### Northeast Ohio Regional Sewer District

#### TO ALL PROSPECTIVE BIDDERS:

\*

\*

\*

\*

Thank you for requesting/accepting our bid information. The documents listed below are enclosed. It is expected that all interested bidders will read and understand the District requirements set forth in the documents. Those documents which have an (\*) asterisk before them require completion and signature(s) in the manner specified on each document and returned with bid.

- . Notice to Bidders
- . Resolution 102-83 (Purchase of Domestic Material)
- . Resolution 44-09 (District to utilize Small, Disadvantaged, Minority,
- Women-owned Business Enterprises as subcontractors)
- . Resolution Pages (Taking of Bids)
- \* . Checklist for Required Documents
  - . Envelope Cover Information Sheet (if download from the web) or Envelope Cover for your mailed bid.
  - . Standard Purchase Bid Form and Signature Page
    - . Invitation and Bid Sheet(s), (May be a separate attachment in Excel Format)
      - . Bid Bond (Form D) (Not required)
      - . Certified, Official or Cashier's Check (Not required)
      - . Consent of Surety with Certified, Official or Cashier's Check (Not required)

. Non-Collusion Affidavit (3 pages), two apparent low bidders shall email to <u>davismoddie@neorsd.org</u> or deliver to Dominic R. Perri at NEORSD, 3900 Euclid Ave. Cleveland, Ohio 44115, these forms within 72 business hours after the bid opening.

- . Standard Form of Instructions to Bidders (6 pages)
- . General Conditions (5 pages)
- . Supplemental General Conditions (multiple pages)
- . Detail Specifications (multiple pages)\*Completed Attachment 1
- information . Performance Bond (Not required)
- . Agreement (sample form, for your information only)

The enclosed bid envelope cover sheet or address and bid information should be used when submitting your bid. <u>If a company envelope, express mail or courier service envelope is used the bid</u> <u>name, bid file number and opening date must appear on the mailing label. THE DISTRICT SHALL</u> <u>TAKE NO RESPONSIBILITY FOR UNIDENTIFIED BIDS WHICH ARE INADVERTENTLY</u> <u>OPENED EARLY AND MAY HAVE TO BE EXCLUDED FROM CONSIDERATION.</u> Bids must be received before the date and time indicated on the Notice to Bidders. If you have any questions, please contact the District Purchasing Department.

W:/Wdocs/Operations/Bid Specs/TO ALL PROSPECTIVE BIDDERS PAGE

#### NOTICE TO BIDDERS

Sealed bids will be received by the Chief Financial Officer of the Northeast Ohio Regional Sewer District, 3900 Euclid Ave., Cleveland, Ohio 44115, until 2:00 p.m. official local time on the date indicated below.

At that time all bids will be opened and read aloud in the Public Meeting Room at the Northeast Ohio Regional Sewer District, 3900 Euclid Ave., Cleveland, Ohio 44115. All bids must be submitted on the forms provided to the Chief Financial Officer, from whom detail specifications may be obtained at <u>www.neorsd.org/bids</u> for free bid packages and any addendum updates.

Bid File No. RFQ-21520 Resolution No. 206-19 Opening Date: Wednesday, August 21, 2019

Taking bids for a three (3) month requirement contract to remove, test, and dispose of debris from the Jennings Road combined sewer and Pump Station wet well, which are owned and operated by the Northeast Ohio Regional Sewer District (herein referred to as the "District"), and the Old Denison Avenue combined sewer, which is owned and operated by the City of Cleveland. These facilities consist of sewers, manholes, piping, and chambers that can accumulate grit, debris, and other waste material commonly found in a wastewater treatment plant collection system. Mandatory Pre-Bid Meeting and Site Inspection August 14, 2019 1:00 pm at (EMSC) Environmental and Maintenance Services, 4747 East 49<sup>th</sup> Street, Cuyahoga Heights, Ohio 44124. No bid bond nor performance bond is required for this bid. If you have any questions email Jennifer Hrlec at hrlecj@neorsd.org

Purchasing Manager

p.d. August 6, 2019 August 13, 2019 NORTHEAST OHIO REGIONAL SEWER DISTRICT RESOLUTION NO. 102.83

Establishing District procurement policy to provide that preference shall be given to the purchase of domestic material.

WHEREAS, the Board of Trustees of the Northeast Ohio Regional Sewer District has determined that preference shall be given to the purchase of domestic material by the District whenever possible; and

WHEREAS, it is the desire of the Board to implement such a policy immediately, but leaving certain discretion for the implementation to the Director;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE NORTHEAST OHIO REGIONAL SEWER DISTRICT:

Section 1. That it shall be the official procurement policy of the Northeast Ohio Regional Sewer District that preference be given to the purchase of domestic material by the District.

Section 2. That the Director and Comptroller be and they are hereby authorized and directed to implement said policy effective immediately on all District procurement, but that they may grant relief from such policy when requested to do so, if such "buy American" policy would, in their opinion, impair the District's overall objective to obtain the lowest possible prices with maximum competition.

Section 3. That this Board declares that all formal actions of the Board concerning and relating to the adoption of this resolution and that all deliberations of the Board and any of its committees that resulted in said formal action were conducted in meetings open to the public and in compliance with all legal requirements, including section 121.22 of the Ohio Revised Code.

On Motion of Mayor Bacci, Seconded by Mr. Amato, the foregoing resolution was unanimously adopted on February 17, 1983.

antin C. anot

Anthony C. Amato, Secretary Board of Trustees Northeast Ohio Regional Sewer District

I, ANTHONY C. AMATO, SECRETARY OF THE BOARD OF TRUSTEES OF THE NORTHEAST OHIO REGIONAL SEWER DISTRICT, DO HEREBY CERTIFY THAT THE FOREGOING IS A TRUE. CORRECT AND EXACT COPY OF THE ORIGINAL OF A RESOLUTION DULY ADOPTED BY

SAID BOARD ON THE 17th DAY OF FEBAUONY 19 83

ANTHONY C. AMATO SECRETARY, BOARD OF TRUSTEES NORTHEAST OHIO REGIONAL SEWER DISTRICT

#### NORTHEAST OHIO REGIONAL SEWER DISTRICT RESOLUTION NO. 44-09

Encouraging contractors, vendors, and consultants seeking contracts with the District to utilize Small, Disadvantaged, Minority-, and Womenowned Business Enterprises as subcontractors and to provide reliable employment opportunities to such individuals within the District's service area, and further encouraging those companies seeking to do business with the District to reach out to Small, Disadvantaged, Minority-, and Women-owned Business Enterprises and to work with the District's Office of Contract Compliance to provide subcontracting opportunities to such business enterprises in order to strengthen the economy of the region and to support the individuals, businesses, and communities served by the District.

WHEREAS, the District is in the process of developing a race- and genderneutral Small Business Enterprise Program; and

WHEREAS, the District has engaged a consultant to conduct a disparity study to determine whether race- and gender-based discrimination exists in the District's contracting marketplace; and

WHEREAS, during the pendency of the District's implementation of a Small Business Enterprise program and the performance of a disparity study, the Board endeavors to continue to increase economic opportunity for Small, Disadvantaged, Minority-, and Women-owned Business Enterprises;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE NORTHEAST OHIO REGIONAL SEWER DISTRICT:

Section 1. That this Board encourages contractors, vendors, and consultants seeking contracts with the District to continue to make their best efforts to utilize Small, Disadvantaged, Minority-, and Women-owned Business Enterprises as subcontractors and to provide reliable employment opportunities to such individuals within the District's service area.

Section 2. That this Board further encourages those companies seeking to do business with the District to continue to reach out to Small, Disadvantaged, Minority-, and Women-owned Business Enterprises and to work with the District's Office of Contract Compliance to provide subcontracting opportunities to such business enterprises in order to strengthen the economy of the region and to support the individuals, businesses, and communities served by the District.

Section 3. That this Board declares that all formal actions of the Board concerning and relating to the adoption of this resolution and that all deliberations of the Board and any of its committees that resulted in said formal action were conducted in meetings open to the public and in compliance with all legal requirements, including Section 121.22 of the Ohio Revised Code.

On motion of Mayor Longo, seconded by Ms. Kelly, the foregoing resolution was unanimously adopted on March 5, 2009.

Darnell Brown

Sheila J. Kelly

Walter O'Mallev

Ronald D. Su

Dean E. Dep Thomas J. Longo

Gary W. Starr



Checklist for Required Documents to be returned when bidding for: Re-Bid Jennings and Old Denison Combined Sewer Cleaning 2019

Bid Number RFQ-21520

Resolution Number 206-19

### Please mark the boxes with an "X" showing that you have placed these items in your bid package envelope, sign and date below, that you have provided ALL the above mentioned information, for the bid process.

ltem	
Checklist for Required Documents submitted with bid and signed (This Page)	
Envelope with Bid Information regarding this bid on outside of envelope	
Standard Purchase Bid Form and Signature Page	
Invitation and Bid Form Sheets completed and signed	
Attended the Manatory Pre-Bid Meeting on August 14, 2019 at 1:00 pm per Section SGC-4	

The two apparent low bidders shall provide these forms within 72 hours after bid opening: Excluding Weekends	
 and District Holidays	
Completed Non-Collusion Affidavit Section SGC-6 (1)	
Completed Reference Form with projects supporting detailed qualifications Section SGC-6 (3)	
Provide and submit on <b>Company Letterhead</b> with the number of years incorporated and working in Northeast Ohio area with present and former business names Section SGC-6 (3)	
Company name, location and address of at least two (2) OHIO EPA-approved solide waste landfills and at least one (1) Ohio EPA-approved hazardous waste landfill approved to accept hazardous waste contaminated with fecal coliform. Also, the applicable Ohio EPA license and/or permit for each landfill and disposal facility.Section SGC-6 (4) Note: the contractor is required to analyze all samples at the contractor's expense. The receiving facility must approve the analysis	
Contractor shall provide a copy of the transporter's certification to haul hazardous waste material with the RCRA identification number. Section SGC-6 (5)	
Written Health and Safety Plan (HASP) Section SGC-6 (6) referencing (DS-5)	
Completed <b>Notice of OSHA Violations report</b> listing all OSHA violations and/or citations received within the past five (5) years for any activity performed by the company.Section SGC-6 (7)	
Completed <b>Notice of EPA and NEROSD Violations Report</b> listing all Ohio (or other state) EPA USEPA or District violaitons and/or citations within the past five (5) years for any activity performed the company Section SGC-6 (8)	
Company Substance Abuse Policy (SGC-15)	

#### This form must also be in your Bid package.

Please sign and date below, that you have provided the above mentioned information for the bid process.

Name of Company:

Print your Name

Sign your Name

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

FROM	 	 	 

.....

.....

### **CHIEF FINANCIAL OFFICER**

### **Northeast Ohio Regional Sewer District**



#### BID FOR - Re-Bid Jennings and Old Denison Combined Sewer Cleaning 2019- No Bid Bond and No

#### Performance Bond required for this bid

#### BID FILE No. RFQ - 21520

Bid must be delivered at the office of the Chief Financial Officer before 2 o'clock P.M.(Official Cleveland Time.)

.....Augut 21, 2019.....



#### **STANDARD PURCHASE BID FORM**

#### **REQUIREMENT PURCHASE BID FORM** \_\_\_\_\_

FROM (COMPANY NAME)

To the Chief Financial Officer

BID FOR \_\_\_\_\_

The Undersigned proposes to furnish the above materials, supplies or equipment, and to accept as full compensation therefore the price per unit multiplied by the number of units of such commodity purchased hereunder, (which units and prices therefore are set forth in the schedule of items hereto attached and made part of this bid) and subject to any discount set forth in this bid.

The Undersigned further certifies that he (as an individual, firm or corporation making this bid) is not in arrears or default to the District upon any debt or contract, nor is a defaulter as surety or otherwise upon any obligation to said District nor has failed to perform faithfully any previous contract with said District and that there is no suit or claim pending as to any such arrears or default

#### THE UNDERSIGNED UNDERSTANDS THAT THE DISTRICT RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS.

The firm, corporation, or individual name \_\_\_\_\_\_ MUST BE SIGNED IN SPACE INDICATED Sign Name Typed or Printed \_\_\_\_\_ Title of Officer Business Address of Bidder **BIDDER MUST** State Where Incorporated \_\_\_\_\_ COMPLETE AND SIGN

Rev. 12-05-14

## **Invitation and Bid Sheets**

The Invitation and Bid sheets are in an excel spreadsheet format and a separate file. Please find the excel spreadsheet file on the download website files. The excel spreadsheet will do all the multiplication and addition for you. Please fill in your pricing in the appropriate boxes and complete adding the rest of the required information on the spreadsheet format as required. Then print out the Invitation and Bid sheets and sign in the Authorized Signature box.

Upon completion of the following steps print the page and add it to the rest of your paper bid package.

**NOTE:** This Affidavit properly executed and containing all required information must accompany your Bid. **IF YOU FAIL TO COMPLY YOUR BID WILL NOT BE CONSIDERED.** 

STATE OF OHIO	} NON-COLLUSION AFFIDAVIT
CUYAHOGA COU	NTY} SS
	being first
duly sworn deposes	and says:
Individual only:	That he is an individual doing business under the name of
	at, in the Ci
	of, State of
Partnership only:	That he is the duly authorized representative of a partnership dong busine
	under the name of
	in the City
	of,State of
Corporation only:	That he is the duly authorized, qualified and acting
	of, a corporation organized
and that he, said J Regional Sewer Dis	and existing under the laws of the State of
Individual only:	Affiant further says that the following is a complete and accurate list of the names and addresses of all persons interested in said proposed contract:
	Affiant further says that he is represented by the following attorneys:
	and is also represented by the following resident agents in Cuyahoga County, Ohio

Partnership only: Affiant further says that the following is a complete and accurate list of the names and addresses of the members of said partnership:

Affiant further says that said partnership is represented by the following attorneys:

and is also represented by the following resident agents in Cuyahoga County, Ohio:

Corporation only: Affiant further says that the following is a complete and accurate list of the officers, directors and attorneys of said corporation:

President

Directors:

Vice President

Secretary

Treasurer

Cleveland Manager or Agent

Attorneys

Statutory Agent

And the following officers are duly authorized to execute contracts on behalf of said corporation:

Affiant further says that the bid filed herewith is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization or corporation; that such bid is genuine and not collusive or sham; that said bidder has not, directly or indirectly, induced or solicited any other bidder to put in a false or sham bid and has not, directly or indirectly, colluded, conspired, connived or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with anyone to fix the bid price or said bidder or of any bid price or that of any other bidder, or to secure any advantage against Northeast Ohio Regional Sewer District or anyone interested in the proposed contract; that all statements contained in such bid are true; that said bidder has not, directly or indirectly, submitted his bid or any breakdown thereof or the contents thereof, or divulged information or data relative thereto, or paid or agreed to pay, directly or indirectly, any money, or other valuable consideration for assistance or aid rendered or to be rendered in procuring or attempting to procure the contract above referred to, to any corporation, partnership, company, association, organization, or to any member or agent thereof, or to any other individual, except to such person or persons as hereinabove disclosed to have a partnership or other financial

interest with said bidder in his general business; and further that said bidder will not pay or agree to pay, directly or indirectly, any money or other valuable consideration to any corporation, partnership, company, association, organization or to any member or agent thereof, or to any other individual, for aid or assistance in securing contract above referred to in the event the same is awarded to \_\_\_\_\_\_

(name or individual, partnership or corporation)

Further affiant saith not.

(SIGN HERE)

Sworn to before me and subscribed in my presence this \_\_\_\_\_ day

of\_\_\_\_\_,

A.D., 20 \_\_\_\_\_.

(Notary Public)

#### STANDARD FORM OF INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS AND BID FOR PURCHASES -IB-

#### **IB-1 ADVERTISEMENT:**

Information concerning the title of Bid, Resolution Number of the Board of Trustees of the Northeast Ohio Regional Sewer District, hereafter designated as "NEORSD," or the "District," and place and dates of advertisement appear in the Legal Notice to Bidders.

#### IB-2 BIDS:

Sealed Bids endorsed and designated in the "Title Bid" section of the Bid form(s) will be received at the office of the Chief Financial Officer of the NEORSD, 3900 Euclid Avenue, Cleveland, OH 44115, until the official time and date indicated in the "Bid Opening" in the Legal Notice to Bidders. Bids received prior to the advertised hour of opening will be securely kept <u>sealed</u>. The official time shall be as stated on the atomic time stamp clock designated as the official clock located at the NEORSD's Security Desk at the George J. McMonagle Administration Building. Bids will be opened and publicly read aloud, irrespective of any irregularities therein, at the Northeast Ohio Regional Sewer District's Public Meeting Room, 3900 Euclid Avenue, Cleveland, OH 44115. All Bids received in conformity with these contract documents shall, as soon as practicable, be tabulated and become public record.

#### **IB-3** FORM OF BID:

- A. Every Bid must be submitted on the original forms supplied by NEORSD. Copies of the original Bid forms supplied by the NEORSD will be considered an alteration of our departure from said forms. Unless otherwise specified in the bid documents, Bids shall state the price of each and every Bid Item contained on the Invitation and Bid Form, in figures (digits), and must contain the full name of every person, firm or corporation submitting the Bid, and the address of the person, firm or the president and secretary of the corporation bidding.
- B. The Bid, with all papers bound thereto, must be submitted unmutilated with the envelope cover sheet, which is furnished by NEORSD in the electronic bid package and placed on the front or back of the envelope.
- C. The NEORSD may consider as informal any Bid on which there is an alteration of or departure from the original Invitation and Bid Form and at its option may reject the same.

**<u>NOTE:</u>** All of this bound information shall be kept intact, and, together with any addenda issued, shall be returned with the Bid. Failure to return such information as described herein shall be a basis to reject the Bid.

D. No Bid shall be accepted from, or contract awarded to, any person, firm or corporation that is in arrears or is in default to the NEORSD upon any debt or contract, or that is a defaulter as surety or otherwise, upon any obligation to said NEORSD, or has failed to perform faithfully any previous contract with the NEORSD.

#### **IB-4** NAME AND SIGNATURE OF BIDDER:

Each Bid must be signed by the Bidder in the space provided for the signature on the Bid blank. The Bidder shall provide the name and address of the firm, and the name and title of the officer duly authorized to sign for and legally bind the firm. In case of a partnership, the firm name and address and name and address of each individual party must be given.

#### **IB-5 BIDDERS AFFIDAVITS:**

- A. Each Bidder shall submit with its Bid an affidavit stating that neither it nor its agents, nor any other party, has paid or agreed to pay, directly or indirectly, any person, firm or corporation money or other valuable consideration for assistance in procuring or attempting to procure the contract herein referred to, and further agreeing that no such money or reward will be hereafter paid. This affidavit shall be on the form which is provided by NEORSD.
- B. Each Bidder which is a foreign corporation, that is, a corporation not chartered in Ohio but licensed to do business in Ohio, is required to submit, upon request by the NEORSD, an affidavit duly executed by the President, Vice President or General Manager of the corporation stating that said foreign corporation has, in accordance with the provisions of the Revised Code of the State of Ohio, obtained a certificate authorizing it to do business in the State of Ohio. (The certificate or certified copies of such certificate may be obtained from the Office of the Secretary of State, Columbus, Ohio.)

#### **IB-6 BID BOND OR CERTIFIED, OFFICIAL OR CASHIER'S CHECK:** Not applicable.

### **IB-7 DISPOSITION OF BID BOND OR** (CERTIFIED, OFFICIAL OR CASHIER'S CHECK): Not applicable.

#### **IB-8** WITHDRAWAL OF BID:

No Bid will be allowed to be withdrawn after it has been deposited with the Chief Financial Officer of the NEORSD until all Bids have been opened, in accordance with the requirements of Ohio Revised Code Section 9.31.

#### **IB-9 EXPLANATIONS, WRITTEN OR ORAL:**

Any Bidder finding a discrepancy or omission in the specifications or having any doubt as to their meaning shall immediately notify the Chief Financial Officer of the NEORSD or his designated representative. The Chief Financial Officer will respond by sending written notices of instructions to all Bidders. The NEORSD will not be responsible for any oral instructions.

#### **IB-10 PRICE BIDS AND DISCOUNTS:**

#### A. Unit Price

The Bid price shall be per unit of items to be bid on, stated in figures in the spaces so provided. The extended submitted bid summary must equal the unit price multiplied by the estimated quantity. In case of discrepancy on unit price items, the unit price multiplied by the estimated quantity shall be considered as the intent of the Bidder. When the unit is a lump sum (LS), enter the lump sum amount under the extended submitted bid summary only.

#### B. Trade Discounts

When the Bidder offers a trade discount, the amount of such discount shall be stated on the Bid blank. Where the Bidder submits his quotation by filing his <u>catalog</u>, price list and discount, such documents shall be made part of the Bid and must be <u>separately signed</u> by the same person and in the same manner as used on the Bid form.

#### C. Discount for Prompt Payment

A discount of two percent (2%) will be taken on payment made within thirty (30) days from the invoice date for materials, supplies, equipment or nonprofessional services, unless the Bidder offers a different discount or indicates otherwise in the space provided on the Bid blank.

#### D. Mathematical Errors

The District shall have the discretion to correct math errors contained on the Bid Form in accordance with the following:

1. On each unit price estimated quantity item, the "ITEM BID AMOUNT" must equal the "UNIT BID PRICE" multiplied by the "ESTIMATED QUANTITY". For example, if the Bidder's "UNIT BID PRICE" is \$5/Unit and the "ESTIMATED QUANTITY" is 1000 Units, the "ITEM BID AMOUNT" will be \$5,000.00. In case of a discrepancy on unit bid price items, the "UNIT BID PRICE" multiplied by the "ESTIMATED QUANTITY" shall be considered as the intent of the Bidder.

2. For any portion of the Bid Form requiring an amount consisting of the sum of certain Bid Items and/or Subtotal(s) under the "ITEM BID AMOUNT" column, the sum of such Bid Items and/or Subtotal(s) shall be considered as the intent of the Bidder and will be included in calculating the "UNOFFICIAL TOTAL BID AMOUNT", regardless of the actual summed number provided by the Bidder.

3. For the portion of the Bid Form requiring the Bidder to provide an "ITEM BID AMOUNT" that shall remain below a maximum percentage when divided by other numbers indicated, the actual number provided by the Bidder shall be considered as the intent of the Bidder. Providing a number above the maximum percentage shall be a basis for rejecting the bid.

#### IB-11 COSTS, FEES, AND SURCHARGES:

Contractors shall include in their bid prices all costs and fees including labor, material, equipment rental and usage, bonding and insurance costs, transportation costs, fuel costs and surcharges, landfill disposal fees and any other surcharges, fines or fees related to this contract. No additional costs beyond the stated bid prices will be paid by the NEORSD. The Contractor's addition of costs to its bid that have not been requested by the NEORSD under the bid documents shall be a basis for rejecting the bid.

#### **IB-12 DISCOUNT USED TO DETERMINE LOWEST AND BEST BID:**

In determining the lowest and best Bid, the NEORSD will consider all Bids on a basis of the net price to be paid after deduction of the discount specified or calculated according to Section IB-11 (C), except that if the terms specified by the Bidder require payment in less than ten (10) days, unless otherwise indicated in the Invitation and Bid Sheet(s), from the date of the invoice, the discount offered will not be deducted from the price named in the Bid to determine the lowest and best Bidder, and the Bid will be considered only on the basis of the unit price actually named in the Bid. But if, notwithstanding the provisions of this paragraph, such Bid is determined to be the lowest and best Bid, the NEORSD reserves the right to accept the terms named in the Bid if such terms are to the advantage of the NEORSD as a basis for payment of invoices only, but not in any case as a basis for determining the lowest and best Bidder.

#### **IB-13 BIDDER'S DESCRIPTION OF ITEMS:**

- A. Bidders shall furnish with their Bids complete descriptions of the items they propose to furnish under the terms of the Bid.
- B. The NEORSD may require Bidders to furnish additional information and/or specifications concerning items to be purchased under the terms of the Bid.

#### **IB-14 BRAND NAMES AND SUBSTITUTIONS:**

Any brand or trade names referred to herein are for identification purposes only. Such references do not limit the bidder to the identified brands, provided the alternates offered by the bidder are equal in quality, function to the level of those specified, and are approved by the accepting facility's end-user. When bidders list a trade name and/or catalog number, NEORSD will assume the item meets the specifications, unless the submission clearly states it is an alternate, and describes specifically how it differs from the item specified. Multiple or alternative bids will not be accepted unless authorized in the specifications. Notwithstanding anything to the contrary herein, when any bid item contains the words "No Substitution", "No Sub", or any other substantially similar notation, the brand, manufacturer name and/or product number specified for such bid item shall be the only acceptable brand, manufacturer name and/or product number. In such cases, alternate products will not be considered.

#### **IB-15 SAMPLES:**

Upon request by the NEORSD the Bidders shall provide samples of the items they propose to furnish under the terms of the Invitation and Bid.

#### **IB-16 TIME OF DELIVERY:**

Bidders must state in their Bids the time necessary to deliver the items they propose to furnish. THIS TIME MUST BE STATED IN CALENDAR DAYS.

#### **IB-17 EQUAL EMPLOYMENT OPPORTUNITY:**

There shall be no discrimination exercised against any citizen in the employment of labor, whether skilled or unskilled, under this Contract; such discrimination shall be deemed to be a material breach of the Contract.

<u>Federally Assisted Contracts:</u> In the case of those contracts receiving federal assistance, the contractors and subcontractors shall be required to comply with all federally- mandated requirements regarding provision of equal employment opportunities and submit a copy of their Monthly Manpower Utilization Report, and any other federally- required documentation, to the NEORSD as well as the appropriate federal official(s) or agency(ies) involved therein. Non-compliance with this section may subject the contractor to such penalties and sanctions as prescribed under applicable federal laws.

Paragraphs IB-18 and IB-19 apply only if requirement contract Bid block is marked on Page 1.

#### **REQUIREMENT CONTRACT**

#### **IB-18 REQUIREMENT CONTRACT DEFINED:**

- A. An award of a contract made under this Bid will be termed a requirement contract.
- B. A requirement contract imposes a duty on the contractor to provide such supplies, material or equipment which is set forth in the Bid, as may be required by the NEORSD during the life of the contract.

#### **IB-19 AMOUNT OF PURCHASE UNDER THE REQUIREMENT CONTRACT:**

Unless cancelled in accordance with GC-7 of this bid documents, the total amount to be ordered under the contract awarded on this Bid shall not be less than five percent (5%).

#### **GENERAL CONDITIONS**

#### -GC-

#### **<u>GC-1</u> REJECTION OR ACCEPTANCE OF BIDS:**

The NEORSD reserves the right to reject any or all bids, and any part or parts of any bids, and also the right to waive any informalities in the bid. In awarding a contract, the NEORSD reserves the right to consider, in addition to price and discount, all elements entering into the question of determining the ability of the bidder to perform the contract satisfactorily. Any bid which is incomplete, conditional, obscure, or which contains additions not called for or irregularities of any kind, may be rejected within the discretion of the NEORSD.

#### **<u>GC-2</u> EVIDENCE OF ABILITY TO FULFILL CONTRACT:**

Bidders must present evidence to the NEORSD, when required to do so, to show that they are fully competent and have the necessary source of supply, facilities and pecuniary resources to fulfill the conditions of the contract and specifications.

#### GC-3 TIME OF AWARD:

The Board of Trustees of the NEORSD shall make and award or reject all bids within ninety (90) days following the opening of bids, unless further time is required to analyze the bids. Any extension of time beyond that date shall be subject to agreement between the Bidders and the NEORSD.

#### **GC-4 BID EVALUATION AND AWARD OF CONTRACT:**

The contract shall be awarded by the NEORSD on the basis of the lowest and best bid. The NEORSD shall be the sole judge of whether the goods and/or services proposed by the bidder meet the specific needs of the NEORSD, and shall evaluate qualified bids on the basis of bid prices submitted as well as the bidder's qualifications, compatibility and availability. In order to fairly evaluate all bids submitted, the NEORSD requires bidders to furnish numerical responses to all requested items. Exceptions and alternates will not receive consideration and shall be a basis to reject the bid. The NEORSD reserves the right to accept or reject any or all bids received, or any portion of the bids received.

#### **<u>GC-5</u> PERFORMANCE BOND:**

Performance Bond not required.

#### GC-6 RELEASE OF BOND:

Not applicable.

#### GC-7 CANCELLATION OF CONTRACT:

In the event of a default by the Contractor under this contract, the NEORSD shall have the right to terminate this agreement and pursue its remedies at law. Additionally, the NEORSD shall have the right to terminate this contract for convenience in the event that the NEORSD's Chief Executive Officer determines such termination to be in the best interest of the NEORSD.

#### GC-8 ASSIGNMENT OF CONTRACT:

The contractor shall not assign, transfer, convey or otherwise dispose of the contract, or his right to execute it or any part thereof, or assign, by power of attorney or otherwise, any of the monies due or to become due under the contract, except by previous consent of the Board of Trustees of the NEORSD in writing endorsed thereon or attached hereto, and the giving of any such consent to a particular assignment, shall not dispense with the necessity of such consent to any further or other assignments. Such assignments, transfer, or conveyance shall not be valid until filed in the office of the Chief Financial Officer of the NEORSD.

#### GC-9 DELAY FOR CAUSES BEYOND CONTROL:

If the contractor be delayed in the compliance with the terms of the contract by strikes, lockouts, fire, unusual delay by common carriers, unavoidable casualties, or any cause beyond the contractor's control, including orders, limitations or restrictions of any Government agency having jurisdiction over the subject matter of the contract, or by delay authorized by the NEORSD, or by any cause for which the Chief Financial Officer shall decide to justify the delay, then for all such delays and suspensions, the contractor shall be allowed one calendar day extension beyond the time fixed for compliance with the terms of his contract for each and every calendar day of such delay so caused in the completion of the work, the same to be ascertained by the Chief Financial Officer.

#### GC-10 PATENT:

The contractor shall be required to pay all royalties and license fees and shall hold and save the NEORSD and its officers, agents, servants and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the contract, including its use by the NEORSD, unless otherwise specifically stipulated in the contract documents. In this respect the contractor shall defend all suits or claims for infringement of any patent or license rights.

#### GC-11 DELIVERY:

Bidders shall agree to make requested delivery of materials, supplies or equipment upon the written purchase order of the Chief Financial Officer of the NEORSD and no delivery shall be accepted unless such written purchase order has first been issued.

#### GC-12 GUARANTEE

The Contractor shall guarantee that any material as furnished under this contract shall be free from all inherent defects of design, material, and workmanship for a minimum period of one (1) year after installation. The Contractor shall rectify, entirely at its own expense, any defects or failures that may develop during the guarantee period. The NEORSD will not pay freight, shipping, or any special handling expenses (including energy surcharges) for returning defective parts and materials.

#### GC-13 LABORATORY TESTS:

The NEORSD reserves the right to test all materials, equipment or supplies delivered during the life of the

contract, at a laboratory to be designated by the Chief Financial Officer of the NEORSD. Where the results of such test shows the materials, equipment or supplies are not equal to the specifications, then the expense of making such test shall be paid by the contractor.

#### **GC-14 FAILURE TO MEET SPECIFICATIONS:**

The delivery of any materials, supplies or equipment and/or the performance of any services under the contract which do not conform to contract specifications will be rejected and the contractor notified immediately. Such rejection and the reason therefore, shall be in writing.

The contractor may, if time for performance has not expired, reasonably notify the Chief Financial Officer of the NEORSD of his intention to cure and may then within the contract time make conforming delivery.

If the said contractor fails to effect immediate replacement of such rejected materials, supplies or equipment, or re-perform such rejected services, the NEORSD will purchase such materials, supplies, equipment and/or services of the character required, on the open market. The contractor shall be liable to NEORSD for any excess cost and expense incurred by the NEORSD. NEORSD shall have the right to deduct such excess cost and expense from any amounts owed to the contractor by the NEORSD under the contract.

#### GC-15 SAFEGUARDS:

Any equipment to be furnished by the terms of this bid, shall be provided with safety controls, guards and housings meeting the requirements of the safety standards of the Industrial Commission and the Department of Industrial Relations of Ohio, and the cost be included as part of the bid.

#### GC-16 STATE OR FEDERAL TAXES:

- A. The NEORSD is exempt from all sales, excise and transportation taxes, except State of Ohio gasoline tax. The price or prices bid shall be exclusive of all such taxes and will be so construed.
- B. The bid prices are subject to increase by the amount of any additional tax imposed by the Federal Government or the State of Ohio to which the NEORSD is not exempt, subsequent to the receipt of bids. Such claims for increased prices must be presented to the NEORSD within thirty (30) days after such tax becomes effective and supported by evidence satisfactory to the Legal Department of the NEORSD. Should the increase in bid prices require an increase in the contract price, such increase shall be subject to approval by the Board of Trustees of the NEORSD.
- C. The contract price is subject to reduction by the amount which an applicable tax is reduced during the period of the contract.

#### GC-17 SOCIAL SECURITIES ACT:

The contractor shall be and remain an independent contractor with respect to all services performed under

said contract, and agrees to and accepts full and exclusive liability for the payment of any and all contributions or taxes for social security, unemployment insurance, old age retirement benefits, pensions or annuities now or hereafter imposed under any state or federal law, which are measured by the wages, salaries, or other remuneration paid to persons employed by the contractor on work performed under the terms of this contract, and further agrees to obey all lawful rules and regulations and to meet all lawful requirements with are now or hereafter may be issued or promulgated under said respective laws by any duly authorized state or federal officials; and said contractor also agrees to indemnify and save harmless the NEORSD from any such contributions or taxes or liability therefore.

#### GC-18 FREIGHT ON DIRECT SHIPMENT TO THE NEORSD:

The freight prices stated in the bid shall be in accordance with lawful freight or cartage charges in existence at the time the bid is made, and bid prices shall be increased or decreased by changes in the freight or cartage rates provided that claims for additional freight or cartage be presented to the NEORSD within thirty (30) days after said increase in freight or cartage rates becomes effective. Reduction in freight or cartage prices will be deducted from the contract price. Should the increase in bid prices require an increase in the contract price, such increase shall be subject to approval by the Board of Trustees of the NEORSD.

#### GC-19 PAYMENT:

Payment shall be made for the net number of units accepted after due and proper delivery, accompanied by invoices at the bid price per unit, less discount for prompt payment if appropriate.

#### GC-20 WORKERS' COMPENSATION:

The contractor shall, during the term of this contract, subscribe to and comply with the Worker's Compensation Laws of the State of Ohio and pay such premiums as may be required and to save said NEORSD harmless from any and all liability arising from said act. The Contractor shall also furnish at the time of delivery of this contract and at such other times as may be applicable a copy of the current official certificate or receipt to show the payments herein-before referred.

#### GC-21 INDEMNITY CLAUSE:

The Contractor shall indemnify, keep and save harmless the NEORSD and its respective officers, agents and employees, against all suits or claims that may be based upon any injury to persons or property that may occur, or that may be alleged to have occurred in the course or as the result of the performance of all or any part of this contract by the Contractor, arising out of the negligent act or omission of the Contractor or its employee, and whether or not the person(s) injured or whose property was damaged were third parties or employees of the Contractor, and the Contractor shall at its own expense defend the NEORSD in all litigation, pay all attorney's fees and all costs and other expenses arising out of the litigation or claim incurred in connection therewith; and shall, at its own expense, satisfy and cause to be discharged such judgments as may be obtained against the NEORSD, or any of its officers, agents or employees. Nothing herein shall be construed to limit the Contractor's indemnification obligations to the limits of insurance provided. The indemnification obligations shall survive any termination of the contract.

In case of any and all claims against the NEORSD and its officers, agents or employees, by any employee of the Contractor, its agents, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation of the above paragraph shall not be limited

in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor's, or other person under applicable worker's or workmen's compensations benefit or disability laws, it being clearly agreed and understood by the parties hereto that the Contractor expressly waives any immunity the Contractor might have had under such laws. By executing the contract, the Contractor acknowledges that the parties have mutually negotiated the foregoing waiver.

#### GC-22 INSURANCE REQUIREMENTS:

The contractor shall maintain during the term of this contract Commercial General Liability insurance on an occurrence coverage basis, including bodily injury, personal injury, property damage, and broad-form contractual liability arising from or relating to Contractor's work of not less than the following amounts:

(a) Contractor's General Liability (occurrence basis, limits per occurrence and annual aggregate):

\$2,000,000	General Aggregate
\$2,000,000	Products/Completed Operations Aggregate
\$2,000,000	Personal Injury and Advertising Injury
\$2,000,000	Bodily Injury and Property Damage Limit - Each Occurrence

The NEORSD shall be named as additional insured on the Contractor's Commercial General Liability policy and Excess/Umbrella Liability. The General Liability Insurance limit requirement can be satisfied by the purchase and maintenance of any combination of primary, excess and/or umbrella insurance. Commercial General Liability and Umbrella/Excess limits of liability (including Products/Completed Operations coverage) shall apply on a per project basis.

In addition to protection for the Contractor's employees and vehicles, the Contractor shall take out and maintain during the life of this contract public liability and public property damage insurance in the amount not less than \$1,000,000.00 to any one person, for each additional person involved, and in any occurrence, wherein the NEORSD is named as an additional insured to protect the NEORSD from all claims or damages from personal injury, including accidental death, as well as from claims for property damage which may arise from the loading, hauling, and unloading operations hereunder.

The NEORSD reserves the right to refuse the insurance policies and demand other insurance if the policy language, insurance company's ability to make payments and/or any other reason makes the policy unacceptable in the sole judgment of the NEORSD. The Contractor shall replace the policy with insurance acceptable to the NEORSD. Failure to do so may result in the not being awarded the contract. In addition, with respect to the contract involved, the Contractor shall have the insurance company write into the policy the following language: "thirty days prior to any reduction of the insurance coverage or cancellation of the policy, the NEORSD (Attention NEORSD Risk Manager) shall be notified."

The successful contractor shall submit the certificate of insurance for the policy or policies prior to award upon notification from the NEORSD. The certificate of insurance shall reference the contract title as stated in the bid documents.

#### GC-23 FORCE MAJEURE

Neither party to this Agreement shall be deemed in default in the performance of its obligations if that party is prevented or delayed from performing by forces beyond its control, (Hereinafter "Force Majeure") including, without limitation, acts of God or of a public enemy; acts of a municipal, state, federal or other governmental legislative, administrative or judicial entity; any catastrophe resulting from flood, fire, extreme weather conditions, explosion; labor disturbances; and other cause beyond the control of the non-performing party. Contractor may be granted a time extension and cost adjustment for its performance based on the duration of the Force Majeure.

#### **GC-24 PRECEDENCE OF BID DOCUMENTS:**

In the event of any conflict between the Instructions to Bidders (IB), the General Conditions (GC), the Supplemental General Conditions (SGC) and the Detailed Specifications (DS) of the bid package, the documents shall govern in the following order: 1) Detailed Specifications; 2) Supplemental General Conditions; 3) General Conditions; and 4) Instructions to Bidders.

Paragraphs GC-25 and GC-26 shall apply only if the requirement contract bid block is marked on bid Page <u>1</u>.

#### **REQUIREMENT CONTRACT**

#### GC-25 DURATION OF CONTRACT:

The proposed contract shall be effective upon its execution by the NEORSD and for the purpose of accepting delivery shall continue in full force and effect for the term stated in the contract (or until appropriated and approved funds have been expended) unless otherwise indicated.

#### GC-26 REDUCTION IN PRICES:

The contractor agrees that if the price to the general trade is reduced while the contract is in effect, the NEORSD will receive the benefit of such reduction immediately. However, if the contract price is below the price to the general trade at the time the contract is awarded, the reduction provision will be effective only when the recognized price to the general trade reaches a lower level than the contract price, or when the contractor reduces his own price to a level lower than the contract price.

# Agreement

For	THIS AGREEMENT, made this day of
,	_, by and between the Northeast Ohio Regional Sewer District ("District"), duly authorized
pursuant to Resolution	Noof the Board of Trustees of the said District, adopted, and
(a corp	pration organized and existing under the laws of the State of, and authorized order
business in the State of C	hio) - (a partnership consisting of) (an individual doing
business as	) ("Contractor").
WHEREAS, it was or Northeast Ohio Regional	te of the conditions of said award that a formal contract should be executed by and between the Sewer District and the Contractor.
WITNESSETH: The Contractor has ag	reed for itself, its representatives, successors and assigns, with the District, as follows:
The Contractor shall furr	ish the following services, materials, supplies or equipment:
	for the consideration of <b>and 00/100 (\$)</b>
Dollars.	
The Invitation to Bid, the part hereof as fully as if l	General Conditions, the Specifications and the Bid, all which are incorporated herein and made lerein rewritten, constitute this contract.
IN WITNESS WHE	<b>REOF</b> , the parties hereunto favor affixed their signature the day and year first above written.
CONTRACTOR	NORTHEAST OHIO REGIONAL SEWER DISTRICT
	BY
BY	<u>Chief Executive Officer</u>
	BY
x 0 V	President of the Board of Trustees

Revised April 8, 2016

#### **SUPPLEMENTAL GENERAL CONDITIONS (SGC)** Jennings and Old Denison Combined Sewer Cleaning 2019

#### SGC-1 PURPOSE OF THIS BID

The purpose of this bid, and the requirement contract awarded following an evaluation of the bids received, is to clean the Old Denison Avenue combined sewer, the Jennings Road combined sewer, and related components flowing to the Jennings Road Pump Station (see **Appendix A – Cleaning Sections**). The Jennings Road Pump Station and combined sewer is owned and operated by the Northeast Ohio Regional Sewer District (herein referred to as the "District"). The Old Denison Avenue combined sewer is owned and operated by the City of Cleveland. The locations and scope of the work are listed in the **Detailed Specifications**.

#### SGC-2 CONTRACT DURATION

The proposed contract shall be effective upon its execution by the District and shall continue in full force and effect for three (3) months, or until the funds appropriated to this contract are spent, whichever should occur first from the effective date of this contract.

#### SGC-3 WAGE RATES

This is a non-prevailing wage rate contract.

#### SGC-4 MANDATORY PRE-BID MEETING AND SITE INSPECTION

All Bidders/Contractors shall acquaint themselves with the project and work sites by attending a **mandatory pre-bid meeting and site inspection** August 14, 2019 at 1:00pm beginning at:

Environmental and Maintenance Services Center (EMSC) 4747 East 49<sup>th</sup> Street Cuyahoga Heights, Ohio 44125

Contractors should email the Maintenance Services Contract Administrator, Jennifer Hrlec, at <u>hrlecj@neorsd.org</u> with the company and individuals who plan to attend. Attendees should arrive early to sign in. Also, attendees must wear a hard hat, steel toe boots, safety glasses, and high visibility clothing.

All Contractors not familiar with the equipment, scope of work and facilities shall acquaint themselves with the tasks to be performed under this contract. This requirement applies to all Contractors for a bid to be considered responsive. During the site inspection, the Contractor shall learn the requirements to fulfill the contract specifications. The means and methods of the Contractor shall be compatible with the present operation and facility and shall not create nuisances for area residents/businesses. Any conditions resulting from the Contractor's actions or inactions that result in complaints shall be corrected immediately to the satisfaction of the District.

Failure by the Contractor to become familiar with the existing conditions which results in the Contractor's subsequent inability to execute the contract shall in no way relieve the Contractor of its obligations under the contract. Likewise, no plea of ignorance of conditions that may exist or that may hereafter exist or difficulties that may be encountered after commencement of work under this contract will be accepted if it is determined that these complications were a result of the Contractor's failure to make prudent examinations and investigations.

#### SGC-5 DEFINITIONS

For the purposes of this bid, sewer cleaning shall mean the work performed by a Contractor with Contractor-supplied personnel and equipment. The Contractor shall be capable of vacuuming and/or jetting piping to remove grit, debris, and other waste material commonly found in District's collection system. While it is anticipated that most waste material in the Jennings Road and Old Denison Ave. combined sewers and associated structures will be characterized as hazardous waste, there is a potential that the material may be non-hazardous/non-Federal Resource Conservation and Recovery Act (RCRA) regulated material.

#### SGC-6 QUALIFICATIONS AND BID SUBMITTALS

For a bid to be considered for a contractual award, the Contractor shall be capable of supplying the personnel, equipment, and services listed in the **Detailed Specifications**. In addition, the Contractor shall have been engaged in the business of sewer cleaning services for a minimum of the last five (5) years, successfully proposing and completing a minimum of five (5) projects for heavy industry, commercial establishments, and/or governmental agencies. It is preferred that the work performed consist of projects involving large diameter (36" or greater) municipal sewer cleaning projects. The District will not consider a bid provided by a Contractor or subcontractor that has been issued a notice of violation or citation from the Ohio Environmental Protection Agency (EPA), United States EPA (USEPA) or the District within the past five (5) years.

#### Each Contractor shall submit the following required information with the bid:

1) Completed Invitation and Bid with authorized signature

#### Failure to submit ALL items stated above, shall be a basis for rejecting the bid.

The apparent two low bidders shall provide to the District the following documents via email to davismoddie@neorsd.org within seventy-two hours (72) after bid opening, excluding weekends and District holidays. Failure to submit such documents within the 72-hour timeframe described above shall be a basis for rejection of the bid.

- 1) Signed and notarized Non-Collusion Affidavit
- 2) Completed **Reference Form** with projects supporting the above detailed qualifications
- 3) Company letterhead with number of years incorporated and working in the Northeast Ohio area with present and former business names
- 4) Company name, location, and address of at least two (2) Ohio EPA-approved solid waste landfills and at least one (1) Ohio EPA-approved hazardous waste disposal facility that is approved to accept hazardous waste contaminated with fecal coliform. Also, the applicable Ohio EPA license and/or permit for each landfill and disposal facility.

Note: The contractor is required to analyze all samples at the contractor's expense. The receiving facility must approve the analysis.

- 5) In addition, the Contractor shall provide a copy of the transporter's certification to haul hazardous waste material with the RCRA identification number.
- 6) Written Health and Safety Plan (HASP) (**DS-5**)
- 7) Completed **Notice of OSHA Violations Report** listing all OSHA violations and/or citations received within the past five (5) years for any activity performed by the company
- 8) Completed **Notice of EPA and NEORSD Violations Report** listing all Ohio (or other state) EPA, USEPA or District violations and/or citations within the past five (5) years for any activity performed by the company
- 9) Company substance abuse policy (SGC-15)
- 10) Any additional documents listed in the Checklist for Required Documents

#### SGC-7 GENERAL PERMITS AND INSPECTIONS

The Contractor is responsible for securing and paying for all required permits (excluding environmental regulatory permits referenced in SGC-8) and licenses and will apply, secure, and pay for any inspections, tests and approvals required by federal, state, and local regulatory authorities. The costs of permits and inspections should be incorporated into the bid unit prices. *No additional payments shall be made for additional fees or charges.* 

#### SGC-8 ENVIRONMENTAL REGULATIONS AND PERMITS

The District requires all Contractors and sub-contractors to comply with local, state, and federal environmental laws and regulations. The work at each specified location shall not commence until approved by the District Representative.

The District will be responsible for obtaining the regulatory permits associated with the generation of hazardous waste. The Contractor shall be responsible for ensuring transport of the waste by a hauler with a valid USEPA ID Number. The Contractor shall be responsible obtaining approval from the appropriate licensed disposal facility for the disposal of waste material (including hazardous waste and non-hazardous solid waste). The District shall review and approve all proposed licensed disposal facilities. Permits and the approval to begin work shall be obtained from the District prior to the initiation of any sewer cleaning activities.

