, as it deems necessary to determine costs or savings. Any claim for an adjustment in price under this provision must be asserted by written notice to the Purchasing Department within thirty (30) days from the date of receipt of the written order from the Purchasing Department. If the parties fail to agree on an amount of adjustment, the question of an increase or decrease in the contract price or time for performance shall be resolved in accordance with the procedures for resolving disputes provided by the Disputes Clause of this contract or, if there is none, in accordance with the disputes provisions of the Virginia Public Procurement Act. Neither the existence of a claim nor a dispute resolution

process, litigation or any other provision of this contract shall excuse the contractor from promptly complying with the changes ordered by the Purchasing Department or with the performance of the contract generally.

- S. **DEFAULT:** In case of failure to deliver goods or services in accordance with the contract, the City, after due oral or written notice, may procure them from other sources and hold the contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies that the City may have.
- T. **AUTHORIZATION TO TRANSACT BUSINESS IN THE COMMONWEALTH:** A contractor organized as a stock or non-stock corporation, limited liability company, business trust, limited partnership, or other entity, or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the Code of Virginia or as otherwise required by law. Any business entity described above that enters into a contract with the City pursuant to the Virginia Public Procurement Act shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the contract. The City may void any contract with a business entity if the business entity fails to remain in compliance with the provisions of this section.
- U. **INSURANCE:** All contractors shall secure and maintain in force, at their own expense all required forms of insurance and payment bonds to insure the completion for the work under contract to the satisfaction of the City and without damage to, or claims against, the City. The contractor shall provide satisfactory evidence of bonds and insurance on behalf of the sub-contractors, before entering into an agreement to sublet any part of the work to be done under the contract.

The following performance and payment bonds and forms of insurance shall be secured by the contractor to cover all work under contract and to protect the contractor, the City, and general public against any damage or claims in connection with the performance of the contract. The bonds and insurance shall be by companies duly authorized to do business in the Virginia. Certificates of insurance, naming the City as an additional insured for each type of coverage shall be required.

At the discretion of the City's purchasing agent, bidders/offerors may be required to submit with their bid/proposal a bid/proposal bond, or a certified check, in an amount to be determined by the purchasing agent, which shall be forfeited to the City as liquidated damages upon the bidder's/offeror's failure to execute a contract awarded or upon the bidder's/offeror's failure to furnish any required performance or payment bonds in connection with a contract awarded.

At the discretion of the purchasing agent, the winning contractor(s) may be required to submit a performance and payment bond to the City which shall be evoked upon contractor's failure to execute a contract awarded or the failure to satisfactorily complete work for which a contract or purchase order was awarded. Performance bond and payment bond in the amount of one

hundred (100) percent of contract price will be required as security of contract, or security for payment of all persons performing labor and furnishing materials in connection with the contract, and protecting the City from all damages or claims resulting from, or in connection with the performance of the contract or purchase order.

The performance bond and payment bond shall bind the surety company to protect the City from damages, claims or costs by failure of the contractor to make corrective action due to financial solvency or for any other cause whatever.

**INSURANCE COVERAGES AND LIMITS REQUIRED:**

1. Worker's Compensation - Statutory requirements and benefits; require that the City of Hopewell, Virginia be added as an additional named insured on contractor's policy.
2. Employers Liability - \$500,000.
3. Comprehensive general liability for bodily injury liability and property damage liability shall be provided as to limits specified.
4. Contractor's protective liability shall be provided for bodily injury liability and property damage liability.
5. Fire and extended coverage shall be provided on the completed builder risk form if specified in bid specifications.
6. The contractor shall require each subcontractor to carry Workers' Compensation Insurance and public liability and property damages liability.
7. Commercial General Liability - \$1,000,000 combined single limit. The City of Hopewell, Virginia is to be named as an additional named insured with respect to the services being procured. This coverage is to include Products and Completed Operations Coverage.
8. Automobile Liability – bodily injury and property damage shall be provided as to limits set forth in the contract specifications.

The contractor shall execute and deliver to the City copies of all insurance certificates.

Executed copies of the performance bond shall become a part of all copies of the contract.

**SPECIAL TERMS AND CONDITIONS**

- A. **ADVERTISING:** In the event a contract is awarded for supplies, equipment, or services resulting from a bid/proposal, no indication of such sales or services to the City will be used in product literature or

advertising. The contractor shall not state in any of its advertising or product literature that the City or any department or institution of the City has purchased or used the products or services.

- B. **AUDIT**: The contractor shall retain all books, records, and other documents relative to this contract for five (5) years after final payment, or until audited by the City, whichever is sooner. The City, its authorized agents, and/or state auditors shall have full access to and the right to examine any of said materials during said period.
- C. **AWARD OF CONTRACT**: Any award will be made to the lowest responsive and responsible bidder/offeror. Evaluation will be based on net prices. Unit prices, extensions and grand total must be shown. In case of arithmetic errors, the unit price will govern. If cash discount for prompt payment is offered, it must be clearly shown in the space provided. Discounts for prompt payment will not be considered in making awards. The City reserves the right to reject any and all bids/proposals in whole or in part, to waive any informality, and to delete items prior to making an award.
- D. **BID/PROPOSAL ACCEPTANCE PERIOD**: Any bid/proposal in response to this solicitation shall be valid for 90 days. At the end of the 90 days the bid/proposal may be withdrawn at the written request of the bidder/offeror. If the bid/proposal is not withdrawn at that time it remains in effect until an award is made or the solicitation is canceled.
- E. **CANCELLATION OF CONTRACT**: The City reserves the right to cancel and terminate any resulting contract, in part or in whole, without penalty, upon 30 days written notice to the contractor. In the event the initial contract period is for more than 12 months, the contract may be terminated by either party, without penalty, after the initial 12 months of the contract period upon 30 days written notice to the other party. Any contract cancellation notice shall not relieve the contractor of the obligation to deliver and/or perform on all outstanding orders issued prior to the effective date of cancellation.
- F. **EXTRA CHARGES NOT ALLOWED**: The bid/proposal price shall be for complete installation ready for the City's use, and shall include all applicable freight and installation charges; extra charges will not be allowed.
- G. **MINORITY/WOMEN-OWNED BUSINESSES SUBCONTRACTING AND REPORTING**: Where it is practicable for any portion of an awarded contract to be subcontracted to other suppliers, the contractor is encouraged to offer such business to minority and/or women-owned businesses. Names of firms may be available from the City. When such business has been subcontracted to minority or women-owned businesses, upon completion of the contract the contractor agrees to furnish the City the following information: name of business, address, phone number, total dollar amount subcontracted and type of product/service provided.
- H. **PREPARATION AND SUBMISSION OF BIDS/PROPOSALS**: Bids/proposals must give the full business address of the bidder/offeror and be signed by the bidder's/offeror's authorized signature.

Bids/proposals by partnerships must furnish the full name of all partners and must be signed in the partnership name by one of the members of the partnership or any authorized representative, followed by the designation of the person signing. Bids/proposals by corporations must be signed with the legal name of the corporation followed by the name of the state in which it is incorporated and by the signature and designation of the president, secretary, or other person authorized to bind the corporation. The name of each person signing shall also be typed or printed below the signature. A bid/proposal by a person, who affixes to the signature the word "President," "Secretary," "Agent" or other designation without disclosing the principal, may be held to be the bid/proposal of the individual signing. When requested by the City or other entity, satisfactory evidence of the authority of the officer signing in behalf of the corporation shall be furnished.

- I. **WITHDRAWAL OR MODIFICATION OF BIDS/PROPOSALS:** Bids/proposals may be withdrawn or modified by written notice received from bidders/offerors prior to the deadline fixed for bid/proposal receipt. The withdrawal or modification may be made by the person signing the bid/proposal or by an individual who is authorized on the face of the bid. Written modifications may be made on the bid/proposal form itself, on the envelope in which the bid/proposal is enclosed, or on a separate document. Written modifications, whether the original is delivered, or transmitted by facsimile, email, or otherwise, must be signed by the person making the modification or withdrawal.
- J. **RECEIPT AND OPENING OF BIDS/PROPOSALS:** It is the responsibility of the bidder/offeror to assure that the bid/proposal is delivered to the place designated for receipt of bids/proposals and prior to the time set for receipt of bids/proposals. Bids/proposals received after the time designated for receipt of bids/proposals will not be considered. Bids/proposals will be opened at the time and place advertised, and their contents made public for the information of bidders/offerors and others interested who may be present either in person or by representative. The officer or agent of the City, whose duty it is to open bids/proposals, will decide when the specified time has arrived. No responsibility will be attached to any officer or agent for the premature opening of a bid/proposal not properly addressed and identified.
- K. **NEGOTIATION WITH THE LOWEST BIDDER:** Unless all bids are cancelled or rejected, the City reserves the right granted by §2.2-4318 of the *Code of Virginia* to negotiate with the lowest responsive, responsible bidder to obtain a contract price within the funds available to the agency whenever such low bid exceeds the City's available funds. For the purpose of determining when such negotiations may take place, the term "available funds" shall mean those funds which were budgeted to and by the agency for the contract prior to the issuance of the written solicitation. Negotiations with the low bidder/offeror may include both modifications of the bid price and the scope of work/specifications to be performed. The City shall initiate such negotiations by written notice to the lowest responsive, responsible bidder/offeror that its bid exceeds the available funds and that the City wishes to negotiate a lower contract price. The times, places, and manner of negotiating shall be agreed to by the City and the lowest responsive, responsible bidder/offeror.

# **CITY OF HOPEWELL**



## **HOPEWELL REGIONAL WASTEWATER TREATMENT FACILITY**

### **INVITATION FOR BID**

**(IFB 14-16)**

### **PUBLICLY OWNED TREATMENT WORKS RESIDUALS**

## I. Purpose

The purpose of this invitation for bid (IFB) is to seek proposals and unit prices from responsive and responsible contractors to provide disposal services for the following Publicly Owned Treatment Works residuals:

Biosolids generated at the City of Hopewell, Hopewell Regional Wastewater Treatment Facility (HRWTF).

Sewage sludge incinerator ash generated at the City of Hopewell, Hopewell Regional Wastewater Treatment Facility (HRWTF).

Dewatered grit and screenings generated from the combined operations of the City of Hopewell, Hopewell Regional Wastewater Treatment Facility (HRWTF); and the City of Hopewell sewer line maintenance.

