CENTRALBIDDING
FROM CENTRAL AUCTION HOUSE

5000123931 - TWO (2) YEAR CONTRACT FOR LUBE OIL ANALYSIS FOR THE JEFFERSON PARISH DEPARTMENT OF PUBLIC WORKS – DRAINAGE PUMPING STATION OPERATIONS AND ALL JEFFERSON PARISH AGENCIES AND MUNICIPALITIES

Jefferson Parish Government

Bid Number 50 - 00123931

TWO (2) YEAR CONTRACT FOR LUBE OIL ANALYSIS FOR THE JEFFERSON PARISH DEPARTMENT OF PUBLIC WORKS - DRAINAGE, PUMPING STATION OPERATIONS, AND ALL JEFFERSON PARISH AGENCIES AND MUNICIPALITIES

BID DUE: September 6, 2018, 2:00 PM

ATTENTION VENDORS!!!

Please review all pages and respond accordingly, complying with all provisions in the technical specifications and Jefferson Parish Instructions for Bidders and General Terms and Conditions. All bids must be received in the Purchasing Department by the bid due date and time.

Jefferson Parish Purchasing Department
200 Derbigny Street
General Government Building, Suite 4400
Gretna, LA 70053
Buyer Name: Melissa Ovalle
Buyer Email: movalle@jeffparish.net
Buyer Phone: (504) 364-2687

JEFFERSON PARISH

Department of Purchasing

Michael S. Yenni
Parish President

Renny Simno
Director

July 2018

CHANGES TO JEFFERSON PARISH BIDDING PROCEDURES

The East bank Office of Purchasing is now open! We are located in the Joseph S. Yenni Building, 1221 Elmwood Park Blvd., Suite 404, Jefferson, LA 70123. Bidders may submit bid responses at this location, pending authorization in each bid package. **Bidders should carefully read and must respond accordingly per the requirements of the bid packages. NOTE: Bidders submitting bids on the day of bid opening, bidders must submit at the West Bank location only.**

Other Changes Continued:

- For all advertised sealed bids, written evidence of signature authority must be included with bid submission.
- Current W9 Forms and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, a current W-9 form must be supplied upon contract execution, should you be awarded a contract and/or issued a purchase order.
- **Proof of insurance in the form of a current certificate evidencing coverages is required with bid submission.** Bidders must read the insurance requirements attachment included in each bid package for specific instructions. Upon contract execution, successful bidder must produce final insurance certificates in accordance with Jefferson Parish insurance requirements.

Bidders should reference the "Additional Requirements" section of the bid instructions and/or the "Important Notice to Bidders" included in the bid package for specific requirements to respond accordingly.

For more information, please call Jefferson Parish Purchasing at 504-364-2678.

Joseph S. Yenni Building – 1221 Elmwood Park Blvd., Ste. 404, Jefferson, LA 70123
Office 504.364.2678
General Government Bldg. – 200 Derbigny St – Suite 4400 - Gretna, LA 70053
Office 504.364.2678
Email: Purchasing@jeffparish.net Website: www.jeffparish.net

Two (2) Year Contract for the Supply of Lube Oil Analysis for the Department of Drainage Pump Station Operations and All of Jefferson Parish Agencies and Municipalities

1.0 GENERAL

1.1 These specifications describe, (1) the lube oil trend analysis required to set preventative maintenance operation of the drainage and water district's engines and other oil lubricated machinery; (2) to check quality of new stock lube oil; (3) to check the quality of new purchased fuel oil; (4) to check the quality of existing fuel oil stocks. Oil analysis shall run for an annual period in accordance with the specifications and requirements prepared for the department of public works.

1.2 The bidder is requested to quote a unit price for each specific type of oil sample analysis to be performed.

1.3 This contract shall be for two years starting upon the date of execution of this contract.

1.4 Samples shall be collected by parish personnel in bottles provided by the contractor.

1.5 The bid price shall include all costs for providing and reporting the required laboratory analytical services, including the furnishings of all sample bottles, labels, and pre-addressed mailing containers for shipment of batches of the samples to an out of town laboratory (if applicable.)

1.6 The parish will bear the cost of hand delivering the samples to a local address within the New Orleans metropolitan area, and said address shall be either the laboratory's place of business; or a designated local express delivery firm (in the event of an out of town laboratory). All costs of further transportation and delivery of the samples, and thereafter delivering the written results of the analysis back to the parish at 1221 Elmwood Park Blvd., suite 907, shall be included in the unit bid price.

1.7 The contractor will provide a pre-printed label for the samples of oil from existing engines, gears, and bearings which will contain the following information:

Sender's name: **Jefferson Parish Drainage**
Unit location:
Unit identification:
Make/Type:
Sample data:
Type of lube oil:
Hour since change:

Oil product name and number:

1.8 The pre-printed label provided by the contractor for new stock lube oil will contain the following information:

Sender's name: **Jefferson Parish Drainage**
Stock location
Type of lube oil
Product name and number

1.9 The pre-printed label provided by the contractor for new fuel oil for stock or for existing fuel in storage will contain the following information:

Sender's name: **Jefferson Parish Drainage**
Fuel stock location
Type of fuel oil

1.10 All items will be awarded to single bidder.

1.11 Bidder shall submit with bid submission a sample typical report sheet for each type of analysis requested, indicating the elements analyzed by spectrochemical methods, physical properties, operating data (such as unit run hours, hours since oil change, oil added, etc..), identification data maintenance recommendations etc. The sample sheet shall also provide for printout of the results of at minimum the last five samples for the particular unit in question.

Failure to submit the "required information" listed in previous paragraph (1.11) will result in bid deemed non-responsive and rejected.

1.12 Bidder shall submit with bid submission the detailed information of the test procedures, method/means of transporting samples, testing equipment, and test facilities - all as necessary for the parish to determine the ability of the bidder to perform the work requested.

Failure to submit the "required information" listed in previous paragraph (1.12) will result in bid deemed non-responsive and rejected.

1.13 Upon the basis of a normal batch of up to thirty (30) samples delivered in accordance with paragraph 1.5, to the laboratory, or his agent, or his express delivery firm, the parish must receive, at its office, 1221 Elmwood Park Blvd., suite 907, the written results of the analysis of the thirty (30) sample batch within 120 hours (5 days). If Drainage Department deems testing an emergency, a batch of two (2) samples, also delivered in accordance with paragraph 1.5, to the laboratory, or his agent, or his express delivery firm, the parish must receive, at its office, 1221 Elmwood Park Blvd., suite 907, the written results of the analysis of the two (2) samples within 18 hours.

1.14 The stated quantity of test reports is approximate and for comparison of bids only, and the parish reserves the right to either increase or decrease the amount of work at its sole discretion.

1.15 A listing of the various engines, gears, and other machinery, for which oil testing is desired is available for bidder review. However, it is to be observed that additions are periodically made thereto, as projects under construction are made operational. Various other older units will be de-commissioned. Therefore, the listings are not static, and constant change is to be envisioned. A list of engines, gears, and other machinery, will be provided through an Addendum.

1.16 The contractor and the parish shall meet shortly after award in order to coordinate and schedule sample intervals, sample collection, identifications, provision of an adequate supply of sample bottles and shipping containers, reporting procedures, billing procedures, and similar details. Thereafter, the contractor shall meet with parish staff on a quarterly basis to discuss general results and interpretations thereof. It is to be understood that such costs incurred by the contractor shall be included in the unit bid price for the various items of work.

2.0 **Technical Information, Lube Oil Analysis:**

2.1 General:

The purpose of this program is to provide periodic reports and recommendations, as yielded by spectrochemical analysis and physical property tests done upon lube oil samples, as will allow determination of the condition of the lubricant, as well as allow indication information as to the physical condition of the machinery (and components thereof). The results of individual tests, when compared against previous tests, all for the same batch of lubricant in the same machines, allows the determination of trends and patterns as are of value in maintenance. All testing shall be done in accordance to ASTM standards. For results to be meaningful, it is important for sampling technique to be such as to yield representative samples, particularly when dealing with samples that may contain suspended solids or liquids. In general, samples will be taken immediately after appropriate circulation of the lubricant.

2.2 Spectrochemical analysis:

The presence of various metallic elements such as iron, lead, copper chromium, aluminum, tin, antimony, and silver indicate the wear of metal components of machinery such as pistons, engine liners, bearings, and gearing.

The presence of silicon indicates contamination of the lubricant by air borne dust and dirt, and thus the effectiveness of air intake cleaning components.

The presence of boron and sodium indicate coolant system leakage as compounds of these elements are used as additives to coolants for corrosion protection.

Molybdenum, phosphorus, zinc, calcium, barium, magnesium, and silicon are elements commonly blended into various lubricants as additives for specific functions such as anti-wear characteristics, detergents, and dispersants, and their presence can identify the lubricant and its suitability for the application.

2.3 Physical Properties:
The physical property tests such as tests for fuel dilution, total solids, water, viscosity, viscosity index, flash point, four point sulphated ash, t.a.n., t.b.n., are of value to indicate the type of lubricant, its suitability for usage in specific machinery, and possible contamination.

2.4 The number of elements to be checked by spectrochemical analysis shall be twenty (20). The exact elements shall be subject to change (subject to mutual agreement) in the case of those elements the determination of which is of marginal value in diagnosing potential problems.

2.5 The laboratory shall also report its recommendation relating to continued use of the oil product, and the possibility of coolant, fuel or air system problems.

3.0 Technical Information, Fuel Oil Analysis:

3.1 The purposes of the analysis of fuel oils in stock is to determine the adequacy of said fuels for use in various engines and/or to determine the compliance of said fuels with various purchase specifications.

3.2 Fuel oil testing shall be done by broadly accepted analytic methods as will yield the following:

(1) Api gravity
(2) Distillation test results to indicate the boiling point and other percentage distillation points, thus yielding "cetane index".
(3) Sulphur content.
(4) Centrifuge test results to yield information on water content and other sediment.
(5) Appearance

DATE: 8/22/2018

BID NO.: 50-00123931

INVITATION TO BID
THIS IS NOT AN ORDER

JEFFERSON PARISH

PURCHASING DEPARTMENT
P.O. BOX 9
GRETNA, LA. 70054-0009
504-364-2678

BUYER: MOVALLE@jeffparish.net

BIDS WILL BE RECEIVED IN THE WEST BANK PURCHASING DEPT, SUITE 4400, JEFFERSON PARISH GENERAL GOVERNMENT BUILDING, 200 DERBIGNY STREET, GRETNA, LA 70053 UNTIL 2:00 PM, 9/06/2018 AND PUBLICLY OPENED THEREAFTER.

For convenience, bidders may also submit bids in the East Bank Purchasing Department, Suite 404, Jefferson Parish Joseph S. Yenni Building, 1221 Elmwood Park Blvd., Jefferson LA 70123. However, if submitting bids on the day of bid opening, bidders must submit at the West Bank location only. All bids will be publicly opened at the West Bank location.

At no charge, bidders may also submit via Jefferson Parish's electronic procurement page by visiting www.jeffparishbids.net to register for this free site. Additional instructions are included in the text box highlighting electronic procurement.

LATE BIDS WILL NOT BE ACCEPTED

Unless submitting via online (see Page 3), each bid must be submitted in a sealed envelope bearing on the outside; the name of the Bidder, his address, and the name of the project for which the bid is submitted and the bid number.

NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN, AND PROPERLY SIGNED BY A MEMBER OF THE FIRM OR AUTHORIZED REPRESENTATIVE, WILL BE ACCEPTED. PENCIL AND/OR PHOTOSTATIC FIGURES OR SIGNATURES SHALL RESULT IN BID REJECTION.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

THE FOLLOWING INSTRUCTIONS APPLY TO ALL BIDS

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. By submitting a bid, vendor agrees to comply with all provisions of Louisiana Law as well be in compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, applicable Jefferson Parish ethical standards and Jefferson Parish Resolution No. 113646 and/or Resolution No. 113647.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from http://purchasing.jeffparish.net and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Further, a current W-9 form and respective Tax Identification number must be supplied upon contract execution, should you be awarded a contract and/or issued purchase order. Failure to do so may result in delay of payment.