Additional permitting considerations:

- 1) The Contractor shall have all required permits and approvals before work begins.
- 2) The Contractor shall have hard copies of all required permits and approvals on site during work activities.
- 3) The Contractor shall not "knowingly" disturb or damage a habitat if there is evidence that an endangered species is present.

- 4) The Contractor shall not cut down and/or remove any trees, shrubs, or brush from the project site without prior approval from the District's representative. Also, the Contractor shall follow the policy detailed in Appendix D Tree and Shrub Removal if any tree or shrub trimming/removal is required to perform the work.
- 5) No work shall be performed that would require United States Army Corps of Engineers (USACE), U.S. Environmental Protection Agency (US EPA), Ohio Environmental Protection Agency (Ohio EPA), or Ohio Department of Natural Resources (ODNR) permits without prior consent from the District's designated representative and the applicable regulatory agency.
- 6) Maintenance events requiring the use of a fire hydrant shall require a Fire Hydrant Operation Permit issued by the City of Cleveland Water Department. The Contractor shall follow all procedures set forth in the permit.
- 7) Maintenance requiring the closure of a street and/or sidewalk shall require a Street Closure Permit issued by the City of Cleveland. The Contractor shall follow the most up to date permitting procedures.

If at any time there are any changes to the work, the Contractor shall notify the District Representative before proceeding.

#### SGC-9 WORK PERFORMED WITHOUT SUBCONTRACTING

No subcontracting shall be permitted without written approval of the subcontractor from the District, prior to the start of the job. The Contractor shall have a sufficient number of experienced personnel and hauling vehicles needed to perform the work. The Contractor may lease the hauling vehicles.

#### SGC-10 BACKGROUND CHECKS

The District reserves the right to perform, at its own expense, a background check on any Contractor employee for the purposes of safety and security to District employees and facilities.

#### SGC-11 SECURITY

All Contractor employees shall bring their state identification cards to the work site daily.

The Contractor shall mark both sides of each vehicle used to perform the work under this contract with clearly identifiable letters and numbers no less than six (6) inches in height and mounted to be readily visible and identified by law enforcement officers.

In addition, any injuries that occur to the drivers, or accidents that occur to Contractor's owned or leased vehicles shall be reported immediately to the District Security Officers and the District project representative. A copy of all Injury and/or Accident Reports written shall be sent to the District designated representative immediately and the District Manager of Health and Safety.

The Contractor shall remain within the area where the work is to take place. Unauthorized entry to other areas shall not be tolerated.

#### SGC-12 DISTRICT SAFETY REQUIREMENTS

District has safety policies in place covering all aspects of work on the property. Contractors shall be aware of and follow the District's safety policies.

Hazards include, but are not limited to: Confined spaces, oxygen deficient/flammable/toxic atmospheres, hazardous chemicals, heavy traffic, slippery surfaces, fall exposure, pressurized gas, moving equipment, open water, biological organisms, and pests.

All Contractor employees shall always wear the following personal protective equipment (PPE), at minimum, on District sites: hard hat, steel toe boots, safety glasses, and high visibility, reflective vest, shirt, or jacket. In addition, any PPE that is required by applicable regulations or recommended in industry standards for the type of work being performed shall also be worn/used.

The following list of items is intended to cover common situations a Contractor may encounter, but does not include all situations. For those situations not addressed, the Contractor shall ask the District representative for guidance.

- 1) Control of Hazardous Energy: Contact District representative.
- 2) Confined Space Entry: Contact District representative before entering.
- 3) Excavation: Contact District representative before digging. City of Cleveland Street Closure or Opening Permit required.
- 4) Hazardous Chemicals: Proper storage and disposal required. Remove all unused chemicals—no disposal on site. See SGC-14 for further requirements.
- 5) District property: Permission is required to use any District equipment/tools/vehicles. Contact District representative.
- 6) Hot Work: Contact District representative before work and supply extinguisher.
- 7) Tools/Ladders/Scaffolds: Contractor shall provide these items in good repair and use them properly.
- 8) Driving on Property: Observe posted speed limits and parking restrictions. Observe conditions in City of Cleveland Street Closure or Opening Permit, if applicable.
- 9) Smoking: No smoking is permitted in any building, at any location, nor in areas near chemicals or flammables.

The Contractor is responsible for providing a work environment that is safe for personnel working on the job site, District personnel, and the public, including motorists attempting to bypass the work zone.

In instances where lane closures are necessary to protect the work zone, as prescribed by the Ohio Manual of Uniform Traffic Control Devices (OMUTCD), the Contractor will coordinate efforts with state, district, and local authorities, including the local jurisdiction's emergency forces. If those entities require it, the Contractor shall provide law enforcement officers as required to protect the construction zones. The Contractor shall be directly compensated for providing safety personnel as required and as authorized in advance by the District.

The Contractor is responsible to leave the work site each day in a clean and safe condition, free of slipping, tripping, and other safety hazards.

Any injuries or accidents that occur involving individuals and/or vehicles, no matter how minor the incident, shall be reported immediately to the District's Security Officers at 216-881-6600 and to the proper authorities at the location of the incident. A copy of any incident reports written shall be emailed to the District designated representative and the District Manager of Health and Safety.

#### SGC-13 ADDITIONAL SAFETY REQUIREMENTS

In addition to the District's safety and security policies, Contractor employees and the completed project shall conform to all applicable federal, state, and local safety and security laws and standards, including, but not limited to:

- 1) Occupational Safety and Health Act (OSHA) and all amendments (www.osha.gov)
- 2) National Fire Protection Association (NFPA) codes and standards (<u>www.nfpa.org</u>), including, but not limited to:
  - a. NFPA 70 National Electric Code®
  - b. NFPA 101 Life Safety Code®
- 3) The Ohio Revised Code (ORC) and the Ohio Administrative Code (OAC)
- 4) Local building code requirements

Any equipment to be furnished by the terms of this bid shall meet the requirements of the safety standards of the Industrial Commission and the Department of Industrial Relations of Ohio, and the cost shall be included as part of the bid.

#### SGC-14 HAZARDOUS CHEMICALS, SPILLS AND NUISANCES

Before bringing any hazardous chemical to any work site, the Contractor shall email the Safety Data Sheet (SDS) to the District representative. While a hazardous chemical is on site, the Contractor shall always store the SDS near of the chemical so that the SDS is readily available in the event of a spill or other exposure to the chemical. The SDS shall verify the Contractor's compliance with OSHA Standards.

The Contractor shall leave the work site in a clean and safe condition and prevent the creation of all nuisances, including but not limited to: noises, odors, trash, and spills. The cost to clean-up trash, spills, etc. caused by the Contractor shall be paid by the Contractor.

In addition, no liquid shall be permitted to drain or be washed down into any storm sewer catch basin. Any environmental fines or fines for other violations occurring as a result of negligence or intentional conduct by the Contractor shall be paid directly by the Contractor. Any District costs involved with the investigation and cleanup of any spills caused by the Contractor shall be deducted from the most current invoice(s).

Further, the Contractor shall be subject to civil and criminal laws requiring the storage, transport, and disposal of all wastes in an approved and controlled manner. It shall be the Contractor's duty to monitor and immediately report any unauthorized spill or discharges of any waste in transit to District Security at 216-881-6600 and the District designated representative, so that all authorities may, in turn, be properly notified. Immediate and complete corrective action shall be the sole responsibility of the Contractor in compliance with regulations of authorities having jurisdiction.

#### SGC-15 SUBSTANCE ABUSE POLICY

The District has in place a Substance Abuse Policy for the protection of its employees and customers. All Contractors shall have a company substance abuse policy.

#### SGC-16 INVOICE PREPARATION AND PAYMENTS

The Contractor shall, at the end of each month, submit an invoice detailing the work performed that month to <u>accountspayable@neorsd.org</u>. The invoices shall contain the District purchase order number and detail the services rendered as described on the purchase order. See **DS-11** for the substantiation of the work that is required to pay the invoices.

After the charges have been verified, the District shall pay for the services. The District shall have the right to withhold payment on any invoice to the extent that items are improperly billed, or work has not been properly performed or substantiated.

#### SGC-17 ADDITIONAL COSTS

The Contractor is responsible to include in the unit bid prices on the **Invitation and Bid** all costs for performing the work specified in the detailed specifications. *No additional payments shall be made for additional fees or charges.* 

#### SGC-18 ADDITIONAL WORK

The District shall not be liable, and payment shall not be rendered for any additional work performed by the Contractor, that is not detailed in this contract or is not pre-approved and authorized in writing by the District representative.

#### SGC-19 GENERAL LIABILITY INSURANCE

<u>General Liability Insurance</u>: Commercial General Liability insurance on an occurrence coverage basis, including bodily injury, personal injury, property damage, and broad-form contractual liability arising from or relating to Contractor's work of not less than the following amounts:

1) Contractor's General Liability (occurrence basis, limits per occurrence and annual aggregate):

\$2,000,000	General Aggregate
\$2,000,000	Products/Completed Operations Aggregate
\$2,000,000	Personal Injury and Advertising Injury
\$2,000,000	Bodily Injury and Property Damage Limit - Each Occurrence

The District shall be named as additional insured on the Contractor's Commercial General Liability policy and Excess/Umbrella Liability. The General Liability Insurance limit requirement can be satisfied by the purchase and maintenance of any combination of primary, excess and/or umbrella insurance. Commercial General Liability and Umbrella/Excess limits of liability (including Products/Completed Operations coverage) shall apply on a per project basis.

#### SGC-20 CONTRACTOR'S POLUTION LIABILITY INSURANCE

<u>Contractor's Pollution Liability</u>: Contractor shall purchase and maintain in force insurance covering loss and liability arising out of or relating to Work that includes activities that could result in or give rise to a contamination or pollution incident or condition. Insurance shall cover and include claims alleging bodily injury, property damage or cleanup, which shall include investigation, response, removal, remediation, and neutralization of the pollution condition both

on and off site claims or to any other location to which Hazardous Materials/Regulated Substances were transported from the Site.

- 1) Contractor's Contractors Pollution Liability limits of not less than:
  - \$2,000,000
    \$2,000,000
    Bodily Injury and Property Damage, Third-Party Claims, each occurrence
    \$2,000,000
    \$2,000,000
    Bodily Injury and Property Damage, Third-Party Claims, annual aggregate
    \$2,000,000
    Clean-up, Response, and Remediation On-Site, each occurrence
    \$2,000,000
    Clean-up, Response, and Remediation Off-Site, each occurrence

#### SGC-21 STATE AND FEDERAL EMPLOYEE BENEFITS LAWS

The Contractor shall be and remain an independent Contractor with respect to all services performed hereunder and agrees to and does hereby accept full and exclusive liability for the payment of any and all contributions or taxes for social security unemployment insurance, or old age retirements benefit, pensions, or annuities now or hereafter imposed under any state or federal law which are measured by the wages, salaries or other remunerations paid to persons employed by the Contractor and work performed under the terms of this contract, and further agrees to obey all lawful rules and regulations and to meet all lawful requirements which are now or hereafter may be issued or promulgated under said respective laws by any duly authorized State or Federal officials; and the Contractor agrees to indemnify and save harmless the District from any contributions or taxes or liability thereof.

#### SGC-22 INDEMNITY CLAUSE

The Contractor shall indemnify, keep and save harmless the District and its respective officers, agents and employees, against all suits or claims that may be based upon any injury to persons or property that may occur, or that may be alleged to have occurred in the course or as the result of the performance of all or any part of this contract by the Contractor, arising out of the negligent act or omission of the Contractor or its employee, whether or not the person(s) injured or whose property was damaged were third parties or employees of the Contractor, and the Contractor shall at its own expense defend the District in all litigation, pay all attorney's fees and all costs and other expenses arising out of the litigation or claim incurred in connection therewith; and shall, at its own expense, satisfy and cause to be discharged such judgments as may be obtained against the District, or any of its officers, agents or employees. Nothing herein shall be construed to limit the Contractor's indemnification obligations to the limits of insurance provided. The indemnification obligations shall survive any termination of the contract.

In case of any and all claims against the District and its officers, agents or employees, by any employee of the Contractor, its agents, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation of the above paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor's, or other person under applicable worker's or workmen's compensations benefit or disability laws, it being clearly agreed and understood by the parties hereto that the Contractor expressly waives any immunity the Contractor might have had under such laws. By executing the contract, the Contractor acknowledges that the parties have mutually negotiated the foregoing waiver.

#### SGC-23 WORKERS' COMPENSATION

The Contractor shall comply with the Ohio Workers' Compensation Act, and shall cover all employees working on this contract and under the control of the Contractor, and shall relieve the District from any costs due to accidents or other liabilities mentioned in said Act. The Contractor shall also furnish at the time of delivery of this contract and at such other times as may be requested, the official certificate or receipt showing the payments hereinbefore referred to, and shall furnish to the Chief Legal Officer proof, as required, that adequate workers' compensation insurance is provided. Any class of employees engaged in work on this contract which is not covered by the Workers' Compensation Act shall be insured by the Contractor under Employer's Liability Insurance and/or United States Longshoremen's and Harbor Worker's Compensation Act, and other act requiring coverage for Liability under Admiralty or Federal Jurisdiction.

#### SGC-24 INSURANCE FOR PUBLIC PROTECTION

In addition to protection for the Contractor's employees and vehicles, the Contractor shall take out and maintain during the life of this contract public liability and public property damage insurance wherein the District is named as an additional insured to protect the District from all claims or damages from personal injury, including accidental death, as well as from claims for property damage which may arise from the cleaning, loading, hauling, unloading and disposal operations hereunder. A copy of the certificate(s) of insurance for each policy or policies shall be deposited with the District before the commencement of any work under the contract.

The District reserves the right to refuse the insurance policies and demand other insurance if the policy language, insurance company's ability to make payments and/or any other reason makes the policy unacceptable in the sole judgment of the District. The Contractor shall replace the policy with insurance acceptable to the District. Failure to do so may result in the contract being revoked. In addition, with respect to the contract involved the Contractor shall have the insurance company write into the policy the following language: "thirty days prior to any reduction of the insurance coverage or cancellation of the policy, the District (Attention: Risk Manager) shall be notified." The amount of the insurance shall be as follows:

<u>Public Liability Insurance</u> - in the amount not less than \$2,000,000 for injuries, including accidental death, to any one person, and for each additional person involved (two or more persons).

<u>Public Property Damage Insurance</u> - in the amount not less than \$2,000,000 in any occurrences to cover damages caused during the execution of this contract to vehicles and any other properties.

#### SGC-25 DAMAGE TO PROPERTY

The Contractor is responsible to immediately repair any buildings, roadways, pieces of equipment, sewers or other property damaged during the execution of the work specified herein, whether owned by the District or a third-party, including the City of Cleveland-owned Old Denison Avenue combined sewer. Failure by the Contractor to make repairs in a reasonable time may result in the District making the necessary repairs and deducting the repair costs (materials and labor) from the next invoice(s) submitted by the Contractor.

#### SGC-26 BID INQUIRIES

All questions regarding any irregularities and request for information should be submitted via email to the District Maintenance Services Contract Administrator, Jennifer Hrlec, at <u>hrlecj@neorsd.org</u> and they will be answered as soon as is practicable. Those questions developing information that, in the opinion of the District, should be available to all persons or firms submitting a bid, will be distributed as an addendum to the bid documents. The District will not be responsible for any oral instructions and/or opinions. *Questions will not be accepted after 12:00 p.m., August 15, 2019.* 

#### SGC-27 BID SUBMITTAL

Bidders shall complete and return all the contents of the bid package distributed by the Bid Opening date and time. The official time shall be as stated on the atomic time stamp clock designated as the official clock located at the District's Security Desk at the George J. McMonagle Administration Building. These documents shall become a part of the finalized contract with the successful bidder.

#### SGC-28 BASIS FOR EVALUATION OF BID

The District will be the sole judge of whether the bids submitted meet the specific needs of the District and will evaluate qualified bids based on lowest cost and best bid received. The bids shall be evaluated using *bid unit prices* submitted on the **Invitation and Bid** and the qualifications of the bidder. Any contract awarded pursuant to this bid shall be written for the corrected, (if any multiplication or addition errors) extended submitted bid summaries and the grand total of the submitted bid dollar amounts. The District reserves the right to accept or reject any or all bids received, or any portions of bids received.

#### SGC-29 CONTRACT TERMINATION

In the event the Contractor does not fully comply with the conditions and obligations of this agreement and these specifications or the District is not satisfied with the vendor's performance under this agreement, the District shall have the right to terminate this agreement and pursue its remedies at law.

The District also reserves the right to require the Contractor to perform the services again in conformity with contract requirements, at no increase in contract amount. If the work remains deficient, the District reserves the right to have the work completed by other means and deduct the cost thereof from the payment due to the Contractor.

When the defects in services cannot be corrected by re-performance, the District may:

- 1) Require the Contractor to take necessary action to ensure that future performance conforms to contract requirements.
- 2) Reduce the contract price to reflect the reduced value of the services performed.
- 3) By contract or otherwise, perform the services and charge to the Contractor any cost incurred by the District that is directly related to the performance of such service.

Additionally, the District shall have the right to terminate this agreement for convenience in the event the District's Chief Executive Officer determines such termination to be in the best interest of the District.

#### DETAILED SPECIFICATIONS (DS) Jennings and Old Denison Combined Sewer Cleaning 2019

#### DS-1 CONTRACT PURPOSE AND SCOPE

The intent of this contract is to remove, test, and dispose of debris from the Jennings Road combined sewer and pump station wet well, which are owned and operated by the Northeast Ohio Regional Sewer District (herein referred to as the "District"), and the Old Denison Avenue combined sewer, which is owned and operated by the City of Cleveland. These facilities consist of sewers, manholes, piping, and chambers that can accumulate grit, debris, and other waste material commonly found in a wastewater treatment plant collection system. The sewer cleaning services to be covered under this contract are beyond the normal scope of the District's cleaning equipment and personnel and are more cost-effective when performed by contractors.

Sewer cleaning services shall mean the work performed by a Contractor with Contractor-supplied personnel and equipment capable of vacuuming and/or jetting piping to remove grit, rags and other waste material found in the work area. While it is expected that the waste material removed from the Jennings Road and Old Denison Avenue combined sewers and associated structures will be characterized as hazardous waste, there is a potential that the material may be non-hazardous/non-Federal Resource Conservation Recovery Act (RCRA) regulated material. In addition, since this material was generated in a combined sewer system and contains detectable concentrations of the bacteria fecal coliform, if the material is characterized as hazardous waste, it can likely only be disposed of at a hazardous waste treatment and disposal facility and likely cannot be disposed via land application at a hazardous waste disposal facility.

The Contractor shall provide all labor, equipment, materials, tools, and incidentals necessary to complete the work, including but not limited to: air monitoring equipment, personal protective equipment (PPE), supervision, coordination, storage containers, hauling vehicles, fuel, etc. The work shall be conducted during normal business hours, Monday through Friday. Work can be performed year-round. The District designated representative shall monitor the work.

#### DS-2 FACILITY LOCATIONS

Facility Name	Facility Address
Old Denison Avenue Sewer	Old Denison Avenue, East of Jennings Road,
	Cleveland, OH 44109
Jennings Road Sewer, Chamber	Jennings Road between Old Denison Avenue and the
Structures and Ellipticals Between	Jennings Road Pump Station, Cleveland, OH 44109
Chambers	
Jennings Road Pump Station Wet Well	4029 Jennings Road, Cleveland, OH 44109

See attached Appendix A – Cleaning Sections for location specifics.

#### DS-3 DEFINITIONS

- A. Chemical of Concern (COC): Chemical that is or is suspected to be present in grit, debris, soil, soil vapor, water, and/or groundwater at the work site as a result of historical land use.
- B. Contaminated Material: A material (grit, debris, soil, soil vapor, water, and
groundwater) that is contaminated with one or more COCs at concentrations that exceed applicable regulatory comparison standards.

- C. **Debris**: The debris to be removed may vary in consistency and type and may include any combination of small grit-like particles, silty or sandy materials, soft organic materials, cobble size pieces, rope, wire, rags, large bulky items, concrete objects, and other items not yet identified. Brick and mortar that has been collected during cleaning operations is also considered debris. **Some debris may be contaminated, as defined above.** The debris to be removed may be hard and may require removal with hand-held mechanical equipment.
- D. **Hazardous Waste**: A waste that exhibits any of the characteristics as identified in OAC 3745-51 and defined in OAC 3745-51-03.
- E. Licensed Disposal Facility: A facility that has obtained the necessary permits and/or licenses required pursuant to federal, state and/or local law to accept materials for permanent burial, destruction, treatment, or recycling. Facilities are licensed based on the materials to be accepted such as Solid Waste, Hazardous Waste, and Petroleum Contaminated Soil.
- F. **Solid Waste**: Any discarded material that meets the definition set forth in 40 CFR 261.2 and OAC 3745-27-01.
- G. **Storage:** The accumulation, collection, or stockpiling of material(s) on-site or off-site.
- H. Supplementary Limitations: The District's Code of Regulations, Title II Pretreatment Regulations contains the list of compounds and concentration limits for acceptance of water discharged into the District's sewer system. The Supplementary Limitations are in Section 2.0305 of Appendix B – Pretreatment Regulations.
- I. **Treatment**: Use of any method, process, or technique other than storage or disposal designed to change the physical, chemical, or biological character or composition of one or more COCs in Contaminated Material to render it non-hazardous or less hazardous; safer to transport, store, or dispose of; or amenable for recovery or reduced in volume.

#### DS-4 CLEANING EQUIPMENT

The Contractor shall provide all supervision, coordination, labor, equipment, materials, tools, and incidentals necessary to complete the work.

The Contractor shall be capable of providing the following equipment to complete the work in a cost effective, efficient, and safe manner.

<u>VACUUM TRUCK(S)</u> : Up to and including 16 cubic yard capacity
<ul> <li><u>COMBINATION JETTER/VAC TRUCK(S)</u>: Up to and including 100 gpm</li> </ul>
<u>JET TRUCKS</u> : Up to and including 80 gpm
<u>WATER BLASTERS</u> : Up to and including 10,000 psi
<u>WITHDRAWAL PUMPS</u> : Up to and including 6-inch diameter

<b>OTHER EQUIPMENT</b> – This equipment shall include, but is not limited to:			
<ul> <li>service truck(s)</li> </ul>	• bucket machine(s)	• air compressor(s) and hoses	• vacuum and jetting hoses
<ul> <li>clam truck(s)</li> </ul>	• power spade(s)	• duct tape	• chipping and jack hammer(s)
• skid loader(s)	• pressure washer(s)	• ladders	<ul> <li>hose connections and fittings</li> </ul>

<b>CONFINED SPACE ENTRY AND SAFETY EQUIPMENT</b> – This equipment shall include,			
but is not limited to:			
• oxygen and combustible gas meters	• PPE such as goggles	• forced air and ventilation fans	<ul> <li>lockout/tagout locks and labels</li> </ul>
<ul> <li>tripods</li> </ul>	• gloves	• coveralls	• boots
hardhats	• respirators	• entry permits	• safety ropes
• barricades	• cones	• safety flags	• safety harnesses

The Contractor shall also follow the directions below when using cleaning equipment for this work:

- A. Provide ample equipment of suitable design to complete the work as indicated and directed.
- B. Final cleaning shall use a finishing bucket or other device acceptable to the District designated representative.
- C. Power washers and water blasters are not considered suitable equipment for cleaning of sewers, unless specified in other sections of these Specifications.

#### DS-5 HEALTH AND SAFETY REQUIREMENTS

The Contractor shall have a representative on site who is responsible for all health and safety matters. If the site representative's primary job function is not health and safety related, the Contractor shall also provide the contact information of at least one employee, whose full-time job responsibilities include health and safety as a primary function.

All personnel supplied by the Contractor shall be trained and familiar with all applicable safety and health regulations including, but not limited to, the following:

#### **GENERAL CONFINED SPACE REQUIREMENT** -

Shall comply with (OSHA 29CFR 1910.146)

#### PERSONAL PROTECTIVE EQUIPMENT/RESPIRATOR USAGE -

Shall comply with (OSHA 29CFR 1910.134)

<u>LOCKOUT/TAGOUT</u> –

Shall comply with (OSHA 29CFR 1910.147)

#### HAZWOPER –

Shall comply with (OSHA 29CFR 1910.120)

The Contractor shall ensure that all personnel are sufficiently trained on all hazards that will be encountered and have proficient means and methods in place for safely performing all tasks during this contract. Listed below are <u>some</u> of the potential hazards that may be encountered while performing cleaning services:

- Toxic atmosphere, including oxygen deficiency, flammable/combustible gases, and hydrogen sulfide
- Engulfment
- Confined Space Entry
- Hazardous energy (prior to performing LOTO include voltages)
- Wet/slippery walking and working surfaces
- Hazards associated with materials in the combined sewers
- Hazardous substances (chemicals such as chlorinated solvents and other volatile organic compounds) in the grit or wastewater collecting in or flowing through the Jennings Road and Old Denison Avenue sewers and associated structures
- Elevated work locations
- Temperature extremes (hot in summer/cold in winter)
- Lighting deficiencies; if the Contractor is going to introduce lighting (or other equipment) it should be intrinsically safe equipment, or the Contractor will need to follow hot work procedures

Before a contract is awarded, the Contractor shall submit a written health and safety plan (HASP) specifying how the Contractor plans to address the above-listed hazards and ensure that their personnel remain healthy and safe while performing the work.

After the contract is awarded, a more detailed, site-specific HASP that addresses the existing hazards disclosed by the District shall be created and submitted to the District designated representative before work begins (DS-5.1.1).

#### DS-5.1 BACKGROUND INFORMATION

During cleaning operations in 2014, waste characterization of the grit/debris removed from the Jennings Road Sewer between Old Denison Avenue and West 14<sup>th</sup> Street/Harvard Avenue, as well as at the Jennings Road Pump Station structures was performed. The waste characterization laboratory results (see **Appendix C – Analytical Reports**) determined that the concentrations of volatile organic compounds (VOCs) detected in the grit removed from the upstream portion of the Jennings Road sewer, closest to the Old Denison Avenue sewer, were above regulatory limits at levels that characterized the material as hazardous waste (D039 -Tetrachloroethene and D040-Trichloroethene).

Based on previous cleaning projects and associated waste characterization results, it is expected that all material removed during cleaning activities in the Old Denison Avenue and Jennings Road sewers shall be assumed to be hazardous waste until testing proves otherwise. In addition, since this material was generated in a combined sewer system and contained detectable concentrations of the bacteria fecal coliform, then the Contractor must assume that all material may require disposal at a hazardous waste treatment and disposal facility and cannot be disposed of via land application at a hazardous waste disposal facility. All material removed from the Old Denison

Avenue and Jennings Road and sewers must be sampled and characterized to determine the disposal methods.

All water removed during cleaning activities in the Old Denison Avenue and Jennings Road sewers shall be containerized and tested prior to discharge back into the sanitary sewer system under authorization through the District's Temporary Discharge Permit, or disposal at an authorized facility, depending on the test results (see **DS-7.4E**).

#### DS-5.1.1 Site-Specific Health and Safety Plan Requirements

The Contractor shall develop a written site-specific HASP that discusses the PPE and air monitoring requirements necessary to address the potential hazardous characteristics of the grit, debris, and wastewater material. This should include the procedures for performing the work in Level B PPE and performing work in a confined space. The HASP shall address all OSHA confined space requirements with regards to personnel roles and responsibilities, air monitoring requirements, and confined space rescue and equipment requirements. The Contractor shall be responsible for providing rescue services for confined space entry rescue, if necessary.

#### DS-6 GENERAL REQUIREMENTS

#### DS-6.1 PROJECT KICK-OFF MEETING

The District designated representative will contact the Contractor to schedule a project kick-off meeting prior to the start of work. The project kick-off meeting will cover the scope of work, the duration of the project, site access, permits and approvals, and sampling, testing, and disposal requirements. The Contractor shall coordinate all work with the District designated representative. At the meeting, the Contractor shall present the planned cleaning method approach based upon the scope of work. The District designated representative and Contractor shall determine the appropriate staging areas along with how long those areas can be used. The Contractor and the District designated representative shall coordinate work schedules, equipment operation and set-up, transportation routes, approved disposal facilities, storage of equipment on site after hours, and the daily work hours. The kickoff meeting shall ensure that the appropriate personnel and equipment required to complete the work are assigned prior to the Contractor beginning the work.

#### DS-6.2 CONTRACTOR REQUIREMENTS

The Contractor shall be able to provide the equipment and personnel necessary to perform the work, including having the appropriate permits and approvals in place to allow for work to proceed and to dispose of material generated during cleaning activities.

The Contractor shall inform the District any time access to a facility is blocked. The Contractor shall not be permitted to block public streets unless prior arrangements have been made with the City of Cleveland, and coordination with the District has been established. The Contractor is responsible for all traffic control and shall comply with state, county, and local highway construction codes.

Additionally, access to manholes "H," "K," and/or "L" to perform cleaning activities shall require the Contractor to coordinate with the proper CSX and Norfolk Southern railroad authorities.

*Note:* Manholes "K" and "L" are not easily accessible for a vac truck. Access shall require tree trimming in compliance with **Appendix D** - **Tree and Shrub Removal Policy**.

The Contractor shall report to the work site within 36 hours following notification of approval to perform the work from the District's designated representative. Failure of the Contractor to report in accordance with this requirement may be considered a default of the contract.

#### DS-6.3 CONTRACTOR SAMPLE SUBMITTAL PROCEDURE

The Contractor shall prepare a written description of the waste characterization sampling procedures (sampling methods, sample tracking, number/type of samples to be collected, sample parameters, etc.). The work shall commence only after written approval by the District designated representative.

#### DS-6.4 PERSONNEL REQUIREMENTS

The Contractor shall comply with all applicable OSHA regulations related to tasks to be performed throughout the contract.

#### FIELD TECHNICIAN -

Properly trained, experienced and capable to perform the work.

#### <u>EQUIPMENT OPERATOR</u> –

Properly trained, licensed, experienced and capable of operating heavy-duty equipment.

#### <u>SITE SUPERVISOR</u> –

All jobs shall have an on-site Supervisor. This person will be responsible for the completion of the daily work and act as the leader and communication liaison with the District designated representative.

#### DS-6.5 TRANSPORTATION AND DISPOSAL

The Contractor is responsible for the transportation and disposal of all media, materials and equipment removed from the Jennings Road and Old Denison Avenue sewers and associated structures.

The Contractor shall be responsible for the characterization of all material removed during the execution of the work prior to disposal. The appropriate disposal method shall be based on the results of waste characterization sampling procedures described in **DS-7.3** and **DS-7.4**.

Only boxes with analytical data confirming the material to be hazardous shall be disposed of at a hazardous waste treatment and disposal facility. All material that is classified as non-hazardous shall be disposed of at a solid waste landfill.

Transportation and disposal activities shall be in conformance with all current federal regulations, including but not limited to RCRA and United States Department of Transportation (DOT) regulations; Ohio EPA and Ohio DOT regulations; and all city/county and local regulations.

The cost for the transportation and disposal activities shall be included in the bid unit prices in the **Invitation and Bid**. The bid unit prices shall also include the current and future costs for all fees charged at the Licensed Disposal Facility, including but not limited to, waste characterization sampling activities, "tipping" fees, "disposal" fees, or any other current and future fees. In addition, any increase in fees during the term of the contract cannot be passed on to the District. All anticipated fee increases should be reflected in the bid unit prices.

Due to the storage space constraints at the work sites, the Contractor must make every effort to expedite the sampling, characterization, approval of characterization by the Licensed Disposal Facility, and transport of storage containers off site. The District will not be responsible for the Contractor's costs from work shutdowns related to lack of storage space for containers. Work shutdowns related to storage space constraints shall not relieve the Contractor of its obligation to complete the contract within (6) six months.

#### DS-6.5.1 Disposal of Removed Non-Hazardous Material

The Contractor shall remove any non-hazardous material in containers from the site within five (5) calendar days after sampling results and approval from the Licensed Disposal Facility have been received and approved by the District representative. Non-hazardous material shall be transported to the appropriate Licensed Disposal Facility in compliance with applicable federal, state, and local regulations governing the transport of solid waste. A Non-Hazardous Waste Manifest shall be prepared for all shipments of non-hazardous material.

#### DS-6.5.2 Disposal of Removed Hazardous Waste

The Contractor shall remove all Hazardous Waste from the site within five (5) calendar days after sampling results and approval from the Licensed Disposal Facility have been received and approved by the District representative. Hazardous Waste shall be transported to the appropriate Licensed Disposal Facility in compliance with applicable federal, state, and local regulations governing the transport of hazardous materials. A Hazardous Waste Manifest shall be prepared for all shipments of Hazardous Waste.

#### DS-6.6 NOTIFICATION OF UTILITIES

If the project requires an impact to above ground or underground utilities, the Contractor shall notify and coordinate the work with the utility company(s). The Contractor shall be responsible for providing all connections, wiring and hoses needed to perform connections to the service. It is the Contractor's responsibility to secure necessary permits and water supply, if applicable.

#### DS-6.7 SITE CLEANLINESS AND SAFETY

The Contractor shall ensure that the work areas are clear of tripping, slipping, and other hazards at all times. In addition, following the performance of work by the Contractor each workday, the Contractor shall contact the District designated representative to inspect the work area before the Contractor leaves the work site. The Contractor is responsible for moving and removing equipment, as needed, to the satisfaction of the District designated representative and leaving the work site in a safe working condition.

#### DS-7 CLEANING REQUIREMENTS

The Old Denison Avenue and Jennings Road combined sewers and associated structures covered under this contract are detailed in the **Appendix A** – **Cleaning Sections**.

#### DS-7.1 GENERAL CLEANING

A. The Jennings Road and Old Denison Avenue Sewers and associated structures shall be cleaned with a method acceptable to the District designated representative. Cleaning techniques shall result in removal of debris, including all loose particles and unstable or unsound materials. If the cleaning method employed is insufficient to achieve desired debris depths, surfaces shall be cleaned using other means acceptable to the District designated representative.

- B. Debris removed from the Old Denison Avenue combined sewer must be stored, transported, and disposed of separately from any material removed from the Jennings Road combined sewer, related structures, and Pump Station.
- C. Bricks that dislodge and fall during cleaning operations shall be removed from the sewer and the void shall be repaired. Bricks that are not stable shall be noted in the pipeline assessment / post video inspection. Bricks that are not bonded on all sides, but appear stable with no danger of falling, may be left in place. Cleaning operations shall not cause unnecessary removal of stable bricks. The District designated representative may require the Contractor to alter cleaning procedures if the representative feels that the procedures are resulting in unnecessary brick removal. The Contractor shall inform the District designated representative prior to making repairs. The Contractor must submit photodocumentation of any repaired areas.
- D. Manual labor utilizing hand held tools is anticipated to be required with cleaning operations. The Contractor shall require appropriate PPE for any manual laborer which may be subject to exposure to Contaminated Material.
- E. The Contractor shall use extreme caution during cleaning operations to avoid injury to workers and collapse of sewer structures. Bricks in the manholes and in the sewer laterals adjacent to manholes may be load bearing.
- F. The Contractor shall remove all debris from the work site to the limits defined in the agreed upon scope of work, including that which accumulates during cleaning efforts as a result of influent flows.
- G. The Contractor shall take measures to prevent grit from entering the 24" outlet from the Chambers into the Jennings Road Pump Station. The Contractor shall remove any excess grit that enters the Pump Station at their own expense.
- H. The Contractor's materials shall not wash down into the Jennings Road Pump Station or any permitted combined sewer overflow (CSO) point (CSO-045 by the South Chamber near the Jennings Road Pump Station). Any material removed from the sewer system resulting from the Contractor's activities shall be handled and disposed of as either non-hazardous solid waste or hazardous waste, depending upon the sampling results.
- I. The Contractor shall be responsible for identifying sources of water and obtaining all necessary permits needed for cleaning. The Contractor shall convey the water to and around the work site.
- J. Cleaning shall occur from the upstream-most to the downstream-most sections of the sewer system. In **Appendix A Cleaning Sections**, the sewer sections are numbered in the sequence that they shall be cleaned.
- K. The amount of debris is not uniform along the entire alignment. Debris may be heavier in some areas and lighter in other areas.

#### DS-7.2 DEBRIS AND WATER DISPOSAL

A. Debris removed during cleaning operations shall be properly containerized, characterized, and disposed of at a facility licensed to accept such waste.

- B. Water removed during cleaning operations shall be properly containerized, characterized, and either discharged/treated and discharged to the sanitary sewer system in accordance with a Temporary Discharge Permit issued by the District, or disposed of at a facility licensed to accept such waste. All Licensed Disposal Facilities proposed by the Contractor shall be approved by the District designated representative.
- C. The Contractor shall control odor by keeping the storage containers, trucks, and handling equipment clean, covered/closed when not being filled, and by using watertight hauling containers.
- D. All grit and debris removed during cleaning activities shall be assumed to be hazardous waste until testing proves otherwise. All grit and debris shall be placed directly into polylined roll-off containers or other water-tight containers. The storage container shall be covered at all times.
- E. The Contractor shall properly characterize any debris or water removed during cleaning operations to determine appropriate handling and disposal options. The Contractor shall arrange and pay for the testing of debris and water to meet all landfill, local, state, and federal requirements.
- F. The Contractor shall provide suitable means to contain and properly dispose of any runoff which may leach from debris containment.
- G. The Contractor shall dewater the liquid from the debris in a closed container and properly containerize, characterize, and discharge or dispose of the liquid (see **7.2.B.**).
- H. The Contractor shall prepare Hazardous Waste manifests for all shipments of Hazardous Waste using the appropriate hazardous waste identification number provided by the District. The District shall be listed as the Generator on all hazardous waste manifests for material removed from the Old Denison Avenue sewer, Jennings Road sewer and appurtenances, and the Jennings Road Pump Station. The Contractor shall coordinate with the District for each shipment of hazardous waste. A qualified District representative shall sign off on all hazardous waste manifests prior to shipment.
- I. If sewage is spilled, discharged, leaked, or otherwise deposited in the open environment, the Contractor shall be responsible for any clean-up and disinfection of the affected area.

#### DS-7.3 REMOVAL AND TESTING OF POTENTIALLY CONTAMINATED MATERIAL This section specifies requirements for the removal, testing and disposal of potentially Contaminated Material that shall be removed during the cleaning activities anticipated under this contract. The Contractor shall be responsible for the cost and coordination of the sampling/testing procedures, and well as the disposal arrangements.

#### A. **Regulatory Requirements**

- 1. The Contractor shall properly handle potentially Contaminated Materials in conformance with federal, state, and local regulations. The Contractor shall provide for the health and safety of personnel and visitors who may work with or be exposed to Contaminated Materials. Activities involving Contaminated Materials shall be conducted in accordance with:
  - a. Federal Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Sections 6901 through 6987.

- b. Ohio Administrative Code (OAC) Chapter 3745-50, Hazardous Waste Management Standards.
- c. OAC Chapter 3745-51, Identification and Listing of Hazardous Waste.

#### B. Testing and Analysis

- 1. The testing laboratory shall be Ohio Environmental Protection Agency (EPA) certified, have a state-approved quality control/quality assurance program and the ability to provide 24-hour turn-around time on analyses. Chain-of-custody transfer forms and sample containers shall be provided by the Contractor's laboratory for all samples. Fully executed chain-of-custody records shall be provided with each sample's analytical report.
- 2. Samples of the grit and debris shall be collected from each container and analyzed to determine if it is within acceptable limits for disposal as Solid Waste or is characterized as Hazardous Waste subject to disposal at a licensed hazardous waste treatment and disposal facility. The waste characterization samples shall be collected as follows:
  - a. At least six (6) sample aliquots collected from six (6) separate locations within each container shall be retrieved and placed into a clean, stainless steel or plastic bowl, Zip-lock bag or equivalent and homogenized. The sample shall then be inserted into the sample container.
  - b. Field notes shall be completed and shall include sample location, container identification and/or sample number, date and time collected and other pertinent information.
  - c. Chain-of-custody documents shall be prepared and sample containers shall be labeled with the project name, container identification, and/or sample number, date and time collected, and analysis required. Upon sample collection, each sample container shall be placed in a cooler with ice until delivery to the laboratory.
  - d. All waste characterization sampling equipment shall be decontaminated using a non-phosphate detergent wash and potable water rinse, followed by a distilled water rinse, and drying with disposable towels between each sampling event. The Contractor has the option to use disposable sampling equipment which shall be properly disposed of.
  - e. The waste profile samples shall be analyzed for the following parameters:
    - Total VOCs
    - Total SVOC
    - TCLP VOCs
    - TCLP SVOCs
    - and any other parameters required by the proposed Licensed Disposal Facility(s)
- 3. The Contractor shall clearly mark or affix a label to any containers to identify what stage in the disposal process the material is in. The labels may include any of the following:

- a. Not Sampled
- b. Sampled on [specify date], Analytical Pending
- c. Non-Hazardous, Analytical Received [specify date]
- d. Hazardous Waste, Analytical Received [specify date]
- 4. At any time, the District may perform duplicate sampling and testing with its thirdparty inspector and independent testing laboratory to verify the results.

#### DS-7.4 CONTROL AND DISPOSAL OF WATER

This section specifies requirements for the removal, testing and disposal of all water (including wastewater and/or dewatered liquid) that is removed from the Old Denison Avenue and Jennings Road sewers during the cleaning activities anticipated under this contract. The Contractor shall be responsible for the cost and coordination of the sampling/testing procedures, and well as treatment and/or disposal arrangements.

- A. The Contractor shall provide proper control of water.
- B. Discharge of any water to the storm sewer is prohibited.
- C. The Contractor shall provide proper equipment capable of collecting and treating or hauling (if contaminated in excess of the Supplementary Limitations) water without causing unsafe work conditions.
- D. Discharge, treatment, and/or disposal of water depends on sampling analytical results.
- E. Sanitary Sewer System Discharge Requirements:
  - 1. The Contractor shall obtain a temporary discharge permit from the District's Water Quality and Industrial Surveillance (WQIS) Department.
  - The District's Supplementary Limitations in Section 2.0305 of Appendix B Pretreatment Regulations contains the list of compounds and concentration limits for acceptance of discharge into the District's sewer system.
  - 3. The Contractor shall obtain one (1) sample from each container or one (1) sample from every approximately 25,000-gallons for analysis of the COCs identified in the Supplementary Limitations.
  - 4. If the results exceed the Supplementary Limitations, the Contractor shall treat the contaminated water to be within the regulation limits prior to discharge to the sanitary sewer system or the Contractor shall containerize and properly dispose of the contaminated water at a Licensed Disposal Facility. Prior to discharge to the sanitary sewer system, the treated water shall be resampled to verify the effectiveness of treatment.
  - 5. All on-site treatment systems shall be approved by the District designated representative prior to implementing.
  - 6. The Contractor shall notify the District prior to discharge of water into the sanitary sewer system.
- F. Licensed Disposal Facility Requirements:
  - 1. The Contractor shall obtain an appropriate number of samples as required by the Licensed Disposal Facility. The Contractor shall be responsible for any

laboratory testing required by the Licensed Disposal Facility to fully characterize the water.

- 2. The Contractor shall notify the Licensed Disposal Facility and the District prior to transportation of the wastewater to the facility.
- 3. No additional compensation shall be allowed for delays in accepting waste or waste rejected by the Licensed Disposal Facility due to incomplete characterization, or due to invalid or expired transporter permits.
- G. The Contractor shall clearly mark or affix a label to any containers to identify what stage in the discharge/disposal process the material is in. The labels may include any of the following:
  - 1. Not Sampled
  - 2. Sampled on [specify date], Analytical Pending
  - 3. Non-Hazardous, Analytical Received [specify date]
  - 4. Hazardous Waste, Analytical Received [specify date]
- H. At any time, the District may perform duplicate sampling and testing with its third-party inspector and independent testing laboratory to verify the results.

#### DS-8 SEWER REPAIR

The Contractor shall be responsible for repairing any damage to the sewer system resulting from cleaning activities, as well as any property/surface damage caused by the Contractor's operations.

#### DS-9 INSPECTION AFTER CLEANING

The Contractor shall contact the District designated representative to inspect the work upon completion of each cleaning project. The Contractor shall provide CCTV video-documentation and pipeline assessment to the District designated representative after cleaning operations are completed in each section. If additional debris has accumulated downstream of the cleaning operation, the Contractor shall remove the additional debris at no additional cost to the District.

#### DS-10 INVITATION AND BID

#### DS-10.1 GRIT REMOVAL

The per ton price stipulated on the **Invitation and Bid** for **Grit Removal** shall be the actual dewatered grit material removed from the cleaning section indicated in the bid item and verified by the District designated representative on site. This proposal amount shall be full compensation for furnishing lab services, tools, labor, equipment, materials, fuel, and other incidentals necessary for safe removal of grit material with potentially hazardous waste content. The per ton price for grit removal shall also include dewatering and sample testing, characterization, and storage of both the material and the water.

#### DS-10.2 GRIT DISPOSAL

#### Grit Disposal – Solid Waste Landfill

The per ton price stipulated on the **Invitation and Bid** shall be the actual dewatered grit material tested and showing no indication of hazardous waste content and shall be full compensation for

disposal fees, tools, labor, equipment, materials, fuel, transportation, and any other costs necessary for the hauling, and disposal of the grit material to an authorized solid waste landfill.

# Grit Disposal – Contaminated Grit Treatment and Disposal – Authorized Hazardous Waste Disposal Facility

The per ton price stipulated on the **Invitation and Bid** shall be the actual dewatered grit material that is characterized as hazardous waste and shall be full compensation for disposal fees, tools, labor, equipment, materials, fuel, transportation, and any other costs necessary for the hauling, treatment, and disposal of the grit material to an authorized Hazardous Waste Toxic Substances Disposal Facility (TSDF).

#### DS-10.3 WATER TREATMENT OR DISPOSAL

All water removed from the Old Denison Avenue and Jennings Road sewers must be tested to confirm that the water is within the acceptable Supplementary Limitations (see **Appendix B** – **Pretreatment Regulations**) to discharge it back to the sewer. If the test results are not within the Supplementary Limitations, then the water must either be treated, or disposed of at an authorized facility, depending on the levels determined.

Water removed from the Old Denison Avenue sewer (Cleaning Section 1 in Appendix A – Cleaning Sections) must be removed, stored, and tested **SEPARATELY** from the Jennings Road sewer and must be treated and/or hauled and disposed of **SEPARATELY**. All charges for treatment and/or disposal must be invoiced **SEPARATELY**.

#### **Contaminated Water Treatment – To Within Supplementary Limitations**

The per gallon price stipulated on the **Invitation and Bid** shall be the decanted wastewater generated from the dewatering process and found to be outside of the acceptable Supplementary Limitations (see **Appendix B** – **Pretreatment Regulations**). This proposal item shall be full compensation for furnishing tools, labor, equipment, and materials necessary for treating the water to within the Supplementary Limitations.

#### **Contaminated Water Disposal – Authorized Treatment/Disposal Facility**

The per gallon price stipulated on the **Invitation and Bid** shall be the decanted wastewater generated from the dewatering process and found to be outside of the acceptable Supplementary Limitations (see **Appendix B** – **Pretreatment Regulations**). This proposal item shall be full compensation for disposal fees, fuel, tools, labor, equipment, and materials necessary for the hauling and disposal of the water to an authorized contaminated water treatment/disposal facility.