The contractor will be responsible for transporting residuals from the location designated by the City of Hopewell to the site specified by the contractor for the lawful treatment, storage, disposal or use of residuals. The contractor will be responsible for lawfully transporting residuals in the container specified by the City of Hopewell. The contractor will be responsible for obtaining all necessary federal, state and local permits and approvals necessary in accordance with applicable laws, rules and regulations to transport and place, dispose, incorporate or otherwise deposit residuals at the site specified by the contractor for the lawful treatment, storage, disposal or use of residuals.

Prospective contractors can submit a proposal, including cost, for one or more of the services described. It is the intention of the City to award contracts for all of the services described in order to manage wastewater treatment plant residuals in such a manner that the economic and environmental best interests of the citizens are served. As such, the City will utilize the services of responsive and responsible contractors on an "as-needed" basis throughout the term of the contract.

HRWTF is an 189,270 m<sup>3</sup>/d (50 mgd) Publicly Owned Treatment Facility (POTW) designed and constructed in the 1970s to provide regional wastewater treatment services to the City of Hopewell, Prince George County, Fort Lee, Federal Correctional Institute, Riverside Regional Jail and 4 significant industrial users: WestRock, Honeywell, Ashland and Virginia American Water Company. The City of Hopewell, Virginia is the holder of a Virginia Pollution Discharge Elimination System (VPDES) permit for the HRWTF.

**A non-mandatory site visit will be held on Monday, June 6, 2016 at 10:00 A.M. at HRWTF, 231 Hummel Ross Road; Hopewell, VA 23860. Questions regarding this bid must be submitted in writing no later than Wednesday, June 8, 2016 at 5:00 PM and will be answered via addendum by Friday, June 10, 2016. Questions should be emailed to Shayna Jones Johnson, Purchasing Agent at [sjohnson@hopewellva.gov](mailto:sjohnson@hopewellva.gov).**

### **A. Disposal of Biosolids.**

HRWTF produces approximately 20 dry tons of biosolids per day at approximately 20% to 25% solids. This is an annualized value. Due to the nature of the treatment processes at the HRWTF, it is anticipated that on any day during a year the volume of biosolids produced could range from zero (0) dry tons per day to 31 dry tons per day.

Biosolids are generated from primary and secondary clarification and may be thickened using dissolved air floatation units (aided by the addition of polymer) and/or gravity thickeners. The combined sludges are mixed in sludge holding tanks, then conditioned with polymer and dewatered with high solids dewatering centrifuges. The quality of these biosolids is shown in Attachment A to this IFB.

Biosolids are normally incinerated on HRWTF plant site, but in the case of incinerator breakdown, the contractor may be requested to dispose of unstabilized biosolids in compliance with all applicable Federal, State and local regulations. The analytical quality of these biosolids is provided in Attachment A to this IFB.

### **B. Disposal of Sewage Sludge Incinerator Ash.**

HRWTF produces approximately 20 dry tons of sewage sludge incinerator ash per day. This is an annualized value. Due to the nature of the treatment processes at HRWTF, it is anticipated that on any day during a year the volume of ash produced could range from zero (0) dry tons per day to 25 dry tons per day. After dewater the biosolids as described in section I.A of this IFB, the resulting biosolids are then fed to a single multiple hearth sewage sludge incinerator where the organic fraction of the biosolids is destroyed. The resulting inert material passes through the multiple hearth sewage sludge incinerator and is transported by bucket elevator to an approximate 44 cubic yard ash storage silo. Sewage sludge incinerator ash is conveyed from the storage silo to 30 cubic yard roll off containers for hauling. The quality of this sewage sludge incinerator ash is shown in Attachment B to this IFB.

It is anticipated that to provide this service, the contractor will take the sewage sludge incinerator ash produced at HRWTF and dispose of this biosolids ash in compliance with all applicable Federal, State and local regulations. The selected contractor will be responsible for providing seven (7) 30 cubic yard roll-off containers for disposal of sewage sludge incinerator ash.

### **C. Disposal of Screenings and Grit.**

Screenings and grit are produced as the result of the operations of a publicly owned treatment works. Screenings (typically rags, plastics and debris) are generated when the influent wastewater is passed through 0.6 inch fine screens installed at the head of the treatment plant. Grit is heavily abrasive material (typically sand, fly ash, carbon and silt) that is washed from the influent wastewater in order to protect the pumps and mechanisms. Screenings and grit are also manually removed from the collection system (sanitary sewer lines, laterals, interceptors and mains) through the process of sanitary sewer line maintenance. Currently, these screenings and grit are collected in separate 20 cubic yard roll off containers for transfer and disposed in a landfill in compliance with applicable Federal, State and local

regulations. Grit and screening quality is provided in Attachment C to this IFB.

It is anticipated that to provide this service, the contractor will take the screenings and grit produced as a result of publicly owned treatment works operations and dispose of these screenings and grit in compliance with all applicable Federal, State and local regulations. The selected contractor will be responsible for providing seven (7) 20 cubic yard roll-off containers for disposal of screenings and grit.

## **II. Conditions of Award.**

### **A. Hauling**

The selected contractor will transport for disposal all Publicly Owned Treatment Works (POTW) residuals from the Hopewell Regional Wastewater Treatment Facility, 231 Hummel Ross Road, Hopewell Virginia in compliance with all Federal, State and local rules and regulations.

The selected contractor shall furnish all labor, transportation, equipment, EPA and/or DEQ approved labels and warning signs and other supplies required for adequate protection of POTW residuals during transportation.

The selected contractor shall have qualified personnel and a properly licensed driver of the transportation vehicle. All of the selected contractor's personnel shall comply with DOT, OSHA, EPA and/or DEQ standards and requirements and generally accepted good practices in handling POTW residuals for the protection of personnel and equipment, and shall wear OSHA approved eye protection with side shields, safety shoes with steel toe and hard hat while performing their assignment on plant site.

All transportation and handling of POTW residuals shall be done in a professional manner conforming to EPA and/or DEQ standards. HRWTF reserves the right to stop the hauling and disposal of POTW residuals if it is not being done in accordance with this IFB.

All containers leaving HRWTF with POTW residuals shall be leak proof and covered to prevent spillage.

All containers arriving at HRWTF for the transportation of POTW residuals shall be clean and empty.

### **B. Obtain all Necessary Permits**

The selected contractor shall act in accordance with all applicable Federal, State and local laws, rules and regulations, and shall secure the necessary permits and licenses necessary to transport and dispose of POTW residuals.

The selected contractor(s) shall enclose copies of all permits and licenses required by applicable Federal, State and local law, rules and regulations for transporting and disposing POTW residuals.

**III. Quotations and Bid Documents.**

**A. Disposal of Biosolids.**

Proposal of services to be Provided by Contractor:

Attach pages as necessary.

Unit Price:	\$/Ton:	\$/Cubic Yard:
Signed:		
Name (print or type):		
Title:		
Company:		
Date:		

**B. Disposal of Sewage Sludge Incinerator Ash.**

Proposal of services to be Provided by Contractor:

Attach pages as necessary.

Unit Price:

\$/Ton:

\$/Cubic Yard:

Signed:

Name (print or type):

Title:

Company:

Date:

**C. Disposal of Grit and Screenings.**

Proposal of services to be Provided by Contractor:

Attach pages as necessary.

Unit Price:	\$/Ton:	\$/Cubic Yard:
Signed:		
Name (print or type):		
Title:		
Company:		
Date:		

**I. Attachment A**

**Biosolids Quality**

---

**REPORT OF ANALYSIS**

CLIENT: Hopewell Regional WTP  
 ATTN: Matt Ellinghaus  
 ADDRESS: P. O. Box 969  
 Hopewell, VA 23860  
 PHONE: (804) 541-2214 Ext. 208  
 FAX: e:(each jra# sep) labdata@hopew

SAMPLE COLLECTED BY: CLIENT  
 GRAB COLLECTION:  
 Date: 4/23/2015 Time: 1121  
 COMPOSITE COLLECTION:  
 Start Date: Time:  
 End Date: Time:



Special Notes:  
 RE: CENTRIFUGE CAKE  
 Semi-Annual/Monthly

PICK UP BY: REED - BS  
 SAMPLE RECEIPT:  
 Date: 4/23/2015 Time: 1535  
 NUMBER OF CONTAINERS: 3  
 SAMPLE CONDITION:  Good  Other (See C-O-C)  
 REPORT NO: 15-06042 15:34

SAMPLE ID: AB04950  
 SAMPLE NO 15-06042

Parameter	Method Number	Method Detection		Analyst/Date/Time
		Limit (mg/Kg)	Result (mg/Kg)	
<b>VOLATILES</b>				
Chloromethane	8260B	0.5	< 0.5	SDT-05/01/15@2014
Bromomethane	8260B	0.5	< 0.5	SDT-05/01/15@2014
Vinyl chloride	8260B	0.5	< 0.5	SDT-05/01/15@2014
Chloroethane	8260B	0.5	< 0.5	SDT-05/01/15@2014
Methylene chloride	8260B	0.5	< 0.5	SDT-05/01/15@2014
Trichlorofluoromethane	8260B	0.5	< 0.5	SDT-05/01/15@2014
1,1-Dichloroethene	8260B	0.5	< 0.5	SDT-05/01/15@2014
1,1-Dichloroethane	8260B	0.5	< 0.5	SDT-05/01/15@2014
trans-1,2-Dichloroethene	8260B	0.5	< 0.5	SDT-05/01/15@2014
cis-1,2-Dichloroethene	8260B	0.5	< 0.5	SDT-05/01/15@2014
Chloroform	8260B	0.5	< 0.5	SDT-05/01/15@2014
1,2-Dichloroethane	8260B	0.5	< 0.5	SDT-05/01/15@2014
1,1,1-Trichloroethane	8260B	0.5	< 0.5	SDT-05/01/15@2014
Carbon tetrachloride	8260B	0.5	< 0.5	SDT-05/01/15@2014
Bromodichloromethane	8260B	0.5	< 0.5	SDT-05/01/15@2014
1,1,2,2-Tetrachloroethane	8260B	0.5	< 0.5	SDT-05/01/15@2014
1,2-Dichloropropane	8260B	0.5	< 0.5	SDT-05/01/15@2014
trans-1,3-Dichloropropene	8260B	0.5	< 0.5	SDT-05/01/15@2014
Trichloroethene	8260B	0.5	< 0.5	SDT-05/01/15@2014
Dibromochloromethane	8260B	0.5	< 0.5	SDT-05/01/15@2014
1,1,2-Trichloroethane	8260B	0.5	< 0.5	SDT-05/01/15@2014

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VELAP# 460013  
 EPA# VA00015