All quotations shall be based on F.O.B. Agency warehouse or job site, anywhere within the Parish as designated by the Purchasing Department. This provision does not apply to public works projects

JEFFERSON PARISH requires all products to be new (current) and all work must be performed according to standard practices for the project. Unless otherwise specified, no aftermarket parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least one (1) year guaranty, in writing, from the date of delivery and/or acceptance of the project. Any deviations or alterations from the specifications must be indicated and/or supporting documentation supplied with bid submission.

Bidders should submit all questions in writing via email to the buyer's email address as indicated above, no later than Five (5) working days prior to the bid opening. Bid numbers should be mentioned in all requests. If submitting online, vendors may send questions via the E-Procurement site no later than Five (5) working days prior to the bid opening.

If this bid requires a pre-bid conference (see Additional Requirements section), bidders are advised that such conference will be held to allow bidders the opportunity to identify any discrepancies in the bid specifications and seek further clarification regarding instructions. The Purchasing Department will issue a written response to bidders' questions in the form of an Addendum. Please note that all official communication will be expressed in the form of an addendum.

All formal Addenda require written acknowledgement on the bid form by the bidder. Failure to acknowledge an Addendum on the bid form shall cause the bid to be rejected. JEFFERSON PARISH reserves the right to award bid to next lowest responsive and responsible bidder in this event.

The purpose and intention of this invitation to bid is to afford all suppliers an equal opportunity to bid on all construction, maintenance, repair, operating supplies and/or equipment listed in this bid proposal. JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR. Items bid must meet specifications.

JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection. Bidders are required to complete, sign and return the bid form and/or complete and return the associated line item pricing forms as indicated. Vendors must not alter the bid forms. Doing so will cause the bid to be rejected.

A corporate resolution or written evidence of the individual signing the bid having such authority must be submitted with the bid. Failure to comply will cause bid to be rejected. For corporate entities, such written evidence may be a printout of the Louisiana Secretary of State's website listing the signatory as an officer. Such printout shall be included with the bid submission. Bids submitted by Owners or Sole Proprietorships must include certification that he or she owns the entity for which the bid is signed. This documentation must be submitted with the bid. Failure to do so will result in bid rejection.

NOTE: A sample corporate resolution can be downloaded from our website http://purchasing.jeffparish.net or you may provide your own document. A sample certification of sole proprietorship can also be downloaded from our website http://purchasing.jeffparish.net or you may provide your own document.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

A. AWARD OF CONTRACT: JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIVE and RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE. SPLIT AWARDS MADE TO SEVERAL VENDORS WILL ONLY BE GRANTED TO THOSE DEEMED RESPONSIVE AND RESPONSIBLE.

All bid prices shall remain valid for 45 days. Jefferson Parish and the lowest responsive and responsible bidder(s) by mutual written consent may mutually agree to extend the deadline for award by one (1) or more extensions of thirty (30) calendar days.

PROTESTS: Only those vendors that submitted a bid in response to this solicitation may submit a protest in writing to the Director of the Purchasing within 48 hours of bid opening. The Purchasing Director will review it in connection with the Parish Attorney's Office which will then respond in writing as soon as possible.

PREFERENCE: Unless federal funding is directly spent by Jefferson Parish for this purchase, preference is hereby given to materials, supplies, and provisions produced, manufactured or grown in Louisiana, quality being equal to articles offered by competitors outside the state. "LSA – R.S. 38:2251-2261"

B. USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

C. CANCELLATION OF CONTRACT: JEFFERSON PARISH reserves the right to cancel all or any part if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel any contract at anytime and for any reason by issuing a THIRTY (30) day written notice to the contractor.

For good cause and as consideration for executing a contract with Jefferson Parish, vendor conveys, sells, assigns and transfers to Jefferson Parish or its assigns all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of Louisiana, relating to the particular good or services purchased or acquired by Jefferson Parish.

D. PRICES: Jefferson Parish is exempt from paying sales tax under LSA-R.S. 47:301 (8)(c). All prices for purchases by Jefferson Parish of supplies and materials shall be quoted in the unit of measure specified and unless otherwise specified, shall be exclusive of state and Parish taxes. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit price shall prevail.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A17.1-1961).

Jefferson Parish and its partners as the recipients of federal funds are fully committed to awarding a contract(s) to firm(s) that will provide high quality services and that are dedicated to diversity and to containing costs. Thus, Jefferson Parish strongly encourages the involvement of minority and/or woman-owned business enterprises (DBE's, including MBE's, WBE's and SBE's) to stimulate participation in procurement and assistance programs.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

Advertised bids will be tabulated and a copy of the tabulation will be forwarded to each responding bidder.

IN ACCORDANCE WITH STATE REGULATIONS JEFFERSON PARISH OFFERS ELECTRONIC PROCUREMENT TO ALL VENDORS

This electronic procurement system allows vendors the convenience of reviewing and submitting bids online. This is a secure site and authorized personnel have limited read access only. Bidders are encouraged to submit electronically using this free service; while the website accepts various file types, one single PDF file containing all appropriate and required bid documents is preferred. Bidders submitting uploaded images of bid responses are solely responsible for clarity. If uploaded images/documents are not legible, then bidder's submission will be rejected. Please note all requirements contained in this bid package for electronic bid submission.

Please visit our E-Procurement Page at www.jeffparishbids.net to register and view Jefferson Parish solicitations. For more information, please visit the Purchasing Department page at http://purchasing.jeffparish.net.

The general specifications for construction projects and the purchase of materials, services and/or supplies are those adopted by the JEFFERSON PARISH Council by Resolution No. 113646 or 113647 dated 12/09/09. The general conditions adopted by this resolution shall be considered as much a part of this document as if they were written wholly herein. A copy may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053. You may also obtain a copy by visiting the Purchasing Department webpage at http://purchasing.jeffparish.net and clicking on Online Forms.

ADDITIONAL REQUIREMENTS FOR THIS BID

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE CORRESPONDING INSTRUCTIONS BELOW.

10, 12, 13, 15

1. All bidders must attend the MANDATORY pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(I), all prospective bidders shall be present at the beginning of the MANDATORY pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.

2. Attendance to this pre-bid conference is optional. However, failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. Furthermore, failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification with no additional cost to the owner.

3. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project. Contractor must also hold any and all applicable Federal and State licenses. Contractor shall be responsible for the payment of these permits and shall obtain them prior to the start of the project.

4. A LA State Contractor's License will be required in accordance with LSA R.S. 37-2150 et. seq. and such license number will be shown on the outside of the bid envelope. Failure to comply will cause the bid to be rejected. Additionally if submitting the bid electronically, then the license number must be entered in the appropriate field in the Electronic Procurement system. Failure to comply will cause the bid to be rejected.

5. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.

6. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precautions must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

7. PUBLIC WORKS BIDS: All awards for public works in excess of $5,000.00 will be reduced to a formal contract which shall be recorded at the contractor's expense with the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. A price list of recordation costs may be obtained from the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of $25,000.00 will require both a performance and a payment bond. Unless otherwise stated in the bid specifications, the performance bond requirements shall be 100% of the contract price. Unless otherwise state in the bid specifications, the payment bond requirements shall be 100% of the contract price. Both bonds shall be supplied at the signing of the contract.

8. NON-PUBLIC WORKS BIDS: A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The performance bond shall be supplied at the signing of the contract.

9. NON-PUBLIC WORKS BIDS: A payment bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The payment bond shall be supplied at the signing of the contract.

10. All bidders must comply with the requirements stated in the attached "Standard Insurance Requirements" sheet attached to this bid solicitation. Prior to contract executions/purchase order issuance, the successful bidder will be required to provide final insurance certificates which shall name Jefferson Parish as an additional insured in accordance with the instructions in the aforementioned "Standard Insurance Requirements" sheet.

11. A bid bond will be required with bid submission in the amount of 5% of the total bid, unless otherwise stated in the bid specifications. Acceptable forms shall be limited to cashier's check, certified check, or surety bid bond. All sureties must be in original format (no copies) If submitting a bid online, vendors must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.

12. This is a requirements contract to be provided on an as needed basis. JEFFERSON PARISH makes no representations on warranties with regard to minimum guaranteed quantities unless otherwise stated in the bid specifications.

13. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be rejected if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.

14. PUBLIC WORKS BIDS - Completed, Signed and Properly Notarized Affidavits Required; This applies to all solicitations for construction, alteration or demolition of public buildings or projects, in conformity with the provisions contained in LSA-RS 38:2212.9, LSA-RS 38:2212.10, LSA-RS 38:2224, and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Conviction Affidavit, Non-Collusion Affidavit, Campaign Contribution Affidavit, Debt Disclosures Affidavit and E-Verify Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

15. NON PUBLIC WORK BIDS - Completed, Signed and Properly Notarized Affidavits Required in conformity with the provisions contained in LSA – RS 38:2224 and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Collusion Affidavit, Debt Disclosures Affidavit and Campaign Contribution Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled NON PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

16. The ensuing contract for this bid solicitation may be eligible for FEMA reimbursement and/or Federal funding/reimbursement. As such, the referenced appendix will be applicable accordingly and shall be considered a part of the bid documents. All applicable certifications must be duly completed, signed and submitted with bid submission. Failure to submit applicable certifications with bid submission will result in bid rejection.

17. For this project, the Contractor shall not pay any state or local sales or use taxes on materials and equipment which are affixed and made part of the immovable property of the project or which permanently incorporated in the project (hereinafter referred to as "applicable materials and equipment"). All purchases of applicable materials or equipment shall be made by the contractor on behalf of and as the agent of Jefferson Parish (Owner), a political subdivision of the State of Louisiana. No state and local sales and use taxes are owned on applicable materials and equipment under the provisions of Act 1029 of the 1991 Regular Session – Louisiana Revised Statute 47:301(8)(c). Owner will furnish contractor a certificate form which certifies that Owner is not required to pay such state or local sales and use taxes, and contractor shall furnish a copy of such certificate to all vendors or suppliers of the applicable materials and equipment

It shall be the duty of every parish officer, employee, department, agency, special district, board, and commission: and the duty of every contractor, subcontractor, and licensee of the parish, and the duty of every applicant for certification of eligibility for a parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to Jefferson Parish Code of Ordinances Section 2-155.10(19). By submitting a bid, vendor acknowledges this and will abide by all provisions of the referenced Jefferson Parish Code of Ordinances.

BID FORM

Non Public Works

All Public Work Projects are required to use the Louisiana Uniform Public Work Bid Form

All prices must be held firm unless an escalation provision is requested in this bid. Jefferson Parish will allow one escalation during the term of the contract, which may not exceed the U.S. Bureau of Labor Statistics National Index for all Urban Consumers, unadjusted 12 month figure. The most recently published figure issued at the time an adjustment is requested will be used. A request must be made in writing by the vendor, and the escalation will only be applied to purchases made after the request is made.

Are you requesting an escalation provision?

YES _____ NO X

MAXIMUM ESCALATION PERCENTAGE REQUESTED N/A %

INITIAL BID PRICES WILL REMAIN FIRM THROUGH THE DATE OF N/A.

For the purposes of comparison of bids when an escalation provision is requested, Jefferson Parish will apply the maximum escalation percentage quoted by the bidder to the period to which it is applied in the bid. The initial price and the escalation will be used to calculate the total bid price. It will be assumed,for comparison of prices only, that an equal amount of material or labor is purchased each month throughout the entire contract.