#### DS-10.4 GENERAL ALLOWANCES

The general allowances are intended to be used, at the District's discretion, for unforeseen but necessary work. The Contractor shall provide a written estimate of all work involving the general allowances. The Contractor may only proceed with the work *after* the quote is authorized in writing by the District designated representative.

The Contractor's estimate for allowances shall include a complete breakdown of costs. The District will pay the Contractor's substantiated costs for labor, materials, and equipment, plus fifteen (15) percent if the Contractor performs the work directly, or twenty (20) percent if a subcontractor performs the work. If work is subcontracted, the Contractor shall retain five (5) percent and pay the subcontractor fifteen (15) percent. Certified payroll reports and receipts for materials and equipment must be provided by the Contractor upon request by the District representative,

regardless of whether the work was performed directly by the Contractor or subcontracted. Any work authorized to be billed as time and materials against the general allowances shall require daily work tickets to be signed by the District designated representative at the end of each workday. These work tickets shall show the factors used to determine the time and materials charges (number of persons, their work classification, equipment used and the number of hours, etc.). *This does not include travel time to and from work areas or Contractor breaks. Those items are the responsibility of the Contractor and shall not be paid by the District.* The District designated representative shall sign the daily service tickets if the work was performed satisfactorily. If the work was not satisfactorily performed and/or fails to achieve the desired results to the approval of the District designated representative, the daily service ticket(s) shall not be signed, and payment shall be withheld until a resolution of the dispute occurs.

The District designated representative may also authorize a negotiated lump sum estimate from the Contractor for work using the general allowances.

#### DS-11 PAYMENT

All work related to the Old Denison Avenue sewer (Cleaning Section 1 in Appendix A – Cleaning Sections) must be performed, tracked, and invoiced **SEPARATELY** from all work related to the Jennings Road sewer. This includes but is not limited to: removing material (including water), storage, testing, characterization, treatment, hauling, and disposal.

Payment to the Contractor for Grit Removal and Grit Disposal will be based on the unit bid price per ton multiplied by the total on the weight ticket (dry weight) from the approved disposal facility. *Unused tonnages will be not be paid.* 

Payment to the Contractor for Contaminated Water Treatment will be based on the unit bid price per gallon multiplied by the total gallons verified by the District representative. *Unused gallons will be not be paid*.

Payment to the Contractor for Contaminated Water Disposal will be based on the unit bid price per gallon multiplied by the total on the hauling manifest as verified by the District representative. *Unused gallons will not be paid*.

Payment to the Contractor for the CCTV – Post Video Inspection/Pipeline Assessment shall be made after all deliverables are reviewed and verified.

Payment to the Contractor for pre-authorized work billed against the General Allowances shall be made after the work is completed and verified by the District designated representative and the costs are substantiated as detailed in **DS-10.3**. No separate payment will be made for any item that is not specifically set forth in the **Invitation and Bid**. All costs therefore shall be included in the prices named in the **Invitation and Bid** for the various items of work.

Payment for each line item on the **Invitation and Bid** shall include such general costs for the furnishing of drawings, submittals, samples, tools, and appliances necessary to complete the work as specified.

## **NOTICE OF OSHA VIOLATIONS REPORT**

Date of Violation	Issuing Agency	<b>Regulatory Code</b>	Violation Description	<b>Corrective Action</b>

## **REFERENCE FORM**

#### Jennings and Old Denison Combined Sewer Cleaning 2019

It is mandatory that this form is fully completed and attached to the bid submittal. The list shall include a minimum of five (5) projects completed in the last five (5) years that are similar in scope to the current project (see **Detailed Specifications**). The Contractor shall have been engaged in the business of sewer cleaning services for a minimum of the last five (5) years, successfully proposing and completing a minimum of five (5) projects for heavy industry, commercial establishments and/or governmental agencies. It is preferred that the work performed consist of projects involving large diameter (36" or greater) municipal sewer cleaning projects. The Northeast Ohio Regional Sewer District may be used as one (1) reference.

COMPANY NAME	CONTACT NAME	PHONE NO. AND EMAIL ADDRESS	PROJECT START DATE	PROJECT END DATE	CONTRACT AMOUNT	DESCRIPTION OF SERVICES

## **NOTICE OF EPA and NEORSD VIOLATIONS REPORT**

Date of Violation	Issuing Agency	<b>Regulatory Code</b>	Violation Description	<b>Corrective Action</b>

## The Northeast Ohio Regional Sewer District Health and Safety Policy for Confined Space Entry

Effective Date:	09/01/2018
Issued by:	Health and Safety
Version Number:	3.0
Supersedes:	Rev. October 2, 2009
Approval Authority:	Manager of Health and Safety
Applicable to:	All NEORSD Employees

## **Table of Contents**

1.0	Overview	3
2.0	Exceptions	3
3.0	Definitions	3
4.0	Responsibilities	6
5.0	Prevention Through Design	8
6.0	Confined Space Identification	9
7.0	Pre-Entry Requirements	. 10
8.0	Classification of Entry	. 11
9.0	Entry Roles	. 12
10.0	Hazard Identification and Evaluation	. 12
11.0	Atmospheric Monitoring	. 13
12.0	Hazard Elimination and Control	. 15
13.0	Ventilation	. 15
14.0	Personal Protective Equipment (PPE)	. 16
15.0	Rescue	. 17
16.0	Entry Evaluation and Permit	. 18
17.0	Multi-Employer Considerations – Construction Activities	. 19
18.0	Multi-Employer Considerations – Non-Construction Activities	. 21
19.0	Culverts	. 22
20.0	Management of Change	. 23
21.0	Training	. 24
22.0	Recordkeeping Requirements	. 25
23.0	Attachments	. 25
Attach	nment A – Pre-Entry Evaluation and Entry Permit – Plants and Collections	
Attach	nment B – Management of Change Form	
Attach	nment C – Confined Space Inventory Reference	
Attach	nment D – Non-entry Rescue Flow Diagram – Plants and Collections	

## 1.0 Overview

The Northeast Ohio Regional Sewer District's (NEORSD/District) Confined Space Entry Policy establishes requirements to ensure employees are able to recognize, evaluate and control the hazards associated with confined space entry and establish practices and procedures for ensuring healthy and safe work environments in and around confined spaces. Through this Policy, NEORSD will be able to address evaluating confined spaces; potential hazards pertaining thereto; communication of such hazards; and the identification of appropriate protective measures.

This policy has been developed to ensure compliance with OSHA's Confined Space regulations (29 CFR 1910.146 and 1926 subpart AA) and other industry best practices, when appropriate.

This policy applies to NEORSD facilities, locations and worksites with one or more confined spaces, except those called out in Section 2.0.

### 2.0 Exceptions

- 2.1 The following types of work activities, which generate hazardous worksites similar to confined spaces, are exempt from the requirements of this Policy:
  - 2.1.1 Construction work regulated by 29 CFR 1926 Subpart P Excavations.
  - 2.1.2 Construction work regulated by 29 CFR 1926 Subpart S Underground Construction, Caissons, Cofferdams and Compressed Air.

## 3.0 Definitions

<u>Acceptable Entry Conditions</u> – Conditions that meet all entry requirements specified in this Policy and all entry conditions listed on the entry permit.

<u>Adjacent Space</u> – Those spaces in all directions from subject space, including points of contact, internal and external, such as decks, sumps, floating roofs, secondary containment areas, interstitial spaces, under floors, supports, tank tops and bulkheads.

<u>Atmospheric Monitoring</u> – The act of using a gas monitor to sample the atmosphere in or around a confined space to determine the level of hazardous, gaseous contaminants present.

<u>Attendant</u> – A person who is qualified to be stationed outside a confined space, who monitors authorized Entrants and their work activities, monitors activities occurring outside the confined space that might affect confined space operations and who performs specified Attendant duties.

<u>Bump Testing</u> – A qualitative function check where a challenge gas is passed over the sensor(s) at a concentration and exposure time sufficient to activate all alarm indicators to present at least their lower alarm setting.

<u>Confined Space</u> – A space that:

- Is large enough and so configured that a person can bodily enter and perform assigned work,
- Has limited or restricted means for entry or exit and
- Is not designed for continuous employee occupancy.

<u>Confined Space Entry</u> – Activities within a confined space. It is considered to have occurred as soon as any part of the Entrant's body breaks the plane of an opening into the space.

<u>Confined Space Rescue Service</u> – The contractor retained and designated by the District to perform entry rescue of Entrant(s).

<u>Confined Space Rescue Team</u> – A combination of individuals trained, qualified, equipped, and available to respond to confined space emergencies.

<u>Contractor</u> – An organization, or its employee, that performs work under contract for the NEORSD. Contractors may employ subcontractors who perform work under contract of the primary contractor.

<u>Culvert</u> – A section of drainage pipe that facilitates drainage between open channel drainage courses (e.g., ditches) under roads or railway embankments, etc.

Entrant – A person who is qualified and authorized to enter and work in a confined space.

<u>Entry Evaluation and Permit</u> – The NEORSD document outlining the pre-entry evaluation; classification of entry; hazard elimination, mitigation and/or control methods; employees that are assigned roles and formal authorization to conduct a confined space entry.

<u>Entry Supervisor</u> – The person qualified and responsible for overseeing entry operations for a given confined space. Oversees and directs a confined space entry and associated operations, including pre-entry steps dictated in Sections 10.0 - 15.0. Note: The person holding the role of Entry Supervisor does not have to be a member of management.

<u>Entry Rescue (Entrant Rescue)</u> – Emergency removal of Entrant(s) from a confined space that requires entry into the space.

<u>Gas Monitor</u> – A direct-reading, portable instrument designed to detect hazardous gases and vapors, including, but not limited to, oxygen, combustible gas and a variety of toxic gases and vapors or volatile organic compounds (e.g., 4-gas meter or Photoionization Detector [PID]).

<u>Hazard</u> – Agents including, but not limited to, biological, chemical, mechanical, electrical, atmospheric, environmental or physical, that has or may have the potential to result in injury, illness, property damage or interruption of a process or an activity in the absence of a control measure.

<u>Hazard Evaluation</u> – The process of identifying hazards or potential hazards and then determining the risk or potential risk of each hazard identified.

<u>Hazardous Atmosphere</u> – Any atmosphere that is oxygen enriched or oxygen deficient, contains a toxin or contaminant, is potentially flammable or explosive, or is immediately dangerous to life and health.

<u>Hazardous Space</u> – A location that does not meet the definition of a confined space; however, contains or has the potential to contain various hazards including hazardous atmospheric conditions similar to that of a permit required confined space.

<u>Hot Work</u> – Any operation capable of providing a source of ignition (for example, riveting, welding, cutting, burning, and heating.) For additional information, reference Hot Work Program.

<u>Intrinsically Safe</u> – Equipment and wiring that are incapable of releasing sufficient electrical energy under normal or abnormal conditions to cause ignition of a specific hazardous atmospheric mixture.

<u>Lockout/Tagout</u> – The placement of a lockout or tagout device on an energy isolating device, in accordance with an established energy-control procedure, ensuring that the equipment may not be operated until the lockout or tagout device is removed. For additional information, reference Control of Hazardous Energy (Lockout/Tagout – LOTO) Policy.

<u>Lower Explosive Limit (LEL)</u> – The lowest volume concentration of a combustible gas or vapor that when mixed with air will ignite, creating a fire or explosion (also known as lower flammable limit or LFL).

<u>Non-Entry Rescue (Entrant Rescue)</u> – Emergency removal of Entrant(s) from a confined space utilizing a means that does not require entry into the space.

<u>Non-Permit Required Confined Space</u> – A space that meets the definition of a confined space but does not meet the definition of a permit required confined space.

<u>Performance Qualification Standard (PQS)</u> – a formalized structure of training, communication and practical performance tasks designed to verify advanced competency in a given subject matter area.

<u>Permit Required Confined Space (Permit Space)</u> – A confined space that has one or more of the following characteristics:

- Contains or has the potential to contain a hazardous atmosphere,
- Contains a material that has the potential for engulfing an Entrant,
- Has an internal configuration such that an Entrant could be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross-section or
- Contains any other recognized serious safety or health hazard.

<u>Prohibited Condition</u> – Any hazardous condition encountered in a permit space that is not allowed by the permit during the period when entry is authorized (i.e., a change to a condition noted on the entry permit prior to entry). Entry must be terminated during a prohibited condition.

<u>Qualified Person</u> – A person who has successfully completed training and performance evaluation for the specific role(s) they are serving during confined space entry work. Training must be maintained as described in Section 20.0.

<u>Rescue Plan</u> – A pre-plan for the rescue of Entrants from confined space emergencies.

<u>Retrieval System</u> – Equipment, including a retrieval line, chest or full body harness and a lifting device or anchor, used for non-entry rescue.

<u>Ventilation</u> – The changing of air within a compartment by natural or powered means.

## 4.0 Responsibilities

To ensure that safe confined space entry work practices are implemented and maintained in accordance with the procedures listed in this Policy, the identified NEORSD employees/departments have the following responsibilities:

#### 4.1 Manager of Health and Safety

- 4.1.1 Overall implementation of this Policy for NEORSD;
- 4.1.2 Coordinate the identification, evaluation, and classification of confined spaces within NEORSD facilities, locations, and worksites; and retention of records thereof;
- 4.1.3 Ensure and evaluate the recordkeeping requirements of this Policy;
- 4.1.4 Coordinate the periodic review/update of this Policy.

#### 4.2 Health and Safety

- 4.2.1 Assist the Manager of Health and Safety with overall implementation of this Policy;
- 4.2.2 Coordinate and/or perform training sessions for employees;
- 4.2.3 Identify, document and label NEORSD confined spaces;
- 4.2.4 Assist in the preparation and maintenance of the NEORSD Confined Space Inventory;
- 4.2.5 Perform audits of NEORSD confined space activities and safe entry practices to ensure the effectiveness of this Policy;
- 4.2.6 Maintain canceled permits for a period of one (1) year;
- 4.2.7 Conduct a review of cancelled permits at least annually;
- 4.2.8 Assist with the review/update of this Policy; and
- 4.2.9 Audit adherence to this Policy.

#### 4.3 Directors

- 4.3.1 Ensure overall compliance with this Policy for his/her area of responsibility.
- 4.3.2 Ensure that the multi-employer considerations of Sections 17 and 18 are implemented when NEORSD locations become multi-employer worksites;

#### 4.4 Superintendents

4.4.1 Direct the use of resources (people and materials) to safely operate and maintain their facility to achieve compliance with this Policy;

- 4.4.2 Direct, develop and implement processes that work within NEORSD policies and procedures, to meet the requirements of this Policy; and
- 4.4.3 Provide direction to ensure adherence to this Policy.

#### 4.5 Managers/Supervisors

- 4.5.1 Ensure that all employees under their supervision that are required to receive training and obtain qualifications under this Policy do so prior to engaging in work activities involving a confined space;
- 4.5.2 Enforce compliance (including use of the Progressive Discipline Policy) on those under their responsibility that are not following this policy;
- 4.5.3 Ensure that job planning takes place prior to each confined space entry;
- 4.5.4 Maintain the necessary equipment and resources needed to engage in confined space entry in accordance to this Policy; and
- 4.5.5 Coordinate with Contractor staff when both District personnel and Contractor personnel will be working in or near confined spaces.

#### 4.6 **NEORSD Employees**

- 4.6.1 Follow the requirements of this Policy at all times;
- 4.6.2 Attend and participate in training as required;
- 4.6.3 Become qualified to perform confined space entry job duties as dictated by job responsibilities and this Policy; and
- 4.6.4 Immediately report issues of non-compliance to this Policy to their supervisor.

#### 4.7 **Engineering & Construction**

- 4.7.1 Seek Prevention through Design (PtD) opportunities in new build and renovation project designs that eliminate the need for confined space entry, or eliminate/ reduce the severity of hazard exposure in confined spaces (See Section 5.0); and
- 4.7.2 Submit a Health and Safety Management of Change Form to Health and Safety whenever a confined space is to be created, modified or decommissioned through a new build or renovation project.

#### 4.8 **District Construction Coordinators**

4.8.1 Provide timely notification to the Health and Safety Department in advance of all projects in which contractors will be working in or potentially impacting ongoing work in nearby confined spaces. Notification of planned work will be submitted as soon as possible, but no less than one (1) week prior to the beginning of work in

order to allow Health & Safety adequate time to prepare and deliver the information required to be provided to Contractors by Sections 17.0 and 18.0.

4.8.2 Assist in the enforcement of contractor compliance with all federal, state and local occupational health and safety regulations as well as compliance with the NEORSD Confined Space Policy, as appropriate.

#### 4.9 Human Resources – Organization Learning and Performance

4.9.1 Ensure the maintenance and storage of training records pertaining to this policy.

#### 4.10 **Purchasing**

4.10.1 Purchase only confined space entry and rescue equipment approved by Health and Safety.

#### 4.11 Security

- 4.11.1 Receive and log notifications at the start and conclusion of confined space entries that are conducted at a wastewater treatment plant; and
- 4.11.2 Coordinate with District personnel and first responders in the event of an emergency.

#### 4.12 **Contractors**

- 4.12.1 Contractors shall take all necessary precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to all persons engaged by the contractor, its subcontractors, suppliers and vendors in performance of the work on the site and other persons who may be affected.
- 4.12.2 Contractors shall give notices required by and comply with applicable laws of all authorities with jurisdiction bearing on the safety of persons and property and their protection from damage, injury, or loss.
- 4.12.3 When so ordered by authorized NEORSD personnel, contractors shall stop any part of the work which the District deems unsafe until corrective action satisfactory to NEORSD Management has been taken.
- 4.12.4 Contractors shall be responsible for the provision and maintenance of all equipment required for confined space entry and rescue, including, but not limited to, rescue winch and mounts, harnesses and retrieval lines, atmospheric monitoring instruments, communication devices, intrinsically safe equipment, and ventilation equipment.

## 5.0 Prevention Through Design

5.1 New construction and modifications to existing structures shall be evaluated during the design phase for end-user impacts regarding confined spaces. Where feasible, design standards shall incorporate Prevention through Design (PtD) principles that reduce or

eliminate the hazards associated with work conducted in and around confined spaces. PtD principles shall include, but are not limited to:

- 5.1.1 Designing a space so that the space is not a confined space;
- 5.1.2 Designing a confined space so that the space is not a permit required confined space;
- 5.1.3 Eliminating the need to enter the confined space and perform work by using remotely operated tools, fixed monitoring devices, viewing windows or cameras, remote grease joints; redesigning the work or maintenance tasks and relocating critical valves/equipment outside the space;
- 5.1.4 Eliminating restricted means of entry and exit by replacing ladders with steps/stairs, enlarging openings/access paths, using standard doorway openings and adding access points;
- 5.1.5 Designing the space for continuous employee occupancy;
- 5.1.6 Eliminate or minimize serious safety hazards within the space (e.g., install fixed guards/covers on mechanical and electrical equipment hazards, install railings and/or fall protection anchor points in the space, install energy isolation lockout points outside of the space, remove or guard exposure to sharp/heated/slippery surfaces, etc.);
- 5.1.7 Prevent engulfment or entrapment hazards (e.g., design pipes, valves and line breaks to allow for double blocking and bleeding of lines outside of the space; design the space opening to allow for easy emptying of content or alter configuration of the space to prevent entrapment);
- 5.1.8 Design or redesign the space to allow for multiple openings for rescue;
- 5.1.9 Design or redesign openings to allow unobstructed access of rescue/retrieval equipment;
- 5.1.10 Permanently mount a davit arm, a receiver or other fixed anchor point for mechanical retrieval equipment at the space opening; and
- 5.1.11 Design spaces that facilitate non-entry rescue.

## 6.0 Confined Space Identification

- 6.1 Each NEORSD facility shall be surveyed in order to identify and document existing confined spaces.
- 6.2 Each NEORSD facility shall electronically document the confined space survey on the District Confined Space Inventory.
  - 6.2.1 The District Confined Space Inventory shall be reviewed and revised as necessary whenever:

- New assets are constructed;
- Existing assets are modified (including removal); and
- When District Management has reason to believe that a previous survey was inadequate.
- 6.3 Each confined space shall be labeled as a confined space, where feasible.
  - 6.3.1 Labels shall be placed on, or as close as possible, to each entrance into a confined space.
  - 6.3.2 Labeling shall be permanent, consist of appropriate material based on location and shall be appropriately sized to ensure visibility.
  - 6.3.3 Confined space labeling shall including language similar to the following:

#### DANGER – CONFINED SPACE DO NOT ENTER WITHOUT AUTHORIZATION

6.4 All confined spaces shall be kept locked, guarded and/or secured to protect against unauthorized or accidental entry.

Note: The labeling requirements of Section 6.3 and locking requirements of Section 6.4 do not apply to manholes, boilers or other equipment where placement of permanent, fixed signage is infeasible. Where such exists, employees and contractors shall be informed via awareness training and communication of the existence of confined spaces in their respective work areas.

## 7.0 Pre-Entry Requirements

- 7.1 Prior to performing confined space entry work the following actions must be completed:
  - 7.1.1 Assignment of entry roles;
  - 7.1.2 Hazard identification and evaluation;
  - 7.1.3 Hazard elimination and/or control;
  - 7.1.4 Atmospheric monitoring;
  - 7.1.5 Ventilation evaluation;
  - 7.1.6 Personal protective equipment evaluation;
  - 7.1.7 Determination of rescue needs and procedure;
  - 7.1.8 Classification of entry; and
  - 7.1.9 Pre-job briefing.

## 8.0 Classification of Entry

- 8.1 All confined spaces have the potential to be a permit-required confined space, depending on the work to be performed and the inherent, potential or introduced hazards in the space at the time of entry. Prior to conducting work in a confined space, the Entry Supervisor shall ensure that all hazards of the space and associated work activities are identified and evaluated.
- 8.2 The classification of entry can only take place after all pre-entry activities identified in Section 7.0 have been evaluated and are documented on the Confined Space Entry Evaluation and Permit.
- 8.3 All confined space entries must be classified as either permit required, alternate entry procedures or non-permit required.
  - 8.3.1 Permit Required Confined Space Entry:
    - Involves entry into a space meeting the definition of a Permit Required Confined Space;
    - Requires that qualified personnel be assigned duties as Entry Supervisor, Attendant(s) and Entrant(s);
    - Requires continuous atmospheric monitoring;
    - Requires employing a form of rescue listed in Section 15.0; and
    - Requires both a pre- and post-entry meeting.
  - 8.3.2 Alternate Procedure Confined Space Entry:
    - Involves entry into a space meeting the definition of a Permit Required Confined Space; however, the only hazard potentially present is atmospheric and continuous forced air ventilation alone has been demonstrated as sufficient to maintain safe entry into the space;
    - Entry can be performed by a single individual;
    - Requires continuous atmospheric monitoring; and
    - Is only permitted when a formal hazard assessment has been documented and approved by Health and Safety.
  - 8.3.3 Non-Permit Confined Space Entry:
    - Involves entry into a space meeting the definition of a confined space but not a Permit Required Confined Space (i.e., there are no actual or potential hazards present within the space).
    - Entry may be performed by a single individual;

- Requires continuous atmospheric monitoring; and
- Is only permitted when a formal hazard assessment has been documented and approved by Health and Safety.
- 8.4 Hazardous space entry requires continuous atmospheric monitoring.
  - 8.4.1 Examples of hazardous spaces could include, but are not limited to, the following NEORSD spaces:
    - Auto regulators;
    - Wet well of a pumping station that is appropriately configured with a staircase and man door; and
    - Catwalk inside a gravity thickener or upper catwalk of a sludge storage tank that can be accessed via a man door.

### 9.0 Entry Roles

- 9.1 Employees assigned entry roles during confined space work must be trained and qualified as specified in Section 20.0 prior to assuming those entry roles.
- 9.2 NEORSD has three (3) categories of entry roles.
  - 9.2.1 Entry Supervisor
  - 9.2.2 Attendant
  - 9.2.3 Entrant
- 9.3 An individual can assume multiple entry roles as long as:
  - 9.3.1 They are qualified for each role; and
  - 9.3.2 They do not simultaneously assume the role of both Attendant and Entrant.

## **10.0 Hazard Identification and Evaluation**

- 10.1 Prior to conducting work in a confined space, the Entry Supervisor shall ensure that all hazards of the space and associated work activities are identified and evaluated.
- 10.2 Hazard sources to evaluate include, but are not limited to, the following:
  - 10.2.1 Direct and indirect hazards
    - Those directly associated with confined spaces and those that are integral to, in and/or around the space that affect it;

- The result of product(s) stored in or around the space; and
- The result of operations, work activities and processes taking place within or near the space.
- Equal consideration should be given to potential hazards directly and indirectly associated with the space.
- 10.2.2 Inherent hazards that exist as a permanent, essential characteristics or attributes of the space.
- 10.2.3 Introduced hazards are hazards not normally associated with the space's purpose or processes but are brought into the space or adjoining area(s) deliberately or inadvertently.
- 10.2.4 Adjacent hazards are hazards or other conditions that may exist in the area(s) surrounding the space, including work being performed.

## **11.0 Atmospheric Monitoring**

- 11.1 Atmospheric monitoring is required for all confined space entry work.
  - 11.1.1 All portable gas monitors shall be turned on and zeroed in a fresh air environment.
  - 11.1.2 All portable gas monitors shall be bump tested prior to daily use and calibrated at least monthly or in accordance with manufacturer's specifications.
- 11.2 Pre-entry testing:
  - 11.2.1 Shall be conducted by an employee trained and qualified in proper gas instrument operation.
  - 11.2.2 Shall be done from outside the confined space prior to entry.

Note: The pre-entry atmospheric testing for continuous systems (e.g., collections system locations that cannot be isolated) is only required prior to descending into a manhole. See the continuous monitoring requirements of Section 11.3.

- 11.2.3 Once acceptable entry conditions are met, Section 4 of the Confined Space Entry Evaluation and Permit must be completed (see Section 16.0).
- 11.2.4 If the confined space has not been opened or the atmosphere is not immediately accessible for testing, the confined space shall only be opened just enough to allow insertion of a sampling probe or hose for testing.
- 11.2.5 Initial testing shall be performed with all ventilation controls turned off to ensure testing of a static atmosphere and to determine the background gas concentration levels in the event that ventilation fails during entry.

Note: Any potential hazard, including, but not limited to, pressure and electric shock should be eliminated, controlled or mitigated prior to opening the space. Some manhole covers may have a small opening to allow the insertion of a sampling hose.

11.2.6 For entries involving a vertical descent, the atmosphere shall be tested using a gas monitor with a sampling pump and hose.

Note: The atmosphere shall be tested at four (4) foot intervals starting at the opening of the space and working towards the bottom of the space.

11.2.7 For entries involving a horizontal entry, the atmosphere shall be tested using a gas monitor with a sampling pump and rigid sampling probe.

Note: The atmosphere shall be tested at four (4) foot intervals working inward from the opening of the space. Continuous systems (e.g., collections system locations that cannot be isolated) are exempt from this pre-entry requirement. See the continuous monitoring requirements of Section 11.3.

- 11.2.8 Acceptable atmospheric limits for entry include:
  - Oxygen content between 19.5 percent and 22.0 percent;
  - Lower explosive limit (LEL) below 10 percent;
  - Hydrogen sulfide content below 10 parts per million (PPM);
  - Carbon monoxide content below 25 PPM; and
  - Other potential toxic air contaminants at or below the occupational exposure limit.

Note: Consult with Health and Safety to determine the appropriate occupational exposure limit to follow.

- 11.3 Continuous monitoring:
  - 11.3.1 The atmosphere within and outside the confined space shall be monitored continuously during permit entry to ensure continued safe working conditions.
  - 11.3.2 The atmosphere within the confined space shall be monitored continuously during alternate entry to ensure continued safe working conditions
  - 11.3.3 If Entrant(s) must travel more than five (5) feet away from the testing (drawing) point of the gas monitor, then each Entrant shall wear a personal gas monitor at all times during the entry operation.
  - 11.3.4 Entrants must exercise additional caution and pay close attention to atmospheric monitor readings when performing horizontal travel in a continuous system. Travel must be paced in a manner that ensures that atmospheric monitoring equipment is provided adequate time for responding to atmospheric conditions.
  - 11.3.5 Entrants shall immediately evacuate the space when atmospheric monitor alarms are sounded.

## **12.0 Hazard Elimination and Control**

- 12.1 Entry Supervisors shall ensure that all identified inherent, introduced and adjacent hazards in and around confined spaces are eliminated, mitigated or controlled to the extent possible prior to entry and that the corrective actions taken are documented on the Entry Evaluation and Permit.
- 12.2 Hazards that cannot be eliminated, mitigated or controlled shall be noted on the Entry Evaluation and Permit by the Entry Supervisor, who shall make sure that required personal protection is used or other appropriate measures are taken to ensure safe entry.
- 12.3 When hot work is required in or adjacent to a confined space, the Entry Supervisor must issue a separate Hot Work Permit attached to the Entry Evaluation and Permit.

12.3.1 Hot work must be conducted in accordance with the Hot Work Policy.

- 12.4 Whenever combustible gases or vapors exist or have the potential to exist, then equipment used during that confined space entry shall be rated intrinsically safe for the electrical classification of the space and tools shall be non-sparking.
- 12.5 All sources of energy (mechanical, electrical, hydraulic, chemical or stored energy) in confined spaces that could impact worker safety must be eliminated whenever feasible using the appropriate lockout/tagout procedures and verified by the Entry Supervisor.

NOTE: Piping containing flowable material (i.e. liquid, gas, steam, etc.) posing an engulfment hazard can only be considered eliminated using one of the following energy control methods: double block and bleed, blinding, blanking or misalignment of piping. Flowable material energy sources isolated by only one valve or gate are only considered controlled, not eliminated

- 12.5.1 Where it is necessary for equipment to continue to operate (not under lockout/tagout) in order to perform work within the space, the Entry Supervisor shall ensure that the work is performed using approved alternative methods or that control measures provide effective protection for workers in the space.
- 12.5.2 Lockout/Tagout must be conducted in accordance with the Control of Hazardous Energy (Lockout/Tagout – LOTO) Policy.
- 12.6 Hazards that cease to be eliminated, controlled or are introduced during an entry result in a prohibited condition being created and entry operations must be terminated.

## 13.0 Ventilation

- 13.1 Ventilation shall be utilized whenever one or more of the following conditions exist:
  - 13.1.1 The need to supply adequate breathing quality air to an oxygen-deficient atmosphere or a potentially oxygen-deficient atmosphere;
  - 13.1.2 The need to remove or control atmospheric contaminants; or

13.1.3 The need to control temperature for thermal hazards.

- 13.2 Ventilation shall be determined and overseen by an employee trained and qualified in proper ventilation techniques.
- 13.3 Ventilation used to establish initial safe conditions (prior to initial entry) may be necessary on an ongoing basis (i.e. continuous ventilation) to maintain safe conditions during entry where there is a potential for changing atmospheric conditions within a space.
- 13.4 There are two types of ventilation that can be used in confined space applications natural and mechanical.
  - 13.4.1 Natural ventilation is when breathing quality air outside a confined space is allowed to enter and mix with the atmosphere in a confined space through natural pressure differentials without mechanical assistance.

Note: Natural ventilation should only be used when the hazard identification and evaluation demonstrate that its use will naturally supply adequate breathing quality air to control atmospheric contaminants to acceptable levels within the confined space.

- 13.4.2 Mechanical ventilation is the use of one or more powered air-moving devices (e.g., fan or blower) to either push air into or pull air out of a confined space to create a slight vacuum that allows breathing quality air to enter and circulate in the space. There are two types of mechanical ventilation: general (or dilution) and local exhaust.
- 13.5 Personnel conducting confined space ventilation shall ensure that:
  - 13.5.1 The source of supply air is from a known contaminant-free location;
  - 13.5.2 Exhaust ventilation discharged from the confined space is located such that contaminants do not re-enter the space through the ventilation supply air source; and
  - 13.5.3 Atmospheric conditions remain within the acceptable atmospheric limits throughout the duration of entry operations.

Note: Particular attention must be paid during all oxy-fuel and/or electrical arc welding and cutting operations in or adjacent to a confined space, as well as ambient currents of natural air flow that may impact atmospheric conditions.

13.6 Once acceptable entry conditions are met that involve ventilation, Section 5 on the Entry Evaluation and Permit must be completed.

## **14.0 Personal Protective Equipment (PPE)**

- 14.1 The minimum levels of PPE to be worn during:
  - 14.1.1 Any confined space entry, regardless of entry classification, includes a hard hat, safety glasses with side shields and protective footwear; and

- 14.1.2 Permit required confined space entries include a full body harness in addition to the requirements of Section 14.1.1.
- 14.2 Additional levels of PPE may be prescribed based during the pre-entry hazard identification and evaluation. This could include, but is not limited to, hand protection, protective clothing, respiratory protection and hearing protection.
- 14.3 All PPE must be worn and maintained according to manufacturer specifications and the Personal Protective Equipment Policy.

### 15.0 Rescue

- 15.1 The Entry Supervisor is responsible for ensuring that non-entry and/or entry-type rescue options are available whenever hazards cannot be eliminated.
- 15.2 Non-Entry Rescue
  - 15.2.1 Non-entry rescue must be utilized whenever feasible.
  - 15.2.2 Entrants must be continuously tethered to man-rated retrieval device for non-entry rescue to be deemed in place.
  - 15.2.3 Attendants are responsible for performing emergency notification and non-entry rescue operations (See Attachment D).
- 15.3 Entry-Type Rescue
  - 15.3.1 Entry-type rescue must be utilized during all permit required entry activities where Entrants must disconnect from the retrieval device.
  - 15.3.2 When existing or potential hazards are atmospheric in nature and Entrants are not connected to a retrieval device, an Emergency Escape Breathing Device (EEBD) or Self-Contained Breathing Apparatus (SCBA) must be carried by each Entrant. Use of any respiratory protection devices must be in accordance with the District Respiratory Protection Program.
  - 15.3.3 NEORSD employees are not trained or qualified to perform entry-type rescue activities; therefore, such activities are prohibited by NEORSD employees.
  - 15.3.4 Health and Safety will contract a confined space rescue service that can provide a confined space rescue team capable of providing entry-type rescue services when necessary.
  - 15.3.5 During pre-entry planning, the need for entry rescue services must be determined. If entry rescue services are needed, then they are to be scheduled through Health and Safety.
  - 15.3.6 Confined spaces that currently require the scheduling and use of a confined space rescue service are the following:

Location	Confined Space Description
Easterly	Capped sections of mixed liquor channels – east and west ends
	Primary settling tanks #1 - #8
Westerly	CSOTF center channel and quad channels
	Solid contacts tanks
Southerly	Grit tanks #1 - #7
	Junction chamber conduit #1 - #7
Collections	Off-line entries into sewers with travel greater than 150 feet
System	Off-line entries into sewers with visual obstructions or conditions
	interfering with top-side communications
	Non-routine inspection or storage tunnel inspections as required
	by Health and Safety

NOTE: Any exemption to the above requirements must be approved in advance by Health and Safety.

- 15.4 Communication
  - 15.4.1 An effective means of communication between the Attendant(s) and the Entrant(s) must be strictly maintained at all times.
  - 15.4.2 Approved methods of communication include:
    - Verbal Primary option;
    - Radio Secondary option; however, should only be used when verbal communication is inappropriate or infeasible; and
    - Any other method approved by Health and Safety Only should be used as a redundant method of communication or when the primary and secondary options are inappropriate or infeasible. Examples include, but are not limited to, air horns and flashlight signaling.

## **16.0 Entry Evaluation and Permit**

- 16.1 A pre-entry evaluation must be conducted prior to all confined space entry work.
  - 16.1.1 All hazards (existing and potential) associated with the confined space entry activities must be identified and documented on the Entry Evaluation and Permit.
  - 16.1.2 The Entry Supervisor is responsible for ensuring that the pre-entry evaluation is completed and documented on the Entry Evaluation and Permit.
- 16.2 General requirements of the Entry Evaluation and Permit:
  - 16.2.1 Each actual or potential hazard and the method for eliminating, mitigating or controlling each hazard must be documented.
  - 16.2.2 Must be reviewed and discussed by the Entry Supervisor during the pre-entry meeting.

- Pre-entry meeting must involve all employees involved in the confined space entry.
- 16.2.3 Must be signed by all employees involved in the confined space entry at the conclusion of the pre-entry meeting. Signing signifies that the employee understands the tasks to be performed; their assigned role(s); hazard(s) associated with the entry, how the hazard(s) are being eliminated, mitigated or controlled; means of communication and rescue procedures.
- 16.2.4 Must be signed by the Entry Supervisor at the conclusion of the pre-entry meeting. Signing signifies that the Entry Supervisor is approving and authorizing the confined space entry.
- 16.2.5 Must remain at the confined space for the duration of work.
- 16.2.6 Cannot exceed the duration of a single shift (e.g., 8 hours). If work activities exceed a single shift, then the Confined Space Entry Evaluation and Permit must be cancelled, and a new permit generated for the oncoming shift.
- 16.2.7 Must be cancelled:
  - After the permit has expired;
  - Once the work is completed;
  - When a prohibited condition exists;
  - When a change in conditions requires a new permit; or
  - When personnel are changed.
- 16.2.8 Cancelled permits must be signed by the Entry Supervisor and sent to Health and Safety.
  - Health and Safety shall review cancelled permits annually to ensure the effectiveness of this Policy.

## **17.0 Multi-Employer Considerations – Construction Activities**

- 17.1 In cases where a contractor will be providing a service on a NEORSD construction project and the contractor may be working within or in proximity to (at or near entry points) of a confined space, the Engineering and Construction Department will consult with the Health and Safety Department as needed for the appropriate confined space hazard and procedural information. Health and Safety must then provide the following information for inclusion in the bid documents:
  - 17.1.1 A statement that the workplace contains confined spaces;
  - 17.1.2 How to identify NEORSD confined spaces;

- 17.1.3 The location of each known confined space within the area where the contractor will be working;
- 17.1.4 The known or potential hazards associated with each confined space or the reason(s) it is a permit space;
- 17.1.5 That entry into confined spaces is prohibited unless prior approval is given by a District official;
- 17.1.6 The precautions or procedures that NEORSD has implemented for the protection of employees in or near permit spaces where the contractor will be working.
- 17.2 Whenever both NEORSD employees and contractor personnel are simultaneously working in or near confined spaces, the supervisor who is overseeing the NEORSD work must coordinate activities with contractor personnel. Contractor personnel will be required to adhere to the same NEORSD Confined Space safe work practices as NEORSD personnel when working jointly in an identified confined space.
  - 17.2.1 The person overseeing the contractor must ensure that the contractor informs NEORSD about:
    - Any hazard(s) encountered during the contractor entry activities that were not previously disclosed by NEORSD; and
    - Any accidents (including near misses) that occurred during the contractor's entry activities.
- 17.3 Contractor non-compliance with 29 CFR 1910.146 and 1026.1200 (Subpart AA) occurring during construction project work will be addressed via the following procedure:
  - 17.3.1 Situations Immediately Dangerous to Life and Health (IDLH):
    - In the event of activities deemed immediately dangerous to life and health, action must immediately be taken to suspend the confined space activity. Such situations include, but are not limited to:
      - Entry taking place while a hazardous atmosphere exists as evidenced by alarming air monitoring instruments;
      - Lack of fall protection;
      - Exposure to live electrical conductors;
      - Lack of appropriate tethering or rescue equipment.
    - Only competent persons are granted the authority intervene and suspend contractor work when observed taking place in an IDLH situation. The following people are deemed competent persons:
      - Health and Safety Manager, Coordinator and Specialists
- Construction Supervisors and Construction Coordinators
- Plant Superintendents and Assistant Superintendents
- Engineering and Construction Director or Deputy Director
- Operations and Maintenance Director or Deputy Director
- Competent person(s) will immediately contact the project's Construction Supervisor to report the violation. The Construction Supervisor (or designee) will immediately respond to the location and take the appropriate action to address the health and safety issue.
- 17.3.2 Situations Deemed Not Immediately Dangerous to Life and Health (Non-IDLH):
  - Observing person(s) will immediately contact the project's Construction Supervisor to report the violation. The Construction Supervisor (or designee) will respond to the location to address the health and safety issue. No immediate work stoppage will occur; however, the observing person may remain at the work site to ensure no IDLH situation develops until the Construction Supervisor responds.
- 17.3.3 Contractors refusing to comply with the District's requests for compliance may be subject to the following actions:
  - Dismissal from NEORSD worksites
  - Termination of contracts
  - Prohibition from future contracts

## **18.0 Multi-Employer Considerations – Non-Construction Activities**

- 18.1 In cases where a contractor will be providing a service on a NEORSD project other than a construction project, and the contractor may be working within or in proximity to (at or near entry points) a confined space, the employee supervising the contractor(s) must provide notification, as early as possible, to the Health and Safety Department that the project will be taking place. The Health & Safety Department must then provide the following information for inclusion in the bid documents:
  - 18.1.1 A statement that the workplace contains confined spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of 40 CFR 1910.146;
  - 18.1.2 The elements, including hazards and the District's experience, that make the spaces permit-required spaces;
  - 18.1.3 The precautions or procedures that NEORSD has implemented for the protection of employees in or near permit spaces where the contractor will be working;

- 18.1.4 That the NEORSD Health and Safety Specialist at the site where the work is taking place (and Security were applicable) must be contacted prior to and after all contractor confined space entries.
- 18.2 Whenever both NEORSD employees and contractor personnel are simultaneously working in or near confined spaces, the supervisor who is overseeing the NEORSD work must coordinate activities with contractor personnel. Contractor personnel will be required to adhere to the same NEORSD Confined Space safe work practices as NEORSD personnel when working jointly in an identified confined space.
- 18.3 At the conclusion of the entry operations, the Health and Safety Specialist for the NEORSD site where the work is taking place must debrief the contractor regarding the permit space program followed and any hazards confronted or created by the Contractor in permit spaces during entry operations.
- 18.4 Contractors failing to adhere to the provisions of this section, or the minimum requirements found 29 CFR 1910.146 will be required to stop work until any deficiencies have been corrected.
- 18.5 Contractors found to be violating 29 CFR 1910.146 may be subject to the following actions:
  - Dismissal from NEORSD worksites
  - Termination of contract
  - Prohibition from future contracts

## **19.0 Culverts**

- 19.1 Prior to conducting work in a culvert, all hazards of the culvert and associated work activities must be identified and eliminated, mitigated or controlled.
- 19.2 Culverts that meet one or more of the following conditions must be entered as a permit required confined space in accordance with this Policy:
  - 19.2.1 Part of a sanitary sewer system, including combined sewers;
  - 19.2.2 Entry or exit points requiring an Entrant to crawl or have a diameter of eighteen inches (18") or less;
  - 19.2.3 Having length or configured in a manner such that a co-worker is unable to see the Entrant or maintain unassisted voice contact;
  - 19.2.4 Contains, or has the potential to contain, hazardous materials or substantial quantities of decaying organic material;
  - 19.2.5 Require the performance of work that could create an atmospheric hazard (e.g., welding, painting, relining with resins or other curing material, operation of equipment capable of producing carbon monoxide);

- 19.2.6 Plugged by debris, snares or other obstructions which could release substantial water into the structure if the obstruction is removed or loosened;
- 19.2.7 Contains water where a combination of depth, current and incline hinders or prevents stable footing; or
- 19.2.8 Any culvert that Health and Safety has deemed necessary to enter as a confined space.
- 19.3 The following work practices must be followed prior to and during all culvert entries regardless of whether the entry meets the criteria for a confined space entry:
  - 19.3.1 Follow the PPE requirements of Section 14.0.
    - An EEBD must be worn when culvert entry involves greater than one-hundred and fifty feet (150') in travel distance.
  - 19.3.2 Entry shall not be made without the on-site presence of another co-worker located outside the culvert. Continuous communication must be maintained in accordance with Section 15.4.
  - 19.3.3 The atmosphere shall be continuously monitored within five (5) feet of each entrant's breathing zone via personal gas monitors.
  - 19.3.4 All terminal ends shall be checked for obstruction and to determine if passable for safe entry/exit. Culverts may terminate at a known "drop-off" or otherwise present fall hazards and must be evaluated prior to entry.
  - 19.3.5 Portable lighting systems, helmet lamps and/or flashlights shall be provided and used when necessary. Intrinsically safe equipment must be used where deemed necessary.
  - 19.3.6 Where a structure has never been entered by current District employees, no blueprints or drawings exist or there is concern for the physical integrity of the structure, consideration must be given on whether to enter the structure or to use remote cameras prior to employee entry.

## 20.0 Management of Change

- 20.1 All alterations or modifications (temporary or permanent) to a confined space that result in a change to the confined space's configuration, equipment, materials, content, operating procedures and processes must be documented on the Health and Safety Management of Change Form (see Attachment B).
- 20.2 Completed Health and Safety Management of Change Forms must be submitted to Health and Safety.
- 20.3 Health and Safety will ensure that any change(s) impacting the District Confined Space Inventory, evaluation procedures, entry procedures and training needs are communicated to affected employees.

## 21.0 Training

- 21.1 Prior to engaging in confined space entry activities, employees must be trained and qualified for the specific entry role(s) that will be assigned to them.
- 21.2 Each entry role (i.e., Entrant, Attendant, Entry Supervisor) will have separate and distinct qualification requirements.
- 21.3 Training will include, but is not limited to:
  - 21.3.1 The location of the Confined Space Policy;
  - 21.3.2 Summary of OSHA's confined space entry regulations;
  - 21.3.3 General and specific duties and responsibilities for each entry role;
  - 21.3.4 Identification, use and care of equipment, tools, personal protective equipment and monitoring instruments to be used for assigned work;
  - 21.3.5 Types of confined spaces to be entered, configuration, structure, obstruction, means of entry and exit, and materials or substances within, around or introduced into the spaces;
  - 21.3.6 Atmospheric, physical, and chemical (toxic) hazard awareness, including, but not limited to, the identification, elimination, protection, signs/symptoms of exposure and control measures applicable to entry work;
  - 21.3.7 The physiological and psychological stresses associated with confined space entry;
  - 21.3.8 Rescue planning and operations; and
  - 21.3.9 The qualification process for each entry role.
- 21.4 Types and frequency:
  - 21.4.1 Initial training Employees must attend an initial training(s) for the specific role(s) that will be assigned to them.
  - 21.4.2 Qualification evaluation Employees must complete the qualification process for the specific role(s) that will be assigned to them.
  - 21.4.3 Refresher training Employees must complete a periodic, competency-based refresher training for the specific roles that will be assigned to them.
  - 21.4.4 Competency Re-training Employees must complete the initial training and qualification evaluation. Retraining and requalification will be required if an individual fails to pass periodic refresher training or anytime management has reason to believe that an employee's knowledge and/or performance is inadequate.

## 22.0 Recordkeeping Requirements

- 22.1 The District Confined Space Inventory shall be maintained by Health and Safety for the life of each confined space.
- 22.2 Cancelled Entry Evaluation and Permits shall be retained on record for a period of one (1) year by Health and Safety.
- 22.3 Health and Safety Management of Change Forms shall be retained on record for a period of one (1) year by Health and Safety.
- 22.4 Training and qualification records will be maintained within the Human Resources Organization Learning and Performance system. All training session attendance rosters will be entered into the OLP system by the class instructor or designee.
- 22.5 Copies of the training materials and class rosters will be maintained by Health and Safety.
- 22.6 Program review information will be maintained by Health and Safety.
- 22.7 Upon request, employee records will be made available to employees, former employees and representatives designated by the individual employee.