**REPORT OF ANALYSIS**

SAMPLE ID: AB04950

SAMPLE NO 15-06042

Parameter	Method Number	Method		Analyst/Date/Time
		Detection Limit (mg/Kg)	Result (mg/Kg)	
<b>VOLATILES</b>				
Benzene	8260B	0.5	< 0.5	SDT-05/01/15@2014
cis-1,3-Dichloropropene	8260B	0.5	< 0.5	SDT-05/01/15@2014
2-Chloroethyl vinyl ether	8260B	0.9	< 0.9	SDT-05/01/15@2014
Tetrachloroethene	8260B	0.5	< 0.5	SDT-05/01/15@2014
Bromoform	8260B	0.5	< 0.5	SDT-05/01/15@2014
Toluene	8260B	0.9	1.2	SDT-05/05/15@1935
Chlorobenzene	8260B	0.5	< 0.5	SDT-05/01/15@2014
Ethylbenzene	8260B	0.5	< 0.5	SDT-05/01/15@2014
Acrolein	8260B	4	< 4	SDT-05/01/15@2014
Acrylonitrile	8260B	4	< 4	SDT-05/01/15@2014
1,3-Dichlorobenzene	8260B	0.5	< 0.5	SDT-05/01/15@2014
1,4-Dichlorobenzene	8260B	0.5	< 0.5	SDT-05/01/15@2014
1,2-Dichlorobenzene	8260B	0.5	< 0.5	SDT-05/01/15@2014
Total Xylenes	8260B	0.5	< 0.5	SDT-05/01/15@2014
SW846 8260 Library Search	8260		See Attached	SDT-04/29/15@2014
<b>SEMIVOLATILES</b>				
Hexachlorethane	8270D	2.2	< 2.2	CLH-05/08/15@0236
1,2,4-Trichlorobenzene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Hexachlorobutadiene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Hexachlorocyclopentadiene	8270D	2.2	< 2.2	CLH-05/08/15@0236
2-Chloronaphthalene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Hexachlorobenzene	8270D	2.2	< 2.2	CLH-05/08/15@0236
N-Nitrosodimethylamine	8270D	2.2	< 2.2	CLH-05/08/15@0236
Bis(2-chloroethyl) ether	8270D	2.2	< 2.2	CLH-05/08/15@0236
Bis(2-chloroisopropyl) ether	8270D	2.2	< 2.2	CLH-05/08/15@0236
N-Nitroso-di-n-propylamine	8270D	2.2	< 2.2	CLH-05/08/15@0236
Nitrobenzene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Isophorone	8270D	2.2	< 2.2	CLH-05/08/15@0236
Bis(2-Chloroethoxy)methane	8270D	2.2	< 2.2	CLH-05/08/15@0236
Naphthalene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Acenaphthylene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Dimethyl phthalate	8270D	2.2	< 2.2	CLH-05/08/15@0236
Acenaphthene	8270D	2.2	< 2.2	CLH-05/08/15@0236
2,6-Dinitrotoluene	8270D	2.2	< 2.2	CLH-05/08/15@0236

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**REPORT OF ANALYSIS**

SAMPLE ID: AB04950

SAMPLE NO 15-06042

Parameter	Method Number	Method		Analyst/Date/Time
		Detection Limit (mg/Kg)	Result (mg/Kg)	
<b>SEMIVOLATILES</b>				
2,4-Dinitrotoluene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Fluorene	8270D	2.2	< 2.2	CLH-05/08/15@0236
4-Chlorophenyl phenyl ether	8270D	2.2	< 2.2	CLH-05/08/15@0236
Diethyl phthalate	8270D	2.2	< 2.2	CLH-05/08/15@0236
1,2,-Diphenylhydrazine	8270D	2.2	< 2.2	CLH-05/08/15@0236
Diphenylamine & Nitrosodipheny	8270D	2.2	< 2.2	CLH-05/08/15@0236
4-Bromophenyl phenyl ether	8270D	2.2	< 2.2	CLH-05/08/15@0236
Phenanthrene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Anthracene	8270D	2.2	< 2.2	CLH-05/08/15@0236
di-n-Butyl phthalate	8270D	2.2	< 2.2	CLH-05/08/15@0236
Fluoranthene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Pyrene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Benzdine	8270D	2.2	< 2.2	CLH-05/08/15@0236
Butyl benzyl phthalate	8270D	2.2	< 2.2	CLH-05/08/15@0236
Benzo[a]anthracene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Chrysene	8270D	2.2	< 2.2	CLH-05/08/15@0236
3,3-Dichlorobenzidine	8270D	2.2	< 2.2	CLH-05/08/15@0236
Bis(2-ethylhexyl) phthalate	8270D	2.2	5.6	CLH-05/08/15@0236
Di-n-Octyl phthalate	8270D	2.2	< 2.2	CLH-05/08/15@0236
Benzo[b]fluoranthene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Benzo[k]fluoranthene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Benzo[a]pyrene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Indeno[1,2,3-c,d]pyrene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Dibenz[a,h]anthracene	8270D	2.2	< 2.2	CLH-05/08/15@0236
Benzo[g,h,i]perylene	8270D	2.2	< 2.2	CLH-05/08/15@0236
2-Chlorophenol	8270D	2.2	< 2.2	CLH-05/08/15@0236
Phenol	8270D	2.2	6.0	CLH-05/08/15@0236
2-Nitrophenol	8270D	2.2	< 2.2	CLH-05/08/15@0236
2,4-Dimethylphenol	8270D	2.2	< 2.2	CLH-05/08/15@0236
2,4-Dichlorophenol	8270D	2.2	< 2.2	CLH-05/08/15@0236
4-Chloro-3-methylphenol	8270D	2.2	< 2.2	CLH-05/08/15@0236
2,4,6-Trichlorophenol	8270D	2.2	< 2.2	CLH-05/08/15@0236
2,4-Dinitrophenol	8270D	9.0	< 9.0	CLH-05/08/15@0236
4-Nitrophenol	8270D	2.2	< 2.2	CLH-05/08/15@0236

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VELAP# 460013

EPA# VA00015



**REPORT OF ANALYSIS**

SAMPLE ID: AB04950

SAMPLE NO 15-06042

Parameter	Method Number	Method		Analyst/Date/Time
		Detection Limit (mg/Kg)	Result (mg/Kg)	
<b>SEMIVOLATILES</b>				
4,6-Dinitro-2-methylphenol	8270D	2.2	< 2.2	CLH-05/08/15@0236
Pentachlorophenol	8270D	4.5	< 4.5	CLH-05/08/15@0236
1,1-Oxybisbenzene	8270D	2.2	< 2.2	CLH-05/08/15@0236
SW846 8270 Library Search	8270		See Attached	CLH-05/08/15@0236
Dioxin (Scan only)	8270		Not detected	CLH-05/08/15@1210
<b>PCBs</b>				
Aroclor 1016	8082A	2	< 2	SDT-04/30/15@2049
Aroclor 1221	8082A	2	< 2	SDT-04/30/15@2049
Aroclor 1232	8082A	2	< 2	SDT-04/30/15@2049
Aroclor 1242	8082A	2	< 2	SDT-04/30/15@2049
Aroclor 1248	8082A	2	< 2	SDT-04/30/15@2049
Aroclor 1254	8082A	0.9	< 0.9	SDT-04/30/15@2049
Aroclor 1260	8082A	0.9	< 0.9	SDT-04/30/15@2049
<b>MISCELLANEOUS</b>				
EOX	9023	230	<230	TES-05/28/15@1016
Total Phenol	9066	2.21	37.4	PEJ-05/01/15@1544
Cyanide	9012B	0.117	< 0.117	ARC-05/01/15@0909
Sulfide	9034	4.67	< 4.67	AME-05/06/15@1118
Total Arsenic	6010C	2.00	< 2.00	EFA-04/28/15@1512
Beryllium	6010C	0.200	1.04	EFA-04/28/15@1512
Total Cadmium	6010C	0.200	3.91	EFA-04/28/15@1512
Total Chromium	6010C	0.399	57.6	EFA-04/28/15@1512
Total Copper	6010C	0.799	83.7	EFA-04/28/15@1512
Total Lead	6010C	2.00	20.6	EFA-04/28/15@1512
Mercury	7471B	0.041	0.262	PEJ-04/30/15@1656
Total Nickel	6010C	2.00	30.0	EFA-04/28/15@1512
Total Silver	6010C	0.399	< 0.399	EFA-04/28/15@1512
Total Zinc	6010C	2.00	502	EFA-04/28/15@1512
Ammonia	*4500NH3D	41.7	3380	ARC-05/11/15@0830
Oil & Grease HEM	1664A	2040	13100	PRM-05/06/15@1030
Oil & Grease SGTHEM	1664A	2040	5150	PRM-05/06/15@1030
% TVS	*2540G	0.01	78.7	PEJ-04/27/15@1620
% TS	*2540G	0.01	22.3	PEJ-04/27/15@1620
TPH-DRO	8015C	2240	19800	SDT-04/30/15@0349

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EPA# VA00015



**REPORT OF ANALYSIS**

SAMPLE ID: AB04950

SAMPLE NO 15-06042

Parameter	Method Number	Method		Analyst/Date/Time
		Detection Limit (mg/Kg)	Result (mg/Kg)	
<b>MISCELLANEOUS</b>				
TPH-GRO	8015C	175	< 175	PRM-05/01/15@1027
Chemical Oxygen Demand	8000	848	39800	AME-05/12/15@1523
Paint Filter	9095B		No Free Liquid	PEJ-04/28/15@1515
Total Molybdenum	6010C	2.00	6.13	EFA-04/28/15@1512
Total Selenium	6010C	2.00	4.87	EFA-04/28/15@1512
pH	9045D		7.42@22oC	ARC-05/20/15@1600
Oil & Grease Leachable	1311/1664A	5.0	< 5.0	PRM-04/30/15@1600
<b>Pesticides</b>				
4,4-DDD	8081B	0.2	< 0.2	SDT-04/30/15@1920
4,4-DDE	8081B	0.2	< 0.2	SDT-04/30/15@1920
4,4-DDT	8081B	0.2	< 0.2	SDT-04/30/15@1920
Aldrin	8081B	0.2	< 0.2	SDT-04/30/15@1920
BHC-alpha	8081B	0.2	< 0.2	SDT-04/30/15@1920
BHC-beta	8081B	0.2	< 0.2	SDT-04/30/15@1920
BHC-delta	8081B	0.2	< 0.2	SDT-04/30/15@1920
BHC-gamma (Lindane)	8081B	0.2	< 0.2	SDT-04/30/15@1920
Chlordane	8081B	0.9	< 0.9	SDT-04/30/15@1920
Dieldrin	8081B	0.2	< 0.2	SDT-04/30/15@1920
Endosulfan I	8081B	0.2	< 0.2	SDT-04/30/15@1920
Endosulfan II	8081B	0.2	< 0.2	SDT-04/30/15@1920
Endosulfan sulfate	8081B	0.2	< 0.2	SDT-04/30/15@1920
Endrin	8081B	0.2	< 0.2	SDT-04/30/15@1920
Endrin aldehyde	8081B	0.2	< 0.2	SDT-04/30/15@1920
Endrin Ketone	8081B	0.2	< 0.2	SDT-04/30/15@1920
Heptachlor	8081B	0.2	< 0.2	SDT-04/30/15@1920
Heptachlor epoxide	8081B	0.2	< 0.2	SDT-04/30/15@1920
Methoxychlor	8081B	0.2	< 0.2	SDT-04/30/15@1920
Toxaphene	8081B	2	< 2	SDT-04/30/15@1920