DELIVERY: FOB JEFFERSON PARISH

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES: As soon as needed

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) _____

THIS SECTION MUST BE COMPLETED BY BIDDER:

FIRM NAME: Ana-Lab Corporation

ADDRESS: 2600 Dudley Rd

CITY, STATE: Kilgore, Texas ZIP: 75663

TELEPHONE: (903.)984.0551 FAX: (903.)984.5914

EMAIL ADDRESS: trey@ana-lab.com

In the event that addenda are issued with this bid, bidders MUST acknowledge all addenda on the bid form.Bidder must acknowledge receipt of an addendum on the bid form as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: 8.29.2018

NUMBER: 9.5.2018

NUMBER: _____

NUMBER: _____

TOTAL PRICE OF ALL BID ITEMS: $ $1,105,122.00

AUTHORIZED SIGNATURE: _____ Trey Peery

Printed Name

TITLE: Business Development Executive

SIGNING INDICATES YOU HAVE READ AND COMPLY WITH THE INSTRUCTIONS AND CONDITIONS.

NOTE: All bids should be returned with the BID NUMBER and BID OPENING DATE indicated on the outside of the envelope submitted to the Purchasing Department.

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00123931

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
			TWO (2) YEAR CONTRACT FOR LUBE OIL ANALYSIS FOR THE JEFFERSON PARISH DEPT. OF PUBLIC WORKS - DRAINAGE PUMPING STATION OPERATIONS AND ALL JEFFERSON PARISH AGENCIES AND MUNICIPALITIES		
1	1,813.00	EA	0010 - Sample oil analysis for existing in-service diesel engines consisting of the following: 1) Viscosity SSU @ 210 Degrees F 2) Fuel Dilution - Value derived from physical characteristics and confirmed by flash point or gas chromatography 3) Total Solids (ASTM D893 or D4055) 4) Water 5) SAE Weight 6) T.B.N. (By ASTM D2896) 7) Spectrochemical Analysis 20 Elements	$591.00	$1,071,483.00
2	45.00	EA	0020 - Sample lube oil anaylsis for existing gear drives and/or existing bearings consisting of the following: 1) Viscosity SSU @ 100 Degrees F 2) Viscosity SSU @ 210 Degrees F 3) Water - Parts per million 4) Total Solids (ASTM D893 or D4055) 5) T.A.N. (By ASTM D664) 6) Spectrochemical Analysis 20 Elements	$676.00	$30,420.00
3	4.00	EA	0030 - Sample lube oil analysis for stock oil consisting of the following: 1) Viscosity @ 100 Degrees F 2) Viscosity @ 210 Degrees F 3) Viscosity Index 4) Flash Point (ASTM D92) 5) Pour Point (ASTM D97) 6) Sulphated Ash (Comparable to ASTM D874) 7) Spectrochemical Analysis 20 Elements 8) Appearance	$703.00	$2,812.00
4	1.00	EA	0040 - Sample fuel oil analysis consisting of the following: 1) API Gravity 2) Distillation Test 3) Cetane Index 4) Sulphur Index 5) Water and Sediment 6) Appearance	$407.00	$407.00

CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF Ana-Lab Corporation INCORPORATED.

AT THE MEETING OF DIRECTORS OF Ana-Lab Corporation INCORPORATED, DULY NOTICED AND HELD ON September 4, 2018, A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED, IT WAS:

RESOLVED THAT Bill Peery, Olivia Ludewig or Sarah Roberts, BE AND IS HEREBY APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-FACT OF THE CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON BEHALF OF THIS CORPORATION IN ALL NEGOTIATIONS, BIDDING, CONCERNS AND TRANSACTIONS WITH THE PARISH OF JEFFERSON OR ANY OF ITS AGENCIES, DEPARTMENTS, EMPLOYEES OR AGENTS, INCLUDING BUT NOT LIMITED TO, THE EXECUTION OF ALL BIDS, PAPERS, DOCUMENTS, AFFIDAVITS, BONDS, SURETIES, CONTRACTS AND ACTS AND TO RECEIVE ALL PURCHASE ORDERS AND NOTICES ISSUED PURSUANT TO THE PROVISIONS OF ANY SUCH BID OR CONTRACT, THIS CORPORATION HEREBY RATIFYING, APPROVING, CONFIRMING, AND ACCEPTING EACH AND EVERY SUCH ACT PERFORMED BY SAID AGENT AND ATTORNEY-IN-FACT.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE AND CORRECT COPY OF AN EXCERPT OF THE MINUTES OF THE ABOVE DATED MEETING OF THE BOARD OF DIRECTORS OF SAID CORPORATION, AND THE SAME HAS NOT BEEN REVOKED OR RESCINDED.

C Remington

SECRETARY-TREASURER

September 5, 2018

DATE

Non-Public Works Bid
Affidavit Instructions

- **Affidavit is supplied as a courtesy to Affiants, but it is the responsibility of the affiant to insure the affidavit they submit to Jefferson Parish complies, in both form and content, with federal, state and parish laws.**
- **Affidavit must be signed by an authorized representative of the entity or the affidavit will not be accepted.**
- **Affidavit must be notarized or the affidavit will not be accepted.**
- **Notary must sign name, print name, and include bar/notary number, or the affidavit will not be accepted.**
- **Affiant MUST select either A or B when required or the affidavit will not be accepted.**
- **Affiants who select choice A must include an attachment or the affidavit will not be accepted.**
- **If both choice A and B are selected, the affidavit will not be accepted.**
- **Affidavit marked N/A will not be accepted.**
- **It is the responsibility of the Affiant to submit a new affidavit if any additional campaign contributions are made after the affidavit is executed but prior to the time the council acts on the matter.**

Instruction sheet may be omitted when submitting the affidavit

BID NO.: 50-00123931

Non-Public Works Bid

AFFIDAVIT

STATE OF TEXAS

PARISH/COUNTY OF Gregg

BEFORE ME, the undersigned authority, personally came and appeared: Bill Peery, (Affiant) who after being by me duly sworn, deposed and said that he/she is the fully authorized VP of ANA-LAB (Entity), the party who submitted a bid in response to Bid Number 50-00123931, to the Parish of Jefferson.

Affiant further said:

Campaign Contribution Disclosures

(Choose A or B, if option A is indicated please include the required attachment):

Choice A _____ Attached hereto is a list of all campaign contributions, including the date and amount of each contribution, made to current or former elected officials of the Parish of Jefferson by Entity, Affiant, and/or officers, directors and owners, including employees, owning 25% or more of the Entity during the two-year period immediately preceding the date of this affidavit or the current term of the elected official, whichever is greater. Further, Entity, Affiant, and/or Entity Owners have not made any contributions to or in support of current or former members of the Jefferson Parish Council or the Jefferson Parish President through or in the name of another person or legal entity, either directly or indirectly.

Choice B ✓ there are **NO** campaign contributions made which would require disclosure under Choice A of this section.

Debt Disclosures

(Choose A or B, if option A is indicated please include the required attachment):

Choice A _____ Attached hereto is a list of all debts owed by the affiant to any elected or appointed official of the Parish of Jefferson, and any and all debts owed by any elected or appointed official of the Parish to the Affiant.

Choice B ✓ There are **NO** debts which would require disclosure under Choice A of this section.

Affiant further said:

That Affiant has employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for Affiant; and

[The remainder of this page is intentionally left blank.]

BID NO.: 50-00123931

That no part of the contract price received by Affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for Affiant.

Bill Peery
Signature of Affiant

Bill Peery
Printed Name of Affiant

SWORN AND SUBSCRIBED TO BEFORE ME
ON THE 4th DAY OF Sept, 2018

Darla Rutland
Notary Public

DARLA B. RUTLAND
Notary Public, State of Texas
Comm. Expires 06-02-2020
Notary ID 125256328

Darla Rutland
Printed Name of Notary

125256328
Notary/Bar Roll Number

My commission expires 6/2/2020

STANDARD INSURANCE REQUIREMENTS FOR BIDDING PURPOSES

All required insurance under this bid shall conform to Jefferson Parish Resolution No. 113646 or No. 113647, as applicable. Contractors may not commence any work under any ensuing contract unless and until all required insurance and associated evidentiary requirements thereto have been met, along with any additional specifications contained in the **Invitation to Bid**. Except as where otherwise precluded by law, the Parish Attorney or his designee, with the concurrence of the Director of Risk Management or his designee, may agree on a case-by-case basis, to deviate from Jefferson Parish's standard insurance requirements, as provided in this Section. Vendors requesting deviation therefrom shall submit such requests in writing, along with compelling substantiation, to the Purchasing Department prior to the bid's due date. Any changes to the insurance requirements will be reflected in the bid specifications and addenda. Prior to contract execution and at all times thereafter during the term of such contract, contractors must provide and continuously maintain all coverages as required by the foregoing Resolutions, and the contract documents. Failure to do so shall be grounds for suspension, discontinuation or termination of the contract.

For bidding purposes, bidders must submit with bid submission a current (valid) insurance certificate evidencing the required coverages. Failure to comply will cause bid to be rejected. The current insurance certificate will be used for proof of insurance at time of evaluation. Thereafter, and prior to contract execution, the low bidder will be required to provide final insurance certificates to the Parish which shall name **the Jefferson Parish, its Districts Departments and Agencies under the direction of the Parish President and the Parish Council** as additional insureds regarding negligence by the contractor for the Commercial General Liability, Workmen's Compensation Insurance and the Comprehensive Automobile Liability policies. Additionally, said certificates should reflect the name of the Parish Department receiving goods and services and reference the respective Jefferson Parish bid number.

JEFFERSON PARISH REQUIRED STANDARD INSURANCE

☑ **WORKER'S COMPENSATION INSURANCE**

As required by Louisiana State Statute, exception; Employer's Liability, Section B shall be $1,000,000 per occurrence when Work is to be over water and involves maritime exposures to cover all employees not covered under the State Worker's Compensation Act, otherwise this limit shall be no less than $500,000 per occurrence.

Note: If your company is not required by law to carry workmen's compensation insurance, i.e. not a Louisiana company, sole employee of the company, then bidders must request a workmen's compensation insurance declaration affidavit prior to the bid opening date. This insurance declaration affidavit must be fully completed, signed, properly notarized and submitted with the bid. A scanned copy may be submitted with the bid; however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being

rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

☑ **COMMERCIAL GENERAL LIABILITY**

Shall provide limits not less than the following: $1,000,000.00 Combined Single Limit per Occurrence for bodily injury and property damage.

☑ **COMPREHENSIVE AUTOMOBILE LIABILITY**

Bodily injury liability $1,000,000.00 each person; $1,000,000.00 each occurrence. Property Damage Liability $1,000,000.00 each occurrence.

Note: This category may be omitted if bidders do not/will not utilize company vehicles for the project or do not possess company vehicles. Bidder must request an automobile insurance declaration affidavit prior to the bid opening date. This insurance declaration affidavit must be fully completed, signed, properly notarized and submitted with the bid. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid; however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

DEDUCTIBLES

No insurance required shall include a deductible not greater than $10,000.00. The cost of the deductible shall be borne by the contractor.

NOTE: If the vendor requires a change in deductibles, the request must be submitted in writing to the Purchasing Department prior to the due date of the bid. Such request shall be reviewed by the Parish Attorney's Office with the concurrence of the Director of Risk Management.

UMBRELLA LIABILITY COVERAGE

An umbrella policy or excess may be used to meet minimum requirements.

FOR CONSTRUCTION AND RENOVATION PROJECTS:

The following are required unless otherwise specified in the bid. Such insurance is due upon contract execution.

1) **OWNER'S PROTECTIVE LIABILITY**

To be for the same limits of liability for bodily injury and property damage liability established for commercial general liability.

2) **BUILDER'S RISK INSURANCE**

The contractor shall maintain Builder's Risk Insurance at his own expense to insure both the owner (Parish of Jefferson) and contractor as their interest may appear.