## 23.0 Attachments

Attachment A – Pre-Entry Evaluation and Entry Permit – Plants and Collections

Attachment B – Management of Change Form

Attachment C – Confined Space Inventory Resource

Attachment D – Confined Space Rescue Flow Diagrams – Plants and Collections

## Attachment A – Confined Space Entry Evaluation and Permit - Plants and Collections

The most current version the NEORSD Confined Space Entry Evaluation and Permit for the Plants and Collections System may be obtained from any member of the Health & Safety Department

## Attachment B – Management of Change Form

The most current version the NEORSD Management of Change Form may be obtained from any member of the Health & Safety Department Attachment C – Facility Confined Space Inventory Resource

The most current version the NEORSD Confined Space Inventory may be obtained from any member of the Health & Safety Department



## Attachment D – Confined Space Rescue Flow Diagrams – Plants and Collections



Attachment D – Confined Space Rescue Flow Diagrams – Plants and Collections

\*\*NOTE: THE CONFINED SPACE ATTENDANT IS THE SCENE INCIDENT COMMANDER UNTIL EMERGENCY RESPONDERS ARRIVE, ONCE ON SCENE, EMERGENCY RESPONDER WILL TAKE OVER INCIDENT COMMAND

# Northeast Ohio Regional Sewer District Health and Safety Policy for Control of Hazardous Energy (Lockout/Tagout – LOTO)

Effective Date:	07/03/2017
Issued by:	Health and Safety
Version Number:	3.0
Supersedes:	Revision # 002
Approval Authority:	Manager of Health and Safety
Applicable to:	All NEORSD Employees

## **Table of Contents**

1.0	Overview	3
2.0	Definitions	3
3.0	Responsibilities	5
4.0	Prevention Through Design	8
5.0	General Requirements & Work Practices	8
6.0	Conditional Requirements & Work Practices	
7.0	New and Modified Equipment	
8.0	Contractors	
9.0	Locks, LOTO Devices and Tags	
10.0	Management of Change	
11.0	Training	
12.0	Recordkeeping Requirements	

## 1.0 Overview

The Northeast Ohio Regional Sewer District's (NEORSD) Control of Hazardous Energy (Lockout/Tagout) Policy is intended to protect NEORSD employees and outside contractors from injuries that could result from the unexpected or unplanned start-up or movement of machinery or equipment during maintenance, installation, adjustment or servicing operations. This policy establishes procedures that are to be used to ensure that District employees are provided with the necessary information and equipment to perform related tasks safely.

Components of the Lockout/Tagout (LOTO) Policy include:

- Energy Control Procedures (steps for equipment shutdown, isolation, application of locks and tags, dissipation of stored energy, verification of isolation, removal of locks and tags and restoration of energy to machines)
- Employee Notification
- Contractor Activities
- Employee Training
- Periodic Audits of Energy Control Procedures

This policy has been developed to ensure compliance with the OSHA's regulation for The Control of Hazardous Energy (Lockout/Tagout) (29 CFR 1910.147) and other industry best practices, when appropriate.

This policy applies to NEORSD property and all work performed by NEORSD employees or contractors who maintain, service, repair, adjust or perform non-routine NEORSD process related work on machines, equipment, or systems on NEORSD facility premises.

## 2.0 Definitions

<u>Affected Employee</u> – An employee who is required to use machines or equipment on which servicing is performed under LOTO or who performs other job-related responsibilities in an area where such servicing is performed. The Affected Employee does not perform servicing or maintenance activities and is not responsible for implementing energy-control procedures.

<u>Authorized Employee</u> – A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. For purposes of this policy, an Authorized Employee is one who (1) locks out or tags out machinery or equipment to perform service or maintenance, (2) implements a lockout/tagout system procedural element on equipment or machinery and/or (3) performs service/maintenance on a piece of equipment or machinery.

<u>Capable of Being Locked Out</u> – An energy source is capable of being locked out if it meets one or more of the following criteria: (1) designed with a hasp to which a lock can be affixed; (2) designed with any other device through which a lock can be attached; (3) has a locking mechanism built into it; (4) can be locked without dismantling, rebuilding or replacing the energy-isolating device or permanently altering its energy-control capability (e.g., although many valves are not designed with an integral locking device, they can be secured with chains, blocking braces, or wedges, which can then be locked).

<u>Complex LOTO</u> – LOTO involving more than one group, e.g., plant w/ contractor, plant w/ SSMO. This document is uncontrolled when printed. Date Printed: Health and Safety Policy Control of Hazardous Energy Page 3 <u>Contractor</u> – An organization, or its employee, that performs work under contract for NEORSD. Contractors may employ subcontractors who perform work under contract of the primary contractor.

<u>Employees Supervising Contractors</u> – Any NEORSD employee, regardless of job title/position, who oversees work performed by contractors.

Energized – Connected to an energy source or containing residual or stored energy.

<u>Energy-Control Procedure</u> – A written procedure that contains the information and steps an Authorized Employee must follow to safely isolate equipment to perform servicing or maintenance under LOTO.

<u>Energy-Isolating Device</u> – A mechanical device that physically prevents the transmission or release of energy. Energy-isolating devices include, but are not limited, to manually operated circuit breakers, disconnect switches, valves and blocks. The term does not apply to pushbuttons, selector switches or other control devices.

<u>Energy Source</u> – Any source of electrical, hydraulic, pneumatic, chemical, thermal, gravity or other energy source.

Integral – An activity that is inherent in or necessary to the production process.

<u>Lockbox (Group Lockbox)</u> – An accessory used for equipment specific lockout application containing the key(s) of all lockout devices that have been applied to each hazardous energy source.

<u>Lockout</u> – The placement of a lockout device on an energy isolating device, in accordance with an established energy-control procedure, ensuring that the equipment may not be operated until the lockout device is removed.

<u>Lockout Device</u> – A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

<u>Other Employee</u> – Those individuals whose work activities are or may be in an area where energycontrol procedures may be utilized. This role is covered by OSHA 1910.147(c)(7)(i)(c).

<u>Principal Authorized Employee</u> – A person responsible for a group lockout who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. A Principal Authorized Employee is an authorized employee who oversees group lockout process and application of personal locks to the lock box.

<u>Repetitive</u> – An activity that must be repeated as part of the production cycle.

<u>Routine</u> – An activity that must be a regular course of procedure and be in accordance with established practice.

<u>Service/Maintenance</u> – Workplace activities that may include constructing, installing, setting up, adjusting, inspecting, maintaining, modifying and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming, and making tool adjustments or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.

<u>Tagout</u> – The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

## 3.0 Responsibilities

To ensure that this LOTO policy is implemented and maintained in accordance with the procedures listed in this policy, the identified NEORSD employees have the following responsibilities:

### 3.1 Manager of Health and Safety

- 3.1.1 Overall implementation of this Policy for the NEORSD: and
- 3.1.2 Coordinate resources and training for authorized, affected and other employees at NEORSD;
- 3.1.3 Manage development of energy-control procedures and the selection of proper LOTO devices;
- 3.1.4 Aid Engineering (Design) on LOTO requirements for new equipment and machines.
- 3.1.5 Coordinate the annual review/update of this Policy or as needed due to operational changes; and
- 3.1.6 Provide guidance and interpretations of this Policy.

#### 3.2 Health and Safety Staff

- 3.2.1 Assist the Manager of Health and Safety with overall implementation of this Policy;
- 3.2.2 Coordinate and/or perform training sessions for authorized and affected employees at NEORSD;
- 3.2.3 Perform periodic inspections of energy control procedures to ensure compliance with this Policy. Provide updates to procedures as needed;
- 3.2.4 Ensure employee and, where applicable, contractor compliance with this Policy.
- 3.2.5 Assist the Manager of Health and Safety with the annual review/update of this Policy;

- 3.2.6 Ensure the proper type of LOTO devices and padlocks are available and organized, as directed by the Manager of Health and Safety;
- 3.2.7 Coordinating the development of equipment specific energy-control procedures;
- 3.2.8 Investigate accidents (including near misses) related to LOTO; and
- 3.2.9 Approve tagout applications when required.

#### 3.3 Directors

3.3.1 Ensure overall compliance with this Policy for his/her area of responsibility.

#### 3.4 **Superintendents**

- 3.4.1 Direct the use of resources (people and materials) to safely operate and maintain their facility to achieve compliance with this Policy;
- 3.4.2 Direct, develop and implement processes that work within NEORSD policies and procedures, to meet the requirements of this Policy; and
- 3.4.3 Provide instruction to ensure adherence to this Policy.

#### 3.5 Engineering (Design)

- 3.5.1 Ensure that design specifications for new build and renovation projects meet the requirements of this Policy; and
- 3.5.2 Seek Prevention through Design (PtD) opportunities in new build and renovation project designs that eliminate or reduce the severity of hazardous energy exposures regarding service/maintenance.

#### 3.6 NEORSD Employees Supervising Contractors

- 3.6.1 Ensure that contractors are properly implementing energy-control procedures as required by this Policy;
- 3.6.2 Coordinate all activities, on projects, during complex lockout/tagout procedures involving outside contractors;
- 3.6.3 Correct and report contractor non-compliance to this Policy; and
- 3.6.4 Submit a Management of Change Form to Health and Safety whenever a machine, equipment or system is created, modified, or decommissioned through a new build or renovation project.

#### 3.7 **Construction Coordinator**

- 3.7.1 Ensure that energy-control procedures are being performed in compliance with the requirements of this Policy;
- 3.7.2 Coordinate LOTO at their assigned facility with engineering (construction)/ individuals supervising contractors and the appropriate Health and Safety Representative whenever contractors are involved in LOTO; and
- 3.7.3 Communicate to the Health and Safety Representative when equipment or systems requiring an energy-control procedure are commissioned, altered or decommissioned.

#### 3.8 Managers/Supervisors

- 3.8.1 Daily oversight to ensure that each employee, under supervision, is utilizing energy-control procedures in compliance with requirements of this Policy;
- 3.8.2 Utilize and enforce the Progressive Discipline Policy;
- 3.8.3 Ensure that Authorized and Affected employees have received training, as required by this policy;
- 3.8.4 Maintain and purchase the necessary LOTO devices, padlocks and resources necessary for effective implementation of energy-control procedures; and
- 3.8.5 Notify the Health and Safety Representative when new equipment is purchased or current equipment is modified, or operations are changed that require the use of energy-control procedures.

#### 3.9 Authorized Employees

- 3.9.1 Perform service/maintenance on equipment and correctly apply energy-control procedures, including the application of locks/tags before maintenance work begins;
- 3.9.2 Be knowledgeable about the types and magnitudes of hazardous energy sources and the hazards associated with the unexpected or unplanned start-up or movement of machinery or equipment during maintenance, installation, adjustment or servicing operations;
- 3.9.3 Be knowledgeable in the methods used to control hazardous energy;
- 3.9.4 Inform their supervisor when unusual situations or questions arise regarding an energy-control procedure or when energy-control procedures need correcting;
- 3.9.5 Inform their supervisor when an accident (including near miss) occurs related to the control of hazardous energy; and

3.9.6 Properly utilize, store and maintain all LOTO devices and padlocks in accordance with this policy.

#### 3.10 Affected Employees

- 3.10.1 Recognize maintenance or repair circumstances where LOTO of machinery would be required to prevent the potential release of hazardous energy;
- 3.10.2 Request assistance from authorized employees whenever service, maintenance or repair to equipment is recognized to require the application of energy-control procedures to safely perform the work as outlined in this Policy;
- 3.10.3 Refuse to work on equipment requiring service, maintenance or repair when energy-control procedures would be required to safely perform any compromised production task; and
- 3.10.4 Never tamper with, alter or remove any LOTO device(s) that may have been applied by other LOTO authorized employees or contractors.

## 4.0 Prevention Through Design

- 4.1 New construction and modifications to existing machines, equipment or systems shall be evaluated during the design phase for end-user impacts regarding LOTO. Where feasible, design standards shall incorporate Prevention through Design (PtD) principles that reduce or eliminate the hazards associated with LOTO. PtD principles shall include, but are not limited to:
  - 4.1.1 Installing energy-isolation devices as close to the equipment as practicable;
  - 4.1.2 Installing bleed points for relieving the pressure of fluid materials (liquids and gases) within machines, equipment or systems allowing for a unpressured first break of a pipe or hose;
  - 4.1.3 Installing equipment that remotely operate electrical disconnects;
  - 4.1.4 Installing sufficient energy-isolation devices to ensure that energy sources do not backflow into a machine, equipment or system; and
  - 4.1.5 Evaluating and installing energy-isolation devices for machines, equipment or systems that may need to undergo service/maintenance in an elevated or upright position (e.g., overhead door, gate, bar rake).

## 5.0 General Requirements & Work Practices

- 5.1 Requirement for Machine Specific Energy-Control Procedures
  - 5.1.1 Energy-control procedures shall be developed for all process, mobile and facility support machines or equipment.

- 5.1.2 Energy-control procedures do not need to be documented for machine or equipment <u>ONLY</u> when <u>ALL</u> of the following exist:
  - 5.1.2.1 The machine or equipment has no potential for stored or residual energy or re-accumulation of energy after shut down;
  - 5.1.2.2 The machine or equipment has a single energy source which can be readily identified and isolated;
  - 5.1.2.3 The isolation and locking out of the energy source will completely deenergize the machine or equipment;
  - 5.1.2.4 The machine is isolated from the energy source and locked out during service/maintenance;
  - 5.1.2.5 A single lockout device will achieve a locked out condition;
  - 5.1.2.6 The lockout device is under the exclusive control of the authorized employee performing the service or maintenance;
  - 5.1.2.7 The service/maintenance work does not create any hazards for other employees; and
  - 5.1.2.8 NEORSD has had zero accidents involving the unexpected activation or re-energization of the machine or equipment during service/maintenance activities.
- 5.1.3 The energy-control procedure shall clearly and distinctly outline the scope, purpose, authorization, rules, techniques to be applied and the measures to enforce compliance. The procedures shall include all energy sources, stored and potential energy sources, the magnitude of the energy and the proper method for isolating the energy source.
- 5.1.4 The energy-control procedures required by this Policy shall be used by authorized employees to perform work covered by this Policy involving the installation, repair, maintenance or service of energized machinery or equipment.
- 5.1.5 Equipment-specific written energy-control procedures shall be accessed in a binder placed at the nearest LOTO station at each facility. Additionally, all procedures can be accessed electronically in WAM, as the procedure is tied to the asset as to which it pertains.
- 5.2 When LOTO Must be Applied
  - 5.2.1 LOTO of machines or equipment is required anytime an employee is required to:
    - Remove or bypass a guard or other safety device; or

- Place any part of his/her body into an area on a machine or piece of equipment where work is actually performed upon the material being processed (point of operation) or where an associated danger zone exists during a machine operating cycle.
- 5.2.2 During the following exemptions, LOTO does not apply:
  - 5.2.2.1 Minor tool changes, adjustments and other minor servicing activities, which take place during normal production operations, are not covered by this standard if they are routine, repetitive, and integral to the use of the equipment for production, provided that the work is performed using alternative measures which provide effective protection;
  - 5.2.2.2 Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water or petroleum products when they are performed on pressurized pipelines, provided that the employer demonstrates that the continuity of service is essential, shutdown of the system is impractical, alternative documented procedures are followed and special equipment is used that will provide proven effective protection for employees;
  - 5.2.2.3 Work on cord and plug connected equipment for which exposure to the hazards of unexpected energization or start-up of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug being under the exclusive control of the employee performing the service/maintenance. In order for the plug to be considered under exclusive control, it must meet one of the following criteria:
    - The plug must be placed into an energy isolating device and the key maintained by the authorized employee;
    - The plug must be in the possession of the employee performing the service/maintenance; or
    - The plug must be within the employee's line of vision and reach.

#### 5.3 Who Applies LOTO

- 5.3.1 Due to the wastewater treatment process and controls, it is imperative in most instances that operations employees be involved with the LOTO process and apply the locks to prevent unwanted discharge or destruction of equipment; even though employees of other job classifications may perform work on the equipment under LOTO. It is critical that operations and other departments work together when applying LOTO, in the following ways:
  - Electrical Breakers and Disconnects:

- The electrical equipment found in listed in the following sections shall be operated, locked out, or re-energized after lockout only by qualified persons, as defined by OSHA and NFPA 70E.
- Restricted Equipment: Restricted equipment shall only be operated, locked out or re-energized by maintenance employees or electricians who are qualified persons for the equipment and task. Coordination of locking out or re-energizing of Restricted Equipment must be done with Operations. Examples of Restricted Equipment and associated tasks include:

Equipment Name or Task	Voltage	Location
Racking Out / In Breakers	All voltages	All Locations
High Voltage Switching	>480 volts	All Locations
Generator & Backup	All voltages	All Locations
Power		
Breakers inside Cabinets	Cabinets >120v	All Locations

- Qualified Equipment: Qualified equipment shall be operated, locked out or re-energized by employees who have successfully become qualified persons for that equipment and task. Qualified persons must:
  - Receive electrical safety training;
  - Be trained in the proper operation and techniques in closing and operating electrical equipment, including, but not limited to:
    - Identification of hazardous situations, equipment and when it is not safe to perform the task or operate the equipment;
    - Operating electrical equipment in wet or damp environments;
    - Proper disconnecting / opening techniques and the associated hazards;
    - Proper re-energizing / closing techniques and the associated hazards; and
    - Not to repeatedly try to close / energize circuits that will not close;
  - Demonstrate skill and knowledge in the safe operation of the equipment and tasks.
- Examples of Qualified Equipment and associated tasks include:

Equipment Name or Task	Voltage	Location
Breakers or Disconnects	240v – 480v	All Locations
with covers on		
Motor Control Buckets	≤480 volts	All Locations
Battery Disconnect	All voltages	All Locations

• Unrestricted Equipment: Unrestricted equipment may be operated, locked out, or re-energized by any properly trained employee. Examples of Unrestricted Equipment and associated tasks include:

Equipment Name or Task	Voltage	Location
Breakers or Disconnect	≤ 120 volts	All Locations
Operation with covers on		
Any equipment / task	<50 volts	All Locations

Note: All electrical work must be performed in accordance to the Electrical Safety policy.

- Mechanical and Process Equipment Lockout
  - Mechanical and Process Equipment affecting wastewater plant operations may only be locked out and re-energized by operations employees.
- Transfer to Other Departments (Where Applicable)
  - As the majority or all lockout points in wastewater treatment plants are being performed by operations employees for other departments, it is imperative that one of the two systems is followed in order for authorized employees to confirm that the LOTO process was completed properly prior to beginning work:
    - Authorized employees shall work in coordination with operations while locking out all energy isolation points, using the Lockout Process in Section 6.1; or
    - Authorized employees shall use a lockout procedure checklist for that equipment or machine to verify all points have been properly locked out. The checklist shall be given to the Health and Safety Department before beginning work. This is offered through the RapidLOTO software.
- 5.4 Sequence for Applying Energy-Control Procedures
  - 5.4.1 The following steps shall be implemented by an authorized employee, <u>in the order</u> <u>presented</u>, when performing energy-control procedures:
    - Prepare for Shutdown: Review the applicable energy-control procedure and study the types and magnitudes of hazardous energy and the methods of

control. Gather all necessary tools and repair or maintenance materials required for the planned service task prior to beginning notification and shut down. If help is needed, seek the assistance of the applicable manager or supervisor.

- Notify Affected Employees: Verbally notify affected employees (i.e., machine operator, wastewater plant operator, shift supervisor, etc.) that an energy-control procedure is going to be utilized prior to the application of LOTO devices.
- Ensure Machinery or Equipment is Shutdown: Use normal stopping procedures to shut down equipment (e.g., depress stop button, shift a lever, operate a valve). Always look for hidden sources of energy as some equipment has multiple energy sources.
- Isolate Machinery or Equipment from Energy Source: Place all energy isolation controls (i.e., breakers, disconnects, valves, etc.) in the "off" or "safe" position so that the machine or equipment is isolated from the energy source. Stored or residual energy must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, etc. Take necessary steps to prevent the reaccumulation of stored or residual energy such as performing back up isolation of energy sources up stream of the primary point of shut down.
- **Apply Locks and Lockout Devices**: Energy-isolating devices that are physically capable of receiving a padlock must be locked when the device is in the "off" or "safe" position. Apply lockout devices and locks to secure the energy-isolation point in place when a lock alone is not suitable. This may include the application of blocks, chains or other lockout devices. Each authorized employee must maintain possession of the key to his/her lock during the entire work operation requiring the use of LOTO.
- Zero Energy Verification Testing: Prior to starting work on machines or equipment, the authorized employee shall verify that isolation, de-energization and locked control of the machine or equipment has been accomplished following the verification steps on the procedures. This may include, but is not limited to using normal operating controls to try and start or move the machinery, or a qualified person verifying zero energy on electrical circuits using a meter.
- 5.5 Sequence for Release from LOTO
  - 5.5.1 When work operations requiring the use of LOTO have been completed, the following steps will be used by an authorized employee, **in the order presented**, to restore machinery or equipment to service:
    - **Check Equipment**: Inspect the area around the machinery or equipment to ensure that all tools and other nonessential items have been removed,

machine guards have been reinstalled and the equipment components are operationally intact and safe to energize.

- **Check Work Area**: Inspect the work area to make certain all personnel are safely positioned away from the machinery.
- Verify Controls are in Neutral: Verify that all machine and equipment control switches are in the neutral or off position.
- **Remove LOTO Devices**: Remove personally applied locks from group lockbox. Principle authorized employee shall remove any applied devices from their installed positions on energy control switches. Only the principle authorized employee shall perform the removal of machine locks on the energy controls. Authorized employees shall remove their color specific locks from the group lockbox.
- **Restore Energy to Equipment/Machine**: Place circuit breakers, disconnect switches, valves, etc. into the appropriate position to restore energy.

#### 5.6 Tagout

#### 5.6.1 Any tagout applications must first be approved by Health and Safety.

- 5.6.2 Tagout is a separate and alternative process to lockout and shall be used only when an energy-isolating device is not capable of being locked out. In the event an energy-isolation device cannot be locked out, the following tagout process shall be used.
  - 5.6.2.1 When a tagout device is used on an energy isolating device, the tagout device shall be attached at the same location that the lockout device would have been attached and the employer shall demonstrate that the tagout program will provide a level of safety equivalent to that obtained by using a lockout program.
  - 5.6.2.2 In demonstrating that a level of safety is achieved in the tagout program that is equivalent to the level of safety obtained by using a lockout program, NEORSD (or contractor) shall demonstrate full compliance with all tagout-related provisions of this standard together with such additional elements as are necessary to provide the equivalent safety available from the use of a lockout device. Additional means to be considered as part of the demonstration of full employee protection shall include the implementation of additional safety measures such as the removal of an isolating circuit element, blocking of a controlling switch, opening of an extra disconnecting device or the removal of a valve handle to reduce the likelihood of inadvertent energization.

#### 5.7 Periodic Inspections

- 5.7.1 Authorized Employees
  - 5.7.1.1 Where LOTO is used for energy control, a periodic inspection shall include a review, between the inspector and each authorized employee, of that employee's responsibilities under the energy control procedure being inspected. The inspection will address any deviations or inadequacies observed in the application of the energy isolation procedure. Corrections or performance improvement suggestions will be immediately shared with the person being evaluated. Retraining will be recommended if indicated by deficient performance.
  - 5.7.1.2 The periodic inspection shall be performed by an authorized inspector, designated in writing by the Manager of Health and Safety, other than the ones(s) utilizing the energy control procedure being inspected.
  - 5.7.1.3 Not all authorized employees need to be inspected on each procedure or equipment, but rather a sampling as equipment is being put under LOTO.
  - 5.7.1.4 The authorized inspector shall document the results of the evaluation using the H&S Form: Lockout-Tagout Audit Sheet. This form provides for:
    - The identification of the machinery or equipment on which the energy isolation procedure was applied;
    - The date of inspection;
    - The employee(s) included in the inspection; and
    - The authorized inspector conducting the inspection
  - 5.7.1.5 All completed inspection forms will be sent to the Health and Safety for certification, evaluation, corrective action and recordkeeping purposes.
- 5.7.2 Written Energy-Control Procedure Evaluation
  - 5.7.2.1 A periodic inspection of the energy control procedures shall be conducted at least annually to ensure that the procedure and the requirements of this standard are being followed. The inspection should verify that all posted and/or available procedures are current and accurate as to the methodology needed to verify a zero energy state. Procedures bearing a current date and verified effective by testing and not subject to an active management of change process will be deemed to be up to date and approved for use.

- 5.7.2.2 The periodic inspection shall be performed by an authorized inspector, designated in writing by the Manager of Health and Safety, other than the ones(s) utilizing the energy control procedure being inspected.
- 5.7.2.3 Any written energy-control procedure found to be inaccurate shall be documented and scheduled for revision using a management of change procedure. The related equipment will be flagged as having an inaccurate energy-control procedure, and service or repair shall not be done until the energy-control procedure is updated and verified as accurate.
- 5.7.3 Program Evaluation
  - 5.7.3.1 The Manager of Health and Safety shall conduct annual evaluations of this Policy. This will consist of a review of incidents over the past year where deficiencies in this Policy or the practice of it were documented to exist. A specification for corrective action will be made, and the general policy will be revised to incorporate any changes necessary to improve the functionality and understanding of this Policy.
  - 5.7.3.2 Documented updates to this Policy will be made where necessary and retraining of authorized and affected employees will be performed for all new information, revisions and required practices prior to approving implementation of the revised Policy.

## 6.0 Conditional Requirements & Work Practices

- 6.1 Group LOTO
  - 6.1.1 Each group LOTO will utilize a group lockout scheme involving machine locks (Blue) and the use of a group lockbox.
  - 6.1.2 The individual that physically applies the locks and tags and performs the verification shall be called the Principal Authorized Employee (PAE). PAEs shall include Operators, Maintenance Managers, Integrated Process Manager (IPM), Construction Coordinators, Shift Managers and Field Technicians.
  - 6.1.3 Group LOTO will utilize the following process:
    - PAE performs energy-control procedure(s) and verification using blue machine locks;
    - PAE places all machine lock keys in a group lockbox, their color specific personal lock and yellow PAE tag on the group lockbox and retains personalpossession of the key;
    - Authorized employees shall place their color specific personal lock and white tag on the lockbox before performing work and retain personal-possession of the key;

- Service/maintenance is performed;
- Authorized employees shall remove their color specific personal lock and white tag from the group lockbox when their personal work is complete;
- PAE shall remove their color specific personal lock and tag from the group lockbox after ALL affected employees have removed their color specific personal locks; and
- PAE shall remove the blue machine locks and re-energize equipment.
- 6.1.4 The Health & Safety Representative is responsible for coordinating and scheduling a pre-job briefing before implementing the complex lockout/tagout procedure and whenever necessary thereafter. All parties involved (or a representative from each party) must be present at the pre-job briefing.
- 6.1.5 The pre-job meeting must be documented, using the H&S Form: *De-energization/Energization Job Briefing Checklist* and posted at the jobsite. The briefing shall cover such subjects as hazards, work procedures, special precautions, energy source controls and personal protective equipment.

For purposes of this policy, the project or job staffing should be designed like the following:



#### 6.2 Personnel and Shift Changes

6.2.1 For energy-control procedures that extend beyond one shift the following procedures shall be followed. When there is no exchange of personnel on the job, one of the following options may be chosen for keeping the equipment under LOTO:

- Short-Term / Non-Process Equipment The authorized employees performing the service/maintenance may leave his/her lock on the energy-isolating device at the end of the shift (which is recommended for jobs that will be continued the next day).
- Longer-Term / Non-Process Equipment The manager may apply a transfer lock (Purple) in place of personal locks, with notice of the reason for LOTO. Transfer lock applications must be documented.
- Longer-Term / Process Equipment The manger can apply the crane or seasonal process locks (Black) to equipment for reasons of security, out of service or service suspended due to season.
- 6.2.2 When there is an exchange of personnel on the job covering two, and only two, consecutive shifts, the following steps shall be taken to keep the equipment under LOTO:
  - The applicable supervisor(s) must be notified when the project will require an energy-control procedure to be extended beyond one shift and the PAE must transfer.
  - At shift change all work will be suspended for a short time.
  - All authorized employees will remove their color specific personal lock and tag from the group lockbox.
  - Off-shift PAE will remove their color specific personal lock and PAE tag from the group lockbox.
  - On-shift PAE will verify each machine lock and verify placement of machine lock keys in the lockbox.
  - On-shift PAE will place color specific personal lock and PAE tag on the group lockbox.
  - Authorized employees will place color specific lock and tag on group lockbox.
  - Work will resume.
- 6.2.3 When there is an exchange of personnel on the job lasting more than two consecutive shifts, the following steps shall be taken to keep the equipment under lockout:
  - The applicable supervisor(s) must be notified when the project will require an energy-control procedure to be extended beyond two consecutive shifts and the PAE must transfer. The IPM becomes the PAE.
  - At shift change all work will be suspended for a short time.

- All authorized employees will remove their color specific personal lock and tag from the group lockbox.
- Off-shift PAE will remove their color specific personal lock and PAE tag from the group lockbox.
- PAE will verify each machine lock and verify placement of machine lock keys in the group lockbox.
- PAE will place color specific personal lock and PAE tag on group lockbox.
- Authorized employees will place color specific lock and tag on lockbox.
- 6.3 Emergency Lock or Tag Removal
  - 6.3.1 In the event that the authorized employee who attached his/her lock or tag is not available to unlock or remove his/her lock and tag, only the applicable Shift Manager, or other member of management designated by the Facility/Department Superintendent, may remove the lock or tag using the following steps:
    - Personally verify that the authorized employee (or contractor) who placed the lock or tag is not at the facility.
    - Attempt to contact the authorized employee (or contractor) whose lock or tag is still in place. Every attempt will be made to ensure that the authorized employee is no longer on the site or reachable.
    - Shift Manager or IPM shall complete and sign the H&S Form: *Emergency Lock or Tag Removal*. All completed forms must be sent to the Manager of Health and Safety within twenty-four (24) hours.
    - The Shift Manager, IPM, or applicable supervisor may cut the lock off using a saw, bolt cutters or other effective tool.
    - The authorized employee (or contractor) whose lock and tag has been removed must be informed by the person who removed the lock before he/she returns to work.
    - The applicable manager shall review the lock application and removal requirements with the authorized employee (or contractor) who left their lock/tag on the equipment if the procedures were not properly followed, resulting in the removal of the lock.
- 6.4 Testing and Positioning of Machines and Equipment
  - 6.4.1 In some situations, it may be necessary for authorized employees to operate equipment for testing or positioning before it is ready to be released to operations. These situations require the temporary removal of LOTO devices only during the limited time necessary for the testing and positioning. Testing procedures shall not

be considered justification to come in unprotected contact with points of operation or expose the authorized employee to the hazards of unexpected release of energy. If contact or exposure is required to complete maintenance, repair or servicing, then energy-control measures must be re-applied.

- 6.4.2 The following steps must be followed during testing and positioning machines and equipment:
  - Clear the machine or equipment of tools and materials that may be affected as a result of the testing or positioning procedure;
  - Notify all affected employees that the machine is about to be tested and verify that personnel are clear of the area;
  - Remove the LOTO devices that were previously applied to energy isolation points;
  - Energize and proceed with testing, observation or positioning using caution not to contact moving or energized machine areas; and
  - After completion of the testing or positioning, if further adjustment is required, de-energize all systems and reapply all previously removed energy isolation measures prior to continuing the servicing and/or maintenance.

## 7.0 New and Modified Equipment

- 7.1 Whenever repair or modification of machines or equipment is performed and whenever new machines or equipment are installed, energy isolating devices for such machines or equipment shall be designed to accept a LOTO device.
- 7.2 The Superintendent, Engineering and Construction Staff (Construction Supervisor or Manager) or Construction Coordinator shall inform the Health and Safety Department of any new equipment entering the facility or alteration to existing machinery that could result in a change of energy-control procedure.
- 7.3 A new energy-control procedure shall be developed when new equipment is installed, or existing energy-control procedures shall be revised if older equipment is modified or overhauled, using the H&S Form: *Management of Change*. See Section 10.

## 8.0 Contractors

- 8.1 Outside contractors shall comply with their own LOTO Policy/Program; however, contractors and NEORSD must be familiar with each party's LOTO Policy/Program and the restrictions/prohibitions pertaining thereto.
- 8.2 Contractors shall supply their own locks for lockout and may not work on equipment under LOTO without first applying their own personal lock.

- 8.3 Prior to any outside contractor performing service/maintenance on NEORSD property, employees shall utilize the following process and the NEORSD employee responsible for supervising contractor(s) shall document using H&S Form: *De-energization/Energization Job Briefing Checklist*.
  - 8.3.1 The Health and Safety Representative must contact the outside contractor's company representative, and exchange LOTO Policies and relevant energy control procedures;
  - 8.3.2 The NEORSD employee responsible for supervising contractor(s) shall notify Health and Safety, Superintendent, and Construction Coordinator (where applicable) that contractor work requiring LOTO is planned, including the scope, duration, and location of the LOTO;
  - 8.3.3 The Health and Safety Representative, Construction Coordinator (where applicable), and NEORSD employee responsible for supervising contractor(s) shall review the outside contractor's LOTO policy/program for adequacy and/or conflicts with internal Policy or procedures;
  - 8.3.4 Where concerns arise over conflicts or questions with NEORSD/contractor policies or procedures, the NEORSD Health and Safety Representative shall arrange a meeting to discuss the procedures that will be followed;
  - 8.3.5 Health and Safety, or Construction Coordinator (where applicable), shall communicate with managers/supervisors regarding the contractor work, and any differences in LOTO policies, procedures, or equipment pertaining thereto;
  - 8.3.6 Managers/supervisors shall notify affected employees of the contractor work, and any differences in LOTO policies, procedures, or equipment pertaining thereto; and
  - 8.3.7 The NEORSD employee responsible for supervising contractor(s) ensure that the outside contractor is provided with and understands all appropriate LOTO procedures and the locations of isolation points pertaining thereto.
- 8.4 When authorized NEORSD employee(s) will be working on the same project as outside contractor(s), a NEORSD employee will serve as Principle Authorized Employee (PAE) and the contractor(s) shall provide, at a minimum, one employee representative to accompany the PAE for verification that all isolation points are identified and secured in accordance with all energy isolation procedures. Both the locks of the contractor employees and NEORSD employee(s) will be applied to multiple lock adapters or group lockbox.
- 8.5 When authorized NEORSD employee(s) will be working on the same project as outside contractor(s) and differences exist between NEORSD/contractor LOTO policy/program, both parties shall adhere to whichever party's policy/program is more stringent. Such determinations shall be made by the Manager of Health and Safety.
- 8.6 Contractors failing to adhere to the provisions of this section, or the minimum requirements found OSHA's regulation for The Control of Hazardous Energy will be required to stop work until any deficiencies have been corrected.

- 8.7 Contractors found to be violating their own LOTO Policy; the District's Policy where applicable; or those conditions agreed upon and documented in H&S Form: *Deenergization/Energization Job Briefing Checklist*, may be subject to the following actions:
  - 8.7.1 Dismissal from NEORSD worksites
  - 8.7.2 Termination of contract
  - 8.7.3 Prohibition from future contracts

## 9.0 Locks, LOTO Devices and Tags

- 9.1 Locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners or other hardware shall be provided to authorized employees for isolating, securing or blocking equipment energy sources. Locks and tags can only be used for implementing energy-isolation procedures and shall not be used for any other purpose (e.g., locking toolboxes or personal lockers).
- 9.2 Only padlocks, lockout devices or other devices approved by the Manager of Health & Safety and procured in accordance with NEORSD purchasing policies may be used by District employees for LOTO.
- 9.3 Each authorized employee shall be provided access to standardized NEORSD approved LOTO devices necessary to implement effective equipment-specific energy-control procedures.
- 9.4 Personal Locks
  - 9.4.1 Must identify the individual applying the lock using one of the following methods:
    - 9.4.1.1 Lock with personal identification information on it; or
    - 9.4.1.2 Attach a tag with personal identification information to the lock.
      - Principle authorized tags will be yellow.
      - Authorized employee tags will be white.
  - 9.4.2 The following color scheme and materials will be used to identify the department/person or lock purpose for the lock placed on a piece of equipment:

Lock Color	Lock Application	Material	Keying
Blue	Machine Locks	Metal/Plastic	Keyed Different
Yellow	Operations and Maintenance	All Plastic	Keyed Different
Teal	Health & Safety	All Plastic	Keyed Different
Purple	Transfer Locks	All Plastic	Keyed Alike
Red	WQIS	All Plastic	Keyed Different
Black	Cranes & Seasonal Process	Metal	Keyed Different
Green	Security & Fire	Metal	Keyed Different

This document is uncontrolled when printed. Date Printed:

- 9.4.3 Only one key will be available for each lockout device. Master or common keys are not permitted, with the exception of the Transfer Locks.
- 9.4.4 Machine Locks may be constructed of plastic, and may be required to be constructed of plastic to meet environmental durability requirements for areas where ferric chloride or hydrogen sulfide is present.
- 9.5 LOTO devices shall be:
  - 9.5.1 Singularly identified;
  - 9.5.2 The only device(s) used for controlling energy;
  - 9.5.3 Used for no other purposes;
  - 9.5.4 <u>Durable</u>: Capable of withstanding the environment to which they are exposed for the maximum period that they are to be exposed. Tagout devices shall be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible;
  - 9.5.5 <u>Standardized</u>: LOTO devices shall be standardized within the facility in at least one of the following criteria: color; shape; or size; and additionally, in the case of tagout devices, print and format shall be standardized.
  - 9.5.6 <u>Substantial</u>: Lockout devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as with the use of bolt cutters or other metal cutting tools. Tagout devices, including their means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tagout device attachment means shall be of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all environment-tolerant nylon cable tie.

## **10.0 Management of Change**

- 10.1 Energy-control procedures will fall under the Management of Change process for the following reasons:
  - 10.1.1 Change to existing installed asset
  - 10.1.2 Error found in existing procedure
  - 10.1.3 Installation of new asset
  - 10.1.4 Removal of asset from service
- 10.2 Change to existing installed procedure / error found in existing procedure

This document is uncontrolled when printed. Date Printed:

Health and Safety Policy Control of Hazardous Energy Page 23

Task	Responsible Person
Complete LOTO Change Management Form	Principal Authorized Employees, Authorized
and submit to Health and Safety	Employees, Managers, Health and Safety
Representative	Representative
Verify information on LOTO Change	Health and Safety Specialist – Consult with
Management Form, apply any necessary	Maintenance where necessary
labeling to electrical or valves, take	
necessary pictures	
Update Procedure in RapidLOTO	Health and Safety Representative
Review/Verify Procedure	IPM and/or Manager
Update Procedure at LOTO Station –	Health and Safety Representative
including printing and laminating procedure	
Evaluate changes to LOTO devices, facilitate	Health and Safety Representative
purchase where necessary	
Provide training on changes if necessary	Health and Safety Representative
Submit WAM Upload Excel file and PDF of	Health and Safety Representative
procedure to Asset Management	
WAM Upload	Asset Management

Process will be completed within 72 hours of submission of LOTO Procedure Form

#### 10.3 Commissioning of new asset

Task	Responsible Person
Complete LOTO Procedure Change Form	Construction Supervisor
and submit to Construction Coordinator	
Communicate Equipment is Commissioned	Construction Coordinator
Author LOTO Procedure including labeling of	Health and Safety Specialist, Principal
isolation points and taking photos of	Authorized Employees, Authorized
equipment and isolation points.	Employees
	NOTE: For large projects installing more than
	20 pieces of equipment, outside assistance
	may be used to write LOTO procedures.
Create Procedure in RapidLOTO	Health and Safety Representative
Review/Verify Procedure	IPM and/or Manager
Place Procedure at LOTO Station – including	Health and Safety Representative
printing and laminating procedure	
Evaluate changes to LOTO devices, facilitate	Health and Safety Representative
purchase where necessary	
Provide training on changes if necessary	Health and Safety Representative
Submit WAM Upload Excel file and PDF of	Health and Safety Representative
procedure to Asset Management	
WAM Upload	Asset Management

#### 10.4 Decommissioning of existing asset

Responsible Person

This document is uncontrolled when printed. Date Printed:

Complete LOTO Procedure Change Form	Construction Supervisor
and submit to Construction Coordinator	
Communicate Equipment is Decommissioned	Plant Construction Coordinator
Mark Equipment Obsolete in RapidLOTO	Health and Safety Representative
Remove Procedure at LOTO Station	Health and Safety Representative
Evaluate changes to LOTO devices, facilitate	Health and Safety Representative
removal where necessary	
Submit WAM Delete Excel file to Asset	Health and Safety Representative
Management	
WAM Update	Asset Management

## 11.0 Training

- 11.1 All NEORSD employees impacted by LOTO must receive training.
- 11.2 An initial training program will be provided to:
  - 11.2.1 All authorized and affected employees prior to working on or around equipment; and
  - 11.2.2 Other employees will receive training as part of their new hire process.
- 11.3 Managers/supervisors shall:
  - 11.3.1 Ensure that all employees attend the training sessions provided by Health and Safety, as required
- 11.4 The Health and Safety staff shall:
  - 11.4.1 Verify that all employees covered by this Policy have received LOTO training.
- 11.5 Newly hired authorized and affected employees will receive this training prior to working in or around process equipment. Other employees will receive training as part of their new hire process.
- 11.6 Training will include, but is not limited to:11.6.1 Authorized Employees will receive specific training on the following:
  - Responsibilities of all positions identified by this Policy;
  - Type and magnitude of energy sources present in the working environment;
  - Purpose and use of energy isolation procedures and the methods of controlling energy sources, either by following single energy source lockout instructions or equipment-specific instructions supplied for the equipment they are working on;
  - Proper application techniques for lock out devices;
  - Limitations and requirements of tag only protection;
  - Steps for removing or transferring LOTO according to this Policy;
  - Steps for testing machinery to confirm a zero energy state;

This document is uncontrolled when printed. Date Printed:

- Steps for removing lockout and restarting machinery according to this Policy; and
- All other applicable requirements of this Policy.
- 11.6.2 Affected employees will receive specific training on the following:
  - A review of this Policy;
  - Purpose and use of energy-control procedures;
  - Recognition of methods used to LOTO equipment and machinery;
  - Responsibilities of all positions identified by this Policy;
  - Prohibitions to participate in an applied energy-control procedure or to attempt to energize any machine or equipment that has been locked out; and
  - All other applicable requirements of this written compliance program.
- 11.6.3 Other employees will receive specific training on the following:
  - Purpose and use of energy-control procedures;
  - Responsibilities of all positions identified by this Policy;
  - Prohibitions from participating in an applied lockout procedure or to attempt to energize any machine or equipment that has been locked out; and
  - All other applicable requirements of this Policy.

### 11.7 Retraining

11.7.1 All authorized employees shall be retrained when:

- There is a change to this Policy;
- There is a change in equipment;
- There is a change in job assignment or process that presents a new hazard; and/or
- Observations reveal that there are inadequacies in employees' knowledge or use of energy-control procedures.

11.7.2 Retraining of all employees shall be done at a minimum of once every three years.

## 12.0 Recordkeeping Requirements

- 12.1 Original/edible copies of energy-control procedures will be maintained by Health and Safety.
- 12.2 Management of Change Forms shall be retained on record for a period of one (1) year.
- 12.3 Training and qualification records will be maintained by Human Resources. All training session attendance rosters will be turned into Human Resources within two (2) business days after the training session and will be entered into the Oracle Learning Management system.
  - 12.3.1 Training documentation must contain, at a minimum:
- Name of Attendee;
- Date(s) of Training; and
- Title or Content of the Course
- 12.4 Copies of the training materials and class rosters will be maintained by Health and Safety.
- 12.5 Annual policy review information will be maintained by Health and Safety.
- 12.6 Employee records will be made available, upon request, to employees, former employees and representatives designated by the individual employee. Training records will be maintained in accordance with NEORSD's Records Retention Schedule.

## APPENDIX A – CLEANING SECTIONS





## Jennings Road and Old Denison Avenue Combined Sewers – Cleaning Sections

#### Manhole/Structure Map:





Cleaning Section 1: Old Denison Avenue Combined Sewer (CS) from bulkhead at WPC-179647 to WPC-61500/ Manhole "N" Note: WPC-179647 and the 30" RCP nearby are slightly West of the locations depicted on this graphic.

#### **Cleaning Section 2:**

Jennings Road CS 18" RCP from WPC-61500/ Manhole "N" to WPC-61992/Manhole "P"

Cleaning Section 3: Jennings Road CS 30" RCP from CSO1BE60/ Manhole "M" to CSO1BE40 Manhole "H"



Cleaning Section 4: Jennings Road CS 30" RCP from CSO1BE40/ Manhole "H" to CSO045A0010/ Structure #1 (North Chamber)





Cleaning Section 5: Jennings Road CS 30" RCP from CSO045A0015 /Manhole "JC-1" to CSO045A0010/ Structure #1





Cleaning Section 7: Jennings Road CS 42" RCP from CSO1BEA5/ Manhole "B" to CSO045B0015/ Structure #3

Cleaning Section 8: Jennings Road CS 54" RCP from approximately CSO045B0020/Manhole "C" to CSO045A0005/ Structure #2, including CSO045B0015/ Structure #3





Cleaning Section 11: Jennings Road CS 24" pipe from CSO045A0005 /Structure #2 to Jennings Road Pump Station, including wet well.

## Regional Sewer District



### Jennings Road 30" Trunk Sewer Inspection – Grit Levels

Sewer System Maintenance and Operation October 2, 2018

#### Manhole/Structure Map:



## Notes:

- Current construction on Jennings Road Northbound may cause a need for traffic control
- Manhole "A'" was not accessible
- Manholes "K" and "L" were located and documented but are not easily accessible for a Vac Truck. Access will require tree trimming in compliance with Appendix D - Tree and Shrub Removal Policy.
- Accessing manholes "H," "K," and "L" requires coordination with the proper CSX and Norfolk Southern railroad authorities.

## MANHOLE "M"

2-3 inch pockets of grit upstream. 3-4 inch of grit and downstream.

### UPSTREAM TOWARDS MANHOLE "N"

#### UPSTREAM TOWARDS MANHOLE "P"







## MANHOLE "N"

# 5-6 inches of grit upstream. 3-4 inch of grit downstream with hardened debris in manhole

#### Upstream



## MANHOLE "P"

## 0-1 inches of grit upstream. 0-1 inches of grit and downstream.

#### Upstream



## MANHOLE "L"

## 3-4 inch pockets of grit upstream. 1-2 inch of grit and downstream.

Upstream



## MANHOLE "K"

Heavy grit upstream and downstream measuring 2-4 inches consistently down both side of line.

Upstream



## MANHOLE "J" 2-3 inch of grit upstream and downstream

#### Upstream



## MANHOLE "H"

# Heavy pockets of grit upstream and downstream. 8-10" inches of grit upstream. 12-14" downstream

Upstream



### MANHOLE "G"

## Heavy pockets grit upstream and downstream. 10-12 inches of grit downstream. 4-8" upstream

## **Upstream** Downstream CSO1BE35 U/S CSO1BE35 D/S MH G MH G

#### **GRIT LEVEL**

## MANHOLE "F"

# Heavy pockets of grit upstream and downstream. Partial blockage at the access manhole looking upstream.

Upstream



## MANHOLE "E"

Heavy grit pockets upstream and downstream measuring as high as 17-20 inches with partial blockage upstream.