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VELAP# 460013

EPA# VA00015



REPORT OF ANALYSIS

SAMPLE ID: AB04950

SAMPLE NO 15-06042

Parameter	Method	Method	Result (mg/Kg)	Analyst/Date/Time
	Number	Detection Limit (mg/Kg)		

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VELAP# 460013

EPA# VA00015



## REPORT OF ANALYSIS

SAMPLE ID: AB04950

SAMPLE NO 15-06042

Parameter	EPA		Method		Regulatory level	Result (mg/L)	Analyst/Date/Time
	HW No.	Method Number	Detection Limit (mg/L)	(mg/L)			
<b>Toxic Characteristic Leaching Procedure by SW-846 Method 1311</b>							
Arsenic	D004	6010C	0.005	5		< 0.005	PEJ-05/04/15@1256
Barium	D005	6010C	0.005	100		0.303	PEJ-05/04/15@1256
Benzene	D018	8260B	0.005	0.5		< 0.005	SDT-04/29/15@1754
Cadmium	D006	6010C	0.0005	1		< 0.0005	PEJ-05/04/15@1256
Carbon Tetrachloride	D019	8260B	0.005	0.5		< 0.005	SDT-04/29/15@1754
Chlordane	D020	8270D	0.025	0.03		< 0.025	CLH-05/06/15@1253
Chlorobenzene	D021	8260B	0.005	100		< 0.005	SDT-04/29/15@1754
Chloroform	D022	8260B	0.005	6		< 0.005	SDT-04/29/15@1754
Chromium	D007	6010C	0.001	5		< 0.001	PEJ-05/04/15@1256
o-Cresol	D023	8270D	0.025	200		< 0.025	CLH-05/06/15@1253
m/p-Cresol	D024	8270D	0.02	200		< 0.02	CLH-05/06/15@1253
Cresol	D026	8270D	0.02	200		< 0.02	CLH-05/06/15@1253
2,4-D	D016	8151A	0.004	10		< 0.004	SDT-05/01/15@1400
1,4-Dichlorobenzene	D027	8260B	0.005	7.5		< 0.005	SDT-04/29/15@1754
1,2-Dichloroethane	D028	8260B	0.005	0.5		< 0.005	SDT-04/29/15@1754
1,1-Dichloroethylene	D029	8260B	0.005	0.7		< 0.005	SDT-04/29/15@1754
2,4-Dinitrotoluene	D030	8270D	0.025	0.13		< 0.025	CLH-05/06/15@1253
Endrin	D012	8270D	0.005	0.02		< 0.005	CLH-05/06/15@1253
Heptachlor (+epoxide)	D031	8270D	0.005	0.008		< 0.005	CLH-05/06/15@1253
Hexachlorobenzene	D032	8270D	0.025	0.13		< 0.025	CLH-05/06/15@1253
Hexachloro-1,3-butadiene	D033	8270D	0.025	0.5		< 0.025	CLH-05/06/15@1253
Hexachloroethane	D034	8270D	0.025	3		< 0.025	CLH-05/06/15@1253
Lead	D008	6010C	0.005	5		< 0.005	PEJ-05/04/15@1256
Lindane	D013	8270D	0.025	0.4		< 0.025	CLH-05/06/15@1253
Mercury	D009	7470A	0.0002	0.2		< 0.0002	PEJ-05/06/15@1235
Methoxychlor	D014	8270D	0.025	10		< 0.025	CLH-05/06/15@1253
Methyl ethyl Ketone	D035	8260B	0.1	200		< 0.1	SDT-04/29/15@1754
Nitrobenzene	D036	8270D	0.025	2		< 0.025	CLH-05/06/15@1253
Pentachlorophenol	D037	8270D	0.1	100		< 0.1	CLH-05/06/15@1253
Selenium	D010	6010C	0.005	1		0.008	PEJ-05/04/15@1256
Pyridine	D038	8270D	0.025	5		< 0.025	CLH-05/06/15@1253
Silver	D011	6010C	0.001	5		< 0.001	PEJ-05/04/15@1256
Tetrachloroethylene	D039	8260B	0.005	0.7		< 0.005	SDT-04/29/15@1754
Toxaphene	D015	8270D	0.1	0.5		< 0.1	CLH-05/06/15@1253
Trichloroethylene	D040	8260B	0.005	0.5		< 0.005	SDT-04/29/15@1754
2,4,5-Trichlorophenol	D041	8270D	0.025	400		< 0.025	CLH-05/06/15@1253
2,4,6-Trichlorophenol	D042	8270D	0.025	2		< 0.025	CLH-05/06/15@1253
2,4,5-TP	D017	8151A	0.004	1		< 0.004	SDT-05/01/15@1400
Vinyl Chloride	D043	8260B	0.01	0.2		< 0.01	SDT-04/29/15@1754

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VELAP# 460013

EPA# VA00015



## REPORT OF ANALYSIS

### NOTES:

JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.

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The results on this report relate only to the sample(s) provided for analysis.

Results conform to NELAC standards, where applicable, unless otherwise indicated.

Results (mg/kg) reported on a dry weight basis.

\*SM 1997

Method 8270 Extraction Date: 5-5-2015

EOX subcontracted to Test America.

Leachable Oil and Grease and COD do not conform to VELAP.

8015C TPH-DRO: Unidentifiable peaks present and reported as diesel.

VOLATILES (SW846 8260) - Library Search

Hexane, 3-methyl- 0.6mg/kg, Heptane, 3,4-dimethyl- 1.4mg/kg,

Tricyclo[2.2.1.0(2,6)]heptane, 1,3,3-trimethyl- 11.5mg/Kg,

Camphene 0.7mg/kg,

Cyclohexene, 1-methyl-4-(1-Methylethenyl)-(s)- 11.9mg/kg,

1-Methyldecahydronaphthalene 2.2mg/kg,

Tricyclo[4.4.1.0(1,6)]undecane 2.2mg/kg,

SEMI-VOLATILES (SW846 8270) - Library Search

Aniline 2.8 mg/kg, m,p-Cresol 52 mg/kg.

Authorized By:

Elaine Claiborne

Elaine Claiborne, Laboratory Director

Date: 29-May-15

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EPA# VA00015



**REPORT OF ANALYSIS**

CLIENT: Hopewell Regional WTP  
 ATTN: Matt Ellinghaus  
 ADDRESS: P. O. Box 969  
 Hopewell, VA 23860  
 PHONE: (804) 541-2214 Ext. 208  
 FAX: e:(each jra# sep) labdata@hopew  
 Special Notes: RE: CENTRIFUGE CAKE  
 Monthly

SAMPLE COLLECTED BY: CLIENT  
 GRAB COLLECTION:  
 Date: 4/28/2015 Time: 0907  
 COMPOSITE COLLECTION:  
 Start Date: Time:  
 End Date: Time:  
 PICK UP BY: REED - DBB  
 SAMPLE RECEIPT:  
 Date: 4/28/2015 Time: 1500  
 NUMBER OF CONTAINERS: 1  
 SAMPLE CONDITION:  Good  Other (See C-O-C)  
 REPORT NO: 15-06193 8:36



SAMPLE ID: AB05129  
 SAMPLE NO: 15-06193

Parameter	Method Number	JRA QL (mg/Kg)	Analyst/Date/Time	Result (mg/Kg)
Total Selenium	6010C	1.95	EFA-05/04/15@1159	3.89
Total Molybdenum	6010C	1.95	EFA-05/04/15@1159	6.13
Oil & Grease SGTHEM	1664A	1920	PRM-05/06/15@1030	6110
Oil & Grease HEM	1664A	1920	PRM-05/06/15@1030	19700
% TS	*2540G	0.01	PEJ-04/30/15@1135	24.0
Total Zinc	6010C	1.95	EFA-05/04/15@1159	595
Total Lead	6010C	1.95	EFA-05/04/15@1159	22.5
Total Nickel	6010C	1.95	EFA-05/04/15@1159	24.4
Total Copper	6010C	0.780	EFA-05/04/15@1159	99.5
Total Chromium	6010C	0.390	EFA-05/04/15@1159	44.7
Total Cadmium	6010C	0.195	EFA-05/04/15@1159	4.73
Total Arsenic	6010C	1.95	EFA-05/04/15@1159	< 1.95
Total Silver	6010C	0.390	EFA-05/04/15@1159	0.442
Beryllium	6010C	0.195	EFA-05/04/15@1159	0.982
Mercury	7471B	0.041	PEJ-04/30/15@1659	0.245

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VELAP# 460013  
 EPA# VA00015



REPORT OF ANALYSIS

SAMPLE ID: AB05129  
SAMPLE NO: 15-06193

Parameter	Method Number	JRA QL (mg/Kg)	Analyst/Date/Time	Result (mg/Kg)
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NOTES:

JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.  
Reproduction of this report is not permitted, except in full, without written approval from James R Reed & Associates.  
The results on this report relate only to the sample(s) provided for analysis.  
Results conform to NELAC standards, where applicable, unless otherwise indicated.  
Results reported on a dry weight basis.  
\*SM 1997

Authorized By: Elaine Claiborne  
Elaine Claiborne, Laboratory Director  
Date: 12-May-15

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VELAP# 460013  
EPA# VA00015



**II. Attachment B**

**Sewage Sludge Incinerator Ash Quality**

**REPORT OF ANALYSIS**

CLIENT: Hopewell Regional WTP  
 ATTN: Matt Ellinghaus  
 ADDRESS: P. O. Box 969  
 Hopewell, VA 23860  
 PHONE: (804) 541-2214 Ext. 208  
 FAX: e:(each jra# sep) labdata@hopew