JEFFERSON PARISH
Department of Purchasing

Michael S. Yenni
Parish President

Renny Simno
Director

August 24, 2018

ADDENDUM # 1

Bid No.: 50-00123931 **Bid Opening Date: September 6, 2018, 2:00 pm**

For: TWO (2) YEAR CONTRACT FOR LUBE OIL ANALYSIS FOR THE JEFFERSON PARISH DEPARTMENT OF PUBLIC WORKS - DRAINAGE PUMPING STATION OPERATIONS AND ALL JEFFERSON PARISH AGENCIES AND MUNICIPALITIES

- **This addendum hereby provides the Jefferson Parish – Pumping Station's "Lube Oil Analysis" list referenced in section 1.15 of specifications and is attached hereto.**

Sincerely,

Melissa Ovalle

Melissa Ovalle, Buyer II
Jefferson Parish Purchasing Department

Bidders must acknowledge all addenda on the bid form. Bidder acknowledges receipt of this addendum on the bid form as indicated. Failure to do so will result in bid rejection.

This addendum is a part of the contract documents and modifies the original bidding documents and specifications. The contents of this addendum shall be included in the contract documents. Changes made by this addendum shall take precedence over the documents of earlier date.

Joseph S. Yenni Building – 1221 Elmwood Park Blvd., Ste. 404, Jefferson, LA 70123
Office 504.364.2678
General Government Bldg. – 200 Derbigny St – Suite 4400 - Gretna, LA 70053
Office 504.364.2678
Email: Purchasing@jeffparish.net Website: www.jeffparish.net

JEFFERSON PARISH - PUMPING STATION'S "LUBE OIL ANALYSIS" LIST

Pump Station	Engine Type & Number	Model #	Oil Type
EAST BANK			
PUMP STA # 1 BONNABEL	EMD # 3	16 CYL – 3070 HP	SHELL CAPRINUS XR 40W
	EMD # 4	16 CYL – 3070 HP	SHELL CAPRINUS XR 40W
	EMD # 5	16 CYL – 3070 HP	SHELL CAPRINUS XR 40W
	# 1 EMD GENERATOR	12 CYL - 2305 HP (1730 kW)	SHELL CAPRINUS XR 40W
	# 2 CUMMINS GENERATOR	12 CYL - 600 kW	SHELL ROTELLA 15W-40
	# 3 CUMMINS GENERATOR	12 CYL - 1750 kW	VALVOLINE 15W-40
PUMP STA # 2 SUBURBAN	EMD # 1	16 CYL – 3070 HP	SHELL CAPRINUS XR 40W
	FAIRBANKS MORSE # 2	10 CYL – 2000 HP	SHELL CAPRINUS XR 40W
	WAUKESHA # 4	12 CYL - 760 HP	SHELL ROTELLA 40W
	WAUKESHA # 5	12 CYL - 760 HP	SHELL ROTELLA 40W
	EMD # 7	16 CYL – 3070 HP	SHELL CAPRINUS XR 40W
	EMD # 8	16 CYL – 3070 HP	SHELL CAPRINUS XR 40W
	# 1 DETROIT GENERATOR	12 CYL - 1500 kW	SHELL ROTELLA 15W-40
	# 2 CUMMINS GENERATOR	12 CYL - 1750 kW	VALVOLINE 15W-40
	# 3 CUMMINS GENERATOR	6 CYL - 350 kW	SHELL ROTELLA 15W-40
PUMP STA # 3 ELMWOOD	CATERPILLAR # 1	12 CYL – 793 HP	MOBIL DELVAC 1300 SUPER 15W - 40
	CATERPILLAR # 2	12 CYL – 793 HP	MOBIL DELVAC 1300 SUPER 15W - 40
	CATERPILLAR # 3	12 CYL – 1276 HP	MOBIL DELVAC 1300 SUPER 15W - 40
	CATERPILLAR # 4	12 CYL – 1276 HP	MOBIL DELVAC 1300 SUPER 15W - 40
	CATERPILLAR # 5	12 CYL – 1276 HP	MOBIL DELVAC 1300 SUPER 15W - 40
	CATERPILLAR # 6	12 CYL – 1276 HP	MOBIL DELVAC 1300 SUPER 15W - 40
	WAUKESHA # 7	12 CYL - 793 HP	SHELL ROTELLA 40W
	WAUKESHA # 8	12 CYL - 793 HP	SHELL ROTELLA 40W
	EMD # 9	16 CYL – 3070 HP	SHELL CAPRINUS XR 40W
	EMD # 10	16 CYL – 3070 HP	SHELL CAPRINUS XR 40W
	# 1 DETROIT GENERATOR	6 CYL INLINE - 400 kW	SHELL ROTELLA 15W-40
	# 2 CUMMINS GENERATOR	6 CYL INLINE - 350 kW	SHELL ROTELLA 15W-40
PUMP STA # 4 DUNCAN	EMD # 3	16 CYL – 3070 HP	SHELL CAPRINUS XR 40W
	EMD # 4	16 CYL – 3070 HP	SHELL CAPRINUS XR 40W
	EMD # 5	16 CYL – 3070 HP	SHELL CAPRINUS XR 40W
	EMD # 6	16 CYL – 3070 HP	SHELL CAPRINUS XR 40W
	# 1 EMD GENERATOR	12 CYL - 2305 HP (1730 kW)	SHELL CAPRINUS XR 40W
	# 2 CUMMINS GENERATOR	12 CYL - 1750 HP (1313 Kw)	VALVOLINE 15W-40
PUMP STA # 5 PARISHLINE	# 1 CUMMINS GENERATOR	12 CYL - 1500 kW	SHELL ROTELLA 15W-40
	# 2 CUMMINS GENERATOR	12 CYL - 1500 kW	SHELL ROTELLA 15W-40
	# 3 CUMMINS GENERATOR	6 CYL - 250 kW	SHELL ROTELLA 15W-40

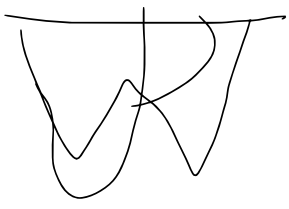
JEFFERSON PARISH - PUMPING STATION'S "LUBE OIL ANALYSIS" LIST

Pump Station	Engine Type & Number	Model #	Oil Type
WEST BANK			
AMES	EMD GENERATOR#1	12-645E4L	MOBILGARD409NC
	CATERPILLAR GENERATOR #2	3304-01	EXXON XD 3-40
	EMD #3	12-645E4L	MOBILGARD 409NC
OLD BAYOU SEGNETTE	CATERPILLAR #1	#3408	DELVAC-1240
	WAUKESHA #2	F1905 DSU	DELVAC-1240
	WAUKESHA #3	F1905 DSU	DELVAC-1240
	WAUKESHA #4	F1905 DSU	DELVAC-1240
	WAUKESHA #5	F1905 DSU	DELVAC-1240
	CATERPILLAR #6	#3408	DELVAC-1240
NEW BAYOU SEGNETTE	EMD #7	L8645F4B	MOBIL-409
	PHILADELPHIA GEARBOX #7	155HOL-2	TERESSTIC-220
	EMD #8	L8645F4B	MOBIL-409
	PHILADELPHIA GEARBOX #8	155HOL-2	TERESSTIC-220
CATAOUATCHE 1	CATERPILLAR #1	IBF31400	SAE-15W-40
	CATERPILLAR #2	IBF31400	SAE-15W-40
CATAOUATCHE2	CATERPILLAR #1	3508C	SAE-15W-40
	CATERPILLAR #2	3508C	SAE-15W-40
	CATERPILLAR GENERATOR #1	D150-8	SAE-15W-40
COUSINS 1	WAUKESHA #1	L5790DU	DELVAC 1240 SAE40
	WAUKESHA #2	L5790DU	DELVAC 1240 SAE40
	WAUKESHA #3	L5790DU	DELVAC 1240 SAE40
COUSINS 2	EMD #1	16-645F4B	MOBILGARD 409
	EMD #2	16-645F4B	MOBILGARD 409
	DETROIT GENERATOR #1	400RXC6D3T	15W-40
	CATERPILLAR GENERATOR #2	FC24-10-2011U	15W-40
COUSINS 3	EMD #1	12645-E4C	MOBILGARD 409
	EMD #2	12645-E4C	MOBILGARD 409
	DETROIT GENERATOR #1	433PSL6220	15W-40
	DETROIT GENERATOR #2	81Z03188	15W-40
ESTELLE 1	DETROIT GENERATOR #1	#91637305	EXXON XD-3 -40
ESTELLE 2	CUMMINS GENERATOR #1	DSGAE-1413883	15W-40
	ALLIS CHALMERS GENERATOR #2	100 ODYC-15R/23479J	MOBIL DELVAC 1240

JEFFERSON PARISH - PUMPING STATION'S "LUBE OIL ANALYSIS" LIST

Pump Station	Engine Type & Number	Model #	Oil Type
	GM DETROIT #1	#91637000	MOBIL DELVAC 1240
	GM DETROIT #2	#91637000	MOBIL DELVAC 1240
HARVEY	EMD GENERATOR	16-645E4B	MOBILGARD 409NC
HERO	EMD GENERATOR #1	16-645E4C	MOBILGARD 410NC
	EMD GENERATOR #2	16-645E4C	MOBILGARD 410NC
	EMD PUMP #4	12-645E4B	MOBILGARD 410NC
	EMD PUMP #5	12-645E4B	MOBILGARD 410NC
PLANTERS	KILO-PAK GENERATOR #1	KP150CD5	MOBIL DELVAC 1240
	EMD GENERATOR #2	20-645-E4C	MOBILGARD 409NC
	WAUKESHA #1	L5792DSU	MOBIL DELVAC 1240
	WAUKESHA #2	L5792DSU	MOBIL DELVAC 1240
	WAUKESHA #3	L5792DSU	MOBIL DELVAC 1240
	WAUKESHA #4	L5792DSU	MOBIL DELVAC 1240
WESTMINSTER	OLYMPIAN GENERATOR #1	#92460	MOBIL DELVAC SAE 30
	EMD GENERATOR #2	L16-710G4C-T2	MOBILGARD 450NC
	CATERPILLAR GENERATOR #3	#C44	MOBIL DELVAC SAE 30
WEST WEGO 1	WAUKESHA #3	L5790DU	XD-3-40
WESTWEGO 2	CUMMINS #1 GENERATOR	NT855G	XD-3-40
	CATERPILLAR #2 GENERATOR	D150-8	15W-40
	WAUKESHA #1	L5792DU	EXXON 12-40
	WAUKESHA #2	L5792DU	EXXON 12-40
	CATERPILLAR #3	#3512	15W-40
WHITNEY BARATARIA	DETROIT GENERATOR #1	6063HK35	MOBILFLEET 15W-40
	DETROIT GENERATOR #2	6063HK35	MOBILFLEET 15W-40
	EMD PUMP #1	L16-645F4B	MOBILGARD 409
	EMD PUMP #2	L16-645F4B	MOBILGARD 409
	EMD PUMP #3	L16-645F4B	MOBILGARD 409

Addendum Received 8.29.2018



CENTRALBIDDING
FROM CENTRAL AUCTION HOUSE

5000123931 - TWO (2) YEAR CONTRACT FOR LUBE OIL ANALYSIS FOR THE JEFFERSON PARISH DEPARTMENT OF PUBLIC WORKS – DRAINAGE PUMPING STATION OPERATIONS AND ALL JEFFERSON PARISH AGENCIES AND MUNICIPALITIES

Jefferson Parish Government

JEFFERSON PARISH
Department of Purchasing

Michael S. Yenni
Parish President

Renny Simno
Director

September 5, 2018

ADDENDUM # 2

Bid No.: 50-00123931

Bid Opening Date: September 6, 2018, 2:00 pm
Postponed Bid Opening Date to: September 18, 2018, 2:00 pm

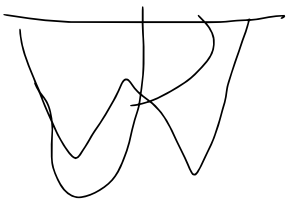
For: TWO (2) YEAR CONTRACT FOR LUBE OIL ANALYSIS FOR THE JEFFERSON PARISH DEPARTMENT OF PUBLIC WORKS - DRAINAGE PUMPING STATION OPERATIONS AND ALL JEFFERSON PARISH AGENCIES AND MUNICIPALITIES

❖ **CLARIFIATION OF SPECIFICATIONS:**

QUESTION # 1:
On the first amendment is a list of 95 samples that will be taken for analysis. I understand that this is not a concrete list, and 95 may not be the exact number of samples to be taken. However, I was wondering if you could let me know the frequency that these samples would be tested. I would need this information in order to finish putting together our pricing structure. For example, would it be roughly 95 samples every month, quarter, or year?