Upstream



### MANHOLE "D"

Heavier pockets of debris in the upstream towards "E" and at the access manhole. Grit levels as high as 17-20 inches. Not as high in upstream towards Harvard Ave.

#### Upstream towards "E"

#### Upstream towards Harvard Ave.



## MANHOLE "D"

# Heavy pockets of grit downstream. Grit measurements as high as 17-20 inches.



## STRUCTURE NO. 1

Heavy pockets of grit downstream of Structure 1 and at access manhole. Grit levels as high as 17-20 inches.

**Downstream of Structure 1** 

#### **Upstream of Stucture 1**



### STRUCTURE NO. 1 Cont.

Heavy pockets of grit downstream of Structure 1 and at access manhole. Grit levels as high as 17-20 inches.

**Upstream side of ellipticals** 



## MANHOLE "JC-1"

Light pockets of grit upstream measuring 3-4 inches. Downstream consistent with upstream grit measuring 1-2 inches.

#### Upstream



## MANHOLE "C"

Upstream and downstream has a low grit measurement of 2-3 inches..

Upstream



## MANHOLE "B"

# Low grit level upstream, downstream, and at access manhole measuring 0-1 inch.

#### Upstream



# APPENDIX B -PRETREATMENT REGULATIONS

#### CODE OF REGULATIONS OF THE NORTHEAST OHIO REGIONAL SEWER DISTRICT

#### TITLE II

#### PRETREATMENT REGULATIONS

Revised: 1991, 1997, 2002, 2014

#### NORTHEAST OHIO REGIONAL SEWER DISTRICT CODE OF REGULATIONS TITLE II - **PRETREATMENT REGULATIONS**

		TABLE OF CONTENTS	PAGE II-2
CHAPTER 1	-	TITLE AND DISTRIBUTION	PAGE II-3
CHAPTER 2	-	DEFINITIONS	PAGE II-6
CHAPTER 3	-	PRETREATMENT REGULATIONS	PAGE II-17
CHAPTER 4	-	CHARGES AND FEES	PAGE II-29
CHAPTER 5	-	ADMINISTRATION	PAGE II-30
CHAPTER 6	-	ENFORCEMENT	PAGE II-40
CHAPTER 7	-	CHARGES	PAGE II-44
CHAPTER 8	-	RECORD RETENTION	PAGE II-45
CHAPTER 9	-	VALIDITY	PAGE II-46
CHAPTER 10	-	ACCEPTANCE	PAGE II-47

#### **CHAPTER 1 - TITLE, DISTRIBUTION AND APPLICABILITY**

- Section 2.0101 <u>Title and Distribution</u> This Title of the <u>Code of Regulations</u> of the Northeast Ohio Regional Sewer District shall be known as <u>Title II- Pretreatment</u> <u>Regulations</u> of the Northeast Ohio Regional Sewer District and may be separately printed and distributed.
- Section 2.0102 <u>Applicability</u> Title II of the <u>Code of Regulations</u> of the Northeast Ohio Regional Sewer District is applicable to any non-domestic user of the public sewer system that discharges substances that may pass through the system or interfere with the operation or performance of the system or may violate any provision of Sections 405 and 406 of the Water Quality Act of 1987, is engaged in any of the following industrial processes or other processes which may subsequently be added, is designated a Significant Industrial User under 40 CFR 403.3(v), or is otherwise designated by the District. All Users subject to Title II remain subject to all other applicable provisions of the <u>Code of Regulations</u>. The National Categorical Standards found in 40 CFR Chapter I, Subchapter N, Parts 405-471 shall be incorporated into these regulations.

	Category	Federal Regulations
(a)	Aluminum Forming	40 CFR 467*
(b)	Asbestos Manufacturing	40 CFR 427
(c)	Battery Manufacturing	40 CFR 461*
(d)	Carbon Black Manufacturing	40 CFR 458*
(e)	Canned and Preserved Fruits and	
	Vegetables Processing	40 CFR 407
(f)	Canned and Preserved Seafood Processing	40 CFR 408
(g)	Cement Manufacturing	40 CFR 411
(h)	Centralized Waste Treatment	40 CFR 437*
(i)	Coal Mining	40 CFR 434
(j)	Coil Coating	40 CFR 465*
(k)	Concentrated Animal Feeding Operations	40 CFR 412*
(1)	Concentrated Aquatic Animal Production	40 CFR 451
(m)	Copper Forming	40 CFR 468*
(n)	Dairy Products Processing	40 CFR 405
(0)	Electrical & Electrical Components	40 CFR 469*
(p)	Electroplating	40 CFR 413*
(q)	Explosives Manufacturing	40 CFR 457
(r)	Ferroalloy Manufacturing	40 CFR 424
(s)	Fertilizer Manufacturing	40 CFR 418*
(t)	Glass Manufacturing	40 CFR 426*
(u)	Grain Mills	40 CFR 406*
(v)	Gum and Wood Chemicals	40 CFR 454
(w)	Hospitals	40 CFR 460
(x)	Ink Formulating	40 CFR 447*
(y)	Inorganic Chemicals	40 CFR 415*
	Category	Federal Regulations
------	--	---------------------
(z)	Iron & Steel Manufacturing	40 CFR 420*
(aa)	Leather Tanning and Finishing	40 CFR 425*
(ab)	Meat and Poultry Products	40 CFR 432
(ac)	Metal Finishing	40 CFR 433*
(ad)	Metal Molding and Casting	40 CFR 464*
(ae)	Metal Products and Machinery	40 CFR 438
(af)	Mineral Mining and Processing	40 CFR 436
(ag)	Nonferrous Metal Forming and Metal	
	Powders	40 CFR 471*
(ah)	Nonferrous Metals Manufacturing	40 CFR 421*
(ai)	Oil and Gas Extraction	40 CFR 435
(aj)	Ore Mining and Dressing	40 CFR 440
(ak)	Organic Chemicals, Plastics, and Synthetic	
	Fibers	40 CFR 414*
(al)	Paint Formulating	40 CFR 446*
(am)	Paving and Roofing Materials	40 CFR 443*
(an)	Pesticide Chemicals	40 CFR 455*
(ao)	Petroleum Refining	40 CFR 419*
(ap)	Pharmaceuticals Manufacturing	40 CFR 439*
(aq)	Phosphate Manufacturing	40 CFR 422
(ar)	Photographic Processing	40 CFR 459
(as)	Plastic Molding and Forming	40 CFR 463
(at)	Porcelain Enameling	40 CFR 466*
(au)	Pulp, Paper and Paperboard	40 CFR 430*
(av)	Rubber Manufacturing	40 CFR 428*
(aw)	Soap and Detergent Manufacturing	40 CFR 417*
(ax)	Steam Electric Power Generating	40 CFR 423*
(ay)	Sugar Processing	40 CFR 409
(az)	Textile Mills	40 CFR 410
(ba)	Timber Product Processing	40 CFR 429*
(bb)	Transportation Equipment Cleaning	40 CFR 442*

\*Categories with Pretreatment Standards

Section 2.0103 <u>Purpose and Policy</u> - These <u>Pretreatment Regulations</u> set forth uniform pretreatment requirements for discharges into the Northeast Ohio Regional Sewer District's wastewater collection and treatment system, and enable the District to protect public health in conformity with all applicable Local, State and Federal laws relating thereto.

The purposes/goals of these Pretreatment Regulations are as follows:

(a) To satisfy the State and Federal requirements that the Northeast Ohio Regional Sewer District develop and implement an industrial waste control program in compliance with the Clean Water Act of 1977 and the <u>General Pretreatment Regulation for New and Existing Sources</u>, 40 CFR Part 403.

- (b) To prevent the introduction of pollutants into the Northeast Ohio Regional Sewer District wastewater system which may interfere with the normal operation of the system or contaminate the resulting municipal sludge.
- (c) To prevent the introduction of pollutants into the Northeast Ohio Regional Sewer District's wastewater system which may not receive adequate treatment in the Sewage Treatment Plant, and which may pass through the system into receiving waters or the atmosphere or otherwise be incompatible with the system.
- (d) To improve the opportunity to recycle and reclaim wastewater and sludge from the system.

Title II of the <u>Code of Regulations</u> provides for the regulation of discharges into the Northeast Ohio Regional Sewer District's wastewater system through the enforcement of administrative regulations. Title II does not provide for the recovery of operation, maintenance or replacement costs of the sewerage facilities of the District or the costs associated with the construction of collection and treatment systems used by industrial dischargers, in proportion to their use of the sewerage system, which are included in Title I of the <u>Code</u> <u>of Regulations</u>.

## **CHAPTER 2 - DEFINITIONS**

- Section 2.0201 Definitions - Unless the content specifically indicates otherwise, the meaning of the following terms wherever they are used in this Title of the Code of Regulations shall be as defined in the following Sections. Section 2.0202 "Act" - shall mean the Clean Water Act of 1977, and all subsequent amendments thereto (33 U.S.C. 1251 et seq., as amended). Section 2.0203 "Applicable Pretreatment Standard" - Any pretreatment limit or prohibitive standard (federal, state and/or local) contained in these regulations deemed to be the most restrictive with which industrial users will be required to comply. "Approval Authority" - shall mean the Director of the Ohio Environmental Section 2.0204 Protection Agency. Section 2.0205 "Authorized Representative of Industrial User" - shall mean: (a) A responsible corporate officer, if the industrial user is a corporation; For the purpose of this Section, a responsible corporate officer means: (1) A president, vice, president, secretary, or treasurer of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (2) The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
  - (b) A general partner or proprietor if the Industrial User is a partnership or sole proprietorship, respectively;
  - (b) A duly authorized representative of the individual designated in Section 2.0205 (a) or (b) if:
    - i. The authorization is made in writing by the individual described in paragraph Section 2.0205 (a) or (b);

	ii.	The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates, such as the position of plant manager, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and,
	iii.	The written authorization is submitted to the Control Authority.
	(d) If an accu the c envi the r subr to be	a authorization under Section 2.0205(c) of this section is no longer arate because a different individual or position has responsibility for overall operation of the facility, or overall responsibility for ronmental matters for the company, a new authorization satisfying requirements of paragraph Section 2.0205(c) of this section must be nitted to the Control Authority prior to or together with any reports e signed by an authorized representative.
Section 2.0206	" <u>Average M</u> "daily avera discharges r discharges r	Ionthly Discharge Limitations" - The highest allowable average of ges" over a calendar month, calculated as the sum of all daily neasured during a calendar month divided by the number of daily neasured during the month.
Section 2.0207	" <u>Average W</u> "daily disch discharges r discharges r	<u>Veekly Discharge Limitation</u> " - The highest allowable average of arges" over a calendar week, calculated as the sum of all daily neasured during the calendar week divided by the number of daily neasured during the week.
Section 2.0208	" <u>Beneficial</u> municipal, a aesthetic en wildlife and and intangib	<u>Uses</u> " - These uses shall mean but not be limited to, domestic, agricultural and industrial use, power generation, recreation, joyment, navigation, and the preservation and enhancement of fish, other aquatic resources or preserves, and other uses, both tangible ble, as specified by state or federal law.
Section 2.0209	" <u>Best Mana</u> practices, m implement t include trea plant site ru raw materia	<u>gement Practice (BMP)</u> " –schedules of activities, prohibitions of aintenance procedures, and other management practices to he prohibitions listed in 40 CFR 403.5(a)(1) and (b). BMPs also tment requirements, operating procedures, and practices to control noff, spillage or leaks, sludge or waste disposal, or drainage from ls storage.
Section 2.0210	" <u>Bypass</u> " – portion of a	shall mean the intentional diversion of wastestreams from any n Industrial User's treatment facility.
Section 2.0211	" <u>Categorica</u> Standards sj	<u>l Pretreatment Standard</u> " - shall mean the National Pretreatment pecifying quantities or concentrations of pollutants or pollutant

properties which may be discharged or introduced into the sewerage system by specific industrial processes.

- Section 2.0212 "<u>Composite Sample</u>" A sample of wastewater which should contain a minimum of eight discrete samples taken at equal time intervals over the compositing period or proportional to the flow rate over the compositing period. More than the minimum number of discrete samples will be required where the wastewater is highly variable.
- Section 2.0213 "<u>Daily Discharge</u>" Discharge of a pollutant measured during a calendar day or any 24 hour period that reasonably represents the calendar day for purposes of sampling.
- Section 2.0214 "<u>Director</u>" Shall mean the Executive Director of the Northeast Ohio Regional Sewer District or his designated representative.
- Section 2.0215 "<u>Discharge</u>" Shall mean any liquid, solid, or gas, or combination thereof, flowing out of any domestic, commercial, or industrial establishment.
- Section 2.0216 "<u>District" or "NEORSD</u>" Shall mean the Northeast Ohio Regional Sewer District, its officers, employees and facilities.
- Section 2.0217 "<u>Easement</u>" An acquired legal right to use land owned by others for a specific purpose or purposes.
- Section 2.0218 "<u>Effluent</u>" Shall mean sewage, water or other liquid after some degree of treatment, flowing out of any treatment device or facility.
- Section 2.0219 "<u>Enforcement Agency</u>" Shall mean the District, Ohio EPA, State, local and Federal Governments charged with the jurisdiction to implement and enforce applicable laws and regulations.
- Section 2.0220 "Equivalent Concentration Based Standards" Shall mean the conversion of mass of pollutant per unit of production limits, as established in some categorical pretreatment standards to equivalent mass per day or concentration limits. Such conversion shall be at the District's discretion, with the District's approval, and be reviewed on a case by case basis. If the District develops these equivalent limits, they will be deemed pretreatment standards that the Industrial Users will be required to comply with in lieu of the promulgated standards.
- Section 2.0221 "<u>Federal Pretreatment Standard</u>" Shall mean any regulation containing pollutant discharge limits and/or other requirements promulgated by the U.S. EPA in accordance with Section 307 (b) and (c) of the Act (33 U.S.C. 1251 et seq.) that applies to a specific category of Industrial Users.

- Section 2.0222 "<u>Garbage</u>" Any solid waste from the preparation, cooking or dispensing of food and from the handling, storage, or sale of produce.
- Section 2.0223 "<u>Ground Garbage</u>" Garbage that is shredded to such a degree that all particles will be carried freely in suspension under the conditions normally prevailing in the sewerage system, with no particle being greater than one half (½) inch in dimension.
- Section 2.0224 "<u>Grab Sample</u>" A sample which is taken from a waste stream on a one time basis with no regard to the flow in the waste stream and without consideration of time.
- Section 2.0225 "<u>Industrial User</u>" Any industrial, commercial, nondomestic, manufacturing, or processing facility that discharges industrial waste to a sewerage facility.
- Section 2.0226 "<u>Industrial Waste</u>" Shall mean any liquid, solid, or gaseous substance or form of energy, or combination thereof, resulting from any process of industrial, commercial, governmental, and institutional concerns, manufacturing, business, trades, or research, including the development, recovery, or processing of natural resources. In the District's discretion, groundwater or surface runoff may be considered to be Industrial Waste.
- Section 2.0227 "<u>Indirect Discharge</u>" The discharge or the introduction of non-domestic pollutants from a source regulated under Section 307 (b) or (c) of the Act. See also the Federal Pretreatment Standards in 40 CFR.
- Section 2.0228 "<u>Influent</u>" Shall mean water, together with any wastes that may be present, flowing into any sewage treatment device or facility.
- Section 2.0229 "<u>Interference</u>" shall mean a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:
  - (a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
  - (b) therefore may constitute a cause of a violation of any requirement of the POTW's permit (including an increase of the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act; the Solid Waste Disposal Act (SWDA) including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA, the Clean Air Act, the Toxic

Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

- Section 2.0230 "<u>Laboratory Determination</u>" Shall mean the measurements, tests and analyses of the characteristics of waters and wastes in accordance with the provisions of 40 CFR Part 136 - <u>Guidelines Establishing Test Procedures for the Analyses of</u> <u>Pollutants</u>. These methods are contained in the latest edition of these publications:
  - (a) <u>Standard Methods for Examination of Water and Wastewater</u> a joint publication of the American Public Health Association, and the Water Environment Federation;
  - (b) <u>ASTM</u> "Annual Book of Standards, Part II, Water, and Environmental Technology, a publication of the American Society for Testing Materials, 2001;"
  - (c) <u>EPA Methods</u> which means "Methods for Chemical Analyses of Water and Wastes," a publication of the U.S. Environmental Protection Agency; or in accordance with any other equivalent method prescribed by the Director.
- Section 2.0231 "<u>Maximum Combined Solvent</u>" shall mean the sum of the concentrations of solvents limited in this Title of the <u>Code of Regulations</u>.
- Section 2.0232 "<u>Maximum Daily Discharge Limitations</u>" Highest allowable daily discharge of specific pollutants as limited by District, local, state or Federal regulations, whichever is more stringent.
- Section 2.0233 "<u>May</u>" Indicates a discretionary condition.
- Section 2.0234 "<u>mg/L</u>" Shall mean milligrams per liter.
- Section 2.0235 "<u>National Categorical Pretreatment Standard</u>" Shall mean any regulation containing pollutant discharge limits promulgated by the EPA in accordance with Section 307 (b) and (c) of the Act (33 U.S.C. 1347) that applies to a specific category of Industrial Users.
- Section 2.0236 "<u>New Source</u>" Shall mean:
  - (a) Any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced after the publication of proposed Pretreatment Standards under Section 307(c) of the Act which will be applicable to such source if such Standards are thereafter promulgated in accordance with that section, provided that:

- (1) The building, structure, facility or installation is constructed at a site at which no other source is located; or
- (2) The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or
- (3) The production or wastewater generating processes of the building, structure, facility or installation are substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source should be considered.
- (b) Construction on a site at which an existing source is located results in a modification rather than a New Source if the construction does not create a new building, structure, facility or installation meeting the criteria in paragraphs (a)(2), or (a)(3) of this section but otherwise alters, replaces, or adds to existing process or production equipment.
- (c) Construction of a new source as defined under this paragraph has commenced if the owner or operator has:
  - (1) Begun or caused to begin as part of a continuous on-site construction program:
    - a. Any placement, assembly, or installation of facilities or equipment; or
    - b. Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
  - (2) Entered into a binding contractual obligation for the purchase of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies, do not constitute a contractual obligation under this paragraph.

Section 2.0237	" <u>Noncontact Cooling Water</u> " – Shall mean the water used to reduce temperature that does not come into contact with any raw material, intermediate product, waste product (other than heat), or any finished product. Noncontact cooling water does not include any process waters or other types of wastewaters, nor is it exposed to anything but the inside of the pipe. Noncontact cooling water should be reasonably free from contaminants like metals, ammonia, organics, and total dissolved solids so that Ohio's water quality standards in Chapter 3745-1 of the Ohio Administrative Code are not violated.
Section 2.0238	" <u>NPDES Permit</u> " - Shall mean a National Pollutant Discharge Elimination System permit setting conditions for the discharge of any pollutant or combination of pollutants to the navigable waters of the United States pursuant to Section 402 of the Clean Water Act.
Section 2.0239	" <u>Pass Through</u> " - Shall mean a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTWs NPDES permit (including an increase in the magnitude or duration of a violation).
Section 2.0240	" <u>Person</u> " - Shall mean any and all persons, natural or artificial, including any individual, firm, company, municipal or private corporation, partnership, co-partnership, joint stock company, trust, estate, association, society, institution, enterprise, governmental agency, the State of Ohio, the United States of America, or other legal entity, or their legal representatives, agents, or assigns.
Section 2.0241	" <u>Pollution</u> " - Shall mean an alteration of the waters of the State by waste to a degree which unreasonably affects such waters for beneficial uses or facilities which serve such beneficial uses, as defined in Section 2.0208. The term also means human-made or human-induced alteration of the chemical, physical, biological and radiological integrity of water.

- Section 2.0242 "<u>Pollution Parameters</u>" Shall include but shall not be limited to:
  - (a) <u>Biochemical Oxygen Demand (BOD)</u> Shall mean the quantity of dissolved oxygen in milligrams per liter required during stabilization of the decomposable organic matter by aerobic biochemical action under standard laboratory procedures for five (5) days at 20° Celsius. The laboratory determination shall be made in accordance with procedures set forth in Section 2.0230 of this Title.
  - (b) <u>Chemical Oxygen Demand (COD)</u> Shall mean a measure of the oxygen equivalent of that portion of the organic material in a sample that is susceptible to oxidation by a strong chemical oxidant. The

laboratory determination shall be in accordance with procedures set forth in Section 2.0230 of this Title.

- (c) <u>Fecal Coliform</u> Any of a number of organisms common to the intestinal tract of man and animals, whose presence in waste or wastewater is an indicator of pollution.
- (d) <u>Floatable Oil</u> Oil, fat, or grease in a physical state such that will separate by gravity from wastewater by treatment in an approved pretreatment facility.
- (e) <u>Grease and Oil</u> A group of substances including hydrocarbons, fatty acids, soaps, fats, waxes, oils or any other material that is extracted by a solvent from an acidified sample and that is not volatilized during the laboratory test procedures. Greases and oils are defined by the method of their determination in accordance with procedures set forth in Section 2.0230 of this Title.
- (f) <u>Grease and Oil of Animal and Vegetable Origin</u> Shall mean substances that are more readily biodegradable in nature than mineral oil such as are discharged by meat packing, vegetable oil and fat companies, food processors, canneries, restaurants and like establishments.
- (g) <u>Grease and Oil of Mineral Origin</u> Shall mean substances that are less readily biodegradable than grease and oil of animal or vegetable origin, and are derived from a petroleum source. Such substances include machinery lubricating oils, gasoline station wastes, petroleum refining wastes and storage depot wastes.
- (h) " $\underline{pH}$ " shall mean the negative decimal logarithm of the hydrogen ion activity in solution.
- (i) <u>Suspended Solids</u> Shall mean solids that either float on the surface of or are in suspension in water, sewage, or other liquid and which are removable by laboratory filtration. Their concentration shall be expressed in milligrams per liter. Quantitative determination shall be made in accordance with procedures set forth in Section 2.0230 of this Title.
- (j) <u>Total Solids</u> The sum of suspended and dissolved solids.
- (k) <u>Volatile Organic Matter</u> The material in the sewage solids that transforms to gases or vapors when heated at 550° Celsius ntigrade for 15 to 20 minutes.

- Section 2.0243 "<u>POTW</u>"- is an acronym for Publicly Owned Treatment Works and means all the sewerage facilities of the District. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a treatment plant.
- Section 2.0244 "<u>Pretreatment</u>" Shall mean the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful or more easily handled state prior to or in lieu of discharging or otherwise introducing such pollutants to the public sewer system.
- Section 2.0245 "<u>Pretreatment Facility</u>" Shall mean structures, devices or equipment for the purpose of removing deleterious waste from sewage generated from a premises prior to its discharge into the public sewer system.
- Section 2.0246 "<u>Process Wastewater</u>" shall mean any water that, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product.
- Section 2.0247 "<u>Process Wastestream</u>" shall mean any water that, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product.
- Section 2.0248 "<u>Receiving Stream</u>" The watercourse, stream, or body of water receiving the waters finally discharged from the wastewater treatment plant.
- Section 2.0249 "<u>Regional Administrator</u>" Shall mean the USEPA Region V Regional Administrator.
- Section 2.0250 "<u>Sewage</u>" Shall mean a combination of the water-carried wastes from residences, business buildings, institutions and industrial establishments, together with such ground, surface, storm or other wastes as may be present.
- Section 2.2051 "<u>Sewer</u>" Shall mean any pipe, conduit, ditch or other device used to collect and transport sewage or storm water from the generating source.
- Section 2.0252 "Shall" Indicates a mandatory condition.
- Section 2.0253 "<u>Significant Industrial User</u>" Shall mean:
  - (a) Except as provided in Part (b) and (c) of this Section, the term Significant Industrial User means:

- (1) All Industrial Users subject to Categorical Pretreatment Standards under Section 2.0102; and,
- (2) Any other Industrial User that: discharges an average of 25,000 gallons per day or more of process wastewaters to the District (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the District's treatment plant to which the discharge is tributary; or has a reasonable potential, in the opinion of the Executive Director, or designated District staff, to adversely affect the District's operations, or for violating any pretreatment standard or requirement.
- (c) The Executive Director, or designated District staff, may determine that an Industrial User subject to categorical Pretreatment Standards under Section 2.0102 is a Non-Significant Categorical Industrial User rather than a Significant Industrial User on a finding that the Industrial User never discharges more than 100 gallons per day (gpd) of total categorical wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater, unless specifically included in the Pretreatment Standard) and the following conditions are met:
  - The Industrial User, prior to the District's finding, has consistently complied with all applicable categorical Pretreatment Standards and Requirements;
  - (2) The Industrial User annually submits the certification statement required in Section 2.0508 together with any additional information necessary to support the certification statement; and,
  - (3) The Industrial User never discharges any untreated concentrated wastewater.
- (c) The Executive Director, or designated District staff, may at any time, on his own initiative, or in response to a petition received from an Industrial User, determine that a Noncategorical Industrial User is not a Significant Industrial User if the Industrial User has no reasonable potential to adversely affect the District's operation or for violating any Pretreatment Standard or requirement.
- Section 2.0254 "<u>Sludge</u>" Shall mean any solid, semisolid or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility, or any other waste having similar characteristics and effects as defined in the standards issued under

Sections 402 and 405 of the Federal Act and in the applicable requirements under Sections 3001, 3004 and 4004 of the Solid Waste Disposal Act PL 94-580.

- Section 2.0255 "<u>Standard Industrial Classification</u>" (SIC) Shall mean a classification pursuant to the Standard Industrial Classification Manual issued by the Executive Office of the President, Office of Management and Budget, 1972 and any and all amendments added thereto.
- Section 2.0256 "<u>System</u>" Shall mean the sewerage system of the Northeast Ohio Regional Sewer District including all treatment and disposal facilities and interceptor sewers owned and operated by the District and all sewerage collection systems and all other appurtenances connected thereto.
- Section 2.0257 "<u>Toxic Substance</u>" Shall mean any substance whether gaseous, liquid or solid, which when discharged to the sewer system in sufficient quantities may interfere with any sewage treatment process, or may constitute a hazard to human beings or animals, or may inhibit aquatic life or create a hazard to recreation in receiving waters of the effluent from the sewage treatment plant, or substances listed in the Federal Regulations promulgated pursuant to Section 307 of the Clean Water Act.
- Section 2.0258 "<u>Unpolluted Water</u>" Means water discharged in its original state or water discharged after use for any purpose, which is at least equal chemically, physically and biologically, to the water from its original source, e.g. potable water, groundwater, river and stream water.
- Section 2.0259 "<u>Upset</u>" An exceptional incident in which a discharger unintentionally and temporarily is in a state of noncompliance with the standards set forth in the applicable pretreatment requirements due to factors beyond the reasonable control of the discharger, and excluding noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation thereof.
- Section 2.0260 "<u>User" or "Discharger</u>" Any person that discharges, causes, or permits the discharge of wastewater into the sewerage system.
- Section 2.0261 "<u>Wastewater Constituents and Characteristics</u>" The chemical, physical, bacteriological and radiological parameters, including volume, flow rate and such other parameters that serve to define, classify, or measure the contents, quality, quantity and strength of wastewater.
- Section 2.0262 "<u>Watercourse</u>" A channel in which a flow of water occurs either continuously or intermittently.

## **CHAPTER 3 - PRETREATMENT REGULATIONS**

- Section 2.0301 <u>General Discharge Prohibitions</u> No discharger shall discharge, cause or allow to be discharged, directly or indirectly, any of the following described substances into the wastewater disposal system or otherwise to the facilities of the Northeast Ohio Regional Sewer District:
  - (a) Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, materials with a closed cup flash point of less than 140 degrees Fahrenheit or 60 degrees Celsius using the test method specified in 40 CFR 261.21.
  - (b) Solid or viscous pollutants in amounts which will or may cause obstruction to the flow in sewers or other interference with the operation of the wastewater system and/or POTW.
  - (c) Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with a pH lower than 5.0 or greater than or equal to 12.5 or having any other corrosive property capable of causing damage or hazard to structures, equipment, or personnel of the system.
  - (d) Any noxious or malodorous liquids, gases, or solids which either singly or by interaction are capable of creating a public nuisance or hazard to life or are sufficient to prevent entry into sewers for maintenance and repair.
  - (e) Any substance that may cause the sewage treatment plant's treatment residues, sludges, or scums, to be unsuitable for reclamation and reuse or to interfere with the reclamation process.
  - (f) Any substance that may cause the District's facilities to violate its NPDES and/or other Disposal System Permits.
  - (g) Any substance with color not removed in the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions.
  - (h) Any wastewater having a temperature which will inhibit biological activity in the District's treatment plant or otherwise result in interference, but in no case wastewater with a temperature at the introduction into the POTW which exceeds 40 degrees Centigrade (104 degrees Fahrenheit).
  - (i) Any slugload, which shall mean any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a single extraordinary discharge episode of such volume or strength (at a flow rate and/or

pollutant concentration) that may cause interference to the District's facilities.

- (j) Any unpolluted water in areas of the District serviced by separate storm and sanitary sewers.
- (k) Any wastewater containing any radioactive wastes or isotopes of such half-life or concentration as exceed limits established by the District in compliance with applicable Local, State or Federal regulations.
- (l) Any wastewater that causes a hazard to human life or creates a public nuisance.
- (m) Any water or waste containing petroleum oil, nonbiodegradable cutting oil or products of mineral origin in sufficient quantities as may pass through or interfere with District operations, or water or wastes containing fats, wax, grease, or oils regardless of origin, and whether emulsified or not, in excess of 250 mg/L or containing substances which may solidify or become viscous at temperatures between 33 degrees and 150 degrees Fahrenheit (1 degree and 65 degrees Centigrade).
- (n) Discharges of trucked or hauled waste are prohibited except at specific discharge points designated in Title I, Chapters 7 and 10 of the <u>Code of</u> <u>Regulations</u>.
- (o) Any water or wastes that are derived from the manufacture or blending of products containing certain bioaccumulative chemicals of concern (BCCs) or that are brought into a facility for the purpose of reclamation, recovery, or treatment of these chemicals, which include but may not be limited to: chlordane, 4,4'-DDD (p,p'-DDD, 4,4'-TDE, p,p'-TDE), ), 4,4'-DDE (p,p'-DDE), 4,4'- DDT (p,p'-DDT), dieldrin, hexachlorobenzene, hexachlorobutadiene (hexachlor-1,3-butadiene), hexachlorocyclohexanes (BHCs), alpha-hexachlorocyclohexane (alpha-BHC), beta-hexachlorocyclohexane (beta-BHC), delta-hexachlorocyclohexane (delta-BHC), lindane (gamma-hexachlorocyclohexane, gamma-BHC), mirex, octachlorostyrene, PCBs (polychlorinated biphenyls), pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, toxaphene.
- (p) Ethylene glycol
- (q) Virgin, used and/or spent chlorofluorocarbon solvents not regulated by Section 2.0305.

- Section 2.0302 <u>National Categorical Standards</u> National categorical standards as promulgated by the U.S. Environmental Protection Agency (EPA) pursuant to the Act shall be met by all dischargers of the respective regulated industrial categories.
- Section 2.0303 <u>Right of Revision</u> The District reserves the right to amend this Title of the <u>Code of Regulations</u> to provide for more stringent limitations or requirements on dischargers to the District's facilities where deemed necessary to comply with the objectives set forth in Section 2.0103 of this Title.
- Section 2.0304 <u>Dilution</u> Except where expressly authorized to do so by an applicable Pretreatment Standard or Requirement, no Industrial User shall ever increase the use of potable or process water, or in any other way attempt to dilute a Discharge, as a partial or complete substitute for adequate treatment to achieve compliance with a Pretreatment Standard or Requirement or the standards set forth in this Title. The District may impose mass limitations on discharges where dilution occurs in order to meet the Pretreatment Standards or Requirements of this Title of the <u>Code of Regulations</u>, or in other cases where the imposition of mass limitations is deemed appropriate by the District.
- Section 2.0305 <u>Supplementary Limitations</u> No discharger shall discharge wastewater containing concentrations of the following enumerated materials, exceeding the following values, at any time. Supplementary limitations apply to the total combined wastewater flow at the building's drain or aggregate of building's drains proportionate to flow.

Substance or Material	<b>Concentration</b>	
Metals		
Cadmium	2	mg/L
Chromium (Hexavalent)	10	mg/L
Chromium (Total)	25	mg/L
Copper	1.62	mg/L
Lead	2	mg/L
Nickel	10	mg/L
Selenium	0.63	mg/L
Zinc	12.1	mg/L
Cyanide		
Cyanide (Amenable)	2	mg/L
Cyanide (Total)	10	mg/L
Phenols		mg/L
Solvents		
1,1,1-Trichloroethane	2.758	mg/L
Benzene	0.014	mg/L
Carbon Disulfide	0.005	mg/L
Carbon Tetrachloride	0.011	mg/L
Chlorobenzene	2.29	mg/L

Substance or Material		<b>Concentration</b>	
Creosols (m-, o-, p-)	25	mg/L	
Cresylic acid	25	mg/L	
Ethylbenzene	1.659	mg/L	
Isobutanol	0.035	mg/L	
Methyl Ethyl Ketone	250	mg/L	
Methylene Chloride	4.131	mg/L	
Nitrobenzene	5.097	mg/L	
o-dichlorobenzene	4.894	mg/L	
Phenol	50	mg/L	
Tetrachloroethylene	0.946	mg/L	
Toluene	2.075	mg/L	
Trichloroethylene	0.026	mg/L	
Xylenes (m-, o-, or p-)	2.091	mg/L	
Maximum combined solvents		mg/L	

Mercury Except where application of the most sensitive analytical method approved under 40 CFR part 136 for mercury in wastewater demonstrates to the District's satisfaction that no mercury is detectable in the user's discharge to the System, all Industrial Users are, for the purpose of this section, sources of mercury. All Industrial Users that are sources of mercury shall implement best management practices (BMPs), as defined under section 2.0209 of this Title, to minimize discharges of mercury to the system. Certain Industrial Users and/or classes of Industrial Users identified by the District as significant sources of mercury shall comply with Districtissued administrative orders requiring submittal and implementation of BMP plans for mercury discharge minimization. Any Industrial User that is a source of mercury failing to implement BMPs in a manner and to an extent satisfactory to the District and/or failing to fully comply with requirements in an administrative order shall be subject to charges as indicated under Section 2.0701 of this Title and/or refusal of service as indicated under Section 1.0907 of Title I of the Code of Regulations.

Section 2.0306 <u>Equivalent Mass Based Limitations</u> - When the limits in a categorical Pretreatment Standard are expressed only in terms of pollutant concentrations, an Industrial User may request that the District convert the limits to equivalent mass limits. The determination to convert concentration limits to mass limits is within the discretion of the District. The District may establish equivalent mass limits only if the Industrial User meets all the following conditions:

(a) To be eligible for equivalent mass limits, the Industrial User must:

- i. Employ, or demonstrate that it will employ, water conservation methods and technologies that substantially reduce water use during the term of its control mechanism;
- ii. Currently use control and treatment technologies adequate to achieve compliance with the applicable categorical Pretreatment Standard, and not have used dilution as a substitute for treatment;
- iii. Provide sufficient information to establish the facility's actual average daily flow rate for all wastestreams, based on data from a continuous effluent flow monitoring device, as well as the facility's long-term average production rate. Both the actual average daily flow rate and long-term average production rate must be representative of current operating conditions;
- iv. Not have daily flow rates, production levels, or pollutant levels that vary so significantly that equivalent mass limits are not appropriate to control the Discharge; and,
- v. Have consistently complied with all applicable categorical Pretreatment Standards during the period prior to the Industrial User's request for equivalent mass limits.
- (b) An Industrial User subject to equivalent mass limits must:
  - i. Maintain and effectively operate control and treatment technologies adequate to achieve compliance with the equivalent mass limits;
  - ii. Continue to record the facility's flow rates through the use of a continuous effluent flow monitoring device;
  - iii. Continue to record the facility's production rates and notify the District whenever production rates are expected to vary by more than 20 percent from its baseline production rates determined in Section 2.0306(a)(iii). Upon notification of a revised production rate, the District must reassess the equivalent mass limit and revise the limit as necessary to reflect changed conditions at the facility; and,
  - iv. Continue to employ the same or comparable water conservation methods and technologies as those implemented pursuant to Section 2.0306(a)(i) of this section so long as it discharges under an equivalent mass limit.

- (c) If the District chooses to establish equivalent mass limits the District:
  - Must calculate the equivalent mass limit by multiplying the actual average daily flow rate of the regulated process(es) of the Industrial User by the concentration-based daily maximum and monthly average Standard for the applicable categorical Pretreatment Standard and the appropriate unit conversion factor;
  - ii. Upon notification of a revised production rate, must reassess the equivalent mass limit and recalculate the limit as necessary to reflect changed conditions at the facility; and,
  - iii. May retain the same equivalent mass limit in subsequent control mechanism terms if the Industrial User's actual average daily flow rate was reduced solely as a result of the implementation of water conservation methods and technologies, and the actual average daily flow rates used in the original calculation of the equivalent mass limit were not based on the use of dilution as a substitute for treatment pursuant to Section 2.0304. The Industrial User must also be in compliance with Section 2.0311 (regarding the prohibition of bypass).
- (d) The District may not express limits in terms of mass for pollutants such as pH, temperature, radiation, or other pollutants which cannot appropriately be expressed as mass.
- Section 2.0307 Equivalent Concentration Based Limitations The District may convert the mass limits of the categorical Pretreatment Standards at 40 CFR parts 414, 419, and 455 to concentration limits for purposes of calculating limitations applicable to individual Industrial Users under the following conditions. When converting such limits to concentration limits, the District must use the concentrations listed in the applicable subparts of 40 CFR parts 414, 419, and 455 and document that dilution is not being substituted for treatment as prohibited by Section 2.0304.
- Section 2.0308 <u>Combined Wastestream Formula</u> Where process effluent is mixed prior to treatment with wastewaters other than those generated by the regulated process, fixed alternative discharge limits may be derived by the District or by the Industrial User. These alternative limits shall be applied to the mixed effluent. When deriving alternative categorical limits, the District shall calculate both an alternative daily maximum value using the daily maximum value(s) specified in the appropriate categorical Pretreatment Standard(s) and an alternative consecutive sampling day average value using the monthly average value(s) specified in the appropriate categorical Pretreatment Standard(s). The Industrial User shall comply with the alternative daily maximum and monthly average limits fixed by the District until the District

modifies the limits or approves an Industrial User modification request. Modification is authorized whenever there is a material or significant change in the values used in the calculation to fix alternative limits for the regulated pollutant. An Industrial User must immediately report any such material or significant change to the District. Where appropriate new alternative categorical limits shall be calculated within 30 days.

(a) *Alternative limit calculation*. For purposes of these formulas, the "average daily flow" means a reasonable measure of the average daily flow for a 30-day period. For new sources, flows shall be estimated using projected values. The alternative limit for a specified pollutant will be derived by the use of either of the following formulas:

(i) Alternative concentration limit.

$$C_T = \left(\frac{\displaystyle\sum_{i=1}^N C_i F_i}{\displaystyle\sum_{i=1}^N F_i}\right) \left(\frac{F_T - F_D}{F_T}\right)$$

where

 $C_T$  = the alternative concentration limit for the combined wastestream.

- $C_i$  = the categorical Pretreatment Standard concentration limit for a pollutant in the regulated stream i.
- $F_i$  = the average daily flow (at least a 30-day average) of stream i to the extent that it is regulated for such pollutant.
- $F_D$  = the average daily flow (at least a 30-day average) from: (a) Boiler blowdown streams, non-contact cooling streams, stormwater streams, and demineralizer backwash streams; provided, however, that where such streams contain a significant amount of a pollutant, and the combination of such streams, prior to treatment, with an Industrial User's regulated process wastestream(s) will result in a substantial reduction of that pollutant, the District, upon application of the Industrial User, may exercise its discretion to determine whether such stream(s) should be classified as diluted or unregulated. In its application to the District, the Industrial User must provide engineering, production, sampling and analysis and such other information so that the District can make its determination; or (b) sanitary wastestreams where such streams are not regulated by a Categorical Pretreatment Standard; or (c) from any process wastestreams which were or could have been entirely exempted from categorical Pretreatment Standards for one or more

of the following reasons:

- (1) The pollutants of concern are not detectable in the effluent from the Industrial User;
- (2) The pollutants of concern are present only in trace amounts and are neither causing nor likely to cause toxic effects;
- (3) The pollutants of concern are present in amounts too small to be effectively reduced by technologies known to the Administrator; or,
- (4) The wastestream contains only pollutants which are compatible with the POTW.
- $F_T$ = The average daily flow (at least a 30-day average) through the combined treatment facility (includes  $F_i$ ,  $F_D$  and unregulated streams).
- N= The total number of regulated streams.
- (ii) Alternative mass limit.

$$M_{T} = \left(\sum_{i=1}^{N} M_{i}\right) \left(\frac{F_{T} - F_{D}}{\sum_{i=1}^{N} F_{i}}\right)$$

where

- $M_{T}$ = the alternative mass limit for a pollutant in the combined wastestream.
- M<sub>i</sub>= the categorical Pretreatment Standard mass limit for a pollutant in the regulated stream i (the categorical pretreatment mass limit multiplied by the appropriate measure of production).
- $F_i$  = the average flow (at least a 30-day average) of stream i to the extent that it is regulated for such pollutant.
- F<sub>D</sub>= the average daily flow (at least a 30-day average) from: (a) Boiler blowdown streams, non-contact cooling streams, stormwater streams, and demineralizer backwash streams; provided, however, that where such streams contain a significant amount of a pollutant, and the combination of such streams, prior to treatment, with an Industrial User's regulated process wastestream(s) will result in a substantial reduction of that pollutant, the District, upon application

of the Industrial User, may exercise its discretion to determine whether such stream(s) should be classified as diluted or unregulated. In its application to the District, the Industrial User must provide engineering, production, sampling and analysis and such other information so that the District can make its determination; or (b) sanitary wastestreams where such streams are not regulated by a categorical Pretreatment Standard; or (c) from any process wastestreams which were or could have been entirely exempted from categorical Pretreatment Standards for one or more of the following reasons:

- (1) The pollutants of concern are not detectable in the effluent from the Industrial User;
- (2) The pollutants of concern are present only in trace amounts and are neither causing nor likely to cause toxic effects;
- (3) The pollutants of concern are present in amounts too small to be effectively reduced by technologies known to the Administrator; or,
- (4) The wastestream contains only pollutants which are compatible with the POTW.
- $F_T$ = The average flow (at least a 30-day average) through the combined treatment facility (includes  $F_i$ ,  $F_D$  and unregulated streams).
- N= The total number of regulated streams.
- (b) An alternative pretreatment limit may not be used if the alternative limit is below the analytical detection limit for any of the regulated pollutants.
- (c) Where a treated regulated process wastestream is combined prior to treatment with wastewaters other than those generated by the regulated process, the Industrial User may monitor either the segregated process wastestream or the combined wastestream for the purpose of determining compliance with applicable Pretreatment Standards. If the Industrial User chooses to monitor the segregated process wastestream, it shall apply the applicable categorical Pretreatment Standard. If the User chooses to monitor the combined wastestream, it shall apply an alternative discharge limit calculated using the combined wastestream formula as provided in this section. The Industrial User may change monitoring points only after receiving approval from the District. The District shall ensure that any change in an Industrial User's monitoring point(s) will not allow the User to substitute dilution for adequate treatment to achieve compliance with applicable Standards.

- Section 2.0309 <u>Prevention of Accidental Discharges</u> Each discharger shall provide protection from accidental discharge of prohibited or regulated materials or substances established by this Title of the <u>Code of Regulations</u>. Where determined by the Executive Director to be necessary, facilities to prevent accidental discharge of prohibited materials shall be provided and maintained at the discharger's cost and expense. Detailed plans showing facilities and operating procedures to provide this protection shall be submitted to the District for review and approval by the District before construction of the facility.
- Section 2.0310 <u>Accidental Discharge Notification Required</u> Dischargers shall notify the District immediately upon the occurrence of a "slugload," as described in Section 2.0301 (i), or accidental discharge of substances prohibited by this Title. The notification shall include location of discharge, date and time thereof, type of waste, concentration and volume and corrective actions. An industrial user shall be responsible for accidental discharges caused by employees, contractors, subcontractors, or any and all individuals permitted upon the premises. Any discharger who has an accidental discharge of prohibited materials shall be liable for any expense, loss or damage to the District's facilities or expenses incurred in the cleanup of the substance in addition to the amount of any charges imposed on the District on account thereof under State or Federal law.

Signs shall be permanently posted in conspicuous places on a discharger's premises, advising employees whom to call in the event of a slug or accidental discharge. Employers shall instruct all employees who may cause or discover such a discharge as to emergency notification procedure. Charges for accidental discharges of prohibited material may be assessed against the discharger pursuant to Section 1.0919 of Title I of the <u>Code of Regulations</u>.

- Section 2.0311 <u>Bypass of Treatment</u> Bypass, as defined in Section 2.0210 is prohibited, and the Disctrict may take enforcement action against an Industrial User for a bypass, unless;
  - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
  - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and,
  - (c) The Industrial User submitted notice of the bypass. If an Industrial User knows in advance of the need for a bypass, it shall submit prior

notice to the District, if possible at least ten days before the date of the bypass.

The District may approve an anticipated bypass, after considering its adverse effects, if the District determines that it will meet the three conditions listed in this section.

In the event an unanticipated bypass that exceeds applicable Pretreatment Standards occurs, notice shall be given to the District within 24 hours from the time the Industrial User becomes aware of the bypass. A written submission shall also be provided within 5 days of the time the Industrial User becomes aware of the bypass. The written submission shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times, and, if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass. The District may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

An Industrial User may allow a bypass to occur which does not cause Pretreatment Standards or Requirements to be violated, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of paragraphs the three conditions listed in this section..

- Section 2.0312 <u>Inspection and Sampling Manhole</u> All sewers shall have an inspection and sampling manhole or structure with an opening sufficient to permit accurate sampling and gauging of the wastewater flow, to assure compliance with these <u>Regulations</u>. Such structures, shall be constructed in accordance with plans approved by the Executive Director. The structure shall be installed at the owner's expense and shall be maintained by him so as to be safe and accessible at all times.
- Section 2.0313 <u>Hazardous Waste Disposal Permit Requirement</u> All Industrial Users must evaluate all solid, liquid, or gaseous waste residuals in order to determine if said residuals are regulated under RCRA. If said residuals are covered under RCRA, then disposal of said residuals in accordance with RCRA is required.
- Section 2.0314 <u>Slug Discharge Control Plan</u> Upon request, and no less than once per control document cycle, Significant Industrial Users shall submit a slug discharge control plan to the District. The plan shall contain at a minimum the following elements:
  - (a) Description of discharge practices, including non-routine batch discharges;
  - (b) Description of stored chemicals;

- (c) Procedures for immediately notifying the POTW of slug discharges, including any discharge that would violate a prohibition of Section 2.0301 of this Title of the <u>Code of Regulations</u> with procedures for follow-up written notification within five days;
- (d) Procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing organic pollutants (including solvents), and/or measures and equipment for emergency response.