SAMPLE COLLECTED BY: CLIENT  
 GRAB COLLECTION:  
 Date: 4/20/2015 Time: 1308  
 COMPOSITE COLLECTION:  
 Start Date: Time:  
 End Date: Time:



Special Notes:  
 Incinerator Ash  
 Semiannual

PICK UP BY: REED - SSC  
 SAMPLE RECEIPT:  
 Date: 4/21/2015 Time: 1420  
 NUMBER OF CONTAINERS: 3  
 SAMPLE CONDITION:  Good  Other (See C-O-C)  
 REPORT NO: 15-05828-15:43

SAMPLE ID: AB04951  
 SAMPLE NO 15-05828

Parameter	Method Number	Method Detection Limit (mg/Kg)	Result (mg/Kg)	Analyst/Date/Time
<b>VOLATILES</b>				
Chloromethane	8260B	0.2	< 0.2	SDT-04/29/15@2101
Bromomethane	8260B	0.2	< 0.2	SDT-04/29/15@2101
Vinyl chloride	8260B	0.2	< 0.2	SDT-04/29/15@2101
Chloroethane	8260B	0.2	< 0.2	SDT-04/29/15@2101
Methylene chloride	8260B	0.2	< 0.2	SDT-04/29/15@2101
Trichlorofluoromethane	8260B	0.2	< 0.2	SDT-04/29/15@2101
1,1-Dichloroethene	8260B	0.2	< 0.2	SDT-04/29/15@2101
1,1-Dichloroethane	8260B	0.2	< 0.2	SDT-04/29/15@2101
trans-1,2-Dichloroethene	8260B	0.2	< 0.2	SDT-04/29/15@2101
cis-1,2-Dichloroethene	8260B	0.2	< 0.2	SDT-04/29/15@2101
Chloroform	8260B	0.2	< 0.2	SDT-04/29/15@2101
1,2-Dichloroethane	8260B	0.2	< 0.2	SDT-04/29/15@2101
1,1,1-Trichloroethane	8260B	0.2	< 0.2	SDT-04/29/15@2101
Carbon tetrachloride	8260B	0.2	< 0.2	SDT-04/29/15@2101
Bromodichloromethane	8260B	0.2	< 0.2	SDT-04/29/15@2101
1,1,2,2-Tetrachloroethane	8260B	0.2	< 0.2	SDT-04/29/15@2101
1,2-Dichloropropane	8260B	0.2	< 0.2	SDT-04/29/15@2101
trans-1,3-Dichloropropene	8260B	0.2	< 0.2	SDT-04/29/15@2101
Trichloroethene	8260B	0.2	< 0.2	SDT-04/29/15@2101
Dibromochloromethane	8260B	0.2	< 0.2	SDT-04/29/15@2101
1,1,2-Trichloroethane	8260B	0.2	< 0.2	SDT-04/29/15@2101

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**REPORT OF ANALYSIS**

SAMPLE ID: AB04951

SAMPLE NO 15-05828

Parameter	Method Number	Method		Analyst/Date/Time
		Detection	Limit (mg/Kg)	
<b>VOLATILES</b>				
Benzene	8260B	0.2	< 0.2	SDT-04/29/15@2101
cis-1,3-Dichloropropene	8260B	0.2	< 0.2	SDT-04/29/15@2101
2-Chloroethyl vinyl ether	8260B	0.4	< 0.4	SDT-04/29/15@2101
Tetrachloroethene	8260B	0.2	< 0.2	SDT-04/29/15@2101
Bromoform	8260B	0.2	< 0.2	SDT-04/29/15@2101
Toluene	8260B	0.2	< 0.2	SDT-04/29/15@2101
Chlorobenzene	8260B	0.2	< 0.2	SDT-04/29/15@2101
Ethylbenzene	8260B	0.2	< 0.2	SDT-04/29/15@2101
Acrolein	8260B	2	< 2	SDT-04/29/15@2101
Acrylonitrile	8260B	2	< 2	SDT-04/29/15@2101
1,3-Dichlorobenzene	8260B	0.2	< 0.2	SDT-04/29/15@2101
1,4-Dichlorobenzene	8260B	0.2	< 0.2	SDT-04/29/15@2101
1,2-Dichlorobenzene	8260B	0.2	< 0.2	SDT-04/29/15@2101
Total Xylenes	8260B	0.2	< 0.2	SDT-04/29/15@2101
SW846 8260 Library Search	8260		See Attached	SDT-05/01/15@2101
<b>SEMIVOLATILES</b>				
Hexachlorethane	8270D	0.95	< 0.95	CLH-05/08/15@0112
1,2,4-Trichlorobenzene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Hexachlorobutadiene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Hexachlorocyclopentadiene	8270D	0.95	< 0.95	CLH-05/08/15@0112
2-Chloronaphthalene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Hexachlorobenzene	8270D	0.95	< 0.95	CLH-05/08/15@0112
N-Nitrosodimethylamine	8270D	0.95	< 0.95	CLH-05/08/15@0112
Bis(2-chloroethyl) ether	8270D	0.95	< 0.95	CLH-05/08/15@0112
Bis(2-chloroisopropyl) ether	8270D	0.95	< 0.95	CLH-05/08/15@0112
N-Nitroso-di-n-propylamine	8270D	0.95	< 0.95	CLH-05/08/15@0112
Nitrobenzene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Isophorone	8270D	0.95	< 0.95	CLH-05/08/15@0112
Bis(2-Chloroethoxy)methane	8270D	0.95	< 0.95	CLH-05/08/15@0112
Naphthalene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Acenaphthylene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Dimethyl phthalate	8270D	0.95	< 0.95	CLH-05/08/15@0112
Acenaphthene	8270D	0.95	< 0.95	CLH-05/08/15@0112
2,6-Dinitrotoluene	8270D	0.95	< 0.95	CLH-05/08/15@0112

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**REPORT OF ANALYSIS**

SAMPLE ID: AB04951

SAMPLE NO 15-05828

Parameter	Method Number	Method		Analyst/Date/Time
		Detection Limit (mg/Kg)	Result (mg/Kg)	
<b>SEMIVOLATILES</b>				
2,4-Dinitrotoluene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Fluorene	8270D	0.95	< 0.95	CLH-05/08/15@0112
4-Chlorophenyl phenyl ether	8270D	0.95	< 0.95	CLH-05/08/15@0112
Diethyl phthalate	8270D	0.95	< 0.95	CLH-05/08/15@0112
1,2-Diphenylhydrazine	8270D	0.95	< 0.95	CLH-05/08/15@0112
Diphenylamine & Nitrosodiphenyl	8270D	0.95	< 0.95	CLH-05/08/15@0112
4-Bromophenyl phenyl ether	8270D	0.95	< 0.95	CLH-05/08/15@0112
Phenanthrene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Anthracene	8270D	0.95	< 0.95	CLH-05/08/15@0112
di-n-Butyl phthalate	8270D	0.95	< 0.95	CLH-05/08/15@0112
Fluoranthene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Pyrene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Benzdine	8270D	0.95	< 0.95	CLH-05/08/15@0112
Butyl benzyl phthalate	8270D	0.95	< 0.95	CLH-05/08/15@0112
Benzo[a]anthracene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Chrysene	8270D	0.95	< 0.95	CLH-05/08/15@0112
3,3-Dichlorobenzidine	8270D	0.95	< 0.95	CLH-05/08/15@0112
Bis(2-ethylhexyl) phthalate	8270D	0.95	< 0.95	CLH-05/08/15@0112
Di-n-Octyl phthalate	8270D	0.95	< 0.95	CLH-05/08/15@0112
Benzo[b]fluoranthene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Benzo[k]fluoranthene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Benzo[a]pyrene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Indeno[1,2,3-c,d]pyrene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Dibenz[a,h]anthracene	8270D	0.95	< 0.95	CLH-05/08/15@0112
Benzo[g,h,i]perylene	8270D	0.95	< 0.95	CLH-05/08/15@0112
2-Chlorophenol	8270D	0.95	< 0.95	CLH-05/08/15@0112
Phenol	8270D	0.95	< 0.95	CLH-05/08/15@0112
2-Nitrophenol	8270D	0.95	< 0.95	CLH-05/08/15@0112
2,4-Dimethylphenol	8270D	0.95	< 0.95	CLH-05/08/15@0112
2,4-Dichlorophenol	8270D	0.95	< 0.95	CLH-05/08/15@0112
4-Chloro-3-methylphenol	8270D	0.95	< 0.95	CLH-05/08/15@0112
2,4,6-Trichlorophenol	8270D	0.95	< 0.95	CLH-05/08/15@0112
2,4-Dinitrophenol	8270D	3.8	< 3.8	CLH-05/08/15@0112
4-Nitrophenol	8270D	0.95	< 0.95	CLH-05/08/15@0112

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EPA# VA00015



**REPORT OF ANALYSIS**

SAMPLE ID: AB04951

SAMPLE NO 15-05828

Parameter	Method Number	Method		Analyst/Date/Time	
		Detection	Limit (mg/Kg)		
<b>SEMIVOLATILES</b>					
4,6-Dinitro-2-methylphenol	8270D		0.95	<0.95	CLH-05/08/15@0112
Pentachlorophenol	8270D		1.9	< 1.9	CLH-05/08/15@0112
1,1-Oxybisbenzene	8270D		0.95	< 0.95	CLH-05/08/15@0112
SW846 8270 Library Search	8270			See Attached	CLH-05/08/15@0112
Dioxin (Scan only)	8270			Not detected	CLH-05/08/15@1035
<b>PCBs</b>					
Aroclor 1016	8082A		1	<1	SDT-04/30/15@1835
Aroclor 1221	8082A		1	< 1	SDT-04/30/15@1835
Aroclor 1232	8082A		1	< 1	SDT-04/30/15@1835
Aroclor 1242	8082A		1	< 1	SDT-04/30/15@1835
Aroclor 1248	8082A		1	< 1	SDT-04/30/15@1835
Aroclor 1254	8082A		0.4	< 0.4	SDT-04/30/15@1835
Aroclor 1260	8082A		0.4	< 0.4	SDT-04/30/15@1835
<b>MISCELLANEOUS</b>					
EOX	9023		96.7	<96.7	TES-04/30/15@1026
Total Phenol	9066		0.95	< 0.95	PEJ-05/01/15@1544
Cyanide	9012B		0.122	< 0.122	ARC-05/01/15@0909
Sulfide	9034		4.86	< 4.86	AME-05/06/15@1118
Total Arsenic	6010C		0.826	< 0.826	EFA-04/28/15@1446
Beryllium	6010C		0.083	3.60	EFA-04/28/15@1446
Total Cadmium	6010C		0.083	2.26	EFA-04/28/15@1446
Total Chromium	6010C		0.165	144	EFA-04/28/15@1446
Total Copper	6010C		0.331	420	EFA-04/28/15@1446
Total Lead	6010C		0.826	53.6	EFA-04/28/15@1446
Mercury	7471B		0.019	< 0.019	PEJ-04/30/15@1652
Total Nickel	6010C		0.826	88.5	EFA-04/28/15@1446
Total Silver	6010C		0.165	2.20	EFA-04/28/15@1446
Total Zinc	6010C		0.826	1361	EFA-04/28/15@1446
Ammonia	*4500NH3D		19.1	30.5	ARC-05/11/15@0830
Oil & Grease HEM	1664A		880	< 880	PRM-05/06/15@1030
Oil & Grease SGTHEM	1664A		880	< 880	PRM-05/06/15@1030
% TVS	*2540G		0.01	5.2	PEJ-04/22/15@1730
% TS	*2540G		0.01	52.2	PEJ-04/22/15@1730
TPH-DRO	8015C		48	< 48	SDT-04/30/15@0224