ANSWER # 1:
- The list provided in addendum #1 is an equipment list which has 95 "oil sample" items to send to "Oil Analysis" firm for analyzing. It is a list of the various engines, gears, and other machinery, for which oil testing is desired.
- Every month, we have an average of 95 "oil sample" items to send out for analysis.

Addendum Received 9.5.2018



Sincerely,

Melissa Ovalle

Melissa Ovalle, Buyer II
Jefferson Parish Purchasing Department

Bidders must acknowledge all addenda on the bid form. Bidder acknowledges receipt of this addendum on the bid form as indicated. Failure to do so will result in bid rejection.

This addendum is a part of the contract documents and modifies the original bidding documents and specifications. The contents of this addendum shall be included in the contract documents. Changes made by this addendum shall take precedence over the documents of earlier date.

Ana-Lab Corp. P.O. Box 9000 Kilgore, TX 75663

Phone 903/984-0551 FAX 903/984-5914 e-Mail corp@ana-lab.com LELAP-accredited #02008

Quotation

120268

Report To

Jefferson Parish Public Works
Melissa Ovalle
200 Derbingy St
General Government Building ST
Gretna, LA 70053

Bill To

Jefferson Parish Public Works
Melissa Ovalle
200 Derbingy St
Gretna, LA 70053

Printed 09/05/2018 2:30:40PM Original Quote Date: 08/29/2018

50-00123931 Standard Pricing

101 **50-00123931- 010 Diesel** Organic Liquid 01 50-00123931 Standard Pricing

Accredi	Test	Name	Method	Fee
	VISC	Viscosity @ 210 F/100 C	ASTM D 445	75.00
	TTBN	Total Base Number	ASTM D2896 CAS:GCOL	160.00
	KFW%	Karl Fischer Water	ASTM E203	50.00
N	F150	Flash Point (Limit 150.0 F)	EPA 1010A	32.00
N	301o	Organic Metals Digestion	EPA 3050B-MOD	16.00
N	*SiB	Silicon Recoverable	EPA 6010B CAS:7740-21-3	13.00
N	*FeI	Iron, Total	EPA 6010C CAS:7439-89-6	13.00
N	*MgI	Magnesium, Total	EPA 6010C CAS:7439-95-4	13.00
N	*NaI	Sodium	EPA 6010C CAS:7440-23-5	13.00
N	*CaI	Calcium	EPA 6010C CAS:7440-70-2	13.00
	*PM	Phosphorous	EPA 6020A	50.00
N	*AlM	Aluminum, Total	EPA 6020A CAS:7429-90-5	13.00
	*BM	Boron	EPA 6020A CAS:7439-92-1	13.00
N	*PbM	Lead, Total	EPA 6020A CAS:7439-92-1	13.00
N	*MoM	Molybdenum, Total	EPA 6020A CAS:7439-98-7	13.00
N	*AgM	Silver, Total	EPA 6020A CAS:7440-22-4	13.00
	*SnM	Tin	EPA 6020A CAS:7440-31-5	13.00
N	*SbM	Antimony, Total	EPA 6020A CAS:7440-36-0	13.00
N	*BaM	Barium, Total	EPA 6020A CAS:7440-39-3	13.00
N	*CrM	Chromium, Total	EPA 6020A CAS:7440-47-3	13.00
N	*CuM	Copper, Total	EPA 6020A CAS:7440-50-8	13.00
N	*ZnM	Zinc, Total	EPA 6020A CAS:7440-66-6	13.00

Sample Fee Total **$591.00**

50-00123931- 010 Diesel Sample Fee Total x 1,813 Samples **1,071,483.0(**

102 **50-00123931 -020 Existing Gear** Organic Liquid 01 50-00123931 Standard Pricing

Accredi	Test	Name	Method	Fee
	VISC	Viscosity @ 210 F/100 C	ASTM D 445	75.00
	VIS4	Viscosity @ 100 F/40 C	ASTM D445	75.00
	TAN3	Acid Number (Subcontract)	ASTM D664 mod CAS:GCOL	170.00
	KFW%	Karl Fischer Water	ASTM E203	50.00
N	F150	Flash Point (Limit 150.0 F)	EPA 1010A	32.00
N	301o	Organic Metals Digestion	EPA 3050B-MOD	16.00
N	*SiB	Silicon Recoverable	EPA 6010B CAS:7740-21-3	13.00
N	*FeI	Iron, Total	EPA 6010C CAS:7439-89-6	13.00
N	*MgI	Magnesium, Total	EPA 6010C CAS:7439-95-4	13.00
N	*NaI	Sodium	EPA 6010C CAS:7440-23-5	13.00
N	*CaI	Calcium	EPA 6010C CAS:7440-70-2	13.00

Ana-Lab Corp. P.O. Box 9000 Kilgore, TX 75663

Phone 903/984-0551 FAX 903/984-5914 e-Mail corp@ana-lab.com LELAP-accredited #02008

Quotation

120268

Report To

Jefferson Parish Public Works
Melissa Ovalle
200 Derbingy St
General Government Building ST
Gretna, LA 70053

Bill To

Jefferson Parish Public Works
Melissa Ovalle
200 Derbingy St
Gretna, LA 70053

50-00123931 Standard Pricing

102 **50-00123931 -020 Existing Gear** Organic Liquid 01 50-00123931 Standard Pricing

Accredi	Test	Name	Method	Fee
	*PM	Phosphorous	EPA 6020A	50.00
N	*AlM	Aluminum, Total	EPA 6020A CAS:7429-90-5	13.00
	*BM	Boron	EPA 6020A CAS:7439-92-1	13.00
N	*PbM	Lead, Total	EPA 6020A CAS:7439-92-1	13.00
N	*MoM	Molybdenum, Total	EPA 6020A CAS:7439-98-7	13.00
N	*AgM	Silver, Total	EPA 6020A CAS:7440-22-4	13.00
	*SnM	Tin	EPA 6020A CAS:7440-31-5	13.00
N	*SbM	Antimony, Total	EPA 6020A CAS:7440-36-0	13.00
N	*BaM	Barium, Total	EPA 6020A CAS:7440-39-3	13.00
N	*CrM	Chromium, Total	EPA 6020A CAS:7440-47-3	13.00
N	*CuM	Copper, Total	EPA 6020A CAS:7440-50-8	13.00
N	*ZnM	Zinc, Total	EPA 6020A CAS:7440-66-6	13.00

Sample Fee Total **$676.00**

50-00123931 -020 Existing Gear Sample Fee Total x 45 Samples **30,420.00**

103 **50-00123931 -030 Stock** Organic Liquid 01 50-00123931 Standard Pricing

Accredi	Test	Name	Method	Fee
	VAPP	Visual Appearance		12.00
	VISC	Viscosity @ 210 F/100 C	ASTM D 445	75.00
	VIS4	Viscosity @ 100 F/40 C	ASTM D445	75.00
	VSIX	Viscosity Index	ASTM D445	20.00
	Sash	Sulfated Ash	astm D874	100.00
	PP	Pour Point	ASTM D97-85	65.00
	KFW%	Karl Fischer Water	ASTM E203	50.00
N	F150	Flash Point (Limit 150.0 F)	EPA 1010A	32.00
N	301o	Organic Metals Digestion	EPA 3050B-MOD	16.00
N	*SiB	Silicon Recoverable	EPA 6010B CAS:7740-21-3	13.00
N	*FeI	Iron, Total	EPA 6010C CAS:7439-89-6	13.00
N	*MgI	Magnesium, Total	EPA 6010C CAS:7439-95-4	13.00
N	*NaI	Sodium	EPA 6010C CAS:7440-23-5	13.00
N	*CaI	Calcium	EPA 6010C CAS:7440-70-2	13.00
	*PM	Phosphorous	EPA 6020A	50.00
N	*AlM	Aluminum, Total	EPA 6020A CAS:7429-90-5	13.00
	*BM	Boron	EPA 6020A CAS:7439-92-1	13.00
N	*PbM	Lead, Total	EPA 6020A CAS:7439-92-1	13.00
N	*MoM	Molybdenum, Total	EPA 6020A CAS:7439-98-7	13.00
N	*AgM	Silver, Total	EPA 6020A CAS:7440-22-4	13.00
	*SnM	Tin	EPA 6020A CAS:7440-31-5	13.00
N	*SbM	Antimony, Total	EPA 6020A CAS:7440-36-0	13.00
N	*BaM	Barium, Total	EPA 6020A CAS:7440-39-3	13.00

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Bill To

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Melissa Ovalle
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Gretna, LA 70053

50-00123931 Standard Pricing

103 **50-00123931 -030 Stock** Organic Liquid 01 50-00123931 Standard Pricing

Accredi	Test	Name	Method	Fee
N	*CrM	Chromium, Total	EPA 6020A CAS:7440-47-3	13.00
N	*CuM	Copper, Total	EPA 6020A CAS:7440-50-8	13.00
N	*ZnM	Zinc, Total	EPA 6020A CAS:7440-66-6	13.00
			Sample Fee Total	**$703.00**
		50-00123931 -030 Stock Sample Fee Total x 4 Samples		**2,812.00**

104 **50-00123931 -040 Fuel Oil** Organic Liquid 01 50-00123931 Standard Pricing

Accredi	Test	Name	Method	Fee
	VAPP	Visual Appearance		12.00
	APIG	API Gravity	ASTM D 1298 @ 60 F	50.00
	SUFG	Sulfur in Fuel by XRF	ASTM D-2622-05 (XRF)	75.00
	APC3	API Gravity	ASTM D287	50.00
	APD	API Distillation	ASTM D86-82	100.00
	KFW%	Karl Fischer Water	ASTM E203	50.00
	CETA	CETANE Index	D976	50.00
N	TSS	Total Suspended Solids	SM 2540 D-97	20.00
			Sample Fee Total	**$407.00**

Quoted By: TREY PZHANG

Quotation Total: $1,105,122.00

Please note that ANA-LAB is accredited nationally to the EPA NELAP standard. Our consistent performance on proficiency samples validates our unparalleled accuracy and precision. This enables Ana-Lab to provide quality results at these competitive prices. We will also provide appropriately cleaned and preserved bottles (that meet EPA specifications) and chain of custodies at no extra cost.

Prices are guaranteed for 60 days from the date of the quote, and your submittal of samples indicates your acceptance. With approved credit, our payment terms are NET 30.

ANA-LAB shall provide these ordered services pursuant to our Standard Terms & Conditions Agreement (available for download from the welcome page at www.ana-lab.com or by US mail by request).

Please send your Purchase Orders to PO@ana-lab.com

If we can help further, please contact us. We look forward to working with you on this project.

Thank you,

Ana-Lab Corp. P.O. Box 9000 Kilgore, TX 75663

Phone 903/984-0551 FAX 903/984-5914 e-Mail corp@ana-lab.com LELAP-accredited #02008

Quotation

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Bill To

Jefferson Parish Public Works
Melissa Ovalle
200 Derbingy St
Gretna, LA 70053

Trey Peery
Business Development
Executive

The accredited column designates accreditation by N - NELAC, or z - not covered under NELAC scope of accreditation.
Normal Turn Around Time is typically 7 working days.
Minimum days are the fastest possible turn around time under optimal conditions if we were to analyze this and only this test. These turn around times will require significant rush fees and may be affected by other parameters given the constraints of the EPA approved methodologies.