## **CHAPTER 4 - CHARGES AND FEES**

- Section 2.0401 <u>Purpose</u> It is the purpose of this chapter to provide for the payment of charges and fees from dischargers to the District's waste disposal system, to compensate the District for the cost of administration of the pretreatment program established herein.
- Section 2.0402 <u>Charges and Fees</u> The District may adopt charges and fees that may include:
  - (a) Charges and fees for monitoring, inspections, and surveillance procedures, including all costs associated with sampling and analyses for Total Toxic Organics (TTO's) which are required pursuant to the categorical pretreatment requirements;
  - (b) Charges and fees for permit applications;
  - (c) Charges and fees for filing appeals;
  - (d) Charges and fees for reviewing accidental discharge incidents and their associated investigation analyses;
  - (e) Charges and fees for discharge in violation of the standards set forth herein;
  - (f) Charges and fees for violation of procedural requirements set forth herein;
  - (g) Charges and fees for reviewing plans for the construction of new facilities relating to this title.

## **CHAPTER 5 - ADMINISTRATION**

- Section 2.0501 <u>Wastewater Dischargers</u> It shall be unlawful to discharge sewage, industrial wastes or other wastes to any sewer within the jurisdiction of the District and/or to the District's facilities without first having complied with the terms of this Title of the <u>Code of Regulations</u>.
- Section 2.0502 <u>Discharge Permits</u> Any Significant Industrial User, as defined in Section 2.0253, who proposes to originate the discharge of any industrial waste for the first time into the sewerage system or who proposes to renew an existing discharge permit or make a significant change in the character or volume of any industrial waste theretofore discharged into the sewerage system shall apply to District for an Administrative Order (Equivalency Permit) to discharge industrial waste on a form furnished by the District a minimum of thirty (30) days prior to the proposed date to originate or renew this discharge into the System. Delay in application for an initial or renewal permit may result in a delay of the issuance of said permit. Any discharge after an existing permit has expired is a violation of this Code.
- Section 2.0503 <u>Baseline Report Requirement</u> Within 180 days after the effective date of a categorical Pretreatment Standard, or 180 days after the final administrative decision made upon a category determination submission, whichever is later, existing Industrial Users subject to such categorical Pretreatment Standards and currently discharging to or scheduled to discharge to the District shall be required to submit a baseline report which contains the information listed in Section 2.0504(a-g). At least 90 days prior to commencement of discharge, New Sources as defined in Section 2.0236, and sources that become Industrial Users subsequent to the promulgation of an applicable categorical standard, shall be required to submit to the District a baseline report which contains the information requested in Section 2.0504(a-e). New Sources shall also be required to include in this report information on the method of pretreatment the source intends to use to meet applicable pretreatment standards. New sources shall give estimates of the information requested in Section 2.0504(d) and (e).
- Section 2.0504 <u>Baseline Report</u> The baseline report shall be made in writing and shall include, at a minimum, the following:
  - (a) *Identifying Information*. The Industrial User shall submit the name and address of the facility including the name of the operator and owners;;
  - (b) *Permits*. The Industrial User shall submit a list of any environmental control permits held by or for the facility;
  - (c) Description of operations. The Industrial User shall submit a brief description of the nature, average rate of production, and Standard Industrial Classification of the operation(s) carried out by such Industrial

User. This description should include a schematic process diagram which indicates points of Discharge to the POTW from the regulated processes.

- (d) *Flow measurement*. The User shall submit information showing the measured average daily and maximum daily flow, in gallons per day, to the POTW from each of the following:
- (e) Measurement of pollutants.
  - i. The Industrial User shall identify the Pretreatment Standards applicable to each regulated process;
  - ii. In addition, the Industrial User shall submit the results of sampling and analysis identifying the nature and concentration (or mass, where required by the Standard or District) of regulated pollutants in the discharge from each regulated process. Both daily maximum and average concentration (or mass, where required) shall be reported. The sample shall be representative of daily operations. In cases where the Standard requires compliance with a Best Management Practice or pollution prevention alternative, the User shall submit documentation as required by the District or the applicable Standards to determine compliance with the Standard;
  - iii. The Industrial User shall take a minimum of one representative sample to compile that data necessary to comply with the requirements of this paragraph.
  - iv. Samples should be taken immediately downstream from pretreatment facilities if such exist or immediately downstream from the regulated process if no pretreatment exists. If other wastewaters are mixed with the regulated wastewater prior to pretreatment the Industrial User should measure the flows and concentrations necessary to allow use of the combined wastestream formula of Section 2.0308 in order to evaluate compliance with the Pretreatment Standards. Where an alternate concentration or mass limit has been calculated in accordance with Section 2.0308 this adjusted limit along with supporting data shall be submitted to the District;
  - v. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR part 136 and amendments thereto. Where 40 CFR part 136 does not contain sampling or analytical techniques for the pollutant in question, or where the Administrator determines that the part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analysis shall be performed by using validated analytical methods or any other applicable sampling and analytical

procedures, including procedures suggested by the District or other parties, approved by the Administrator;

- vi. The District may allow the submission of a baseline report which utilizes only historical data so long as the data provides information sufficient to determine the need for industrial pretreatment measures;
- vii. The baseline report shall indicate the time, date and place, of sampling, and methods of analysis, and shall certify that such sampling and analysis is representative of normal work cycles and expected pollutant discharges to the POTW;
- (f) Certification. A statement, reviewed by an authorized representative of the Industrial User (as defined in Section 2.0205) and certified to by a qualified professional, indicating whether Pretreatment Standards are being met on a consistent basis, and, if not, whether additional operation and maintenance (O and M) and/or additional Pretreatment is required for the Industrial User to meet the Pretreatment Standards and Requirements; and,
- (g) *Compliance schedule*. If additional pretreatment and/or O and M will be required to meet the Pretreatment Standards; the shortest schedule by which the Industrial User will provide such additional pretreatment and/or O and M. The completion date in this schedule shall not be later than the compliance date established for the applicable Pretreatment Standard.

The District will evaluate the complete baseline report and data furnished by the discharger and may require additional information.

Section 2.0505 Standards Modification - The District reserves the right to amend the regulations within this Title and the terms and conditions hereof in order to assure compliance by the District with applicable laws and regulations. Within 9 months of the promulgation of a National Categorical Pretreatment Standard, that contains regulations which necessitate amendments, this Title will be amended to require compliance by the dischargers with such standards within the time frame prescribed by such standards. All National Categorical Pretreatment Standards adopted after the promulgation of this Title shall be adopted by the District as part of the regulations of this Title. Citing the Code of Federal Regulations and the date of promulgation in Section 2.0102 will constitute adoption of a categorical standard. Where a discharger, subject to a National Categorical Pretreatment Standard, has not previously submitted a baseline report as required by Section 2.0503, the discharger shall file a baseline with the District within 180 days after the promulgation of the Applicable National Categorical Pretreatment Standard by the U.S. EPA. In addition, any discharger operating on the basis of a previous filing of a baseline report shall submit to the District within 180 days after the promulgation of an

applicable National Categorical Pretreatment Standard the additional information required by paragraphs (h) and (i) of Section 2.0504. Any changes or new conditions in regulations contained within this Title shall include a reasonable time schedule for compliance.

Section 2.0506 <u>Compliance Date Report</u> - Within 90 days following the date for final compliance with applicable categorical Pretreatment Standards or in the case of a New Source following commencement of the introduction of wastewater into the POTW, any Industrial User subject to Pretreatment Standards and Requirements shall submit to the District a report containing the information described in Section 2.0504(d-f) of this Code. For Industrial Users subject to equivalent mass or concentration limits established by the Control Authority in accordance with the procedures in §403.6(c), this report shall contain a reasonable measure of the User's long term production rate. For all other Industrial Users subject to categorical Pretreatment Standards expressed in terms of allowable pollutant discharge per unit of production (or other measure of operation), this report shall include the User's actual production during the appropriate sampling period.

Section 2.0507 Periodic Compliance Reports (Categorical Industrial Users) (a)Any Industrial User subject to a Categorical Pretreatment Standard (except a Non-Significant Categorical User as defined in Section 2.0253(b)), after the compliance date of such Pretreatment Standard, or, in the case of a New Source, after commencement of the discharge to the District, or any non-categorical industrial discharger required to self-monitor by the District, shall submit to the District during the months of June and December, unless required more frequently in the Pretreatment Standard or by the District, a report indicating the nature and concentration of pollutants in the effluent which are limited by such categorical Pretreatment Standards, or local limits specified by the District. In addition, this report shall include a record of measured or estimated average and maximum daily flows for the reporting period for the discharge reported in 2.0503(d) or specified by the District. . The District may require more detailed reporting of flows. In cases where the Pretreatment Standard requires compliance with a Best Management Practice (or pollution prevention alternative), the Industrial User shall submit documentation required by the District or the Pretreatment Standard necessary to determine the compliance status of the User. At the discretion of the District and in consideration of such factors as local high or low flow rates, holidays, budget cycles, etc., the District may modify the months during which the above reports are to be submitted.

All modifications will be made in writing by the District and shall not be applicable until received by the Industrial User.

(b) The Control Authority may authorize the Industrial User subject to a categorical Pretreatment Standard to forego sampling of a pollutant regulated by a categorical Pretreatment Standard if the Industrial User has demonstrated

through sampling and other technical factors that the pollutant is neither present nor expected to be present in the Discharge, or is present only at background levels from intake water and without any increase in the pollutant due to activities of the Industrial User. This authorization is subject to the conditions set forth in Section 2.0518.

(c) The Control Authority may reduce the requirement in Section 2.0507(a) of this section to a requirement to report no less frequently than once a year, unless required more frequently in the Pretreatment Standard or by the Approval Authority, where the Industrial User meets all of the following conditions:

- i. The Industrial User's total categorical wastewater flow does not exceed any of the following:
  - 0.01 percent of the design dry weather hydraulic capacity of the POTW, or 5,000 gallons per day, whichever is smaller, as measured by a continuous effluent flow monitoring device unless the Industrial User discharges in batches;
  - 2. 0.01 percent of the design dry weather organic treatment capacity of the POTW; and,
  - 3. 0.01 percent of the maximum allowable headworks loading for any pollutant regulated by the applicable categorical Pretreatment Standard for which approved local limits were developed by the District;
- ii. The Industrial User has not been in significant noncompliance, as defined in Section 2.0607 for any time in the past two years;
- iii. The Industrial User does not have daily flow rates, production levels, or pollutant levels that vary so significantly that decreasing the reporting requirement for this Industrial User would result in data that are not representative of conditions occurring during the reporting period;
- iv. The Industrial User must notify the Control Authority immediately of any changes at its facility causing it to no longer meet conditions of Section 2.0507(c)(i) or (ii). Upon notification, the Industrial User must immediately begin complying with the minimum reporting in Section 20507(a); and
- v. The District must retain documentation to support the District's determination that a specific Industrial User qualifies for reduced reporting requirements under Section 2.0507(c) of this section for a

period of 3 years after the expiration of the term of the control mechanism.

(d) For Industrial Users subject to equivalent mass or concentration limits established by the District in accordance with the procedures in Sections 2.0306 and 2.0307, the report required by Section 2.0506(a) shall contain a reasonable measure of the Industrial User's long term production rate. For all other Industrial Users subject to categorical Pretreatment Standards expressed only in terms of allowable pollutant discharge per unit of production (or other measure of operation), the report required by Section 2.0506(a) shall include the Industrial User's actual average production rate for the reporting period.

Section 2.0508 <u>Annual Certification by Non-Significant Categorical Industrial Users</u> – A facility determined to be a Non-Significant Industrial User pursuant to Section 2.0253(b) must annually submit the following certification statement, signed in accordance with the signatory requirements in Section 2.0205 of this Code. This certification must accompany any additional report required by the control document:

Based on my inquiry of the person or persons directly responsible for managing compliance with Categorical Pretreatment Standards under 40 CFR \_\_\_\_\_, I certify that, to the best of my knowledge and belief that during the period from \_\_\_\_\_, \_\_\_\_ to \_\_\_\_\_, \_\_\_ [month, days, year]:

(a) The facility described as \_\_\_\_\_ [facility name] met the definition of a non-significant categorical Industrial User as described in Section 2.0253(b) of the NEORSD's Code of Regulations; (b) the facility complied with all applicable Pretreatment Standards and requirements during this reporting period; and (c) the facility never discharged more than 100 gallons of total categorical wastewater on any given day during this reporting period. This compliance certification is based on the following information:

Section 2.0509 <u>Periodic Compliance Reports (Significant Non-Categorical Industrial Users)</u> – Any Significant Non-Categorical Industrial User shall submit to the District at least once every six months (on dates specified by the District) a description of of the nature, concentration and flow of pollutants required to be reported by the District. In cases where local limit requires compliance with a Best Management Practice or pollution prevention alternative, the Industrial User must submit documentation required by the District to determine the compliance status of the Industrial User. These reports must be based on sampling and analysis performed in the period covered by the report, and in accordance with the techniques described in 40 CFR Part 136 and amendments thereto.

- Section 2.0510 <u>Resampling if Noncompliance is Determined</u> Any Industrial User required by the District to self-monitor who determines, upon review of the self-monitoring data, that a violation of the categorical or local limits has occurred, shall notify the District within 24 hours of becoming aware of a violation, and submit the results of the self-monitoring to the District within 30 days. This Industrial User must resample for the parameter that is in violation and submit results of resampling within 30 days of first becoming aware of the violation. The Industrial User must continue this process each additional 30-day period until the violation is corrected. Resampling is not required if the District performs sampling at the Industrial User between the time when the initial sampling was conducted and the time when the Industrial User or the District receives the results of this sampling.
- Section 2.0511 Inspection and Sampling The District may inspect the facilities of any discharger to determine compliance with the requirements of the regulations of this Title. The discharger shall allow the District or its representatives, without prior notice, upon presentation of credentials of identification, to enter upon the premises of the discharger at all hours for the purposes of inspection, sampling, or records examination. Delays in permitting access by District personnel in excess of ten minutes shall be a failure to provide reasonable access under Section 2.0601. The District shall have the right to set up on the discharger's property such devices as are necessary to conduct sampling, inspection, compliance monitoring and/or metering operations. The District shall have the right to require the discharger to purchase, install, and operate remote sensing and telemetry of pretreatment system alarms, meters, and flow gauges.
- Section 2.0512 <u>Confidential Information</u> Information and data furnished to the District with respect to the nature and frequency of discharge shall be available to the public or other governmental agencies without restriction unless the discharger specifically requests and is able to demonstrate to the satisfaction of the District that the release of such information would divulge information, processes, or methods of production entitled to protection as trade secrets of the discharger. All requests to keep information confidential must be made in writing.

Said confidentiality shall be honored to the extent required by State and Federal law provided the discharger is in compliance with the regulations of this Title. Said information shall be made available to enforcement agencies (e.g., Ohio EPA, U.S.E.P.A.) where the discharger has failed to comply with the standards established herein.

- Section 2.0513 <u>Reporting is Required</u> The discharger is required to report as per Chapter Five of this Title and failure to comply shall constitute a violation of this Title and may result in an enforcement action under Chapter Six and assessment of charges under Chapter Seven of this Title.
- Section 2.0514 <u>Operating Upsets</u> Any discharger that experiences an upset in operations which places the discharger in a temporary state of noncompliance with this Title of the <u>Code of Regulations</u> and/or any applicable Administrative Order shall inform the District within 12 hours of the commencement of the upset. Where such information is given orally, a written follow-up report shall be filed by the discharger with the District within five days. The report shall specify:
  - (a) Description of the upset, the cause thereof and the upset's impact on discharger's compliance status.
  - (b) Duration of noncompliance, including exact dates and times of noncompliance and if the noncompliance continues, the time by which compliance is reasonably expected to occur.
  - (c) All steps taken or to be taken to reduce, eliminate and prevent recurrence of such an upset or other conditions of noncompliance.
- Section 2.0515 <u>Diversion Prohibited</u> There shall be no diversions, shunts, removal of pretreatment equipment, or removal of integral unit processes of the pretreatment system without prior written notification to and approval of the District.
- Section 2.05164 <u>New Source Compliance Deadline</u> A New Source, as defined in Section 2.0236 must have installed and operational a pretreatment system technologically capable of meeting the applicable pretreatment standard prior to discharging to the sewer system. Compliance must be achieved in the shortest possible time period following start-up, but in no case longer than 90 days.
- Section 2.0517 <u>Notification of Changed Discharge</u> All Industrial Users are required to promptly notify the District in advance of substantial changes in the volume or character of discharge. A substantial change is any change that affects the Industrial User's flow or chemical loading by more than ten percent, additional flows or loadings which cause the total regulated wastestream to surpass the design capacity of the pretreatment system, or a change in a discharge that would contain the listed or characteristic hazardous wastes for which the Industrial User has submitted initial notification under 40 CFR 403.12 (P).
- Section 2.0518 Monitoring Waivers The Executive Director may authorize, at his/her discretion, an industrial user subject to a categorical pretreatment standard,

except for centralized waste treatment facilities regulated by and defined in 40 CFR 437, to forego sampling of a pollutant regulated by a categorical pretreatment standard if the industrial user has demonstrated through sampling and other technical factors that the pollutant is neither present nor expected to be present in the discharge, or is present only at background levels from intake water and without any increase in the pollutant due to activities of the industrial user. This authorization is subject to the following conditions:

- (a) A pollutant is determined to be present solely due to sanitary wastewater discharged from the facility provided that the sanitary wastewater is not regulated by an applicable categorical standard and otherwise includes no process wastewater;
- (b) A monitoring waiver is valid only for the duration of the effective period of the permit or other equivalent individual control mechanism, but in no case longer than five years. The industrial user shall submit a new request for the waiver before the waiver can be granted for each subsequent control mechanism;
- (c) In making a demonstration that a pollutant is not present, the industrial user shall provide data from at least one sampling of the facility's process wastewater prior to any treatment present at the facility that is representative of all wastewater from all processes. The request for a monitoring waiver shall be signed in accordance with Section 2.0205 of this Code, and include the certification statement in 40 CFR 403.6(a)(2)(ii). Non-detectable sample results may only be used as a demonstration that a pollutant is not present if the USEPA approved analytical method from 40 CFR 136 with the lowest method detection limit for that pollutant was used;
- (d) The District shall include any monitoring waiver as a condition in the industrial user's control mechanism;
- (e) The reasons supporting any monitoring waiver and any information submitted by the user in its request for the waiver shall be maintained by the District for three years after expiration of the waiver;
- (f) Upon approval of the monitoring waiver and revision of the industrial user's control mechanism by the District, the industrial user shall certify on each periodic compliance monitoring report required by the District's control mechanism: "Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standards under 40 CFR [specify applicable national pretreatment standard part or parts], I certify that, to the best of my knowledge and belief, there has been no increase in the level of [list pollutant or pollutants] in the wastewaters due to the activities at the facility since submittal of the last periodic report under Section 2.0507 of the NEORSD Code of Regulations."

- (g) In the event that a waived pollutant is found to be present or is expected to be present based on changes that occur in the industrial user's operations, the user shall be required to immediately:
  - (1) Notify the District in writing; and,
  - (2) Comply with the monitoring requirements specified in the District's control mechanism;
- (h) The provision for a monitoring waiver does not relieve the industrial user of any other certification processes and requirements established by the District or in categorical pretreatment standards, except as otherwise specified in the categorical pretreatment standard.
## **CHAPTER 6 - ENFORCEMENT**

Section 2.0601 <u>Revocation of Treatment Services</u> - The District may terminate the wastewater treatment services to any discharger who fails to:

- (a) Factually report the wastewater constituents and characteristics of its discharge;
- (b) Report significant changes in wastewater constituents or characteristics;
- (c) Provide access to the discharger's premises to representatives of the District for the purpose of inspection or monitoring;
- (d) Meet the conditions of Title I or Title II of the <u>Code of Regulations</u>; or
- (e) Comply with any final administrative or judicial order entered with respect the <u>Code of Regulations</u>.
- Section 2.0602 <u>Notification of Violation</u> Whenever the District determines that any industrial user has failed to comply with any requirement or condition of any Title of the <u>Code of Regulations</u>, the appropriate action and timetables as outlined in the District's Enforcement Response Plan (ERP) shall be taken by the District. The ERP is established in accordance with 40 CFR 403.8 (F)(5).
- Section 2.0603 <u>Administrative Orders</u> Administrative orders may be issued to any Industrial User for purposes of, but not limited to, establishing timetables, requiring installation of equipment, establishing spill control measures, etc.

An Administrative Order shall be issued to all Significant Industrial Users as defined in Section 2.0253 for purposes of notifying those Users of the requirements necessary to be met to comply with all applicable Federal, State, and Local regulations.

All Administrative Orders shall be delivered personally or by certified or registered mail, return receipt requested. All Administrative Orders shall:

- (a) Contain a statement of duration that shall not exceed five years;
- (b) Be immediately terminated upon a facility's going out of business or moving to a new location, either within or outside of the jurisdiction of the Northeast Ohio Regional Sewer District;
- (c) Be non-transferable.

The issuance of a new or revised Administrative Order shall terminate any existing Administrative Order upon personal delivery or signed receipt of certified mail.

- Section 2.0604 Show Cause Hearing - Where a violation of the Code of Regulations occurs, the District may order the discharger who caused or allowed the violation to show cause, before the Board of Trustees or its designated Hearing Examiner in a hearing convened pursuant to Sections 1.0302 and 1.0303 of Title I of this Code of Regulations, why the revocation of service, termination action and/or application of charges should not occur. A written notice shall be served on the discharger by personal service or certified mail, return receipt requested, specifying the time and place of a hearing to be held by the Board of Trustees or its designated Hearing Examiner regarding the violation, the reasons why the enforcement action is to be taken, the proposed enforcement action, and directing the discharger to show cause before the Board of Trustees or its designated Hearing Examiner why the proposed enforcement action should not be taken. The notice of the hearing shall be served no less than seven calendar days before the hearing. Service may be made on any agent, officer or authorized representative of a discharger or to the discharger's principal place of business or to the facility at which the noncompliance occurred. The proceedings at the hearing shall be in accordance with Section 1.0302 and 1.0303 of Title I of the Code of Regulations, and the determination by the Board of Trustees shall be made in the manner prescribed in that Section.
- Section 2.0605 Emergency Suspension of Service - The Executive Director may, for good cause shown, suspend the wastewater treatment service of a discharger when it appears to the District that an actual or threatened discharge presents or may present an imminent or substantial danger to the health or welfare of persons, substantial danger to the environment, may interfere with the operation of the POTW, or may violate any discharge limits imposed by Title I or Title II of the Code of Regulations. Any discharger notified of the suspension of the District's wastewater treatment service shall cease all discharges. In the event of failure of the discharger to comply with the suspension order within the specified time, the District shall take all actions necessary, including but not limited to judicial proceedings, to compel the discharger's compliance with such order. The discharger shall be responsible for all costs associated with said action. The District shall reinstate the wastewater treatment service upon receipt of proof of the elimination of the noncomplying discharge or conditions creating the threat of imminent or substantial danger as set forth above. Such emergency suspension of service is separate from suspension of service for nonpayment of any user charge(s).
- Section 2.0606 <u>Judicial Proceedings</u> Following the final appeal to the District permitted under procedures for Administrative Determinations of Section 5.1 of the <u>Rules of Procedure For Administrative Determinations Made By The</u> <u>Northeast Ohio Regional Sewer District</u>, the General Counsel of the District

may, following the authorization of such action by the District, commence an action for appropriate legal and/or equitable relief in the appropriate local court.

Section 2.0607 <u>Enforcement Actions - Annual Publication</u> - At least annually, the Executive Director shall publish a list of all industrial users who at any time during the previous twelve months were in significant non-compliance with applicable pretreatment requirements.

For the purposes of this provision, an industrial user is in significant noncompliance if its violations meet one or more of the following criteria:

- (a) Chronic violations of wastewater discharge limits, defined here as those in which sixty-six percent or more of all the measurements taken for the same pollutant during a six-month period equal or exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including instantaneous limits;
- (b) Technical Review Criteria (TRC) violations, defined here as those in which thirty-three percent or more of all of the measurements taken for the same pollutant parameter during a six-month period equal or exceed the product of the numeric Pretreatment Standard or Requirement including instantaneous limits, multiplied by the applicable TRC (TRC=1.4 for BOD, TSS, fats, oil and grease, and 1.2 for all other pollutants except pH);
- (c) Any other violation of a Pretreatment Standard or Requirement (daily maximum, long-term average, instantaneous limit, or narrative standard) that the Director determines has caused, alone or in combination with other discharges, Interference or Pass Through (including endangering the health of District personnel or the general public);
- (d) Any discharge of a pollutant that has caused imminent endangerment of human health, welfare or to the environment or has resulted in the District's exercise of its emergency authority to halt or prevent such a discharge;
- (e) Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance;
- (f) Failure to provide, within 45 days after the due date, required reports including, but not limited to baseline monitoring reports, 90-day

compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules;

- (g) Failure to accurately report noncompliance;
- (g) Any other violation or group of violations, which may include a violation of Best Management Practices, which the Executive Director determines will adversely affect the operation or implementation of the District's Pretreatment program.

## **CHAPTER 7 - CHARGES**

- Section 2.0701 <u>Failure to Comply with Regulations Charges</u> Any failure to comply with the provisions of this Title of the <u>Code of Regulations</u> may result in a minimum charge of \$300, but not to exceed \$5000, for each violation. Assessment of charges under this Section shall not preclude any other remedy available to the District.
- Section 2.0702 <u>Civil Penalties</u> Any discharger who is found to have violated an Order of the District or who has failed to comply with any provision of this Title of the <u>Code of Regulations</u>, and the regulations or rules of the District or orders of any court of competent jurisdiction shall be subject to the imposition of a civil penalty.
- Section 2.0703 <u>Recovery of Costs Incurred by the District</u> Any discharger violating any of the provisions of this Title of the <u>Code of Regulations</u>, or who discharges or causes a discharge producing a deposit or obstruction, or causes damage to or impairs the District's wastewater disposal system, shall be liable to the District for any expense, loss or damage caused by such violation or discharge. The District shall bill the discharger for the costs incurred by the District for any cleaning, repair, or replacement work caused by the violation or discharge. Refusal to pay the assessed costs shall constitute a violation of this Title of the <u>Code of Regulations</u> enforceable under the provisions of Chapter 6 of this Title of the <u>Code of Regulations</u>. In addition, charges specified under Section 1.0920 of Title I of the <u>Code of Regulations</u> may apply. The District may require adequate assurance of payment for charges that may accrue under this Section.
- Section 2.0704 <u>Falsifying Information</u> Any person who knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to this Title of the <u>Code of Regulations</u>, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this Title of the <u>Code of Regulations</u>, shall be charged a minimum of \$1000 to a maximum of \$5000 per violation.

### **CHAPTER 8 - RECORDS RETENTION**

Section 2.0801 <u>Records Retention</u> - All dischargers subject to this Title of the <u>Code of</u> <u>Regulations</u> shall retain and preserve for no less than three (3) years any records, books, documents, memoranda, reports, correspondence, RCRA Sludge Hauling Manifests, and any and all summaries thereof, relating to monitoring, sampling and chemical analyses made by or on behalf of a discharger in connection with its discharge. All records which pertain to matters which are the subject of Administrative Adjustment or any other enforcement or litigation activities brought by the District pursuant hereto shall be retained and preserved by the discharger until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

## **CHAPTER 9 - VALIDITY**

- Section 2.0901 <u>Conflicts With Other Titles</u> The provisions of this Title of the <u>Code of</u> <u>Regulations</u> of the Northeast Ohio Regional Sewer District are intended to be read in conjunction with and complement the provisions of Title I. If any provision of Title II conflicts with any provision of Title I, the provisions of Title II shall govern.
- Section 2.0902 <u>Severability</u> If the provisions of any paragraph, section or article of this Title are declared unconstitutional or invalid by the final decision of any court of competent jurisdiction, the provisions of the remaining paragraphs, sections or articles shall continue in full force and effect.

## **CHAPTER 10 - ACCEPTANCE**

Section 2.1001 <u>Acceptance</u> - By discharging to the system of the District, the discharging party agrees to comply with all terms and regulations of the District and to be bound by said terms, conditions and regulations.

# APPENDIX C -ANALYTICAL REPORTS



Precision Analytical, Inc. 4450 Johnston Parkway Unit B Cleveland, OH 44128 TEL: 216 663 0808 FAX: 216 663 0656 Website: <u>www.precisionanalytical.com</u>

Garth Stevens Nerone and Sons 19501 Miles Parkway Warrensville Hts., OH 44128 TEL: (216) 662-2235 FAX: (216) 662-5522

RE: NEORSD - SCRR

Order No.: 1405100

Dear Garth Stevens:

Precision Analytical, Inc. received 1 sample(s) on 5/6/2014 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in an attached Case Narrative. Quality control data is within laboratory defined or method specified acceptance limits except if noted. Note that sample results reported relate only the samples as received at the laboratory.

Solid samples are reported in ug/Kg or mg/Kg as received, unless specified in the units as dry weight. Unless otherwise noted, results have not been background or blank corrected.

If you have any questions regarding these tests results, please feel free to call.

Certifications: Ohio EPA - 4041; NELAC PA - 68-00434; W.Va DEP - 245

Sincerely,

Cary Mathias President

Page 1 of 2



Precision Analytical, Inc. 4450 Johnston Parkway Unit B Cleveland, OH 44128 TEL: 216 663 0808 FAX: 216 663 0656 Website: www.precisionanalytical.com

## **Analytical Report**

(consolidated) WO#: 1405100 Date Reported:

			-					
	Result	RL	Qual	Units	DF	Date A	nalyzed	
: S12054050614								
1405100-001				Matrix:	SLUE	DGE		
NEORSD - SCRR								
Nerone and Sons		Collection Date: 5/6/2014 9:00:00 AM					0 AM	
	Nerone and Sons NEORSD - SCRR 1405100-001 : S12054050614	Nerone and Sons NEORSD - SCRR 1405100-001 : \$12054050614 Result	Nerone and Sons           NEORSD - SCRR           1405100-001           : S12054050614           Result         RL	Nerone and Sons           NEORSD - SCRR           1405100-001           : S12054050614           Result         RL Qual	Nerone and Sons Collection Date: NEORSD - SCRR 1405100-001 Matrix: : S12054050614 Result RL Qual Units	Nerone and Sons     Collection Date: 5/6/20       NEORSD - SCRR     1405100-001       1405100-001     Matrix: SLUE       : S12054050614     Result       Result     RL Qual Units     DF	Nerone and Sons     Collection Date: 5/6/2014 9:00:0       NEORSD - SCRR     1405100-001       1405100-001     Matrix: SLUDGE       : S12054050614     Result       Result     RL Qual Units     DF	Nerone and Sons     Collection Date: 5/6/2014 9:00:00 AM       NEORSD - SCRR     Ido5100-001       1405100-001     Matrix: SLUDGE       : S12054050614     Result       Result     RL Qual Units     DF       Date Analyzed

VOLATILES	CLP			SW8260B	SW1311V	Analyst: AC
1,1-Dichloroethene	ND	100	µg/L		1 5/7/2	014 3:55:00 PM
1,2-Dichloroethane	ND	100	µg/L	-	1 5/7/2	014 3:55:00 PM
1,4-Dichlorobenzene	ND	100	µg/L	-	1 5/7/2	014 3:55:00 PM
Benzene	ND	100	µg/L	-	1 5/7/2	014 3:55:00 PM
Carbon tetrachloride	143	100	µg/L	-	1 5/7/2	014 3:55:00 PM
Chlorobenzene	ND	100	µg/L	-	1 5/7/2	014 3:55:00 PM
Chloroform	ND	100	µg/L	-	1 5/7/2	014 3:55:00 PM
Methyl ethyl ketone	ND	200	µg/L	-	1 5/7/2	014 3:55:00 PM
Tetrachloroethene	6,200	2,500	* µg/L	-	1 5/8/2	014 1:24:00 PM
Trichloroethene	273	100	µg/L	-	1 5/7/2	014 3:55:00 PM
Vinyl chloride	ND	100	µg/L		1 5/7/2	014 3:55:00 PM

**Qualifiers:** 

*	Value exceeds Maximum Contaminant Level
С	Value is below Minimum Compound Limit.

Holding times for preparation or analysis exceeded Н

М Manual Integration used to determine area response

- N Tentatively identified compounds
- 0 RSD is greater than RSD limit

RL Reporting Detection Limit (PQL) в Analyte detected in the associated Method Blank

DF Dilution Factor

J Analyte detected below quantitation limits

MDL Method Detection Limit

ND Not Detected at the Reporting Limit

PL Permit Limit

s Spike outside acceptance limits

512054

Page \_\_\_\_ of \_\_\_\_\_

	(0)	
PRECISION	ANALYTICAL,	INC.

LABORATORY WORK ORDER NO.

4450 Johnston Parkway, Unit B · Cleveland, OH 44128										14	05	100	D.				
(216) 663 0808 · FAX (216) 6	03 0030						0	check	if same	as REP	ORT T	O					1
			100				NVOIC	ETO									
Contact & Co.) NERONE (SONS, INC	1.6					_	(Contac	t & Co.,			<u> </u>			_			
ODRESS 19501 S. MILES PKU	VV	-			1 (A)		OFTW	500					ST	ATE		ZIP	
TY WAAAA PHISUILLE HTS	STATE O	H	ZR	191	6.6		GHT	C blo					FA	X No.			
HONE No. 216-662-1235 FAX No. 216-662-5526					PHON	E 140.					01	OTE No.	CH	1			
MALDONTH ORCORE, DIE PROJECT NAME NEORID - SCR.R					PONO				AMAL	222	REOU	ESTED	are				
TAT STD 24 HR* 48 HR*	72 HB*	Auth. Sig					Bal			1	- Terrer	1010		T	E		
Rush TAT may result in additional a	urcharges for expedit	ed work.	TEMP	C.	00 1		0						-				
Special Instructions & QC Heq's			VIS. IC	EYF	SINO	XIE	20										
	and hurt of	17 Arch	i ina.		Mos.	ATP!	2				1				1		
Sample Disposal  Return to Client  Disp	DATE	TEAE	CIMP	GRB	No. CONT	S.	2	- 3			- 1						
No. SAMPLE IDENTIFICATION	Left A sale	10.00	12		1	41	V	- †	Ti	+				T			
1 512054050614	3-9-14	A GRAP			-	1./lan		-									
2			-			-		-									
3						-		-				1					
4					_	-						Ť		1			
5						-			- 1-			T					
6				-		-			-	-							
7			+			-			-					1			
8		-				-				-		-	1		1		
9		-	-				<u> </u>				$ \rightarrow $	-		-			
10			+			+			-+-	+		-			$\mathbf{t}$		
11			+			-	-							-	1		
12				-		-	1										
13				+		-	-			-		-			$\square$		
14			-			-	1-	-				-	-	-			
15			-	-	-	-	-					-	-t				
16		DATE	1.		BECEWE	BY	1			RELI	NOUIS	HED B	Y	1	-	DATE	TIME
SAMPLER(S): PRINT NAME(S) RELINCUISHER	-	Pla	1.	116 -	a che la la la della												
G.STEVENS KJOUT A		13/6	E	430	DECEIVE	5 M 1	1:017	TORY	BY	1						DATE	TIME
RECEIVED BY RELINQUISHED BY		DATE		HIC	neverte	- 104 had	ah	ist	Rejá	Ċ					5	1/10/14	144

Form No. 100e Rev. No. 0 Eff. Date 03/21/2013 Form 100e - eCOC

PRECISI EANNAL YINGALS	O N INC.	Sam	ple Receip	t Check	Form 244 Rev#: 1 5/21/10
DIIGL	[] Yee	Work Orde	No.	190010	
	<	Parashiard P			
Date & Time Received: <u>DJQIIM 199</u>		Keceived E	sy:		
Date & Time Logged In: 51619 131		Logged In	By: <u>Cruc</u>		
Date & Time Reviewed:		Reviewed I	Ву:		
Carrier Name: D PAI D UPS D FedEx		Othe	r/Tracking #		
Samples Analyzed In House? 🕅 Yes 🛛 I	No Su	ubbed To		the state of the s	
Is Chain Of Custody Present?			V Yes	□ No	
Is Chain Of Custody Properly Filled Out?			Yes	🗆 No	
Does Chain Of Custody Match Sample Labels	2		Yes	🗆 No	
Are Samples Past Hold Time?			🗆 Yes	DA NO	
Are Samples In Proper Containers?	X Yes		No Intact?	V Yes	🗆 No
No. Of Containers? Dd Glass 🗆	Plastic 🗌 i	Baggie 🗆 '		dlar 🗌 Other	
When Applicable, Is Headspace Present?	🗆 Yes	🗆 No	MSDS Provide	d 🗆 Yes	🗆 No
Matrix:	Solid 🗌 Oi	I 🗆 Drinkir	ng Water 🗋 Soil 🗋	Gas 🗌 Other	
On Ice? 28.00	🗌 Yes		DX No		
Are Samples Preserved?	Yes		□ No	5 NA	
pH Results:			1 1		_
Metals Hardness 🛛 HN03		CN			
CODNH3PhenolTC		TKN/TON_	Phos	No2No3	□H2S04
Sulfide NaOH & ZnAcetate		Other			
Field Data: D pH C Temp C Flow C TRC	TRC Lo			y 🔲 Other	
Explanation of Comments & Problems:		an còrne an ainm a anna an			
				50 e 18 e	
	3				
		31900 			



Environmental Analysis and Management

Chemical Solvents 1010 Dennison Road Cleveland, OH 44109 Chris Rander

## Client Project S12054050614/2106050914 EA Group Workorder Number: 140500165 Received on May 9, 2014

The following analytical report contains results as requested for samples submitted to EA Group. The results included in this report have been reviewed for compliance with the analytical methods indicated in this report. All data has been found to be compliant with accepted laboratory protocol, except as noted in the QC narrative. Industrial hygiene reports, air and/or surface concentrations results are based upon sampling information provided by the client. Industrial hygiene results will not be blank corrected. Analyst initials of REF indicate analysis performed at a subcontract facility.

If you have questions, comments or require further assistance regarding this report, please contact your client services representative or one of the individuals listed below.

Data or reporting: Debbie Lauer - Lab Manager dlauer@eagrou.pohio.com

Sample tracking, supplies: Lisa Foose - Sample Control sreceiving @eagroupohio.com

Invoice Related: Bonnie Renbarger - Office Manager brenbarger@eagroupohio.com Mike Herbert mherbert@eagroupohio.com

Reproduction of this report is prohibited except in its entirety. Unless noted, soil, sludge and sediment results are reported on dry weight basis. The "Sample Reporting Limit" is based on the method used for analysis and does not refer to any regulatory limit. These results relate only to the items tested.



# Laboratory Analytical Report

## **Chemical Solvents**

1010 Dennison Road Cleveland, OH 44109

> Attention: Chris Rander

**Client Project:** 

S12054050614/2106050914

Purchase Order: L62794

**EA Group Workorder:** 1405-00165

Deband & Sauer

Deborah L. Lauer Laboratory Manager

May 13, 2014



Sample Receive Date 5/9/2014

Sample Listing

EAG	ication	Client	EAG	<u>Client</u>
Sample Identif		Sample Identification	Sample Identification	Sample Identification
140500165	- 001	S12054050614	140500165 - 002	2106050914



and Management

## Project Narrative 1405-00165

All analyses performed by EA Group were done using established laboratory SOPs. Management has reviewed the data for compliance with the laboratory QA/QC plan and data have been found to be compliant with the laboratory protocols unless otherwise noted below. All results listed for this report relate only to the samples submitted on this work order.

The temperature of the sample(s) upon receipt was 17.5°C.

#### Misc. QC Comments

Percent Moisture is used to report results on a dry weight basis.

When necessary, reporting limits of individual samples may be raised due to high concentration of interfering compounds or target analytes, or quantity of sample available for analysis.

pH method note: If this analysis was performed in the laboratory, it may not meet the "immediate analysis" requirement that applies to most wastewater monitoring samples. In such cases, analysis for pH should be done at the time of sampling.

The results listed in this report relate only to the samples submitted to EA Group per the chain of custody.

#### Data Flag Table

- B The method blank contained a standard laboratory contaminant (Methylene Chloride, Acetone, Hexane, Phthalates, etc.) above the standard laboratory method detection limit. If the analyte is present in the sample at a concentration up to ten times the blank level, the result is reported with a "B" indicating method blank contamination. Samples will be reported without a "B" if the analyte concentration in the sample is greater than ten times the blank level.
- E An analytical result marked with an "E" indicates the result reported is above the high end limit of the calibration curve and should be considered an estimated concentration.
- DIL Due to matrix interference or high analyte concentration, a dilution was required. The spikes and/or surrogates results could not be quantitated and therefore marked "DIL".
- J An analytical result marked with a "J" indicates the result reported was below the standard reporting limit and above the method detection limit. As the observed level approaches the MDL there is an increasing probability of a false positive response.
- MI Analytical results marked as "MI" indicate that due to inherent matrix interference, the result could not be quantitated.
- # Results flagged "#" indicate the reported result may be outside allowable permit levels as provided by the client, when applicable.
- NA A result or field marked as "NA" indicates that it was not applicable for this project.
- Q A quality control result flagged with a "Q" indicates the percent recovery was outside the acceptable range as determined by the laboratory.

\*\* Positive results for this analyte represent a probable combination of 3-Methylphenol (m-Cresol) and 4-Methylphenol (p-Cresol).