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VELAP# 460013

EPA# VA00015



**REPORT OF ANALYSIS**

SAMPLE ID: AB04951

SAMPLE NO 15-05828

Parameter	Method Number	Method		Analyst/Date/Time	
		Detection	Limit (mg/Kg)		
<b>MISCELLANEOUS</b>					
TPH-GRO	8015C		75.0	< 75.0	PRM-04/30/15@2156
Chemical Oxygen Demand	8000		368	993	AME-05/14/15@1130
Paint Filter	9095B			No Free Liquid	PEI-04/28/15@1515
Total Molybdenum	6010C		0.826	11.2	EFA-04/28/15@1446
Total Selenium	6010C		0.826	3.05	EFA-04/28/15@1446
pH	9045D			8.07@22oC	ARC-04/22/15@1225
Oil & Grease Leachable	1311/1664A		5.0	< 5.0	PRM-04/30/15@1600
<b>Pesticides</b>					
4,4-DDD	8081B		0.1	< 0.1	SDT-04/30/15@1835
4,4-DDE	8081B		0.1	< 0.1	SDT-04/30/15@1835
4,4-DDT	8081B		0.1	< 0.1	SDT-04/30/15@1835
Aldrin	8081B		0.1	< 0.1	SDT-04/30/15@1835
BHC-alpha	8081B		0.1	< 0.1	SDT-04/30/15@1835
BHC-beta	8081B		0.1	< 0.1	SDT-04/30/15@1835
BHC-delta	8081B		0.1	< 0.1	SDT-04/30/15@1835
BHC-gamma (Lindane)	8081B		0.1	< 0.1	SDT-04/30/15@1835
Chlordane	8081B		0.4	≤ 0.4	SDT-04/30/15@1835
Dieldrin	8081B		0.1	< 0.1	SDT-04/30/15@1835
Endosulfan I	8081B		0.1	< 0.1	SDT-04/30/15@1835
Endosulfan II	8081B		0.1	< 0.1	SDT-04/30/15@1835
Endosulfan sulfate	8081B		0.1	< 0.1	SDT-04/30/15@1835
Endrin	8081B		0.1	< 0.1	SDT-04/30/15@1835
Endrin aldehyde	8081B		0.1	< 0.1	SDT-04/30/15@1835
Endrin Ketone	8081B		0.1	< 0.1	SDT-04/30/15@1835
Heptachlor	8081B		0.1	< 0.1	SDT-04/30/15@1835
Heptachlor epoxide	8081B		0.1	< 0.1	SDT-04/30/15@1835
Methoxychlor	8081B		0.1	< 0.1	SDT-04/30/15@1835
Toxaphene	8081B		1	< 1	SDT-04/30/15@1835

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VELAP# 460013

EPA# VA00015



REPORT OF ANALYSIS

SAMPLE ID: AB04951

SAMPLE NO 15-05828

Parameter	Method Number	Method Detection Limit (ng/Kg)	Result (mg/Kg)	Analyst/Date/Time
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EPA# VA00015



**REPORT OF ANALYSIS**

SAMPLE ID: AB04951

SAMPLE NO 15-05828

Parameter	EPA		Method	Regulatory	Result (mg/L)	Analyst/Date/Time
	HW No.	Method Number	Detection Limit (mg/L)	level (mg/L)		
<b>Toxic Characteristic Leaching Procedure by SW-846 Method 1311</b>						
Arsenic	D004	6010C	0.005	5	0.052	PEJ-05/04/15@1227
Barium	D005	6010C	0.005	100	0.256	PEJ-05/04/15@1227
Benzene	D018	8260B	0.005	0.5	< 0.005	SDT-04/28/15@1414
Cadmium	D006	6010C	0.0005	1	< 0.0005	PEJ-05/04/15@1227
Carbon Tetrachloride	D019	8260B	0.005	0.5	< 0.005	SDT-04/28/15@1414
Chlordane	D020	8270D	0.025	0.03	< 0.025	CLH-05/06/15@1415
Chlorobenzene	D021	8260B	0.005	100	< 0.005	SDT-04/28/15@1414
Chloroform	D022	8260B	0.005	6	< 0.005	SDT-04/28/15@1414
Chromium	D007	6010C	0.001	5	0.002	PEJ-05/04/15@1227
o-Cresol	D023	8270D	0.025	200	< 0.025	CLH-05/06/15@1415
m/p-Cresol	D024	8270D	0.02	200	< 0.02	CLH-05/06/15@1415
Cresol	D026	8270D	0.02	200	< 0.02	CLH-05/06/15@1415
2,4-D	D016	8151A	0.004	10	< 0.004	SDT-05/01/15@1241
1,4-Dichlorobenzene	D027	8260B	0.005	7.5	< 0.005	SDT-04/28/15@1414
1,2-Dichloroethane	D028	8260B	0.005	0.5	< 0.005	SDT-04/28/15@1414
1,1-Dichloroethylene	D029	8260B	0.005	0.7	< 0.005	SDT-04/28/15@1414
2,4-Dinitrotoluene	D030	8270D	0.025	0.13	< 0.025	CLH-05/06/15@1415
Endrin	D012	8270D	0.005	0.02	< 0.005	CLH-05/06/15@1415
Heptachlor (-epoxide)	D031	8270D	0.005	0.008	< 0.005	CLH-05/06/15@1415
Hexachlorobenzene	D032	8270D	0.025	0.13	< 0.025	CLH-05/06/15@1415
Hexachloro-1,3-butadiene	D033	8270D	0.025	0.5	< 0.025	CLH-05/06/15@1415
Hexachloroethane	D034	8270D	0.025	3	< 0.025	CLH-05/06/15@1415
Lead	D008	6010C	0.005	5	< 0.005	PEJ-05/04/15@1227
Lindane	D013	8270D	0.025	0.4	< 0.025	CLH-05/06/15@1415
Mercury	D009	7470A	0.0002	0.2	< 0.0002	PEJ-04/24/15@1513
Methoxychlor	D014	8270D	0.025	10	< 0.025	CLH-05/06/15@1415
Methyl ethyl Ketone	D035	8260B	0.1	200	< 0.1	SDT-04/28/15@1414
Nitrobenzene	D036	8270D	0.025	2	< 0.025	CLH-05/06/15@1415
Pentachlorophenol	D037	8270D	0.1	100	< 0.1	CLH-05/06/15@1415
Selenium	D010	6010C	0.005	1	0.010	PEJ-05/04/15@1227
Pyridine	D038	8270D	0.025	5	< 0.025	CLH-05/06/15@1415
Silver	D011	6010C	0.001	5	< 0.001	PEJ-05/04/15@1227
Tetrachloroethylene	D039	8260B	0.005	0.7	< 0.005	SDT-04/28/15@1414
Toxaphene	D015	8270D	0.1	0.5	< 0.1	CLH-05/06/15@1415
Trichloroethylene	D040	8260B	0.005	0.5	< 0.005	SDT-04/28/15@1414
2,4,5-Trichlorophenol	D041	8270D	0.025	400	< 0.025	CLH-05/06/15@1415
2,4,6-Trichlorophenol	D042	8270D	0.025	2	< 0.025	CLH-05/06/15@1415
2,4,5-TP	D017	8151A	0.004	1	< 0.004	SDT-05/01/15@1241
Vinyl Chloride	D043	8260B	0.01	0.2	< 0.01	SDT-04/28/15@1414

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VELAP# 460013

EPA# VA00015



REPORT OF ANALYSIS

NOTES:

JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.  
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The results on this report relate only to the sample(s) provided for analysis.  
Results conform to NELAC standards, where applicable, unless otherwise indicated.  
\*SM 1977  
Results (mg/kg) reported on a dry weight basis.  
EDX subcontracted to Test America.  
Leachable Oil and Greas does not conform to VELAP.  
Method 8270 Extraction Date:5-5-2015  
VOLATILES (SW846 8260) - Library Search  
Library search found no identifiable peaks.  
SEMI-VOLATILES (SW846 8270) - Library Search  
Library search found no identifiable peaks

Authorized By: Elaine Claiborne  
Elaine Claiborne, Laboratory Director  
Date: 20-May-15

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VELAP# 460013  
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### **III. Attachment C**

#### **Screenings and Grit Quality**

**REPORT OF ANALYSIS**

CLIENT: Hopewell Regional WTP  
 ATTN: Matt Ellinghaus  
 ADDRESS: P. O. Box 969  
 Hopewell, VA 23860  
 PHONE: (804) 541-2214 Ext. 208  
 FAX: e:(each jra# sep) labdata@hopew  
 Special Notes: RE: GRIT AND SCREENINGS  
 Scripsmail

SAMPLE COLLECTED BY: CLIENT  
 GRAB COLLECTION:  
 Date: 3/25/2015 Time: 1121  
 COMPOSITE COLLECTION:  
 Start Date: Time:  
 End Date: Time:  
 PICK UP BY: REED - DBB  
 SAMPLE RECEIPT:  
 Date: 3/26/2015 Time: 1430  
 NUMBER OF CONTAINERS: 3  
 SAMPLE CONDITION:  Good  Other (See C-O-C)  
 REPORT NO: 15-04517 8:43