Building A Greener World Demands Superior Chemistry

Statement
Of
Qualifications
&
Technical Experience

Quality Environmental Chemistry Since 1965

P .O. Box 9000
2600 Dudley Road
Kilgore, TX 75662
(903) 984-0551
Fax (903) 984-5914
http://www.ana-lab.com
corp@ana-lab.com

Testing Cert. #0637.01 **T104704201**

Table of Contents

SECTION 1

INTRODUCTION & STRUCTURE

Introduction

Ana-Lab Corporation is a 100% Employee Owned Corporation. Founded by Dr. Charles H. Whiteside in 1965, Ana-Lab has been providing superior environmental testing and legally defensible data to thousands of federal, state, commercial, industrial, municipal, and private clients for almost five decades. The company's laboratory and corporate offices are located in Kilgore, Texas. Additionally, the company has 7 Regional Service Centers providing on-site sales, sampling, and service to 10 states, Canada, Mexico, and Central America.

By providing the very best analytical services and maintaining the highest ethical standards our Ana-Lab team has earned the most prestigious quality assessments and certifications in the industry, including the following:

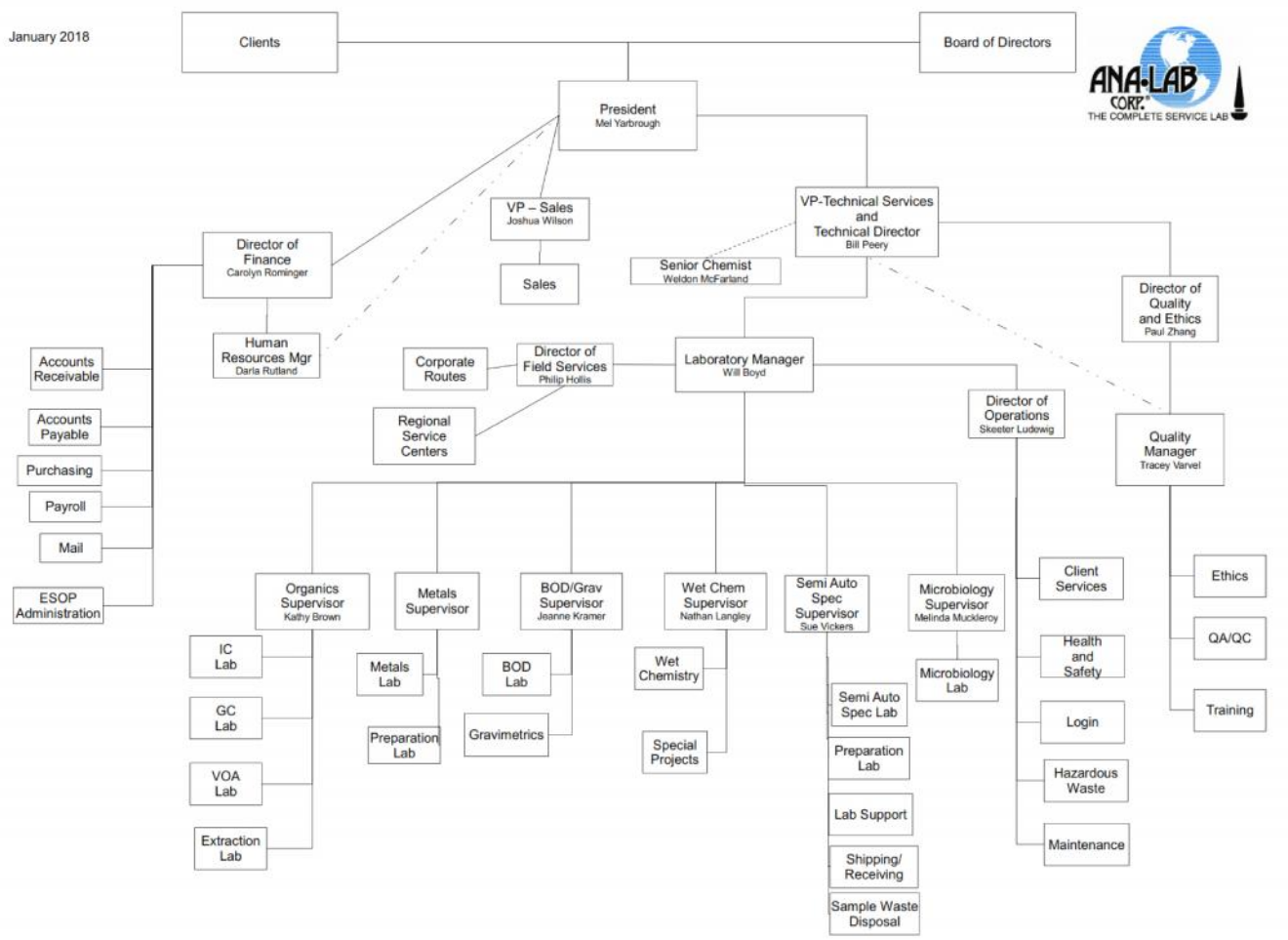
- National Environmental Laboratory Accreditation Program (NELAP #T104704201)
- American Association for Laboratory Accreditation (A2LA) ISO/IEC 17025 (0637-01)
- The U. S. Environmental Protection Agency (EPA)
- The U. S. Department of Agriculture (USDA)
- Texas Department of Health Lead Firm
- Departments of Environmental Quality in AR, LA, NM, OK, TN, and TX
- The U. S. EPA Environmental Response Laboratory Network (ERLN) member
- The U. S. EPA Water Laboratory Alliance Network (WLAN) member

We at Ana-Lab offer clients specialized custom services by developing unique procedures to meet the most demanding analytical methods and subsequent data reporting requirements. This is achieved with our commitment to the most highly technological equipment available to industry, with a fully computerized QA/QC program enabling us to maintain standards of quality far beyond the minimal acceptance limits required.

Our capabilities include the ability to analyze a full list of parameters in diverse matrices including groundwater, wastewater, drinking water, soil, potentially hazardous materials, petroleum, and related materials.

Finally, our secured web-based Laboratory Information Management System (LIMS) or WebLDS provides clients with secure, real-time, 24hr access to their data. Clients are able to monitor the progress of their samples from login through data reporting as tests are completed in our laboratory. WebLDS provides solid communication between our clients and lab personnel.

Organizational Structure



The Senior Management Team includes the following members (with detailed biographical summaries for technical members in Section 3):

President	**Mel Yarbrough, J.D.**	**myarborough@ana-lab.com**
V.P – Technical Services/ Tech Dir:	**Bill Peery, Jr., M.S.**	**bpeery@ana-lab.com**
Lab Manager	**Will Boyd, M.S.**	**will@ana-lab.com**
V.P. - Finance:	**Carolyn Rominger**	**crominger@ana-lab.com**
Director of Operations:	**Skeeter Ludewig, B.S.**	**skeeter@ana-lab.com**
Director of Quality Assurance & Ethics:	**Paul Zhang, Ph.D.**	**pzhang@ana-lab.com**
Vice President - Sales:	**Joshua Wilson**	**jwilson@ana-lab.com**

Business Credentials/Policies

Small Business Classification
Ana-Lab Corporation is defined under an Employee Owned Stock Ownership Plan (ESOP) and is classified as a small business (< $12MM) as defined by the Federal Government NAICS 541380 Testing Laboratories procurement guidelines.

Affirmative Action
Ana-Lab Corporation submits annual Employer Information Reports (both type 2 and type 8) in Texas. The State of Texas designation for Ana-Lab report registration is:

CO = T511161

Dun & Bradstreet
DNS # 058667809

Commercial and Government Entity Code (CAGE Code)
44149

Federal Tax ID
75-1255643

Incorporation
Charter No. 238677 (August 1967)

Insurance
Professional Liability: $1MM/$2MM aggregate
Pollution Liability: $2MM
Excess Liability: $4MM
General Liability: $1MM/$2MM aggregate
Employer's Liability: $1MM
Vehicle Liability: $1MM

Vision, Mission, and Values
Our ***Vision*** is to be regarded as the best client service lab in America.
Our ***Mission*** is to provide clients with superior, innovative, and cost effective service.
Our ***Values*** are integrity, caring, and continuous improvement.

SECTION 2

LOCATIONS

Centralized Laboratory

Corporate Headquarters
Ana-Lab Corporation
2600 Dudley Road
P.O. Box 9000
Kilgore, Texas 75663
Phone: 903-984-0551
Fax: 903-984-5914
Email: corp@ana-lab.com
www.ana-lab.com

Regional Service Centers

Panhandle Regional Office
6501 Storage Dr
Amarillo, Texas 79110
Phone/Fax: 806-679-8459
Email: panhandle@ana-lab.com

North Texas Regional Office
11105 Shady Trail, Suite 123
Dallas, Texas 75229
Phone/Fax: 972-837-9412
Email: northtex@ana-lab.com

Central Texas Regional Office
6448 HWY 290 East, Suite A-106
Austin, Texas 78723
Phone/Fax: 512-821-0045
Email: centex@ana-lab.com

Rio Grande Regional Office
2039 E. Price Rd, Suite E
Brownsville, Texas 78521
Phone/Fax: 956-831-6437
Email: rgvtex@ana-lab.com

Gulf Coast Regional Office
4141 Directors Row, Suite C
Houston, Texas 77092
Phone/Fax: 281-333-9414
Email: gulfcoast@ana-lab.com

Oklahoma Regional Office
1824 Atchison Dr, Suite F
Norman, Oklahoma 73069
Phone/Fax: 405-590-2533
Email: oklahoma@ana-lab.com

ArkLaMiss Regional Office
4720 Viking Dr, Suite A
Bossier City, Louisiana 71111
Phone/Fax: 318-219-9300
Email: arkla@ana-lab.com

SECTION 3

STAFF

Senior Technical Team

- VP- Technical Services**/ Technical Director**
  Bill Peery, Jr., M.S.

Years with Ana-Lab: 33 years
Years of Experience: 35 years

Education: M.S. (1993) Chemistry/Computer Science
University of Texas at Tyler
B.S. (1984) Math/Computer Science
Lamar University
B.A. (1983) Chemistry/Biology
University of Texas at Austin

Professional Experience: Ana-Lab Corporation

Research Areas: Developments of fully functional LIMS on a distributed LAN environment; Heavy metal transport mechanisms in river and creek sediment beds

Post-Graduate: Groundwater monitoring
Groundwater modeling
Groundwater movement

- **Laboratory Manager**
  Will Boyd, M.S

Years with Ana-Lab: 22 years
Years of Experience: 24 years

Education: M.S. (2003) Environmental Science
Stephen F. Austin
B.A (1996) Chemistry
University of Texas at Arlington

Professional Experience: Ana-Lab Corporation
Armstrong Forensic Laboratory

- **Director of Operations**
  Skeeter Ludewig, B.S.

Years with Ana-Lab: 28 years
Years of Experience: 49 years

Education: B.S. (1975) Education
Texas A&M University

Professional Experience: Ana-Lab Corporation
Laboratory staff 19 years
Texas Tech Health Science
Helena Laboratories
Texas Veterinarian Medical Lab
Agriculture Analytical Services Lab
40hr HAZWOPER certified since 1996

- **Director of Quality Assurance & Ethics**
  Paul Zhang, Ph.D.