**EAG Workorder:** 1405-00165 **Client Project:** S12054050614/2106050914

Client ID: S12054050614 EAG ID: 1405-00165-1	Dat	te/Time Sample	<b>d:</b> 5/06/2014		<b>Received:</b> 5/09/2014				
Parameter Percent Moisture	<u>CAS #</u>	<u>Result</u> 30	Reporting Limit 0.10	<u>Units</u> %	<b>Prep</b> <u><b>Date</b></u> 5/12/2014	<b>Analysis</b> <u><b>Date</b></u> <u>Tim</u> 5/12/2014	e <u>Analyst</u> SLD		
Client ID: 2106050914 EAG ID: 1405-00165-2	Dat	te/Time Sample	<b>d:</b> 5/09/2014		]	Received: 5/09	9/2014		
<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	Reporting <u>Limit</u>	<u>Units</u>	Prep <u>Date</u>	Analysis <u>Date Tim</u>	e <u>Analyst</u>		
Percent Moisture		34	0.10	%	5/12/2014	5/12/2014	SLD		



EAG Workorder 1405-00165 EAG ID: 1405-00165-001 Client ID: \$12054050614 Client Project:\$12054050614/2106050914

Matrix: Sludge Analyst: CMW Date Sampled: 05/06/2014 Time Sampled: Date Received:05/09/2014

			<b>Reporting</b>			
<u>Parameter</u>	CAS #	Result	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	
Volatile Organic Compounds: SW846-8260A						
Acetone	67-64-1	<2800	2800	ug/kg	5/12/2014	
Acrolein	107-02-8	<1400	1400	ug/kg	5/12/2014	
Acrylonitrile	107-13-1	<1400	1400	ug/kg	5/12/2014	
Benzene	71-43-2	<280	280	ug/kg	5/12/2014	
Bromochloromethane	74-97-5	<280	280	ug/kg	5/12/2014	
Bromodichloromethane	75-27-4	<280	280	ug/kg	5/12/2014	
Bromoform	75-25-2	<280	280	ug/kg	5/12/2014	
Bromomethane	74-83-9	<280	280	ug/kg	5/12/2014	
Carbon disulfide	75-15-0	<280	280	ug/kg	5/12/2014	
Carbon Tetrachloride	56-23-5	<280	280	ug/kg	5/12/2014	
Chlorobenzene	108-90-7	<280	280	ug/kg	5/12/2014	
Chloroethane	75-00-3	<280	280	ug/kg	5/12/2014	
Chloroform	67-66-3	<280	280	ug/kg	5/12/2014	
Chloromethane	74-87-3	<280	280	ug/kg	5/12/2014	
Dibromochloromethane	124-48-1	<280	280	ug/kg	5/12/2014	
1,1-Dichloroethane	75-34-3	1400	280	ug/kg	5/12/2014	
1,2-Dichloroethane	107-06-2	<280	280	ug/kg	5/12/2014	
1,1-Dichloroethene	75-35-4	<280	280	ug/kg	5/12/2014	
1,2-Dichloropropane	78-87-5	<280	280	ug/kg	5/12/2014	
cis-1,2-Dichloroethene	156-59-2	22000	280	ug/kg	5/12/2014	
trans-1,2-Dichloroethene	156-60-5	<280	280	ug/kg	5/12/2014	
cis-1,3-Dichloropropene	10061-01-5	<280	280	ug/kg	5/12/2014	
trans-1,3-Dichloropropene	10061-02-6	<280	280	ug/kg	5/12/2014	
Ethylbenzene	100-41-4	36000	1400	ug/kg	5/12/2014	
2-Hexanone (MBK)	591-78-6	<1400	1400	ug/kg	5/12/2014	
n-Hexane	110-54-3	<2800	2800	ug/kg	5/12/2014	
Methylene Chloride	75-09-2	<1400	1400	ug/kg	5/12/2014	
Methyl Ethyl Ketone (2-butanone)	78-93-3	<1400	1400	ug/kg	5/12/2014	
Methyl Methacrylate	80-62-6	<280	280	ug/kg	5/12/2014	
4-Methyl-2-Pentanone	108-10-1	<1400	1400	ug/kg	5/12/2014	
Methyl Tert-Butyl Ether	1634-04-4	<280	280	ug/kg	5/12/2014	
2-Nitropropane	79-46-9	<280	280	ug/kg	5/12/2014	
Pentachloroethane	76-01-7	<280	280	ug/kg	5/12/2014	
Propionitrile	107-12-0	<1400	1400	ug/kg	5/12/2014	
Styrene	100-42-5	<280	280	ug/kg	5/12/2014	
1,1,1,2-Tetrachloroethane	630-20-6	<280	280	ug/kg	5/12/2014	
1,1,2,2-Tetrachloroethane	79-34-5	<280	280	ug/kg	5/12/2014	
Tetrachloroethene (Tetrachloroethylene)	127-18-4	550000	28000	ug/kg	5/13/2014	
Toluene	108-88-3	29000	1400	ug/kg	5/12/2014	
1,2,4-Trichlorobenzene	120-82-1	<280	280	ug/kg	5/12/2014	
1,1,1-Trichloroethane	71-55-6	20000	280	ug/kg	5/12/2014	
1,1,2-Trichloroethane	79-00-5	<280	280	ug/kg	5/12/2014	



EAG Workorder 1405-00165 EAG ID: 1405-00165-001 Client ID: \$12054050614 Client Project:\$12054050614/2106050914

Matrix: Sludge Analyst: CMW Date Sampled: 05/06/2014 Time Sampled: Date Received:05/09/2014

			<b>Reporting</b>		<b>Date</b>
<u>Parameter</u>	CAS #	Result	Limit	<u>Units</u>	Analyzed
Trichloroethene (Trichloroethylene)	79-01-6	8400	280	ug/kg	5/12/2014
Trichlorofluoromethane	75-69-4	<280	280	ug/kg	5/12/2014
1,2,3-Trichloropropane	96-18-4	<280	280	ug/kg	5/12/2014
1,1,2 Trichlorotrifluoroethane	76-13-1	18000	280	ug/kg	5/12/2014
1,2,4-Trimethylbenzene	95-63-6	25000	1400	ug/kg	5/12/2014
Vinyl Acetate	108-05-4	<280	280	ug/kg	5/12/2014
Vinyl Chloride	75-01-4	340	280	ug/kg	5/12/2014
Xylenes (Total)	1330-20-7	150000	4200	ug/kg	5/12/2014
<u>Surrogate</u>		Percent <u>Recovery</u>		Recovery <u>Limits</u>	
4-Bromofluorobenzene		99.6		(79 - 126)	
1,2-Dichloroethane-d4		90.2		(68 - 158)	
Toluene-d8		95.6		(76 - 129)	



EAG Workorder 1405-00165 EAG ID: 1405-00165-001 Client ID: \$12054050614 Client Project:\$12054050614/2106050914

Matrix: Sludge Analyst: CMW Date Sampled: 05/06/2014 Time Sampled: Date Received:05/09/2014

			Reporting		Date
Parameter_	CAS #	Result	Limit	<u>Units</u>	Analyzed
Volatile Organic TCLP: SW846-8260A					
Benzene	71-43-2	< 0.10	0.10	mg/liter	5/13/2014
Carbon tetrachloride	56-23-5	< 0.10	0.10	mg/liter	5/13/2014
Chlorobenzene	108-90-7	< 0.10	0.10	mg/liter	5/13/2014
Chloroform	67-66-3	< 0.10	0.10	mg/liter	5/13/2014
1,2-Dichloroethane	107-06-2	< 0.10	0.10	mg/liter	5/13/2014
1,1-Dichloroethene	75-35-4	< 0.10	0.10	mg/liter	5/13/2014
Methyl ethyl ketone	78-93-3	<1.0	1.0	mg/liter	5/13/2014
Tetrachloroethene	127-18-4	9.4	0.10	mg/liter	5/13/2014
Trichloroethylene	79-01-6	0.31	0.10	mg/liter	5/13/2014
Vinyl chloride	75-01-4	< 0.10	0.10	mg/liter	5/13/2014
ZHE TCLP Extraction:SW846-1311		Complete			5/12/2014
<u>Surrogate</u>		Percent <u>Recovery</u>		Recovery <u>Limits</u>	
1,2-Dichloroethane-d4		95.5		(69 - 148)	
Toluene-d8		93.7		(78 - 133)	
4-Bromofluorobenzene		104		(78 - 136)	



EAG Workorder 1405-00165 EAG ID: 1405-00165-002 Client ID: 2106050914 Client Project: \$12054050614/2106050914

Matrix: Sludge Analyst: CMW Date Sampled: 05/09/2014 Time Sampled: Date Received:05/09/2014

			<b>Reporting</b>		Date	
<u>Parameter</u>	CAS #	Result	<u>Limit</u>	<u>Units</u>	<b>Analyzed</b>	
Volatile Organic Compounds: SW846-8260A						
Acetone	67-64-1	<15000	15000	ug/kg	5/12/2014	
Acrolein	107-02-8	<7500	7500	ug/kg	5/12/2014	
Acrylonitrile	107-13-1	<7500	7500	ug/kg	5/12/2014	
Benzene	71-43-2	<1500	1500	ug/kg	5/12/2014	
Bromochloromethane	74-97-5	<1500	1500	ug/kg	5/12/2014	
Bromodichloromethane	75-27-4	<1500	1500	ug/kg	5/12/2014	
Bromoform	75-25-2	<1500	1500	ug/kg	5/12/2014	
Bromomethane	74-83-9	<1500	1500	ug/kg	5/12/2014	
Carbon disulfide	75-15-0	<1500	1500	ug/kg	5/12/2014	
Carbon Tetrachloride	56-23-5	<1500	1500	ug/kg	5/12/2014	
Chlorobenzene	108-90-7	<1500	1500	ug/kg	5/12/2014	
Chloroethane	75-00-3	<1500	1500	ug/kg	5/12/2014	
Chloroform	67-66-3	<1500	1500	ug/kg	5/12/2014	
Chloromethane	74-87-3	<1500	1500	ug/kg	5/12/2014	
Dibromochloromethane	124-48-1	<1500	1500	ug/kg	5/12/2014	
1,1-Dichloroethane	75-34-3	12000	1500	ug/kg	5/12/2014	
1,2-Dichloroethane	107-06-2	<1500	1500	ug/kg	5/12/2014	
1,1-Dichloroethene	75-35-4	<1500	1500	ug/kg	5/12/2014	
1,2-Dichloropropane	78-87-5	<1500	1500	ug/kg	5/12/2014	
cis-1,2-Dichloroethene	156-59-2	180000	3000	ug/kg	5/12/2014	
trans-1,2-Dichloroethene	156-60-5	<1500	1500	ug/kg	5/12/2014	
cis-1,3-Dichloropropene	10061-01-5	<1500	1500	ug/kg	5/12/2014	
trans-1,3-Dichloropropene	10061-02-6	<1500	1500	ug/kg	5/12/2014	
Ethylbenzene	100-41-4	210000	3000	ug/kg	5/12/2014	
2-Hexanone (MBK)	591-78-6	<7500	7500	ug/kg	5/12/2014	
n-Hexane	110-54-3	<15000	15000	ug/kg	5/12/2014	
Methylene Chloride	75-09-2	<7500	7500	ug/kg	5/12/2014	
Methyl Ethyl Ketone (2-butanone)	78-93-3	<7500	7500	ug/kg	5/12/2014	
Methyl Methacrylate	80-62-6	<1500	1500	ug/kg	5/12/2014	
4-Methyl-2-Pentanone	108-10-1	<7500	7500	ug/kg	5/12/2014	
Methyl Tert-Butyl Ether	1634-04-4	<1500	1500	ug/kg	5/12/2014	
2-Nitropropane	79-46-9	<1500	1500	ug/kg	5/12/2014	
Pentachloroethane	76-01-7	<1500	1500	ug/kg	5/12/2014	
Propionitrile	107-12-0	<7500	7500	ug/kg	5/12/2014	
Styrene	100-42-5	<1500	1500	ug/kg	5/12/2014	
1,1,1,2-Tetrachloroethane	630-20-6	<1500	1500	ug/kg	5/12/2014	
1,1,2,2-Tetrachloroethane	79-34-5	<1500	1500	ug/kg	5/12/2014	
Tetrachloroethene (Tetrachloroethylene)	127-18-4	5000000	150000	ug/kg	5/13/2014	
Toluene	108-88-3	280000	3000	ug/kg	5/12/2014	
1,2,4-Trichlorobenzene	120-82-1	<1500	1500	ug/kg	5/12/2014	
1,1,1-Trichloroethane	71-55-6	200000	3000	ug/kg	5/12/2014	
1,1,2-Trichloroethane	79-00-5	<1500	1500	ug/kg	5/12/2014	



EAG Workorder 1405-00165 EAG ID: 1405-00165-002 Client ID: 2106050914 Client Project: \$12054050614/2106050914

Matrix: Sludge Analyst: CMW Date Sampled: 05/09/2014 Time Sampled: Date Received:05/09/2014

			<b>Reporting</b>		Date
<b>Parameter</b>	<u>CAS #</u>	Result	Limit	<u>Units</u>	Analyzed
Trichloroethene (Trichloroethylene)	79-01-6	120000	1500	ug/kg	5/12/2014
Trichlorofluoromethane	75-69-4	<1500	1500	ug/kg	5/12/2014
1,2,3-Trichloropropane	96-18-4	<1500	1500	ug/kg	5/12/2014
1,1,2 Trichlorotrifluoroethane	76-13-1	120000	1500	ug/kg	5/12/2014
1,2,4-Trimethylbenzene	95-63-6	80000	1500	ug/kg	5/12/2014
Vinyl Acetate	108-05-4	<1500	1500	ug/kg	5/12/2014
Vinyl Chloride	75-01-4	1700	1500	ug/kg	5/12/2014
Xylenes (Total)	1330-20-7	1100000	450000	ug/kg	5/13/2014
<u>Surrogate</u>		Percent <u>Recovery</u>		Recovery <u>Limits</u>	
4-Bromofluorobenzene		135		(79 - 126)	
1,2-Dichloroethane-d4		136		(68 - 158)	
Toluene-d8		121		(76 - 129)	



EAG Workorder 1405-00165 EAG ID: 1405-00165-002 Client ID: 2106050914 Client Project: \$12054050614/2106050914

Matrix: Sludge Analyst: CMW Date Sampled: 05/09/2014 Time Sampled: Date Received:05/09/2014

			Reporting		Date
Parameter_	CAS #	Result	Limit	<b>Units</b>	Analyzed
Volatile Organic TCLP: SW846-8260A					
Benzene	71-43-2	< 0.10	0.10	mg/liter	5/13/2014
Carbon tetrachloride	56-23-5	< 0.10	0.10	mg/liter	5/13/2014
Chlorobenzene	108-90-7	< 0.10	0.10	mg/liter	5/13/2014
Chloroform	67-66-3	< 0.10	0.10	mg/liter	5/13/2014
1,2-Dichloroethane	107-06-2	< 0.10	0.10	mg/liter	5/13/2014
1,1-Dichloroethene	75-35-4	< 0.10	0.10	mg/liter	5/13/2014
Methyl ethyl ketone	78-93-3	<1.0	1.0	mg/liter	5/13/2014
Tetrachloroethene	127-18-4	32	1.0	mg/liter	5/13/2014
Trichloroethylene	79-01-6	3.3	0.10	mg/liter	5/13/2014
Vinyl chloride	75-01-4	< 0.10	0.10	mg/liter	5/13/2014
ZHE TCLP Extraction:SW846-1311		Complete			5/12/2014
<u>Surrogate</u>		Percent <u>Recovery</u>		Recovery <u>Limits</u>	
1,2-Dichloroethane-d4		94.7		(69 - 148)	
Toluene-d8		90.0		(78 - 133)	
4-Bromofluorobenzene		103		(78 - 136)	



#### 1405-00165

Listed below are the TCLP regulatory limits. If you have any questions regarding the results or the regulatory limits, please contact Client Services. Source: 40CFR 261.

TCLP Metals:	mg/liter	TCLP Volatiles:	mg/liter
Arsenic	5.0	Benzene	0.5
Barium	100.0	Carbontetrachloride	0.5
Cadmium	1.0	Chlorobenzene	100.0
Chromium	5.0	Chloroform	6.0
Lead	5.0	1,2-Dichloroethane	0.5
Mercury	0.2	1,1-Dichloroethene	0.7
Selenium	1.0	Methyl ethyl ketone	200.0
Silver	5.0	Tetrachloroethene	0.7
		Trichloroethene	0.5
TCLP Semi-volatiles:	mg/liter	Vinyl Chloride	0.2
1,4-Dichlorobenzene	7.5		
2,4-Dinitrotoluene	0.13	TCLP Pesticides:	mg/liter
Hexachlorobenzene	0.13	Chlordane	0.03
Hexachlorobutadiene	0.5	Endrin	0.02
Hexachloroethane	3.0	Heptachlor	0.008
Nitrobenzene	2.0	Heptachlor Epoxide	0.008
Pyridine	5.0	Lindane	0.4
o-Cresol	200.0	Methoxychlor	10.0
m-Cresol	200.0	Toxaphene	0.5
p-Cresol	200.0		
Cresol (total)	200.0	<b>TCLP Herbicides:</b>	mg/liter
Pentachlorophenol	100.0	2,4-D	10.0
2,4,5-Trichlorophenol	400.0	2,4,5-TP (Silvex)	1.0
2,4,6-Trichlorophenol	2.0		
Characterization Parameters:	Acceptable limits		
Corrosivity	2-12.5 pH units		

Corrosivity2-12.5 pH unitsFlashpoint>140 degrees FIgnitability (solid burn rate)<2.2 mm/second</td>Reactive Cyanide\*<250 mg/kg</td>Reactive Sulfide\*<500 mg/kg</td>

\* EA Group uses the industry standard for the analysis of reactivity. However, the EPA has withdrawn guidance concerning this method. Further evaluation may be required to determine whether a waste is 'reactive'. The generator should contact the waste handler or the EPA for further guidance.

e	7118 INDUS MENTOR, DH (440) 951-35 FAX (440) 95	TRIAL PARK BL 110 44060-531 514 51-3774	_VD. 4	СН		F CUS	ST	OI	ϽY	,						E	AG V	VOF	IK OF	RDEF	R#_	5-145
EAGROUP	(800) 875-35 www.eagroup customerserv	514 Hohio.com vice@eegroup-c	phio.com	PLEAS	E DO NO	T SEPAR	AT	EF	OR	MS											PAC	GE OF_
Company Name Chemi	 cal Solvents	s, Inc.			TUR		<u>)</u>						A	NAL'	YSIS	REQU	ESTE	D				COOLER TEI
Report Address 1010 D	enison Roa	d				JSH	<i>Di</i> i											1				17.50
City Cleveland		State OH	Zip	44109	Reques	red.by	<u>F</u> M															. [. –
Billing Address same	· · · · · · · · · · · · · · · · · · ·	1	L			ORMAL		1000 C														
City		State	Zip		-																	
Phone		Fax	······································		Matrix Key:																	
Report Attention Chris Ra	leport Attention Chris Rander crander@chemicalsolvents.com		.com	Liquid - L		(G/C)	(G/C)		Ų													
Project Name	UK				Solid/Soil - S		oosite	S		A-VO												
P.O. # Quote #	L62	794			Other - Specify	1	or Com	ontaine	VOC	RGB												SAMPLE REMARKS
SAMPI	LE IDENTIFIC	CATION		MATRIX	COLLECTION TIME	COLLECTION DATE	Grab	# of C	TCLP	Total												CONDITION ETC
S12054050614				sludge		5/6/14		1	хх	хх												
2106050914				sludge		5/9/14		1	хх	хх												
											•											
													ľ									
																		-				
																			<u> </u>			
														_								
																		1				
													ĺ									
-																						
Method of shipment:	EAG Client	t FedEx	UPS Othe	er	I	l		l Fa	x Re	sults			mail	Resi	ults (	pdf)						
Relinquished by/(sign)	Klerk	Pate	/Time /2 2.2.2	Received by	(sign)	v	5	7 Da 9/	ite/Tin	ne 197	7	Addi	tional	Com	ment r	s / Met	hod P	rotoco	ol:	1917 C 1917		ana, ana ana ana ana ana ana ana ana ana
Relinguished by (sign)	~	STa // Date	/=: レル /Time   /スのつ	Received by	My m	/	, 5.9	, da	te/Tin	<u></u> F0	)		VAI	ף סדי								
Relinquished by (sign)		Date	/Time	Received by	(sign)			Da	ite/Tin	ne			OT	HE	יי R_					<u> </u>		



Precision Analytical, Inc. 4450 Johnston Parkway Unit B Cleveland, OH 44128 TEL: 216 663 0808 FAX: 216 663 0656 Website: www.precisionanalytical.com

May 13, 2014

Garth Stevens Nerone and Sons 19501 Miles Parkway Warrensville Hts., OH 44128 TEL: (216) 662-2235 FAX: (216) 662-5522

**RE: NEORSD-SCRR** 

Order No.: 1405197

Dear Garth Stevens:

Precision Analytical, Inc. received 1 sample(s) on 5/9/2014 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in an attached Case Narrative. Quality control data is within laboratory defined or method specified acceptance limits except if noted. Note that sample results reported relate only the samples as received at the laboratory.

Solid samples are reported in ug/Kg or mg/Kg as received, unless specified in the units as dry weight. Unless otherwise noted, results have not been background or blank corrected.

If you have any questions regarding these tests results, please feel free to call.

Certifications: Ohio EPA - 4041; NELAC PA - 68-00434; W.Va DEP - 245

Sincerely,

Cary Mathias President

Page 1 of 2



Precision Analytical, Inc. 4450 Johnston Parkway Unit B Cleveland, OH 44128 TEL: 216 663 0808 FAX: 216 663 0656 Website: www.precisionanalytical.com

# **Analytical Report**

 (consolidated)

 WO#:
 1405197

 Date Reported:
 5/13/2014

CLIENT:	Nerone and Sons	Collection Date: 5/9/2014 8:00:00 AM
Project:	NEORSD-SCRR	
Lab ID:	1405197-001	Matrix: SLUDGE
<b>Client Sample ID</b>	: 2106 050914	

Analyses	Result	RL Q	ual Un	its	DF	Date A	Analyzed
TCLP ANALYSIS VOLATILE ORGANIC COMPOU	NDS, TCLP			SW8260B	sv	V1311V	Analyst: <b>AC</b>
1,1-Dichloroethene	ND	100	μς	ı/L	1	5/12/2	2014 1:19:00 PM
1,2-Dichloroethane	ND	100	μg	ı/L	1	5/12/2	2014 1:19:00 PM
1,4-Dichlorobenzene	ND	100	μg	ı/L	1	5/12/2	2014 1:19:00 PM
Benzene	ND	100	μο	ı/L	1	5/12/2	2014 1:19:00 PM
Carbon tetrachloride	ND	100	μο	ı/L	1	5/12/2	2014 1:19:00 PM
Chlorobenzene	ND	100	μο	ı/L	1	5/12/2	2014 1:19:00 PM
Chloroform	ND	100	μο	ı/L	1	5/12/2	2014 1:19:00 PM
Methyl ethyl ketone	ND	200	μο	ı/L	1	5/12/2	2014 1:19:00 PM
Tetrachloroethene	46,400	5,000	* µg	ı/L	1	5/12/2	2014 2:57:00 PM
Trichloroethene	5,270	5,000	* µg	ı/L	1	5/12/2	2014 2:57:00 PM
Vinyl chloride	ND	100	μg	ı/L	1	5/12/2	2014 1:19:00 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

- C Value is below Minimum Compound Limit.
- H Holding times for preparation or analysis exceeded

M Manual Integration used to determine area response

- N Tentatively identified compounds
- O RSD is greater than RSDlimit

RL Reporting Detection Limit (PQL)

B Analyte detected in the associated Method Blank

- DF Dilution Factor
- J Analyte detected below quantitation limits
- MDL Method Detection Limit
- ND Not Detected at the Reporting Limit

S Spike outside acceptance limits

PL Permit Limit

Page \_\_\_\_\_ of \_\_\_\_\_



Ż

LABORATORY WORK ORDER NO.

4450 Johnston Parkway, Unit B · Clev	eland, OH 4412	28								NL	75	10-	1					
(216) 663 0808 · FAX (216) 6	63 0656				Г	XI Ch			REPOR	T TO	<u></u>	1-1-	<u> </u>					
					L		TO	ine as							ngeroomek kalingany			
REPORT TO NERONE & SONS, INC. C/O	GARTH STEVI	ens			(0	Contact &	& Co.)						and the second secon					
ADDRESS 19501 S MILES PKWY					A	DDRES	S								710			
ADDRESS 19901 C. MILLO I INC.	STATE OH	ZI	P 441	28	c	YTI					ST	ATE		!	11P			
$\frac{114}{1000000000000000000000000000000000$	FAX No. 216-662	2-5522			F	HONE	No.			and the second	FA	X No.	. P. 100					
Email garth@nerone.biz	PROJECT NAME	IEORSI	D-SCF	R	F	PO No.						JOTE N	0. 51	D				
TAT STD 24 HR* 48 HR* -Rush TAT may result in additional	T2 HR* Au surcharges for expedited w	uth. Sig		0.2		TO					REQU							
Special Instructions & QC Req's			IS. ICE YE	S/NO	ATRIX	LP-V(												
Sample Disposal Return to Client Dis	posal by Lab		E: CMP   GRB	No. CONT	S	81												
No. SAMPLE IDENTIFICATION		>	0	1	41	X	1	┝━╋										
12106 050914	5/9/14 8	SAM			06			┝━╋										
2					+-+		_										12 - 100-	
3					+-+											S.		
4					+-+									1				
5					+-+	-+	_											
6								$\uparrow \uparrow \uparrow$										
7					+-+													
8																- 6		
9																		
10																		100
																		and the second
					$\uparrow$													
SAMPLER(S): PRINT NAME(S) RELINQUISHED BY		DATE. 5/9/14	тіме 8:3(	RECEIVE	б'вү RT	HS	TEN	avs	RELING	UISHEDI	¥		$\sum$	5/		9::	30/ ME	im
RECEIVED BY RELINQUISHED BY		DATE	TIME	RECEIVE	d in la	BORAT	ORY BY	. At	3 <u>Qz</u>	6	diama.			5	9/14	00	130	i :

Form No. 100e Rev. No. 0 Eff. Date 03/21/2013 Form 100e - eCOC

			Work Orde	r No	14(	)5197		
	RUSH:	🛱 Yes		No	□na			
Date & Time Received:	5/9/14 00	130	Received E	Зу: <u>С</u> Я	l-		-	
Date & Time Logged In:	5/9/14 0	954	Logged In	By: <u> </u>			-	
Date & Time Reviewed:	5/12/14 0	852	Reviewed	By: <u>Qer</u>			-	
Carrier Name: 🗌 PAI 🔲 เ	JPS 🗌 FedEx	D Clien	t 🗌 Othei	/Tracking # _	c			
Samples Analyzed In House?	🕅 Yes 🗆 I	lo S	ubbed To _			***		
Is Chain Of Custody Present?				🎾 Yes		🗆 No		
Is Chain Of Custody Properly	Filled Out?			🕅 Yes		□ No		
Does Chain Of Custody Matcl	n Sample Labels'	?		🖄 Yes		🗆 No		
Are Samples Past Hold Time?	>			🗆 Yes		∭ No		□ N/
Are Samples In Proper Conta	iners?	IØ)Yes		🗆 No	Intact?	🕅 Yes		
No. Of Containers?	_ 🕅 Glass 🗆	Plastic 🗌	Baggie 🗆 \	/OA 🗌 Micro	o 🗌 Tedl	ar 🗌 Other		
When Applicable, Is Headspa	ce Present?	□ Yes	🗆 No	MSDS F	Provided	□ Yes	🗆 No	
Matrix: 🛛 Aqueous 🗆 Liqui	d 🕅 Sludge 🗆 :	Solid 🗌 Oi	il 🗌 Drinkin	g Water 🔲 S	Soil 🗌 G	as 🗌 Other		
On lce?વેઉ∘C		🗆 Yes		🕅 No				
Are Samples Preserved?		🗌 Yes		🗆 No				
pH Results:						/		
Metals Hardness	🗆 HN03		CN	□NaOH				
COD NH3 Ph	ienol TC	C	TKN/TON_	Phos	۱۱	lo2No3	🗆 н250	)4
Sulfide 🛛 NaOH & Z	InAcetate		Other					
Field Data:		TRC Lo	w 🗌 Color	🗌 Odor 🗆 T	urbidity [	Other		
Explanation of Comments &	Problems:							



Environmental Analysis and Management

Chemical Solvents 1010 Dennison Road Cleveland, OH 44109 Chris Rander

Client Project #2072-051914 EA Group Workorder Number: 140500325 Received on May 20, 2014

The following analytical report contains results as requested for samples submitted to EA Group. The results included in this report have been reviewed for compliance with the analytical methods indicated in this report. All data has been found to be compliant with accepted laboratory protocol, except as noted in the QC narrative. Industrial hygiene reports, air and/or surface concentrations results are based upon sampling information provided by the client. Industrial hygiene results will not be blank corrected. Analyst initials of REF indicate analysis performed at a subcontract facility.

If you have questions, comments or require further assistance regarding this report, please contact your client services representative or one of the individuals listed below.

Data or reporting: Debbie Lauer - Lab Manager dlauer@eagrou.pohio.com

Sample tracking, supplies: Lisa Foose - Sample Control sreceiving @eagroupohio.com

Invoice Related: Bonnie Renbarger - Office Manager brenbarger@eagroupohio.com Mike Herbert mherbert@eagroupohio.com

Reproduction of this report is prohibited except in its entirety. Unless noted, soil, sludge and sediment results are reported on dry weight basis. The "Sample Reporting Limit" is based on the method used for analysis and does not refer to any regulatory limit. These results relate only to the items tested.



# Laboratory Analytical Report

## **Chemical Solvents**

1010 Dennison Road Cleveland, OH 44109

> Attention: Chris Rander

## **Client Project:**

#2072-051914

Purchase Order: L62913

**EA Group Workorder:** 1405-00325

Deband & daver

Deborah L. Lauer Laboratory Manager

May 27, 2014



Sample Receive Date 5/20/2014

Sample Listing

EAG Client Sample Identification Sample Identification EAG Sample Identification <u>Client</u> <u>Sample Identification</u>

140500325 - 001 #2072-051914



and Management

## Project Narrative 1405-00325

All analyses performed by EA Group were done using established laboratory SOPs. Management has reviewed the data for compliance with the laboratory QA/QC plan and data have been found to be compliant with the laboratory protocols unless otherwise noted below. All results listed for this report relate only to the samples submitted on this work order.

The temperature of the sample(s) upon receipt was 12.1°C. Samples were transported with ice packs.

#### Misc. QC Comments

Percent Moisture is used to report results on a dry weight basis.

When necessary, reporting limits of individual samples may be raised due to high concentration of interfering compounds or target analytes, or quantity of sample available for analysis.

pH method note: If this analysis was performed in the laboratory, it may not meet the "immediate analysis" requirement that applies to most wastewater monitoring samples. In such cases, analysis for pH should be done at the time of sampling.

The results listed in this report relate only to the samples submitted to EA Group per the chain of custody.

#### Data Flag Table

- B The method blank contained a standard laboratory contaminant (Methylene Chloride, Acetone, Hexane, Phthalates, etc.) above the standard laboratory method detection limit. If the analyte is present in the sample at a concentration up to ten times the blank level, the result is reported with a "B" indicating method blank contamination. Samples will be reported without a "B" if the analyte concentration in the sample is greater than ten times the blank level.
- E An analytical result marked with an "E" indicates the result reported is above the high end limit of the calibration curve and should be considered an estimated concentration.
- DIL Due to matrix interference or high analyte concentration, a dilution was required. The spikes and/or surrogates results could not be quantitated and therefore marked "DIL".
- J An analytical result marked with a "J" indicates the result reported was below the standard reporting limit and above the method detection limit. As the observed level approaches the MDL there is an increasing probability of a false positive response.
- MI Analytical results marked as "MI" indicate that due to inherent matrix interference, the result could not be quantitated.
- # Results flagged "#" indicate the reported result may be outside allowable permit levels as provided by the client, when applicable.
- NA A result or field marked as "NA" indicates that it was not applicable for this project.
- Q A quality control result flagged with a "Q" indicates the percent recovery was outside the acceptable range as determined by the laboratory.

\*\* Positive results for this analyte represent a probable combination of 3-Methylphenol (m-Cresol) and 4-Methylphenol (p-Cresol).



EAG Workorder 1405-00325 EAG ID: 1405-00325-001 Client ID: #2072-051914 Client Project:#2072-051914

Matrix: Solid Analyst: CMW Date Sampled: 05/19/2014 Time Sampled: Date Received:05/20/2014

			<b>Reporting</b>		Date
Parameter	CAS #	Result	Limit	<u>Units</u>	Analyzed
Volatile Organic TCLP: SW846-8260A					
Benzene	71-43-2	< 0.10	0.10	mg/liter	5/23/2014
Carbon tetrachloride	56-23-5	< 0.10	0.10	mg/liter	5/23/2014
Chlorobenzene	108-90-7	< 0.10	0.10	mg/liter	5/23/2014
Chloroform	67-66-3	< 0.10	0.10	mg/liter	5/23/2014
1,2-Dichloroethane	107-06-2	< 0.10	0.10	mg/liter	5/23/2014
1,1-Dichloroethene	75-35-4	< 0.10	0.10	mg/liter	5/23/2014
Methyl ethyl ketone	78-93-3	<1.0	1.0	mg/liter	5/23/2014
Tetrachloroethene	127-18-4	10	1.0	mg/liter	5/23/2014
Trichloroethylene	79-01-6	0.32	0.10	mg/liter	5/23/2014
Vinyl chloride	75-01-4	< 0.10	0.10	mg/liter	5/23/2014
ZHE TCLP Extraction:SW846-1311		Complete			5/22/2014
Surrogate		Percent Recovery		Recovery <u>Limits</u>	
1,2-Dichloroethane-d4		105		(69 - 148)	
Toluene-d8		97.0		(78 - 133)	
4-Bromofluorobenzene		106		(78 - 136)	



#### 1405-00325

Listed below are the TCLP regulatory limits. If you have any questions regarding the results or the regulatory limits, please contact Client Services. Source: 40CFR 261.

TCLP Metals:	mg/liter	TCLP Volatiles:	mg/liter
Arsenic	5.0	Benzene	0.5
Barium	100.0	Carbontetrachloride	0.5
Cadmium	1.0	Chlorobenzene	100.0
Chromium	5.0	Chloroform	6.0
Lead	5.0	1,2-Dichloroethane	0.5
Mercury	0.2	1,1-Dichloroethene	0.7
Selenium	1.0	Methyl ethyl ketone	200.0
Silver	5.0	Tetrachloroethene	0.7
		Trichloroethene	0.5
TCLP Semi-volatiles:	mg/liter	Vinyl Chloride	0.2
1,4-Dichlorobenzene	7.5		
2,4-Dinitrotoluene	0.13	TCLP Pesticides:	mg/liter
Hexachlorobenzene	0.13	Chlordane	0.03
Hexachlorobutadiene	0.5	Endrin	0.02
Hexachloroethane	3.0	Heptachlor	0.008
Nitrobenzene	2.0	Heptachlor Epoxide	0.008
Pyridine	5.0	Lindane	0.4
o-Cresol	200.0	Methoxychlor	10.0
m-Cresol	200.0	Toxaphene	0.5
p-Cresol	200.0		
Cresol (total)	200.0	<b>TCLP Herbicides:</b>	mg/liter
Pentachlorophenol	100.0	2,4-D	10.0
2,4,5-Trichlorophenol	400.0	2,4,5-TP (Silvex)	1.0
2,4,6-Trichlorophenol	2.0		
Characterization Parameters:	Acceptable limits		
Corrosivity	2-12.5 pH units		

Corrosivity2-12.5 pH unitsFlashpoint>140 degrees FIgnitability (solid burn rate)<2.2 mm/second</td>Reactive Cyanide\*<250 mg/kg</td>Reactive Sulfide\*<500 mg/kg</td>

\* EA Group uses the industry standard for the analysis of reactivity. However, the EPA has withdrawn guidance concerning this method. Further evaluation may be required to determine whether a waste is 'reactive'. The generator should contact the waste handler or the EPA for further guidance.
$( \downarrow )$	7118 INDUSTRIAL PARK BLVD. MENTOR, OHID 44060-5314
	(440) 931-3314 FAX (440) 951-3774 (800) 875-3514
EAGROUP	www.eagroup-ohio.com customerservice@eagroup-ohio.com

CHAIN OF CUSTODY PLEASE DO NOT SEPARATE FORMS EAG WORK ORDER # 5-325

PAGE /\_\_\_\_ OF /\_\_\_

Company Name Chemica	l Solvents, Inc.		TUR	NAROUND (*	<u>)</u>		ANALYSIS REQUESTED			COOLER TEMP:								
Report Address 1010 Der	nison Road								-									
City Cleveland	Ieveland State OH <sup>Zip</sup> 44109			Requested by:														
Billing Address same		L		ORMAL						·								
City	State	Zip																
Phone	Fax	I	Matrix Key:															
Report Attention Chris Ran	der		Liquid - L		(C)													
Project Name		2 - 1 Mar 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	Solid/Soil - S		osite	s												
P.O. # Quote # L62913	-16/T-		Other - Specify	4	Comp	Itainer	0.0.											SAMPLE
SAMPLE		MATRIX			Grab or	# of Cor												CONDITION,
#2072-0	55191H	Solid		5/14/14	,	1	X											·
<u> </u>	<u>&gt;&gt;       / </u>			<i>[[]</i>		•												
													-				•	
									_				-					
													:					
	L-11									-								
					<u> </u>				_									
	141-1776				<u> </u>				_				-					
	2. 2. 7. 7. W																	
																	1	
Method of obipmont: EA		S Other	1	<u> </u>	ŕ			   	m	Ema	Basi	  te/n						
Belingrished by/kign)		Beceivedth	v (sion)			Da	te/Tim	ne	Ac	ditiona	1 Comr	nents /	Metho	<i>il address</i> od <b>Pro</b> t	tocol:	useren in the second	Generality Generality	
Chia Dene	<u> </u>	12:10 4	~ 0/	for	Sp	0/14	11	280			P							
Relinquished by (sign)	5/20/14	ne Received b 1.334/D A	yrsight ()	he	52	/ Da のド	tte/Tim −{  ( •	孔口		⊒ vA ⊐ Bl	.' ISTF	, L						
Relinquished by (sign)	Date/Tim	Received	y (sign)			Da	ite/Tim	ie			HFI	7						

WHITE - FILE

YELLOW - INVOICE

Rev.13 3/2006



August 19, 2014

Garth Stevens Nerone and Sons 19501 Miles Parkway Warrensville Hts., OH 44128 TEL: (216) 662-2235 FAX: (216) 662-5522

RE: NEORSD-SCRR

Order No.: 1408244

Dear Garth Stevens:

Precision Analytical received 1 sample(s) on 8/13/2014 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in an attached Case Narrative. Quality control data is within laboratory defined or method specified acceptance limits except if noted. Note that sample results reported relate only the samples as received at the laboratory.

Solid samples are reported in ug/Kg or mg/Kg as received, unless specified in the units as dry weight. Unless otherwise noted, results have not been background or blank corrected.

If you have any questions regarding these tests results, please feel free to call.

Certifications: Ohio EPA - 4041; NELAC PA - 68-00434; W.Va DEP - 245

Sincerely,

Cary Mathias President

Page 1 of 2



## **Analytical Report**

 (consolidated)

 WO#:
 1408244

 Date Reported:
 8/19/2014

CLIENT:	Nerone and Sons	Collection Date: 8/13/2014 10:00:00 AM
Project:	NEORSD-SCRR	
Lab ID:	1408244-001	Matrix: SOLID
<b>Client Sample ID:</b>	2029 081314	

Analyses	Result	RL Qu	al Units	DF	Date Analyzed			
TCLP ANALYSIS VOLATILE ORGANIC COMPOU	NDS, TCLP		SW826	iob Sv	V1311V Analyst: AC	;		
1,1-Dichloroethene	ND	100	µg/L	1	8/18/2014 11:55:00 A	M		
1,2-Dichloroethane	ND	100	µg/L	1	8/18/2014 11:55:00 A	M		
1,4-Dichlorobenzene	ND	100	µg/L	1	8/18/2014 11:55:00 A	M		
Benzene	ND	100	µg/L	1	8/18/2014 11:55:00 A	M		
Carbon tetrachloride	ND	100	µg/L	1	8/18/2014 11:55:00 A	M		
Chlorobenzene	ND	100	µg/L	1	8/18/2014 11:55:00 A	M		
Chloroform	ND	100	µg/L	1	8/18/2014 11:55:00 A	M		
Methyl ethyl ketone	252	200	µg/L	1	8/18/2014 11:55:00 A	M		
Tetrachloroethene	1,710	100 *	' μg/L	1	8/18/2014 11:55:00 A	M		
Trichloroethene	555	100 *	' μg/L	1	8/18/2014 11:55:00 A	M		
Vinyl chloride	ND	100	µg/L	1	8/18/2014 11:55:00 A	M		

#### NOTES:

<sup>1</sup> 2-Butanone found at similar levels in the blank, but well below regulatory limits.

Qualifiers:

- C Value is below Minimum Compound Limit.
- H Holding times for preparation or analysis exceeded

M Manual Integration used to determine area response

- N Tentatively identified compounds
- O RSD is greater than RSDlimit
- RL Reporting Detection Limit (PQL)

- B Analyte detected in the associated Method Blank
- DF Dilution Factor
- J Analyte detected below quantitation limits
- MDL Method Detection Limit
- ND Not Detected at the Reporting Limit

PL Permit Limit

S Spike outside acceptance limits



4450 Johnston Parkway, Unit B · Cleveland, OH 44128 (216) 663 0808 · FAX (216) 663 0656 LABORATORY WORK ORDER NO.

# 1408244

REPORT TO (Contact & Co.)       NERONE & SONS, INC. C/O GARTH STEVENS       INVOICE 1 (Contact & Co.)         ADDRESS       19501 S. MILES PKWY       ADDRESS         CITY       WARRENSVILLE HEIGHTS       STATE OH       ZIP 44128         CITY       WARRENSVILLE HEIGHTS       FAX NO. 216-662-5522       PHONE NO.         PHONE NO.       216-662-2235       FAX NO.       216-662-5522       PHONE NO.         EMAIL       garth@nerone.biz       PROJECT NAME       NEORSD-SCRR       PO NO.         TAT       STD       24 HR*       48 HR*       72 HR*       Auth. Sig.         "Bush TAT may result in additional surcharges for expedited work.         Special Instructions & OC Reg's         NO.         Sample Disposat       Return to Client       Disposal by Lab       Archive:       Mos.         No.       SAMPLE IDENTIFICATION         DATE       TIME       CMP       GRB       No. CONT         No.       SAMPLE IDENTIFICATION	E TO & Co.) SS 
ICONDUCT & CO.)       ADDRESS         ADDRESS       19501 S. MILES PKWY         ADDRESS       19501 S. MILES PKWY         CITY       WARRENSVILLE HEIGHTS         STATE       OH         ZIP       44128         CITY       WARRENSVILLE HEIGHTS         PHONE No.       216-662-2235         FAX No.       216-662-5522         PHONE No.       216-662-2235         FAX NO.       216-662-5522         PHONE No.       216-662-5522         PHONE NO.       24 HR*       48 HR*         TAT       STD       24 HR*       48 HR*         Bush TAT may result in additional surcharges for expedified work.       TEMP*C         Special Instructions & QC Reg's       VIS. ICE YES NO         Sample Disposat       Return to Client       Disposal by Lab       Archive:         No.       SAMPLE IDENTIFICATION       DATE       TIME       CMP         No.       SAMPLE IDENTIFICATION       DATE       X       X	SS STATE ZIP No. FAX No. QUOTE No. STD ANALYSIS REQUESTED 
ADDRESS       1350113. MILLO FRAVE         CITY       WARRENSVILLE HEIGHTS         STATE       OH         ZIP       44128         CITY       WARRENSVILLE HEIGHTS         STATE       OH         PHONE No.       216-662-2235         FAX No.       216-662-5522         PHONE No.       216-662-2235         EMAIL       garth@nerone.biz         PROJECT NAME       NEORSD-SCRR         PO No.       72 HR*         Auth. Sig.	STATE ZIP
CHY       WARKENSVILLE HEIGHTIS       CHY       WARKENSVILLE HEIGHTIS       CHY       WARKENSVILLE HEIGHTIS         PHONE No. 216-662-2235       FAX No. 216-662-5522       PHONE N.         EMAIL garth@nerone.biz       PROJECT NAME NEORSD-SCRR       PO No.         TAT       STD       24 HR*       48 HR*       72 HR*       Auth. Sig.         "Rush TAT may result in additional surcharges for expedited work.         Special Instructions & QC Reg's         VIS. RCE YES NO         Sample Disposat       Return to Client       Disposal by Lab       Archive:       Mos.         No.       SAMPLE IDENTIFICATION       DATE       TIME       CMP       GRB       No. CONT	No. FAX No. QUOTE No. 570 ANALYSIS REQUESTED
EMAIL       garth@nerone.biz       PROJECT NAME       NEORSD-SCRR       PO No.         TAT       STD       24 HR*       48 HR*       72 HR*       Auth. Sig.         "Rush TAT may result in additional surcharges for expedited work.         Special Instructions & QC Reg's         VIS. ICE YES (NO)         No.       SAMPLE IDENTIFICATION         No.       SAMPLE IDENTIFICATION         Date       TIME CMP GRB No. CONT         1       COLSPAN= COL	ANALYSIS REQUESTED
TAT       STD       24 HR*       48 HR*       72 HR*       Auth. Sig.         "Rush TAT may result in additional surcharges for expedited work.         Special Instructions & OC Reg's         VIS. ICE YES NO         X         Sample Disposat       Return to Client       Disposal by Lab       Archive:       Mos.         No.       SAMPLE IDENTIFICATION         DATE       TIME CMP GRB No. CONT         1       COLSPAN= CONT	ANALYSIS REQUESTED
Special Instructions & QC Req's     Push TAT may rosult in additional surcharges for expedited work.       Special Instructions & QC Req's     VIS. KE YES NO       Sample Disposat     Return to Client     Disposal by Lab       No.     SAMPLE IDENTIFICATION     DATE       TIME     CMP GRB     No. CONT       1     CORD     C	
Special instructions & QC Reg's     TEMP 'C     VIS. KCE YES (NO)     YE       Sample Disposal     Return to Client     Disposal by Lab     Archive:     Mos.       No.     SAMPLE IDENTIFICATION     DATE     TIME     CMP GRB     No. CONT       1     2020     0212141     Qalab     3 X	
Vis. ICE       YES. (NO)       E         Sample Disposat       Return to Client       Disposal by Lab       Archive:       Mos.         No.       SAMPLE IDENTIFICATION       DATE       TIME       CMP       GHB       No. CONT         1       2020       00       214       00       3       X	
Sample Disposat     Return to Client     Disposal by Lab     Archive:     Mos.       No.     SAMPLE IDENTIFICATION     DATE     TIME     CMP       III     2020     021214     22124     3 X	
No. SAMPLE IDENTIFICATION DATE TIME CMP GRB No. CONT C	
1 3020 091214 9-13-14 mm X 3X	
2	
3	
4	
5	
6	<u></u>
7	
8	╶ <u>┨╴┦╶┨╺</u> ┫╍╎╶┧╌┤╺┡╍┤╶┿╾┽╶┾╸
9	_┦_┫_┫_┫╶┩╶┩╶┩╼╬╼┿╌┼╌╋
10	<u></u>
11	╶┊╡╶╡╌╡╌╡╴┤╴┤╾╋╴╋╶╂╶╄╼╬╸
12	<u>_</u>
13	
14	<u>_</u> <u></u>
15	
16	
SAMPLER(S): PRINT NAME(S) RELINQUISHED BY DATE TIME RECEIVED BY	
PAT CERVENIK Patu Cive 8/13/14/0.44	
RECEIVED BY RELINQUISHED BY DATE TIME RECEIVED IN LABORATOR	

Form No. 100e Rev. No. 0 Eff. Date 03/21/2013 Form 100e - eCOC

						Form 244
PRECISION ANALYTIC	CAL	Sample Re	ceipt Che	cklist		Rev#, 1 5/21/10
A DIVISION OF CWM ENVIRONMEN		Nork Order No.	140 9	રુસ્પ્		
RUSH	l: 🗌 Yes	X No				
te & Time Received: 8/13/14 10	244	Received By:	CR			
te & Time Logged In: 8 13 14 1	<u>328</u>	Logged in By:	Core			
te & Time Reviewed: 8/14/14_1	12:14	Reviewed By:	AT		-	
arrier Name: X PAI 🗍 UPS 🗌 FedEx	Client	C Other/Trackin	ıg #			
amples Analyzed in House? X Yes 🛛 🗌	No Sul	obed To				
Chain Of Custody Present?		X Yes		🗆 No		
Chain Of Custody Properly Filled Out?		X Yes		M No		
oes Chain Of Custody Match Sample Labe	ls?	X Yes		No No		
re Samples Past Hold Time?		🗆 Ye	S	X No		
re Samples In Proper Containers?	X Yes		Intact?	X Yes	amer	🗆 No
lo. Of Containers?	Plastic 🗆	Baggie 🖾 VOA 🗆	] Micro 🗌 Ted	lar 🗌 Othe	۲ <u> </u>	
Vhen Applicable, Is Headspace Present?	🗌 Yes	🗆 No 🛛 🛛	ISDS Provided	🗆 Yes	🗆 No	
Aatrix: 🔲 Aqueous 🗆 Liquid 🗔 Studge	] Solid □ O	il 🗍 Drinking Wat	er 🗌 Soil 🗌 C	as 🗆 Othe	er	
Dn Ice? 20 °C	□ Yes	M NO	D			
Are Samples Preserved?	🗆 Yes		5	1 NA		
				10		
Metals Hardness D HN03		CN	1aOH		7	
CODNH3Phenoi	тос	TKN/TON	Phos	No2No3	🛛	H2S04
Sulfide NaOH & ZnAcetate		Other				
		ow [] Color [] O	dor 🛛 Turbidity			
Explanation of Comments & Problems:						
Non-compliant in	rite-oi	a sised	- 6n Cl	C		



September 12, 2014

Garth Stevens Nerone and Sons 19501 Miles Parkway Warrensville Hts., OH 44128 TEL: (216) 662-2235 FAX (216) 662-5522

**RE: NEORSD-SCRR** 

Precision Analytical 4450 Johnston Parkway · Unit B Cleveland, OH 44128 TEL: (216) 663-0808 FAX: (216) 663-0656 Website: www.precisionanalytical.com

Order No.: 1409161

Dear Garth Stevens:

Precision Analytical received 1 sample(s) on 9/9/2014 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in an attached Case Narrative. Quality control data is within laboratory defined or method specified acceptance limits except if noted. Note that sample results reported relate only the samples as received at the laboratory.

Solid samples are reported in ug/Kg or mg/Kg as received, unless specified in the units as dry weight. Unless otherwise noted, results have not been background or blank corrected.

If you have any questions regarding these tests results, please feel free to call.

Certifications: Ohio EPA - 4041; NELAC PA - 68-00434; W.Va DEP - 245

Sincerely,

Cary Mathias President

Page 1 of 2



# **Analytical Report**

(consolidated) WO#: **1409161** Date Reported: **9/12/2014** 

CLIENT:	Nerone and Sons	Collection Date: 9/9/2014 10:30:00 AM
Project:	NEORSD-SCRR	
Lab ID:	1409161-001	Matrix: SOLID
<b>Client Sample ID</b>	2130 090914	

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	
TCLP ANALYSIS VOLATILE ORGANIC COMPOU	JNDS, TCLP		SW8260B	SM	/1311V Analyst: AC	
1,1-Dichloroethene	ND	100	µg/L	1	9/10/2014 1:46:00 PM	
1,2-Dichloroethane	ND	100	µg/L	1	9/10/2014 1:46:00 PM	
1,4-Dichlorobenzene	ND	100	µg/L	1	9/10/2014 1:46:00 PM	
Benzene	ND	100	µg/L	1	9/10/2014 1:46:00 PM	
Carbon tetrachloride	ND	100	µg/L	1	9/10/2014 1:46:00 PM	
Chlorobenzene	ND	100	µg/L	1	9/10/2014 1:46:00 PM	
Chloroform	ND	100	µg/L	1	9/10/2014 1:46:00 PM	
Methyl ethyl ketone	ND	400	µg/L	1	9/10/2014 1:46:00 PM	
Tetrachloroethene	ND	100	µg/L	1	9/10/2014 1:46:00 PM	
Trichloroethene	ND	100	µg/L	1	9/10/2014 1:46:00 PM	
Vinyl chloride	ND	100	µg/L	1	9/10/2014 1:46:00 PM	

Qualifiers:	*	Value exceeds Maximum Contaminant Level	В	An
-	С	Value is below Minimum Compound Limit.	DF	Dil
	Н	Holding times for preparation or analysis exceeded	J	An
	М	Manual Integration used to determine area response	MDL	Me
	Ν	Tentatively identified compounds	ND	No
	0	RSD is greater than RSDlimit	PL.	Per

RL Reporting Detection Limit (PQL)

B Analyte detected in the associated Method Blank

DF Dilution Factor

J Analyte detected below quantitation limits

MDL Method Detection Limit

ND Not Detected at the Reporting Limit

PL Permit Limit

S Spike outside acceptance limits

Page 2 of 2



4450 Johnston Parkway, Unit B · Cleveland, OH 44128

LABORATORY WORK ORDER NO.