SAMPLE ID: AB04338  
 SAMPLE NO 15-04517

Parameter	Method Number	Method Detection Limit (mg/Kg)	Result (mg/Kg)	Analyst/Date/Time
<b>VOLATILES</b>				
Chloromethane	8260B	0.3	0.3	SDT-04/07/15@2354
Bromomethane	8260B	0.3	< 0.3	SDT-04/07/15@2354
Vinyl chloride	8260B	0.3	< 0.3	SDT-04/07/15@2354
Chloroethane	8260B	0.3	< 0.3	SDT-04/07/15@2354
Methylene chloride	8260B	0.3	< 0.3	SDT-04/07/15@2354
Trichlorofluoromethane	8260B	0.3	< 0.3	SDT-04/07/15@2354
1,1-Dichloroethene	8260B	0.3	< 0.3	SDT-04/07/15@2354
1,1-Dichloroethane	8260B	0.3	< 0.3	SDT-04/07/15@2354
trans-1,2-Dichloroethene	8260B	0.3	< 0.3	SDT-04/07/15@2354
cis-1,2-Dichloroethene	8260B	0.3	< 0.3	SDT-04/07/15@2354
Chloroform	8260B	0.3	< 0.3	SDT-04/07/15@2354
1,2-Dichloroethane	8260B	0.3	< 0.3	SDT-04/07/15@2354
1,1,1-Trichloroethane	8260B	0.3	< 0.3	SDT-04/07/15@2354
Carbon tetrachloride	8260B	0.3	< 0.3	SDT-04/07/15@2354
Bromodichloromethane	8260B	0.3	< 0.3	SDT-04/07/15@2354
1,1,2,2-Tetrachloroethane	8260B	0.3	< 0.3	SDT-04/07/15@2354
1,2-Dichloropropane	8260B	0.3	< 0.3	SDT-04/07/15@2354
trans-1,3-Dichloropropene	8260B	0.3	< 0.3	SDT-04/07/15@2354
Trichloroethene	8260B	0.3	< 0.3	SDT-04/07/15@2354
Dibromochloromethane	8260B	0.3	< 0.3	SDT-04/07/15@2354
1,1,2-Trichloroethane	8260B	0.3	< 0.3	SDT-04/07/15@2354

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VELAP# 460013  
 EPA# VA00015



**REPORT OF ANALYSIS**

SAMPLE ID: AB04338

SAMPLE NO 15-04517

Parameter	Method Number	Method		Analyst/Date/Time
		Detection Limit (mg/Kg)	Result (mg/Kg)	
<b>VOLATILES</b>				
Benzene	8260B	0.3	< 0.3	SDT-04/07/15@2354
cis-1,3-Dichloropropene	8260B	0.3	< 0.3	SDT-04/07/15@2354
2-Chloroethyl vinyl ether	8260B	0.6	< 0.6	SDT-04/07/15@2354
Bromoform	8260B	0.3	< 0.3	SDT-04/07/15@2354
Tetrachloroethene	8260B	0.3	< 0.3	SDT-04/07/15@2354
Toluene	8260B	0.3	5.5	SDT-04/07/15@2354
Chlorobenzene	8260B	0.3	0.5	SDT-04/07/15@2354
Ethylbenzene	8260B	0.3	< 0.3	SDT-04/07/15@2354
Acrolein	8260B	3	< 3	SDT-04/07/15@2354
Acrylonitrile	8260B	3	< 3	SDT-04/07/15@2354
1,3-Dichlorobenzene	8260B	0.3	< 0.3	SDT-04/07/15@2354
1,4-Dichlorobenzene	8260B	0.3	2.5	SDT-04/07/15@2354
1,2-Dichlorobenzene	8260B	0.3	< 0.3	SDT-04/07/15@2354
Total Xylenes	8260B	0.3	< 0.3	SDT-04/07/15@2354
SW846 8260 Library Search	8260		See Attached	SDT-04/07/15@2354
<b>SEMIVOLATILES</b>				
Hexachlorethane	8270D	2.8	< 2.8	CLH-04/14/15@1919
1,2,4-Trichlorobenzene	8270D	2.8	< 2.8	CLH-04/14/15@1919
Hexachlorobutadiene	8270D	2.8	< 2.8	CLH-04/14/15@1919
Hexachlorocyclopentadiene	8270D	2.8	< 2.8	CLH-04/14/15@1919
2-Chloronaphthalene	8270D	2.8	< 2.8	CLH-04/14/15@1919
Hexachlorobenzene	8270D	2.8	< 2.8	CLH-04/14/15@1919
N-Nitrosodimethylamine	8270D	2.8	< 2.8	CLH-04/14/15@1919
Bis(2-chloroethyl) ether	8270D	2.8	< 2.8	CLH-04/14/15@1919
Bis(2-chloroisopropyl) ether	8270D	2.8	< 2.8	CLH-04/14/15@1919
N-Nitroso-di-n-propylamine	8270D	2.8	< 2.8	CLH-04/14/15@1919
Nitrobenzene	8270D	2.8	< 2.8	CLH-04/14/15@1919
Isophorone	8270D	2.8	< 2.8	CLH-04/14/15@1919
Bis(2-Chloroethoxy)methane	8270D	2.8	< 2.8	CLH-04/14/15@1919
Naphthalene	8270D	2.8	< 2.8	CLH-04/14/15@1919
Acenaphthylene	8270D	2.8	< 2.8	CLH-04/14/15@1919
Dimethyl phthalate	8270D	2.8	< 2.8	CLH-04/14/15@1919
Acenaphthene	8270D	2.8	< 2.8	CLH-04/14/15@1919
2,6-Dinitrotoluene	8270D	2.8	< 2.8	CLH-04/14/15@1919

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**REPORT OF ANALYSIS**

SAMPLE ID: AB04338

SAMPLE NO 15-04517

Parameter	Method Number	Method		Analyst/Date/Time
		Detection	Result (mg/Kg)	
<b>SEMIVOLATILES</b>				
2,4-Dinitrotoluene	8270D	2.8	<2.8	CLH-04/14/15@1919
Fluorene	8270D	2.8	<2.8	CLH-04/14/15@1919
4-Chlorophenyl phenyl ether	8270D	2.8	<2.8	CLH-04/14/15@1919
Diethyl phthalate	8270D	2.8	<2.8	CLH-04/14/15@1919
1,2-Diphenylhydrazine	8270D	2.8	<2.8	CLH-04/14/15@1919
Diphenylamine & Nitrosodiphenyl	8270D	2.8	<2.8	CLH-04/14/15@1919
4-Bromophenyl phenyl ether	8270D	2.8	<2.8	CLH-04/14/15@1919
Phenanthrene	8270D	2.8	5.3	CLH-04/14/15@1919
Anthracene	8270D	2.8	<2.8	CLH-04/14/15@1919
di-n-Butyl phthalate	8270D	2.8	<2.8	CLH-04/14/15@1919
Fluoranthene	8270D	2.8	<2.8	CLH-04/14/15@1919
Pyrene	8270D	2.8	<2.8	CLH-04/14/15@1919
Benzidine	8270D	2.8	<2.8	CLH-04/14/15@1919
Butyl benzyl phthalate	8270D	2.8	<2.8	CLH-04/14/15@1919
Benzo[a]anthracene	8270D	2.8	6.0	CLH-04/14/15@1919
Chrysene	8270D	2.8	5.4	CLH-04/14/15@1919
3,3-Dichlorobenzidine	8270D	2.8	<2.8	CLH-04/14/15@1919
Bis(2-ethylhexyl) phthalate	8270D	2.8	<2.8	CLH-04/14/15@1919
Di-n-Octyl phthalate	8270D	2.8	<2.8	CLH-04/14/15@1919
Benzo[b]fluoranthene	8270D	2.8	<2.8	CLH-04/14/15@1919
Benzo[k]fluoranthene	8270D	2.8	<2.8	CLH-04/14/15@1919
Benzo[a]pyrene	8270D	2.8	4.8	CLH-04/14/15@1919
Indeno[1,2,3-c,d]pyrene	8270D	2.8	<2.8	CLH-04/14/15@1919
Dibenz[a,h]anthracene	8270D	2.8	<2.8	CLH-04/14/15@1919
Benzo[g,h,i]perylene	8270D	2.8	<2.8	CLH-04/14/15@1919
2-Chlorophenol	8270D	2.8	<2.8	CLH-04/14/15@1919
Phenol	8270D	2.8	<2.8	CLH-04/14/15@1919
2-Nitrophenol	8270D	2.8	<2.8	CLH-04/14/15@1919
2,4-Dimethylphenol	8270D	2.8	<2.8	CLH-04/14/15@1919
2,4-Dichlorophenol	8270D	2.8	<2.8	CLH-04/14/15@1919
4-Chloro-3-methylphenol	8270D	2.8	<2.8	CLH-04/14/15@1919
2,4,6-Trichlorophenol	8270D	2.8	<2.8	CLH-04/14/15@1919
2,4-Dinitrophenol	8270D	11	<11	CLH-04/14/15@1919
4-Nitrophenol	8270D	2.8	<2.8	CLH-04/14/15@1919