Years with Ana-Lab: 8 year
Years of Experience: 21 years

Education: Ph.D. (1998) Chemistry
Texas A&M University

Professional Experience: Ana-Lab Corporation
Academic, industrial, and government chemistry 12 years
Texas A&M University
University of South Carolina

Research Areas: Crystal stability and phase transformation of metal phosphate/ phosphonate in the solid state

Post-Graduate: Novel gas adsorbent efficiencies
Polymer nanocomposite materials
Synthesis and functionalization of porous silica
Synthesis of polymer-inorganic composites

Key Technical Staff

Ana-Lab Corporation is staffed with highly educated, technically trained, and diversely experienced chemists and technicians. For a complete and updated list of the main technical staff for the organization (laboratory and field staff) please visit our website at http://www.ana-lab.com/the-company/personnel/.

SECTION 4

ANALYTICAL CAPABILITIES

Analytical Equipment List Summary

GC (9)	**ICP/MS** (3)	**TOX analyzer** (1)
GC/MS VOA (3)	**ICP/AES** (2)	**TOC analyzer** (2)
GC/MS SVOA (3)	**Discrete analyzer** (1)	**Hg CVAAS** (2)
HPLC (4)	**Segregated flow analyzer** (2)	**Hg CVAFS** (1)
LC/Tandem MS/MS (1)	**IC** (3)	**Cr+6 Low-level** (1)

Our significant equipment listed above, coupled with our extensively experienced staff affords us the opportunity to accurately analyze parameters by methods approved by both federal and state regulatory agencies. Logging an average of 93,000 samples annually we routinely analyze by the following methods:

- Standard Methods for the Examination of Water and Wastewater
- American Society for Testing and Materials (ASTM)
- EPA Methods for the Determination of Metals in Environmental Samples
- EPA Methods for the Determination of Organic Compounds in Drinking Water
- EPA Methods for Chemical Analysis of Water and Wastes
- EPA Test Methods for Evaluating Solid Waste (SW-846)
- EPA 40 CFR Part 136
- Other client-requested methods or client-customized methods

Field Services

With our 7 Regional Service Centers located in 3 states we currently offer a full range of routine and special sampling in 10 states (see Section 2). All sales and sampling is performed by our technical field staff with the following minimum training:

- Bachelor's degree in science from a regionally accredited university
- 40hr HAZWOPER certified
- Trained to conduct both sampling and on-site field analysis, pursuant to NELAP standards
- Trained to conduct routine level C and D sampling

For more specialized sampling (unknown substance sampling, pressurized environments, or other highly specialized environments and industrial hygiene project planning and sampling) Ana-Lab provides a specially trained field team that can accommodate level A and B sampling, including confined space entries.

As such, Ana-Lab routinely samples and analyzes samples in support of the following programs:

- Air Force Center for Environmental Excellence (AFCEE)
- Army Corps of Engineers (ACOE)
- Clean Air Act (CAA)
- Comprehensive Environmental Response, Compensation, & Liability Act (CERCLA)
- Clean Water Act (CWA)
- National Pollutant Discharge Elimination System (NPDES)
- Resource Conservation & Recovery Act (RCRA)
- Safe Drinking Water Act (SDWA)

With Ana-Lab field services, clients are able to conduct business with us from your location as follows:

1. Client will visit with a technical sales representative in person regarding your analytical needs or permit requirements.
2. Technical sales representative will make arrangements with the closest Regional Service Center to conduct the appropriate sampling with the necessary chain-of-custody forms, sampling containers, sampling protocol, and safety procedures.
3. Regional Service Center management team will conduct the sampling, on-site analysis, and ship samples to the corporate laboratory pursuant to the 49 CFR Part 173.4 shipping guidelines.
4. Client will have access to WebLDS to track sample analysis progression through the laboratory, and receive secured electronic data results and invoices to their email account.
5. Technical sales representatives will conduct follow-up visits to ensure service quality.

Finally, Ana-Lab offers complete client consultation for sample analysis and data interpretation. Clients are invited to ask Technical sales representatives or corporate laboratory staff direct questions related to the data outcomes and related quality assurance data to ensure a completely satisfied service experience. To facilitate this, Ana-Lab staffs multiple project management staff members, in addition to the local Technical sales staff and laboratory technicians.

SECTION 5

QUALITY ASSURANCE

QA Program Design and Ethics

Ana-Lab Corporation's structure is built upon quality management systems theory. Consequently, all programs from human resources and sales to laboratory analyses and information management are designed according to quality systems thinking. Additionally, all programs and employees are responsible for contributing to the most deliberate continuous improvement systems with the highest integrity and care. Understandably, these aspects encompass our organizational values.

Ana-Lab senior management promotes the highest levels of quality assurance with a strong Ethics program. As such, employees are trained to understand every aspect of the Quality Policy, the Traceability Policy, and the Ethics Policy and how these critical policies affect every employee. The President, Vice President, and Director of Quality Assurance and Ethics have signed and issued the Quality Policy Statement and the Traceability Policy, and the Ethics Policy is signed annually by every employee.

Quality Policy Statement (excerpt from the Quality Manual, Rev. 24, 2017)

Ana-Lab Corporation is committed to providing superior environmental analyses and services that meet the needs of our clients.

Ana-Lab is committed to the highest quality of testing through good professional practices, modern instrumentation, and well-trained personnel. Management sets goals to achieve involvement of each employee in improving quality, reducing costs, and conforming to the client and testing requirements. Laboratory personnel are included in quality improvement planning and are involved in maintaining the quality system.

Ana-Lab's goals are to: Meet the Data Quality Objectives of the client; Comply with applicable government standards and regulations; Operate in accordance with current laboratory accreditation standards.

Ana-Lab's quality objectives are to maintain standards for laboratory competence that are outlined in ISO 17025, NELAC, NLLAP, TNLAP, and GALP. Specific quality requirements of regulatory agencies and clients are also implemented. Together these provide the maximum opportunity to produce accurate and reproducible analytical results.

Ana-Lab's quality objectives are to: Assure the data produced is reliable; Assure the data and documentation meet or exceed the client's Data Quality Objectives; Assure adequate documentation control; Enable personnel to identify and implement preventative and corrective actions necessary to ensure data integrity; Meet requirements of regulatory agencies and organizations providing recognition; Provide a system for continuous improvement.

All employees are trained for the testing and administrative activities in which they are involved and are familiar with the quality documentation and implementation of the policies and procedures in their work. Monthly training sessions with all employees address issues in the quality system.

Traceability Policy Statement (excerpt from the Quality Manual, Rev. 24, 2017)

Ana-Lab is a testing laboratory. Calibrations verified in-house are traceable to national or international standards. Only accredited calibration laboratories are contracted to perform external calibrations and services.

Ethics Policy Statement (excerpt from the Quality Manual, Rev 24, 2017)

Ana-Lab's heritage has as its core the ethical treatment of everyone involved with our business. As a corporate community we embrace our heritage of integrity and strive to live by the following principles: Fairness and honesty in all our relationships; Mutual respect; A respect for ourselves and others; A sense of caring that leads us to act responsibly toward each other and society; Loyalty to our clients and one another; A spirit of open-mindedness as we deal with all; Dedication to service; Good stewardship of our resources; A commitment to flexibility and continuous improvement.

We each take personal responsibility to live these values in all our dealings, knowing full well our pledge may involve difficult choices, hard work, and courage.

All aspects of Ana-Lab's business are ultimately addressed through the quality program in the form of Standard Operating Procedures (SOPs). Pursuant to ISO 17025 SOPs are in place and reviewed annually for the organizational structure, the quality system, personnel training and conduct, test methods and operating procedures, accommodations and environmental conditions, purchasing and supplies, sample management, quality control, preventative and corrective actions, records, waste disposal, and safety.

EH&S

Environmental health and safety concerns every aspect of Ana-Lab's commercial laboratory business. Business administration, sales, field work, and laboratory work all have unique environments with subsequent potential threats to the EH&S of employees.

In an effort to mitigate these potential threats Ana-Lab systems are designed with extensive training and monitoring programs in all areas of business. However, Ana-Lab senior management takes the training and monitoring systems to a higher level than required, as detailed in the Quality Manual and the Chemical Hygiene Plan.

One of the most notable aspects of the EH&S management system is the 40hr HAZWOPER (Hazardous Waste Operations) training for field employees and select laboratory employees, rather than the industry-wide 8hr HAZCOM (Hazardous Communications) training. This advanced training helps to ensure that affected employees are most vigilant in recognizing and addressing potential EH&S threats to themselves and the environment.

A description of the EH&S program can be found in part in both the Quality Manual (waste disposal and safety) and the Chemical Hygiene Plan (chemical storage, use, transportation, and disposal).

Proficiency Testing Scores

Ana-Lab regularly participates in numerous national and industry-related proficiency testing programs and audits. Many of these audits are successfully conducted at the request of our clients utilizing independent, third party audit teams.

In addition to our clients' audits Ana-Lab participates in the following regulatory proficiency test programs:

- Water Pollution (chemistry and microbiological)
- DMR
- Water Supply (chemistry and microbiological)
- Soil

Program	Vendor	Samples Analyzed 2017	2017 Scores (%)	3 Year Avg (%)
Water Pollution	ERA/Phenova	1346	98%	98%
DMR	We use a WP study as our DMRQA study.			
Water Supply	ERA/Phenova	470	96%	94%
Soil	ERA/Phenova	622	93	97%

Certifications/Accreditations

We at Ana-Lab have earned many awards, certifications, and accreditations that confirm Ana-Lab's consistent quality work. We regularly participate in laboratory service evaluations among our strongest competitors, demonstrating our ability to successfully service clients while providing the highest level of data integrity and accuracy.

Recognition and Awards

- ACIL Seal of Excellence annually 2004 – 2017
- ACIL Customer Service Quality Award 2016-2017
- ACIL Top Ten In Customer Satisfaction 2007
- ACIL Proficiency Award 2007
- ACIL Timeliness Award 2007
- Better Business Bureau Torch Award 2006
- Texas Association of Business Don Kaspar Award 2010

EPA Approvals

- USEPA UCMR Approved Perchlorate Laboratory
- Texas Commission on Environmental Quality Approval for TOC
- EPA Approval for Determination of Inorganic Anions by IC under EPA Method 300.0
- EPA Approval for Wastewater Analysis using ICP/MS under EPA Method 200.8
- USEPA Approved for UCMR4 Bromide and TOC Samples

Certifications/Accreditations

(See http://www.ana-lab.com/our-services/certifications/ to download a PDF of our Scope of Accreditation(s))

- A2LA ISO17025 (0637-01)
- Arkansas DEQ Certification
- Louisiana DEQ NELAP Accreditation (NELAP #02008)
- Louisiana DHH Drinking Water Certificate
- Oklahoma DEQ Laboratory Accreditation Program
- TCEQ DW Commercial Lab Approval
- TCEQ NELAP accreditation (NELAP #T104704201)
- Texas Dept of Health Certification of Lead Assessor (3 individuals certified)
- USDA Soil Permit (foreign soils)

SECTION 6

DATA MANAGEMENT

Data Management and Security

Pursuant to ISO 17025 and NELAP standards all client data records are maintained in a highly secured database and subjected to Records Management and Electronic Data Security management SOPs. Unless a longer retention time is specified, records are held secure and in confidence for 5 years from the date of completion and then disposed of in a manner to preserve confidentiality. Environmental Lead (Pb) records are retained for 10 years. Hazardous waste records are retained permanently. Business records are retained appropriately for the type of record.

Often, original paper records are replaced with scanned images in an effort to reduce the laboratory's carbon footprint.

As a matter of confidentiality reports are only issued to the client. However, if the client desires others to receive reports this request must be made to the laboratory in writing.

Analytical data is recorded directly into the laboratory information management system (LIMS) via software specifically designed to interface instrumentation with the LIMS. Data is appropriately stored in LIMS backups and archived electronically. Data that cannot be reprinted is scanned into the network and archived electronically.