4450 Johnston Parkway, Unit B · Ci (216) 663 0808 · FAX (216	eveland, OH 44 ) 663 0656	+120								L	100	911	61				
					[	X Che	eck if si	ame a	s REPOP	TT TO							
REPORT TO NERONE & SONS, INC. C/C	GARTH STE	EVENS			IN (C	VOICE	TO Co.)										
ADDRESS 19501 S. MILES PKWY					A	DDRESS	5										
CITY WARRENSVILLE HEIGHTS	STATE C	STATE OH ZIP 44128 CIT										STAT	Έ		ZIP		
PHONE No. 216-662-2235	FAX No. 216-	662-552	2		Р	HONE N	lo.					FAX N	No.				
EMAIL garth@nerone.biz	PROJECT NAME	ROJECT NAME NEORSD-SCRR										QUOT	TE No.	<u> </u>	<u>ans</u>		
TAT STD 24 HR* 48 HR*	72 HR*	Auth. Sig.			-	मा	-		AN	ALYS	SRE	QUES	TED				-
Special Instructions & OC Reg's			TEMP *C		ž	CLP											
Sample Disposal Return to Client D	isposal by Lab	Arch	l ive:	Mos.	MATA	ğ											
No. SAMPLE IDENTIFICATION		11111	GMP G		┟╴╼╋╴		+					2			┝─┼╴	$\rightarrow$	-0-
1 2130 090914	4/9/14	10:50	$ \nu $	<u> </u>	+	<u>^</u>			┝━╂━	+			-			+	_
2					┼╌┼	-	+		┝─┼╍								+
<u> </u>			┝╼╌┼╴		+		+			+					┟━╋		+-
<u> </u>		<u> </u>	╞╼┼╴		┼╴┼		+	├──	┝╍╌┠╍	+					┝╌╌╂╸	+	+
6			$\vdash$		┼─┼╴		+									+	-
7			╏──╂─		+			┝─		+						+	
8		┼───	┼─┼╴		++		+	<del>                                      </del>									+
9				_							<u> </u>					11	
10					++												
11				-													
12																	
13		<u> </u>															
14										- 11 - 11							
15															$\square$		
16																	-
SAMPLER(S): PRINT NAME(S) RELINQUISHED BY		DATE A/A/14			BY				RELINQU	ISHED	BY				DATE	-	TIME
RECEIVED BY RELINQUISHED BY	<u> </u>	DATE	TIME	RECEIVED	IN LABO	Chr	Y BY	na	to	,				Caller 2	DATE 9/9/	M	TIME 1105

Form No. 100e Rev. No. 0 Eff. Date 03/21/2013 Form 100e - eCOC

PRECISI ANALYTICAL,	ON INC.	Samp	le Rec	eipt C		st	Form 244 Rev#: 1 5/21/10
DIICH		Nork Order	No No		1101		
A Deviver 9/2/11 110	< 1	Received By	r C	01~			
ate & Time Received: 99101 125	3	Logged in B	Nr: 04	ne -			
ate & Time Logged In: <u>(110)</u>		Reviewed B	v Kl	3			
ate & Time Reviewed							
arrier Name: 🗋 PAI 🛑 UPS 🗐 FedEx	Client	C Other/	Tracking #				
amples Analyzed In House? 🔯 Yes 🛛 🛛 N	lo Si	ibbed To	· 			72	
Chain Of Custody Present?			<b>Y</b> Yes		🗆 No	1.4	
Chain Of Custody Properly Filled Out?			V Yes		🗆 No		
oes Chain Of Custody Match Sample Labels	?		X Yes		□ No		
re Samples Past Hold Time?			🗆 Yes		D No		
re Samples In Proper Containers?	Yes		🗆 No	Intact?	V Yes		🗋 No
lo. Of Containers?  Glass 🗹	Plastic	Baggie 🗆 🔪	/OA 🗌 Mic	ro 🗌 Ted	lar 🗌 Othe	er	
Vhen Applicable, Is Headspace Present?	☐ Yes	□ No	MSDS	Provided	□ Yes	🗆 No	
Natrix: 🗆 Aqueous 🗆 Liquid 🗖 Sludge 🗖	Solid 🗌 O	il 🗖 Drinkin	g Water 🗆	Soil 🗌 G	as 🗌 Othe	er	(e)
On Ice?00∘C	🗋 Yes	•	No No				
Are Samples Preserved?	🗆 Yes		D No		MA NA		
oH Results:			2557			-	
Metals Hardness 🗌 HN03		CN	_ □NaOH				
CODNH3PhenolT	oc	TKN/TON_	Pho	)S	No2No3		]H2S04
Sulfide INaOH & ZnAcetate		Other					54
Field Data: D pH D Temp D Flow D TRC		ow 🗆 Color	Odor [	Turbidity	Other_		
Explanation of Comments & Problems:	8					_	
			20				



October 02, 2014

Garth Stevens Nerone and Sons 19501 Miles Parkway Warrensville Hts., OH 44128 TEL: FAX (216) 662-5522

RE: NEORSD-SCRR

Order No.: 1409495

Dear Garth Stevens:

Precision Analytical received 1 sample(s) on 9/22/2014 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in an attached Case Narrative. Quality control data is within laboratory defined or method specified acceptance limits except if noted. Note that sample results reported relate only the samples as received at the laboratory.

Solid samples are reported in ug/Kg or mg/Kg as received, unless specified in the units as dry weight. Unless otherwise noted, results have not been background or blank corrected.

If you have any questions regarding these tests results, please feel free to call.

Certifications: Ohio EPA - 4041; NELAC PA - 68-00434; W.Va DEP - 245

Sincerely,

Cary Mathias President

Page 1 of 4



# **Analytical Report**

(consolidated) WO#: 1409495 Date Reported: 10/2/2014

CLIENT:	Nerone and Sons	Collection Date: 9	9/22/2014
Project:	NEORSD-SCRR		
Lab ID:	1409495-001	Matrix: S	SLUDGE
Client Sample ID	2136 092214		

Analyses	Result	RL Qu	RL Qual Units		Date Analyzed
TCLP ANALYSIS METALS ANALYSIS BY ICP, TCLP			SW60	10B	Analyst: STB
Arsenic	ND	0.0500	mg/L	1	9/23/2014 3:03:03 PM
Barium	0.443	0.0500	mg/L	1	9/23/2014 3:03:03 PM
Cadmium	ND	0.0500	mg/L	1	9/23/2014 3:03:03 PM
Chromium	ND	0.0500	mg/L	1	9/23/2014 3:03:03 PM
Lead	ND	0.0500	mg/L	1	9/23/2014 3:03:03 PM
Selenium	ND	0.0500	mg/L	1	9/23/2014 3:03:03 PM
Silver	ND	0.0500	mg/L	1	9/23/2014 3:03:03 PM
METALS ANALYSIS BY ICP, TCLP			SW60	10B	Analyst: STB
Antimony	ND	0.0500	mg/L	1	9/23/2014 3:03:03 PM
Beryllium	ND	0.0500	mg/L	1	9/23/2014 3:03:03 PM
Nickel	8.22	0.0500	mg/L	1	9/23/2014 3:03:03 PM
Thallium	ND	0.0500	mg/L	1	9/23/2014 3:03:03 PM
TCLP ANALYSIS MERCURY. TCLP			SW74	70A	Analyst: <b>NS</b>
Mercury	ND	1.50	µg/L	20	9/23/2014 2:41:04 PM
TCLP ANALYSIS PESTICIDES, TCLP			SW80	81A	Analyst: MIM
Chlordane, total	ND	0.125	µg/L	1	10/1/2014 1:00:00 PM
Endrin	ND	0.125	µg/L	1	10/1/2014 1:00:00 PM
gamma-BHC	ND	0.125	µg/L	1	10/1/2014 1:00:00 PM
Heptachlor	ND	0.125	µg/L	1	10/1/2014 1:00:00 PM
Heptachlor epoxide	ND	0.125	µg/L	1	10/1/2014 1:00:00 PM
Methoxychlor	ND	0.125	µg/L	1	10/1/2014 1:00:00 PM
Toxaphene	ND	0.125	µg/L	1	10/1/2014 1:00:00 PM
TCLP ANALYSIS HERBICIDES, TCLP			SW81	51A	Analyst: MIM
2,4,5-TP	ND	0.0250	mg/L	1	9/29/2014 11:30:00 AM
2,4-D	ND	0.0250	mg/L	1	9/29/2014 11:30:00 AM

Value exceeds Maximum Contaminant Level \* **Qualifiers:** С

Value is below Minimum Compound Limit.

Н Holding times for preparation or analysis exceeded

М Manual Integration used to determine area response

Tentatively identified compounds Ν

0 RSD is greater than RSDlimit

Reporting Detection Limit (PQL) RL

В Analyte detected in the associated Method Blank

DF Dilution Factor

Analyte detected below quantitation limits J

MDL Method Detection Limit

ND Not Detected at the Reporting Limit

PL Permit Limit

S Spike outside acceptance limits Page 2 of 4



# **Analytical Report**

(consolidated) WO#: 1409495 Date Reported: 10/2/2014

CLIENT:	Nerone and Sons	Collection Date: 9/22/2014
Project:	NEORSD-SCRR	
Lab ID:	1409495-001	Matrix: SLUDGE
Client Sample ID	2136 092214	

Analyses	yses Result RL Qual Units		al Units	DF	Date A	nalyzed
TCLP ANALYSIS SEMI-VOLATILE ORGANIC CO	MPOUNDS, TCLP		SW8270	C		Analyst: <b>CS</b>
2,4,5-Trichlorophenol	ND	25.0	µg/L	1	9/26/2	014 12:45:00 PM
2,4,6-Trichlorophenol	ND	25.0	µg/L	1	9/26/2	014 12:45:00 PM
2,4-Dinitrotoluene	ND	25.0	µg/L	1	9/26/2	014 12:45:00 PM
2-Methylphenol	ND	50.0	µg/L	1	9/26/2	014 12:45:00 PM
3&4 Methylphenol	ND	50.0	µg/L	1	9/26/2	014 12:45:00 PM
Hexachlorobenzene	ND	25.0	µg/L	1	9/26/2	014 12:45:00 PM
Hexachlorobutadiene	ND	25.0	µg/L	1	9/26/2	014 12:45:00 PM
Hexachloroethane	ND	25.0	µg/L	1	9/26/2	014 12:45:00 PM
Nitrobenzene	ND	25.0	µg/L	1	9/26/2	014 12:45:00 PM
Pentachlorophenol	ND	25.0	µg/L	1	9/26/2	014 12:45:00 PM
Pyridine	ND	25.0	µg/L	1	9/26/2	014 12:45:00 PM
TCLP ANALYSIS VOLATILE ORGANIC COMPOU	INDS, TCLP		SW8260	3 SI	W1311V	Analyst: AC
1,1-Dichloroethene	ND	100	µg/L	1	9/24/2	014 3:59:00 PM
1,2-Dichloroethane	ND	100	µg/L	1	9/24/2	014 3:59:00 PM
1,4-Dichlorobenzene	ND	100	µg/L	1	9/24/2	014 3:59:00 PM
Benzene	ND	100	µg/L	1	9/24/2	014 3:59:00 PM
Carbon tetrachloride	ND	100	µg/L	1	9/24/2	014 3:59:00 PM
Chlorobenzene	ND	100	µg/L	1	9/24/2	014 3:59:00 PM
Chloroform	ND	100	µg/L	1	9/24/2	014 3:59:00 PM
Methyl ethyl ketone	ND	200	µg/L	1	9/24/2	014 3:59:00 PM
Tetrachloroethene	ND	100	µg/L	1	9/24/2	014 3:59:00 PM
Trichloroethene	ND	100	µg/L	1	9/24/2	014 3:59:00 PM
Vinyl chloride	ND	100	µg/L	1	9/24/2	014 3:59:00 PM
CYANIDE, TOTAL (SOLID)			SW9014	ļ		Analyst: DR
Cyanide, Total	2.1	1.0	mg/Kg	1	9/26/2	014 1:30:00 PM
FLASHPOINT			SW1010	)		Analyst: KRK
Ignitability	>205	0	°F	1	9/25/2	014 3:02:00 PM
Qualifiers: * Value exceeds Maximum C Value is below Minimum	m Contaminant Level m Compound Limit.		B Analyte detected i DF Dilution Factor	n the associat	ted Method Blank	

Н Holding times for preparation or analysis exceeded

М Manual Integration used to determine area response

Tentatively identified compounds Ν 0 RSD is greater than RSDlimit

RL Reporting Detection Limit (PQL)

DF Dilution Factor

MDL Method Detection Limit

ND Not Detected at the Reporting Limit

PL Permit Limit

Spike outside acceptance limits S

Analyte detected below quantitation limits J



# **Analytical Report**

(consolidated) WO#: **1409495** Date Reported: **10/2/2014** 

CLIENT:	Nerone and Sons		<b>Collection Date:</b>	9/22/2	014
Project:	NEORSD-SCRR				
Lab ID:	1409495-001		Matrix:	SLUD	GE
Client Sample ID	2136 092214				
Analyses		Result	RL Qual Units	DF	Date Analyzed

Anaryses	Kesut	KE Quai Units	DI	Date Analyzeu	
РН		SW904	15C	Analyst: <b>TIS</b>	
Hydrogen Ion (pH)	7.25	EST H S.U.	1	9/23/2014 10:05:00 AM	
Temp. at pH Measurement	21.8	EST H °C	1	9/23/2014 10:05:00 AM	

#### NOTES:

EST: The method specifies that this parameter is to be analyzed within 15 minutes of collection. This sample has been analyzed in the la and is reported as over holding time. The result is considered an estimated value.

SULFIDE			A4500-	S2-E	Analyst: DR
Sulfide	ND	100	mg/Kg	1	9/24/2014 10:00:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	В	Analyte detected in the associated Method Blank	
-	С	Value is below Minimum Compound Limit.	DF	Dilution Factor	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	М	Manual Integration used to determine area response	MDL	Method Detection Limit	
	Ν	Tentatively identified compounds	ND	Not Detected at the Reporting Limit	
	0	RSD is greater than RSDlimit	PL	Permit Limit	D 4 64
	RL	Reporting Detection Limit (PQL)	S	Spike outside acceptance limits	Page 4 of 4



PRECISION ANALT	IICAL, IN	<b>U</b> .					-	_		LAB	ORAT	ORY	WOF	RK ORD	ER NO.		
4450 Johnston Parkway, Unit B · Cl (216) 663 0808 · FAX (216)	eveland, OH 4412 ) 663 0656	8									14	0	74	195	5		
	,					X	Check i	same	as REI	PORT	TO				1940		
EPORT TO NERONE & SONS, INC. C/C	GARTH STEVE	ENS				INVOI	CE TO rt & Co.)										
DDRESS 19501 S. MILES PKWY						ADDR	ESS										
WARRENSVILLE HEIGHTS	STATE OH	z	IP 441	28		СПУ							STAT	E		ZIP	
IONE No. 216-662-2235	FAX No. 216-662	2-5522			610	PHON	E No.						FAX N	lo.			
MAIL garth@nerone.biz	PROJECT NAME N	EORS	D-SCI	R		PO No					-		QUOT	'E No.	ST	>	
AT 🔀 STD 🗌 24 HR* 🗌 48 HR	72 HR* Au	th. Sig							9	ANA	LYSIS	REC	NES	TED	5		
Rush TAT may result in additio	al surcharges for expedited w	ork.	EMP IC	20		7		) =	포	Ea						1	
ecial instructions a up ned a		v	IS ICE Y		-  ×	Z	4 4	¥	2 +	Å		_	5	S			
			N. HOL YE		Ē	Z	H [≹	٩	3	-48		5	73	- 73			
mple Disposal Return to Client D	DATE		e: CMP   GRB	MOS.	3	8	7 H	17		3	Ŧ	ğ	đ	ð			
						3	51		<u>'</u> 3	0	- 4	- 14-	H		-	╉╍╍╋	
				<u>k</u>		4	<del>S</del>	<u> </u>		- 264				_	-	╂╌┿	
23609264	9-22-19 0	<u>~~~</u>			3		<u> </u>									╉╾┽	
			-		┼──											╂╼╼╋	
·						┝─┼		+				-				┢╾┽	-
· · · · · · · · · · · · · · · · · · ·						┠──╂		+								++	-
						┝─┼									_	╆╾┾	
						╞─┤		+-									
					+									-+-			
						- 71		+								+	
1					<u>†</u>											+	
2								+								+	
3																	
4																	
5				1													
6																	
-			1	4	1			_		1 - 1 - 1 - 1					_		

Form No. 100e Rev. No. 0 Eff. Date 03/21/2013 Form 100e - eCOC

PREC	SION	ANA	LYT	ICAL

Sample Receipt Checklist

Form 244 Rev#: 1 5/21/10

	16	. 0	
	Work Order No	04495	
RUSH: 🗆 Y	es XNo ⊡NA		
Date & Time Received: 4/22/14 1130	Checklist By: Cou-		
Date & Time Logged In: 9 23 14 0931	_Logged In By:Cou		
Date & Time Reviewed: 9 29/14 0906	_ Reviewed By:		2
Carrier Name:  PAI  UPS  FedEx X  Clier	nt D Other/Tracking #		
Samples Analyzed in House? X Yes 🛛 No S	Subbed To		
s Chain Of Custody Present?	X Yes	🗆 No	
s Chain Of Custody Properly Filled Out?	X Yes	🗆 No	
Joes Chain Of Custody Match Sample Labels?	X Yes	🗆 No	
Are Samples Past Hold Time?	🗆 Yes	🗆 No	
Are Samples In Proper Containers? X Yes	□ No Intact?	X Yes	🗆 No
No. Of Containers? Glass 🛱 Plastic D	Baggie 🛛 VOA 🗍 Micro 🗌 Tedl	ar 🗌 Other	
When Applicable, Is Headspace Present?	No MSDS Provided	🗆 Yes	🗆 No
Matrix: 🔲 Aqueous 🗆 Liquid 🗔 Sludge 🖄 Solid 🗔	Oil 🗌 Drinking Water 🗌 Soil 🗌 G	as 🗌 Other	
Dn Ice?QO∘C Ye	s 🕅 No		
Were Samples Preserved On Arrival?	s 🗋 No		
Final oH Results:		/	
Metals Hardness HN03	CN □NaOH		
COD NH3 Phenol TOC	_ TKN/TON Phos I	No2No3	DH2S04
Sulfide INaOH & ZnAcetate	Other		
Field Data:  pH  Temp  Flow  TRC  TRC	Low Color Codor Turbidity	Other	
Explanation of Comments & Problems: Sample time on coa is a Unable to contact client to veri	fromg (sample time is by time sample time	after re crossed	ceived time) loff coc.



November 26, 2014

Tom Nerone Nerone and Sons 19501 Miles Parkway Warrensville Hts., OH 44128 TEL: (216) 662-2235 FAX (216) 662-5522

**RE: NEORSD-SCRR** 

Precision Analytical 4450 Johnston Parkway · Unit B Cleveland, OH 44128 TEL: (216) 663-0808 FAX: (216) 663-0656 Website: www.precisionanalytical.com

Order No.: 1411420

Dear Tom Nerone:

Precision Analytical received 1 sample(s) on 11/20/2014 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in an attached Case Narrative. Quality control data is within laboratory defined or method specified acceptance limits except if noted. Note that sample results reported relate only the samples as received at the laboratory.

Solid samples are reported in ug/Kg or mg/Kg as received, unless specified in the units as dry weight. Unless otherwise noted, results have not been background or blank corrected.

If you have any questions regarding these tests results, please feel free to call.

Certifications: Ohio EPA - 4041; NELAC PA - 68-00434; W.Va DEP - 245

Sincerely,

Mark Makowiecki Lab Manager

Page 1 of 3



# **Analytical Report**

(consolidated) WO#: 1411420 Date Reported: 11/26/2014

CLIENT:	Nerone and Sons	Collection Date: 9/29/2014 10:00:00 AM
Project:	NEORSD-SCRR	
Lab ID:	1411420-001	Matrix: SOLID
Client Sample ID	07-2148	

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
RCRA METALS, SOLID METALS ANALYSIS BY ICP				SW60	10B	Analyst: STB
Arsenic	4.89	0.469		mg/Kg	1	11/21/2014 5:35:00 PM
Barium	89.5	0.469		mg/Kg	1	11/21/2014 5:35:00 PM
Cadmium	2.38	0.469		mg/Kg	1	11/21/2014 5:35:00 PM
Chromium	31.2	2.35		mg/Kg	1	11/21/2014 5:35:00 PM
Lead	52.6	0.469		mg/Kg	1	11/21/2014 5:35:00 PM
Nickel	1,520	0.469		mg/Kg	1	11/21/2014 5:35:00 PM
Selenium	ND	0.469		mg/Kg	1	11/21/2014 5:35:00 PM
Silver	ND	0.469		mg/Kg	1	11/21/2014 5:35:00 PM
RCRA METALS, SOLID MERCURY, SOLID				SW74	71B	Analyst: <b>NS</b>
Mercury	ND	0.00448	н	mg/Kg	2	11/24/2014 2:59:00 PM
TCL VOC, SOLID VOLATILE ORGANIC COMPOUNDS				SW82	60B	Analyst: AC
1,1,1-Trichloroethane	ND	954	н	µg/Kg	1	11/21/2014 5:37:00 PM
1,1,2,2-Tetrachloroethane	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM
1,1,2-Trichloroethane	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM
1,1-Dichloroethane	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM
1,1-Dichloroethene	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM
1,2-Dichloroethane	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM
1,2-Dichloropropane	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM
2-Hexanone	ND	19,100	Н	µg/Kg	1	11/21/2014 5:37:00 PM
4-Methyl-2-pentanone	ND	3,820	Н	µg/Kg	1	11/21/2014 5:37:00 PM
Acetone	ND	19,100	Н	µg/Kg	1	11/21/2014 5:37:00 PM
Benzene	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM
Bromodichloromethane	ND	954	н	µg/Kg	1	11/21/2014 5:37:00 PM
Bromoform	ND	954	н	µg/Kg	1	11/21/2014 5:37:00 PM
Bromomethane	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM
Carbon disulfide	ND	954	н	µg/Kg	1	11/21/2014 5:37:00 PM
Carbon tetrachloride	ND	954	н	µg/Kg	1	11/21/2014 5:37:00 PM
Chlorobenzene	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM
Chloroethane	ND	954	н	µg/Kg	1	11/21/2014 5:37:00 PM
Chloroform	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM
Qualifiers: * Value exceeds Maximum Contaminar	t Level			B Analyte deter	cted in the associate	d Method Blank

C Value is below Minimum Compound Limit.

Н Holding times for preparation or analysis exceeded

М Manual Integration used to determine area response

Tentatively identified compounds Ν

0 RSD is greater than RSDlimit

RL Reporting Detection Limit (PQL)

DF Dilution Factor

Analyte detected below quantitation limits J

MDL Method Detection Limit

ND Not Detected at the Reporting Limit

PL Permit Limit

S Spike outside acceptance limits



## **Analytical Report**

 (consolidated)

 WO#:
 1411420

 Date Reported:
 11/26/2014

CLIENT:	Nerone and Sons	<b>Collection Date:</b>	9/29/2014 10:00:00 AM
Project:	NEORSD-SCRR		
Lab ID:	1411420-001	Matrix:	SOLID
Client Sample ID	07-2148		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed					
TCL VOC, SOLID VOLATILE ORGANIC COMPOUNDS				SW82	60B	Analyst: AC					
Chloromethane	ND	1,910	н	µg/Kg	1	11/21/2014 5:37:00 PM					
cis-1,2-Dichloroethene	ND	954	н	µg/Kg	1	11/21/2014 5:37:00 PM					
cis-1,3-Dichloropropene	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
Dibromochloromethane	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
Ethylbenzene	8,180	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
m,p-Xylene	28,500	1,910	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
Methyl ethyl ketone	ND	3,820	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
Methylene chloride	ND	3,820	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
o-Xylene	5,130	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
Styrene	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
Tetrachloroethene	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
Toluene	5,140	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
trans-1,2-Dichloroethene	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
trans-1,3-Dichloropropene	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
Trichloroethene	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM					
Vinyl acetate	ND	1,910	н	µg/Kg	1	11/21/2014 5:37:00 PM					
Vinyl chloride	ND	954	Н	µg/Kg	1	11/21/2014 5:37:00 PM					

#### NOTES:

\* Sample had expired upon receipt. Client requested additional analysis on sample after hold time had expired. The sample required a methanol extraction.

Qual	ifiers:
------	---------

\*

Value exceeds Maximum Contaminant Level

- C Value is below Minimum Compound Limit.
- H Holding times for preparation or analysis exceeded

M Manual Integration used to determine area response

- N Tentatively identified compounds
- O RSD is greater than RSDlimit
- RL Reporting Detection Limit (PQL)

- B Analyte detected in the associated Method Blank
- DF Dilution Factor
- J Analyte detected below quantitation limits
- MDL Method Detection Limit
- ND Not Detected at the Reporting Limit

PL Permit Limit

S Spike outside acceptance limits



4450 Johnston Parkway, Unit B · Cleveland, OH 44128 (216) 663 0808 · FAX (216) 663 0656 LABORATORY WORK ORDER NO.

		1411420
L XI	Choo	Will some as REPORT TO

REPORT TO NERONE & SONS, INC. C/O	GARTH ST	EVENS					INVOICE TO (Contact & Co.)													
ADDRESS 19501 S MILES PKWY				141-11-1			ADDF	RESS							_					
ADDRESS 19901 S. WILLSTRWT	STATE	<u>이</u> 법	ZIP 4	14128	8		CITY							STATE		ZIF	,			
WARKENSVILLE REIGHTS	FAX No. 216	-662-552	2	11140	<u> </u>		PHO	IE No.	,					FAX No.						
PHUNE NO. 210-002-2255	PROJECT NAM	E NEOR	2.02	CRR	2		PON	0.						QUOTE	No.	STD				
		Auth Sig	01-0						_		ANA	LYS	S RE	FOLIESTED						
	surchames for exce	dited work.	•	_			H	I	-1		<b>T</b>				1	1 1	1			
Special Instructions & QC Reg's			TEMP C	c			P	5	<u>o</u> '	{	}				[		-			
			VIS. ICE	YES	7 NO	ž	10	$\mathbf{\lambda}$	A				[							
Durante Diagonal D Batum to Client Disu	oosal by Lab	Arc	nive:	N	Aos.	TA I	1	5	¢Γ.		-	ļ	'		}		ł			
	DATE	TIME	CMP	GRB	No. CONT	-	Ť	C.	2						1					
1 2 1 1 2	9/20	- ID AN	X				X	<b>S</b>			1	-1					1			
07-2178	1101	<u></u>						+	<u>C</u>			<u>                                     </u>	<b> </b>				+	1-		
				-+				$\vdash$	╶┿╝┼╴						+	1	╧	1		
3			┼─┼					1	3		+						╈	+		
4			╉╌╉					-	m -	- +	+				+	╋╌┼╌	+			
5	and the second		╂──┼		-	┢╾┥				-+-	+					+	-+-			
6	<u> </u>	<u> </u>	+	-	_				2		+	╀──		┝╌┼╴	+	╉┈╪╸	+-	<u> </u>		
7	<u></u>		+	-	-				th-		+	<del> </del>		┝━╍┠━	+	╋╾╋╸	+			
8			+		-	<u> </u>			-1-5			╂──		$\vdash$		+	+	+		
9			┶╌┥		1				5					-		+ +	+			
10			+			<u> </u>			6					$\left  \right $		++	╉			
11			┦──┤			× .					1-	-		$\left  \right $		┼┼		<u> </u>		
12							<u> </u>	_	10						_	<del>{   _   _</del>	+	<del></del>		
13						<u> </u>	<u> </u>		0	_			<u> </u>			+ +	+	<u>_</u>		
14							1		9	-		-		-			+			
15	T				10							1000	-		-		<u> </u>			
16																	$\perp$			
SAMPLER(S): PRINT NAME(S) RELINGUISHED PL	A	DATE	TIN	NE F	RECEIVED	BY				RE	LINQUI	SHED I	BY			DATE	1	TIME		
GADTH STEVENS Sauth &		11/20	197	20	-															
RECEIVED BY RELINQUISHED BY		DATE	TIN	MEF	RECEIVED	INLA	BORA	TORY	BY							DATE		TIME		
				12.1	la	ra	(	N	ans	1 5			-			11/20/1	4	970		

Form No. 100e Rev. No. 0 Eff. Date 03/21/2013 Form 100e - eCOC

PRECISION OF CWM ENVIRONMENTAL	Form 244 Rev#: 1 5/21/10										
RUSH: LI Yes		A									
Date & Time Received: 11/20/14 970 0	Checklist By:										
Date & Time Logged In: 11/20/14 1377L	.ogged In By:										
Date & Time Reviewed: 11/22/14 1139 Reviewed By: CR											
Carrier Name: X PAI UPS FedEx Client	Carrier Name: X PAI UPS FedEx Client Other/Tracking #										
Samples Analyzed In House? X Yes D No Sub	bed To										
Is Chain Of Custody Present?	X Yes	🗆 No									
Is Chain Of Custody Properly Filled Out?	X Yes	🗆 No									
Does Chain Of Custody Match Sample Labels?	X Yes	🗆 No									
Are Samples Past Hold Time?	□ Yes	X No									
Are Samples In Proper Containers? X Yes	🗆 No inta	ct? X Yes	🗆 No								
No. Of Containers? Glass Plastic B	aggie 🗆 VOA 🗖 Micro 🗌	Tediar 🗌 Other_									
When Applicable, Is Headspace Present?	No MSDS Provid	ded 🛛 Yes	🗆 No								
Matrix: Aqueous Liquid Sludge Solid Oil	🗆 Drinking Water 🗆 Soil [	□ Gas □ Other_	angender Verlag von die Sterense van die Staatsbereker (* 1999) 1999 - Die Staatsbereker (* 1999)								
On Ice?°C	M No										
Were Samples Preserved On Arrival?	🗍 No										
Final pH Results:											
Metals Hardness 🛛 HN03	CN DNaOH										
COD NH3 Phenol TOC T	KN/TON Phos	No2No3	□н2S04								
Sulfide INaOH & ZnAcetate	Other										
Field Data: D pH D Temp D Flow D TRC D TRC Low	Color 🛛 Odor 🗆 Turbi	dity 🗌 Other									
Explanation of Comments & Problems:											



November 05, 2014

Garth Stevens Nerone and Sons 19501 Miles Parkway Warrensville Hts., OH 44128 TEL: FAX (216) 662-5522

RE: NEORSD-SCRR Box 81024

Order No.: 1410623

Precision Analytical

Cleveland, OH 44128

4450 Johnston Parkway · Unit B

TEL: (216) 663-0808 FAX: (216) 663-0656

Website: www.precisionanalytical.com

Dear Garth Stevens:

Precision Analytical received 1 sample(s) on 10/30/2014 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in an attached Case Narrative. Quality control data is within laboratory defined or method specified acceptance limits except if noted. Note that sample results reported relate only the samples as received at the laboratory.

Solid samples are reported in ug/Kg or mg/Kg as received, unless specified in the units as dry weight. Unless otherwise noted, results have not been background or blank corrected.

If you have any questions regarding these tests results, please feel free to call.

Certifications: Ohio EPA - 4041; NELAC PA - 68-00434; W.Va DEP - 245

Sincerely,

Mark Makowiecki Lab Manager

Page 1 of 3



# **Analytical Report**

(consolidated) WO#: **1410623** Date Reported: **11/5/2014** 

CLIENT:	Nerone and Sons	Collection Date:								
Project:	NEORSD-SCRR Box	81024								
Lab ID:	1410623-001			Ma	trix: SOLII	)				
Client Sample ID	Box 81024									
	D0X 01024									
Analyses		Result	RL Qu	al Units	DF	Date Analyzed				
MERCURY, SOLID				SW74	71B	Analyst: <b>NS</b>				
Mercury		ND	0.00482	mg/Kg	2	10/30/2014 2:47:40 PM				
TCL VOC, SOLID VOLATILE ORGA	NIC COMPOUNDS			SW82	60B	Analyst: AC				
1,1,1-Trichloroetha	ane	ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
1,1,2,2-Tetrachloro	bethane	ND	975	μg/Kg	1	10/31/2014 12:23:00 PM				
1,1,2-Trichloroetha	ane	ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
1,1-Dichloroethane	9	ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
1,1-Dichloroethene	9	ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
1,2-Dichloroethane	9	ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
1,2-Dichloropropar	ne	ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
2-Hexanone		ND	19,500	µg/Kg	1	10/31/2014 12:23:00 PM				
4-Methyl-2-pentan	one	ND	3,900	µg/Kg	1	10/31/2014 12:23:00 PM				
Acetone		ND	19,500	µg/Kg	1	10/31/2014 12:23:00 PM				
Benzene		ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Bromodichloromet	hane	ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Bromoform		ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Bromomethane		ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Carbon disulfide		ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Carbon tetrachlorio	de	ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Chlorobenzene		ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Chloroethane		ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Chloroform		ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Chloromethane		ND	1,950	µg/Kg	1	10/31/2014 12:23:00 PM				
cis-1,2-Dichloroeth	iene	2,380	975	µg/Kg	1	10/31/2014 12:23:00 PM				
cis-1,3-Dichloropro	opene	ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Dibromochloromet	hane	ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Ethylbenzene		6,140	975	µg/Kg	1	10/31/2014 12:23:00 PM				
m,p-Xylene		23,300	1,950	µg/Kg	1	10/31/2014 12:23:00 PM				
Methyl ethyl keton	e	ND	3,900	µg/Kg	1	10/31/2014 12:23:00 PM				
Methylene chloride	9	ND	3,900	µg/Kg	1	10/31/2014 12:23:00 PM				
o-Xylene		3,740	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Styrene		ND	975	µg/Kg	1	10/31/2014 12:23:00 PM				
Tetrachloroethene		653	585	µg/Kg	1	10/31/2014 12:23:00 PM				

Qualifiers: \* Value exceeds Maximum Contaminant Level

С

Value is below Minimum Compound Limit.

H Holding times for preparation or analysis exceeded

M Manual Integration used to determine area response

N Tentatively identified compounds

O RSD is greater than RSDlimit

RL Reporting Detection Limit (PQL)

B Analyte detected in the associated Method Blank

DF Dilution Factor

J Analyte detected below quantitation limits

MDL Method Detection Limit

ND Not Detected at the Reporting Limit

PL Permit Limit

S Spike outside acceptance limits



# **Analytical Report**

(consolidated) WO#: 1410623 Date Reported: 11/5/2014

CLIENT:	Nerone and Sons		Collection Date:								
Project:	NEORSD-SCRR B	ox 81024									
Lab ID:	1410623-001			Matrix:	SOLI	D					
Client Sample ID	Box 81024										
Analyses		Result	RL Qu	al Units	DF	Date	Analyzed				
TCL VOC, SOLID VOLATILE ORGA	ANIC COMPOUNDS			SW8260B			Analyst: AC				
Toluene		3,230	975	µg/Kg	1	10/3	1/2014 12:23:00 PM				
trans-1,2-Dichloro	ethene	ND	975	µg/Kg	1	10/3	1/2014 12:23:00 PM				
trans-1,3-Dichloro	propene	ND	975	µg/Kg	1	10/3	1/2014 12:23:00 PM				
Trichloroethene		ND	975	µg/Kg	1	10/3	1/2014 12:23:00 PM				
Vinyl acetate		ND	1,950	µg/Kg	1	10/3	1/2014 12:23:00 PM				
Vinyl chloride		ND	975	µg/Kg	1	10/3	1/2014 12:23:00 PM				
NOTES:											
The sample requi	red a methanol extraction	on.									
TCLP ANALYSIS VOLATILE ORGA	ANIC COMPOUNDS,	TCLP		SW8260B	SV	V1311V	Analyst: AC				
1,1-Dichloroethen	e	ND	100	µg/L	1	10/3	1/2014 10:15:00 AM				
1,2-Dichloroethan	e	ND	100	μg/L	1	10/3	1/2014 10:15:00 AM				
1,4-Dichlorobenze	ene	ND	100	μg/L	1	10/3	1/2014 10:15:00 AM				
Benzene		ND	100	μg/L	1	10/3	1/2014 10:15:00 AM				
Carbon tetrachlori	de	ND	100	µg/L	1	10/3	1/2014 10:15:00 AM				
Chlorobenzene		ND	100	µg/L	1	10/3	1/2014 10:15:00 AM				
Chloroform		ND	100	µg/L	1	10/3	1/2014 10:15:00 AM				
Methyl ethyl keton	e	ND	200	µg/L	1	10/3	1/2014 10:15:00 AM				
Tetrachloroethene	9	ND	100	µg/L	1	10/3	1/2014 10:15:00 AM				
Trichloroethene		ND	100	µg/L	1	10/3	1/2014 10:15:00 AM				
Vinyl chloride		ND	100	µg/L	1	10/3	1/2014 10:15:00 AM				

Qualifiers:	*	Value exceeds Maximum Contaminant Level	В	Analyte detected in the associated Method Blank
-	С	Value is below Minimum Compound Limit.	DF	Dilution Factor
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	М	Manual Integration used to determine area response	MDL	Method Detection Limit
	Ν	Tentatively identified compounds	ND	Not Detected at the Reporting Limit
	0	RSD is greater than RSDlimit	PL	Permit Limit

RL

Reporting Detection Limit (PQL)

Spike outside acceptance limits s



4450 Johnston Parkway, Unit B · Cleveland, OH 44128

LABORATORY WORK ORDER NO.

(216) 663 0808 · FAX (2	16) 663 0656												4	OL	ed	3					
- a								Chec	k if sa	me as	REPOR	тто									
REPORT TO (Contact & Co.) NERONE & SONS, INC. C	O GARTH ST	EVENS					INVOICE TO (Contact & Co.)														
ADDRESS 19501 S. MILES PKWY							ADDF	IESS													
CITY WARRENSVILLE HEIGHTS	STATE (	ЭН	ZIP 4	4412	28		CITY							STAT	ΓE		z	P			
PHONE No. 216-662-2235	FAX No. 216	-662-552	2				PHO	IE No.						FAX	No.						
EMAIL garth@nerone.biz	PROJECT NAM	E NEOR	SD-S	SCR	R	i i	PO N	D.						QUO	TE No.	87	0				
TAT STD 24 HR* 48 H	HR* 72 HR*	Auth. Sig	•		`				च्चा	-	AN	ALYS	IS RE	QUE	STED			_			
Special Instructions & OC Reg's			TEMP 10	YE	20 S/NO	× CLP															
Sample Disposal  Return to Client	Disposal by Lab	Arch	ive:		Mos.	MATH	VO	ΪŻ	Me												
No. SAMPLE IDENTIFICATION	DATE	TIME	CMP	GRB	No. CONT		0	2	50							-					
1 BOX 8/024				$\checkmark$		5	Х	X	X		-1		1								
2																					
3																					
4																					
5		1																			
6						_															
7																					
8			100																		
9																	1				
10	2																				
11																					
12																				~~	
13													() — —								
14																					
15							-				1										
16	A 11																			_	
SAMPLER(S): PRINT NAME(S) RE(NOUISHID		DATE	TIN	AE	RECEIVED	BY				A	ELINQUI	Shed	BY				DATE	-	TIME		
RÉCEIVED BY RÉLINQUISHED	BY	DATE	TIN	AE	RECEIVED	IN LA	BORA	TORY	ÊΥ	-							DATE			-	
		12000					1	-			-	-	-				105	14	0.4	(	

<

Form No. 100e Rev. No. 0 Elf. Date 03/21/2013

Page \_\_\_\_ of \_

PRECISION ANALYTICAL A DIVISION OF SWM ENVIRONMENTAL	Form 244 Rev#: 1 5/21/10							
Work Order No.								
Date & Time Received: 10/36/14 08/44 Checklist By:								
Date & Time Logged in: 030114 11001 Logged in By: 000-								
Date & Time Reviewed: 10/31/14 \$40 Reviewed By:								
Carrier Name:  PAI UPS FedEx Client Other/Tracking #								
Samples Analyzed In House? 🗘 Yes 🛛 No Subbed To								
Is Chain Of Custody Present?								
Is Chain Of Custody Properly Filled Out? Yes								
Does Chain Of Custody Match Sample Labels?								
Are Samples Past Hold Time?								
Are Samples In Proper Containers? 🖄 Yes 🗆 No Intact? 💆 Yes	🗆 No							
No. Of Containers? Glass 🖾 Plastic 🗆 Baggie 🗆 VOA 🗆 Micro 🗆 Tedlar 🗆 Other_								
When Applicable, Is Headspace Present?  Yes No MSDS Provided Yes								
Matrix: 🔲 Aqueous 🗆 Liquid 🗆 Sludge 🎾 Solid 🗔 Oil 🗆 Drinking Water 🗆 Soil 🗆 Gas 🗔 Oth	er							
On Ice?O ℃ □ Yes ☑ No □ NA								
Were Samples Preserved On Arrival?  Yes  NO								
Final pH Results:								
Metals Hardness 🗆 HN03 CN 🗆 NaOH								
CODNH3PhenolTOCTKN/TONPhosNo2No3DH2	S04							
Sulfide 🗆 NaOH & ZnAcetate Other								
Field Data:  pH  Temp  Flow  Flow  TRC  TRC Low  Color  Odor  Turbidity  Other_								
Explanation of Comments & Problems: NO Sample date/time provided								

# APPENDIX D -TREE AND SHRUB REMOVAL POLICY



TO: Engineering & Construction Operation & Maintenance Watershed Programs DATE:

RE:

September 7, 2016

FROM:	Robin Halperin	
	Manager of Regulatory Compliance	ł

010

Tre

**Tree & Shrub Removal Policy** 

## Purpose

Due to the presence of the federally endangered Indiana bat (*Myotis sodalist*), the federally threated northern long-eared bat (*Myotis septentrionalis*) and the federally endangered Kirtland's Warbler (*Dendroica kirtlandii*) in the District's service area, the District must take care when removing trees or shrubs from District-owned property and project sites. The Endangered Species Act (ESA) makes it unlawful for a person to take a listed animal without a permit, and this includes habitat. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct."

If a project has a "federal nexus" such as a Nationwide Permit (NWP) or federal funding, the lead federal agency coordinates with the U.S. Fish and Wildlife Service (USFWS) regarding tree removal. If there is no federal nexus, such as most Stormwater Inspection and Maintenance (SWIM) projects, O&M maintenance projects, and some E&C projects the onus to comply with these federal rules falls on the District. In order to ensure that the District is in compliance with these federal rules for all projects, the following procedures have been established by Regulatory Compliance.

## **Background**

The Indiana bat and northern long-eared bat habitat is protected statewide. During the summer months, Indiana bats roost under the peeling bark of dead and dying trees. The northern long-eared bat roosts underneath bark, in cavities or in crevices of both live trees and dead trees. Since both species use trees for roosting and maternity wards during the summer roosting season, tree removal in Ohio is restricted from **April 1<sup>st</sup> to September 30<sup>th</sup>**. However, with documentation and coordination it is possible for USFWS to lift these restrictions for certain projects/sites (see below).

The Kirtland's Warbler protected habitat is located along the Lake Erie shoreline in Ashtabula, Cuyahoga, Erie, Lake, Lorain, Lucas, Ottawa and Sandusky Counties. Kirtland's Warbler utilizes forested and scrubshrub habitat within 3 miles of the Lake Erie shoreline during migration which runs from **April 22<sup>nd</sup> to June 1<sup>st</sup>** and from **August 15<sup>th</sup> to October 15<sup>th</sup>**. This restriction is not typically lifted by USFWS unless it has been observed that the birds have already migrated through the area for the season.

## <u>Policy</u>

It is the District's preference to remove trees and shrubs outside of the restricted time periods. No trees larger than 3" diameter at breast height (DBH) shall be removed during the summer bat roosting season until coordination with Regulatory Compliance is conducted. If the project is located within three (3) miles of the Lake Erie shoreline and habitat is present, no shrub or tree clearing can occur during the warbler migration periods. This policy applies to live and dead trees as well as standing and leaning trees.

Coordination with Regulatory Compliance for tree/shrub removal is required on all E&C and O&M projects. If tree or shrub removal is outside of the restricted time periods, Regulatory Compliance will conduct a brief review and grant approval for tree/shrub clearing. However, if tree or shrub removal <u>is</u> required during the restricted times, the following steps are to be taken:

- 1. Contact Regulatory Compliance with a request to remove the trees or shrubs. The request should include a map of the site with the trees/shrubs identified for removal, as well as a short description of the work to be conducted.
- **2.** Regulatory Compliance will have the District's Ecological Assessment Consultant assess the trees and/or shrubs in the project area for potential endangered species habitat.

## Bat Habitat

- **1.** Regulatory Compliance will review the endangered species habitat assessment report for the following:
  - Trees that possess bat habitat characteristics, called potential roost trees (PRTs);
  - Non-PRTs;
  - Total number of trees to be removed.
- **2.** If **PRTs are identified**, and trees must be removed during the restricted time period, Regulatory Compliance will coordinate with USFWS prior to the removal of any trees from the project site.
- **3.** If **no PRTs are identified**, and there are **two (2) or fewer trees** to be removed, removal may occur after permission from Regulatory Compliance is granted.
- **4.** If **no PRTs are identified**, and there are **more than two (2) trees** to be removed, Regulatory Compliance will coordinate with USFWS to receive approval prior to the removal of any trees.

## Kirtland's Warbler Habitat

1. Regardless of the number or type of trees to be removed, if the project is located within 3 miles of the Lake Erie shoreline, Regulatory Compliance will coordinate with USFWS prior to any tree or shrub removal due to the Kirtland's Warbler restrictions.

### **USFWS** Coordination

Coordination with USFWS may result in several different outcomes based on a number of factors specific to each project. Some of the possible scenarios are described below:

- <u>Permission</u> granted to remove the requested trees or shrubs.
- <u>Requirement</u> that the District wait until outside the restricted time to remove trees and/or shrubs.
- <u>Requirement</u> to conduct an <u>emergence survey</u> or a <u>mist net survey</u> to evaluate the presence of endangered/threated bats.

- <u>Emergence surveys</u> consist of a certified person observing the tree(s) to be cut down at dusk for two (2) nights in a row. *If no bats are present, the tree must be cut down the next morning and be evaluated after it is cut to verify that no bats were present or killed.*
- <u>Mist net surveys</u> consist of setting up nets overnight in the project area and identifying any bats that are captured in the net. This type of survey is more expensive, but is valid for a five (5) year window. *The trees may be removed anytime in this five (5) year period.*
- The type of survey used is dependent upon the number of trees to be removed and other project details. These surveys must be conducted by certified professionals. The District's Ecological Assessment Consultant offers this service. Coordination for these surveys would occur between Regulatory Compliance, USFWS, the Ecological Assessment Consultant and the District Project Manager.

Regulatory Compliance will work with E&C and O&M to conduct the endangered species habitat assessments and coordination with USFWS in a timely manner.