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**REPORT OF ANALYSIS**

SAMPLE ID: AB04338

SAMPLE NO 15-04517

Parameter	Method Number	Method		Analyst/Date/Time
		Detection Limit (mg/Kg)	Result (mg/Kg)	
<b>SEMIVOLATILES</b>				
4,6-Dinitro-2-methylphenol	8270D	2.8	< 2.8	CLH-04/14/15@1919
Pentachlorophenol	8270D	5.6	< 5.6	CLH-04/14/15@1919
1,1-Oxybisbenzene	8270D	2.8	< 2.8	CLH-04/14/15@1919
SW846 8270 Library Search	8270		See Attached	CLH-04/14/15@1919
Dioxin (Scan only)	8270		Not detected	CLH-04/15/15@0053
<b>PCBs</b>				
Aroclor 1016	8082A	0.139	< 0.139	JFS-04/08/15@0408
Aroclor 1221	8082A	0.139	< 0.139	JFS-04/08/15@0408
Aroclor 1232	8082A	0.139	< 0.139	JFS-04/08/15@0408
Aroclor 1242	8082A	0.139	< 0.139	JFS-04/08/15@0408
Aroclor 1248	8082A	0.139	< 0.139	JFS-04/08/15@0408
Aroclor 1254	8082A	0.056	< 0.056	JFS-04/08/15@0408
Aroclor 1260	8082A	0.056	< 0.056	JFS-04/08/15@0408
<b>MISCELLANEOUS</b>				
EOX	9023	146	<146**	TES-04/30/15@1026
Total Phenol	9066	1.37	81.6	PEJ-04/07/15@1432
Cyanide	9012B	0.122	≤ 0.122	ARC-04/09/15@1119
Sulfide	9034	4.86	< 4.86	AME-04/10/15@1434
Total Arsenic	6010C	1.16	< 1.16	EFA-04/06/15@1119
Beryllium	6010C	0.116	< 0.116	EFA-04/06/15@1119
Total Cadmium	6010C	0.116	0.552	EFA-04/06/15@1119
Total Chromium	6010C	0.232	7.15	EFA-04/06/15@1119
Total Copper	6010C	0.464	109	EFA-04/06/15@1119
Total Lead	6010C	1.16	11.2	EFA-04/06/15@1119
Mercury	7471B	0.027	0.286	PEJ-04/01/15@1724
Total Nickel	6010C	1.16	6.35	EFA-04/06/15@1119
Total Silver	6010C	0.232	< 0.232	EFA-04/06/15@1119
Total Zinc	6010C	1.16	260	EFA-04/06/15@1119
Ammonia	*4500NH3D	26.7	2420	ARC-04/06/15@0830
Oil & Grease HEM	1664A	1340	139000	PRM-04/08/15@1200
Oil & Grease SGTHEM	1664A	1340	10600	PRM-04/08/15@1200
% TVS	*2540G	0.01	79.0	PEJ-04/06/15@1000
% TS	*2540G	0.01	35.8	PEJ-03/27/15@1700
TPH-DRO	8015C	2790	29300	SDT-04/02/15@2102

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**REPORT OF ANALYSIS**

SAMPLE ID: AB04338

SAMPLE NO 15-04517

Parameter	Method Number	Method		Analyst/Date/Time
		Detection	Limit (mg/Kg)	
<b>MISCELLANEOUS</b>				
TPH-GRO	8015C		109	PRM-04/03/15@0045
Chemical Oxygen Demand	8000	275	152923	AME-04/02/15@1504
Paint Filter	9095B		No Free Liquid	PEJ-04/01/15@0930
Total Molybdenum	6010C	1.16	15.6	BFA-04/06/15@1119
Total Selenium	6010C	1.16	1.17	BFA-04/06/15@1119
pH	9045D		6.94@20oC	ARC-04/24/15@0910
Oil & Grease Leachable	1311/1664A	5.0	5.6	PRM-04/09/15@1630
<b>Pesticides</b>				
4,4-DDD	8081B	0.014	< 0.014	JFS-04/16/15@0704
4,4-DDE	8081B	0.014	< 0.014	JFS-04/16/15@0704
4,4-DDT	8081B	0.014	< 0.014	JFS-04/16/15@0704
Aldrin	8081B	0.014	< 0.014	JFS-04/16/15@0704
BHC-alpha	8081B	0.014	< 0.014	JFS-04/16/15@0704
BHC-beta	8081B	0.014	< 0.014	JFS-04/16/15@0704
BHC-delta	8081B	0.014	< 0.014	JFS-04/16/15@0704
BHC-gamma (Lindane)	8081B	0.014	< 0.014	JFS-04/16/15@0704
Chlordane	8081B	0.056	< 0.056	JFS-04/16/15@0704
Dieldrin	8081B	0.014	< 0.014	JFS-04/16/15@0704
Endosulfan I	8081B	0.014	< 0.014	JFS-04/16/15@0704
Endosulfan II	8081B	0.014	< 0.014	JFS-04/16/15@0704
Endosulfan sulfate	8081B	0.014	< 0.014	JFS-04/16/15@0704
Endrin	8081B	0.014	< 0.014	JFS-04/16/15@0704
Endrin aldehyde	8081B	0.014	< 0.014	JFS-04/16/15@0704
Endrin Ketone	8081B	0.014	< 0.014	JFS-04/16/15@0704
Heptachlor	8081B	0.014	< 0.014	JFS-04/16/15@0704
Heptachlor epoxide	8081B	0.014	< 0.014	JFS-04/16/15@0704
Methoxychlor	8081B	0.014	< 0.014	JFS-04/16/15@0704
Toxaphene	8081B	0.139	< 0.139	JFS-04/16/15@0704

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VELAP# 460013

EPA# VA00015



REPORT OF ANALYSIS

SAMPLE ID: AB04338

SAMPLE NO 15-04517

Parameter	Method	Method	Result (mg/Kg)	Analyst/Date/Time
	Number	Detection Limit (mg/Kg)		

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## REPORT OF ANALYSIS

SAMPLE ID: AB04338

SAMPLE NO 15-04517

Parameter	EPA	Method	Method	Regulatory	Result (mg/L)	Analyst/Date/Time
	HW	Method	Detection	level		
	No.	Number	Limit (mg/L)	(mg/L)		
<b>Toxic Characteristic Leaching Procedure by SW-846 Method 1311</b>						
Arsenic	D004	6010C	0.005	5	< 0.005	EFA-04/03/15@1252
Barium	D005	6010C	0.005	100	0.220	EFA-04/03/15@1252
Benzene	D018	8260B	0.005	0.5	< 0.005	SDT-04/07/15@2133
Cadmium	D006	6010C	0.0005	1	0.0012	EFA-04/03/15@1252
Carbon Tetrachloride	D019	8260B	0.005	0.5	< 0.005	SDT-04/07/15@2133
Chlordane	D020	8270D	0.025	0.03	< 0.025	JFS-04/14/15@1534
Chlorobenzene	D021	8260B	0.005	100	< 0.005	SDT-04/07/15@2133
Chloroform	D022	8260B	0.005	6	< 0.005	SDT-04/07/15@2133
Chromium	D007	6010C	0.001	5	0.005	EFA-04/03/15@1252
o-Cresol	D023	8270D	0.025	200	< 0.025	JFS-04/14/15@1534
m/p-Cresol	D024	8270D	0.02	200	< 0.02	JFS-04/14/15@1534
Cresol	D026	8270D	0.02	200	< 0.02	JFS-04/14/15@1534
2,4-D	D016	8151A	0.004	10	< 0.004	JFS-04/09/15@1252
1,4-Dichlorobenzene	D027	8260B	0.005	7.5	0.006	SDT-04/07/15@2133
1,2-Dichloroethane	D028	8260B	0.005	0.5	< 0.005	SDT-04/07/15@2133
1,1-Dichloroethylene	D029	8260B	0.005	0.7	< 0.005	SDT-04/07/15@2133
2,4-Dinitrotoluene	D030	8270D	0.025	0.13	< 0.025	JFS-04/14/15@1534
Endrin	D012	8270D	0.005	0.02	< 0.005	JFS-04/14/15@1534
Heptachlor (-epoxide)	D031	8270D	0.005	0.008	< 0.005	JFS-04/14/15@1534
Hexachlorobenzene	D032	8270D	0.025	0.13	< 0.025	JFS-04/14/15@1534
Hexachloro-1,3-butadiene	D033	8270D	0.025	0.5	< 0.025	JFS-04/14/15@1534
Hexachloroethane	D034	8270D	0.025	3	< 0.025	JFS-04/14/15@1534
Lead	D008	6010C	0.005	5	< 0.005	EFA-04/03/15@1252
Lindane	D013	8270D	0.025	0.4	< 0.025	JFS-04/14/15@1534
Mercury	D009	7470A	0.0002	0.2	< 0.0002	PEJ-04/02/15@1620
Methoxychlor	D014	8270D	0.025	10	< 0.025	JFS-04/14/15@1534
Methyl ethyl Ketone	D035	8260B	0.1	200	< 0.1	SDT-04/07/15@2133
Nitrobenzene	D036	8270D	0.025	2	< 0.025	JFS-04/14/15@1534
Pentachlorophenol	D037	8270D	0.1	100	< 0.1	JFS-04/14/15@1534
Selenium	D010	6010C	0.005	1	< 0.005	EFA-04/03/15@1252
Pyridine	D038	8270D	0.025	5	< 0.025	JFS-04/14/15@1534
Silver	D011	6010C	0.001	5	< 0.001	EFA-04/03/15@1252
Tetrachloroethylene	D039	8260B	0.005	0.7	< 0.005	SDT-04/07/15@2133
Toxaphene	D015	8270D	0.1	0.5	< 0.1	JFS-04/14/15@1534
Trichloroethylene	D040	8260B	0.005	0.5	< 0.005	SDT-04/07/15@2133
2,4,5-Trichlorophenol	D041	8270D	0.025	400	< 0.025	JFS-04/14/15@1534
2,4,6-Trichlorophenol	D042	8270D	0.025	2	< 0.025	JFS-04/14/15@1534
2,4,5-TP	D017	8151A	0.004	1	< 0.004	JFS-04/09/15@1252
Vinyl Chloride	D043	8260B	0.01	0.2	< 0.01	SDT-04/07/15@2133

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## REPORT OF ANALYSIS

### NOTES:

JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.

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The results on this report relate only to the sample(s) provided for analysis.

Results conform to NELAC standards, where applicable, unless otherwise indicated.

Results (mg/kg) reported on a dry weight basis.

\*SM 1997

Method 8270 Extraction Date: 4-6-2015

EOX subcontracted to Test America.

\*\*EOX analyzed out of holding time.

Leachable Oil and Grease and COD do not conform to VELAP.

Results (mg/Kg) reported on dry weight basis.

8015C TPH-DRO: Unidentifiable peaks present and reported as diesel.

8015c TPH-GRO: Unidentifiable peaks found in sample and reported as gasoline.

VOLATILES (SW846 8260) - Library Search

2-Amino-1-(o-methoxyphenyl)propane 1.1 mg/Kg,

2-Pentanone, 4-hydroxy-4-methyl- 0.3 mg/Kg,

Methane, iodo- 2.9 mg/Kg, 1R- .alpha.-Pinene 1.1 mg/Kg,

Furan, 2-pentyl- 3.0 mg/Kg; Adamantane 41 mg/Kg

Octanoic acid, methyl ester 4.4 mg/Kg.

Authorized By: Elaine Clalborne

Elaine Clalborne, Laboratory Director

Date: 01-May-15

SEMI-VOLATILES (SW846 8270) - Library Search

Benzoic acid 3.6 mg/kg,

Bicyclo[2.2.1]heptane, 2,2-dimethyl-3-methylene 36 mg/kg,

Squalene 67 mg/kg, Cholesterol 481 mg/kg.

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