All analytical data leading to the final report are subjected to the most stringent data verification process. Data is reviewed to verify its accuracy, repeatability, and integrity. If acceptable the data is verified during the second level of review and released to be printed on the analytical report. Any quality control outside acceptable control limits is evaluated for significance of nonconformity by the QA department.

For more detailed information please reference the Quality Manual.

LIMS/LDS

The laboratory's LIMS system is available for all clients via Ana-Lab's customized WebLDS (web-based Laboratory Data System). Clients are encouraged to visit Ana-Lab's website, login with their email address and a secured password, and review their samples and subsequent data from the point of sample login to verification. As such, WebLDS affords clients the ability to watch their samples be converted into usable data throughout the entire laboratory process.

One of the most notable advantages of WebLDS reported by clients is the ability to view one's sample history compared to more recent samples. Additionally, early detection of potential problems is feasible with one's ability to review and consider data even prior to the data verification.

Finally, TRRP Level 4 reporting and other raw data sets are also available for direct download from WebLDS into clients' computer terminals. This value-added benefit of data packaging makes project management a team effort with the laboratory and the client.

Electronic Data Deliverables

Ana-Lab is proud to offer electronic data deliverable packages in any number of designs appropriate for the project or client. This ability to customize data packages affords the client the opportunity to communicate with the laboratory QA staff to determine the most practical or specifically detailed data package necessary to complete a project. QA staff work closely with the information technology (IT) staff to ensure that data is packaged into files appropriate for web-based, email-based, or client-owned database direct transfer.

SECTION 7

PROJECT EXPERIENCE

Federal

TYPE	DESCRIPTION	CATEGORY
DOD contractor	Perchlorate sampling and analysis in Arkansas	RCRA, CERCLA, CWA, TRRP
DOD USAF	Low-flow groundwater, soil, confined space entry sampling, 90 day holding facility sampling, wastewater sampling and analysis in NM	RCRA, CWA, TRRP
DOD USACE AFCEE	Base closure monitoring, groundwater analysis for perchlorate and explosives in NM, low-flow groundwater	RCRA, CERCLA, TRRP
DOD USAR	Groundwater sampling and analysis in GA	RCRA, TRRP
DOD USACE FAA	Water quality sampling and analysis for routine monitoring in TX, OK, AR, LA	CWA, TRRP
DOT USCG	Groundwater sampling and analysis in NC	RCRA, CERCLA
DOD USDA DOT (TX) USEPA	Various sampling and analysis in OR, IL, VA, MD,DE, AK, TX	RCRA, CERCLA, SARA, CWA, CAA, TRRP

Municipal

TYPE	DESCRIPTION	CATEGORY
Wastewater plant	Various sampling and analysis in NM, OK, TX, AR, KS, LA, MS, AL, GA, TN, DE, MD, VA	CWA
Water treatment plant	Various sampling and analysis in NM, OK, TX, AR, KS, LA, MS, AL, GA, TN, DE, MD, VA	CWA, SDWA
Landfill	Various sampling and analysis in NM, OK, TX, AR, KS, LA, MS, AL, GA, TN, DE, MD, VA	RCRA, NPDES, SDWA
Municipal laboratory	Various subcontracted analysis in NM, OK, TX, AR, KS, LA, MS, AL, GA, TN, DE, MD, VA	CWA, CAA, RCRA, SDWA
Forensics laboratory	Selected investigative analysis in TX	Special

Engineering

TYPE	DESCRIPTION	CATEGORY
Construction Engineering	Industrial hygiene project planning, sampling, analysis, and data interpretation	AIHA
Ecological consulting	Sampling and analysis of plant fauna, animal tissue, and soil	Special
Environmental engineering	Various sampling, analysis, and data interpretation for water, storm water, drinking water, wastewater, soils, materials, air, and gases in NM, OK, TX, AR, KS, LA, MS, AL, GA, TN, DE, MD, VA	CERCLA, SARA, NPDES, CAA, CWA, RCRA, AIHA, TRRP, SDWA

Industrial (multi-state)

TYPE	DESCRIPTION	CATEGORY
Oil and Gas Refining	Sampling and analysis of wastewater, storm water drinking water, process and blowdown water, air, gas, soil, and oil products	RCRA, CAA, CWA, NPDES, ASTM, SDWA
Fertilizer Manufacturing	Sampling and analysis of wastewater, storm water, soil, air, gas, process water, blowdown water, and ammonia products	RCRA, CAA, CWA, NPDES, customized methods
Mining	Lignite overburden analysis	SM, ASTM, and customized methods
Animal Feeding, Packing, and Rendering	Wastewater, storm water, drinking water, process water, soil, and sludge sampling and analysis	RCRA, CWA, NPDES, SDWA
Pharmaceutical Manufacturing	Wastewater, storm water, drinking water, process water, and materials sampling and analysis	RCRA, CWA, NPDES, SDWA, and customized methods
Automotive Manufacturing	Wastewater, storm water, drinking water, process water, soil, and sludge sampling and analysis	RCRA, CWA, NPDES, SDWA
Chemical Manufacturing	Wastewater, storm water drinking water, process and blowdown water, air, gas, soil, and oil products sampling and analysis	RCRA, CAA, CWA, NPDES, ASTM, SDWA
Transfer Storage Disposal Facilities	Influent, in-process streams, final effluent water and solids sampling and analysis	RCRA, CERCLA
General Manufacturing	Wastewater, storm water, drinking water, process water, soil, and sludge sampling and analysis	RCRA, CWA, NPDES, SDWA

State

TYPE	DESCRIPTION	CATEGORY
Texas Commission on Environmental Quality	Groundwater and soil analysis	RCRA, TRRP
Oklahoma Department of Environmental Quality	Groundwater analysis	RCRA, TRRP
Louisiana Department of Environmental Quality	Groundwater and soils analysis	RCRA, TRRP

Foreign

TYPE	DESCRIPTION	CATEGORY
Foreign Government in El Salvador	Project planning, groundwater and soil sampling and analysis, and expert witnessing	International litigation
Maquiladora plants in Mexico	Routine sampling and analysis for water, drinking water, wastewater, soils, and materials	Industry

References

Cannon Air Force Base
506 N. Air Commando Way
Cannon AFB, NM 88103-5136
Contact: Jaoquin Madril
Phone: (505) 904-6745

Barksdale Air Force Base
2 CES-CEV Suite 208
334 Davis Ave West
Barksdale AFB, A 71110-2076
Contact: Bharbi Patel
Phone: 318-456-3522

City of San Benito
485 N. Sam Houston
San Benito, TX 78586
Contact: Adan Gonzalez
Phone: (956) 399-5344

Riverbend Water Resources
228 A Texas Ave
New Boston, TX 75570
Contact: Eli Hunt
Phone: (903) 831-0091

City of Henderson
Southside WW Plant
3492 FM 225 S
Henderson, TX 75652
Contact: Randy Boyd
Phone: (903) 657-5246

City of Denton
1100 S. Mayhill Rd.
Denton, TX 76208
Contact: Heather Goins
Phone: (940) 349-8610

City of Marshall
P. O. Box 698
Marshall, TX 75671
Contact: Nancy Pasel
Phone: (903) 935-4485

City of Jacksonville
P.O. Box 1390
Jacksonville, TX 75766
Contact: Jovie Hicks
Phone: (903) 586-2768

City of Bryan
P.O Box 1000
Bryan, TX 77805
Contact: Mark Jurica
Phone: (979) 209-5932

City of Shreveport
Pretreatment
P.O. Box 31109
Shreveport, LA 71130
Contact: Chris Warren
Phone: (318) 673-6581

Cleco/Dolet Hills Power Station
963 Power Plant Rd
Mansfield LA 71052
Contact: Anna Hanna
Phone: (318) 682-8562

Agrium
9201 FM 1551
Borger, TX 79007
Contact: Adam McGhee
Phone: (806) 468-0628

Texas Commission on Environmental Quality

NELAP-Recognized Laboratory Accreditation is hereby awarded to

Ana-Lab Corporation

2600 Dudley Road
Kilgore, TX 75662-3730

in accordance with Texas Water Code Chapter 5, Subchapter R, Title 30 Texas Administrative Code Chapter 25, and the National Environmental Laboratory Accreditation Program.

The laboratory's scope of accreditation includes the fields of accreditation that accompany this certificate. Continued accreditation depends upon successful ongoing participation in the program. The Texas Commission on Environmental Quality urges customers to verify the laboratory's current location(s) and accreditation status for particular methods and analyses (www.tceq.texas.gov/goto/lab). Accreditation does not imply that a product, process, system or person is approved by the Texas Commission on Environmental Quality.

Certificate Number: T104704201-18-14
Effective Date: 2/1/2018
Expiration Date: 1/31/2019

Executive Director Texas Commission on Environmental Quality

Ana-Lab Corp. P.O. Box 9000 Kilgore, TX 75663

Phone 903/984-0551 e-Mail corp@ana-lab.com LELAP-accredited #02008

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Report

Report To

Client
Address Info

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Account
####

Project
Project #

Project Name

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Report Date: 01/19/2017 *Printed:* 08/16/2017

Report To

Client
Address Info

Tru-Tone Outfall-DTP1

Account	*Project*
####	**Project #**

Results

Sample ID *Received:* 01/11/2017

Non-Potable Water *Collected by:* SR *Affiliation:* Client 01/10/2017 07:25:00

SM 4500-CN⁻ E-1999 *Prepared:* 699751 01/12/2017 10:00:00 *Analyzed* 700119 01/13/2017 12:20:00 MLC

	Parameter	*Results*	*Units*	*RL*	*Flags*	*CAS*	*Bottle*
N	**Cyanide, total**	**<0.005**	**mg/L**	0.005			02

Sample ID *Received:* 01/11/2017

Non-Potable Water *Collected by:* SR *Affiliation:* Client 01/10/2017 09:15:00

SM 4500-CN⁻ E-1999 *Prepared:* 699751 01/12/2017 10:00:00 *Analyzed* 700119 01/13/2017 12:22:00 MLC

	Parameter	*Results*	*Units*	*RL*	*Flag*	*CAS*	*Bottle*
N	**Cyanide, total**	**<0.005**	**mg/L**	0.005			02

Sample ID *Received:* 01/11/2017

Non-Potable Water *Collected by:* KG/SR *Affiliation:* Client 01/10/2017 11:05:00

SM 4500-CN⁻ E-1999 *Prepared:* 699751 01/12/2017 10:00:00 *Analyzed* 700119 01/13/2017 12:23:00 MLC

	Parameter	*Results*	*Units*	*RL*	*Flags*	*CAS*	*Bottle*
N	**Cyanide, total**	**<0.005**	**mg/L**	0.005			02

Sample ID *Received:* 01/11/2017

Non-Potable Water *Collected by:* KG/SR *Affiliation:* Client 01/10/2017 12:55:00

SM 4500-CN⁻ E-1999 *Prepared:* 700627 01/18/2017 10:30:00 *Analyzed* 700762 01/18/2017 15:36:00 RSV

	Parameter	*Results*	*Units*	*RL*	*Flag*	*CAS*	*Bottle*
N	**Cyanide, total**	**<0.006**	**mg/L**	0.006	C		03

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####### **Sample ID** Comp: 1-10 0630 to 1255 *Received:* 01/11/2017

Non-Potable Water Composite Stop 12:55 1/10/17 *Collected by:* KG/SR *Affiliation:* Client 12:55:00

EPA 200.8 5.4 *Prepared:* 700049 01/13/2017 10:00:00 *Analyzed* 700200 01/13/2017 15:40:00 CLK

	Parameter	Results	Units	RL	Flag	CAS	Bottle
N	**Cadmium, Total**	**<0.0002**	**mg/L**	0.0002	s	**7440-43-9**	02
N	**Chromium, Total**	**0.00218**	**mg/L**	0.0005		**7440-47-3**	02
N	**Copper, Total**	**0.0253**	**mg/L**	0.001		**7440-50-8**	02
N	**Lead, Total**	**<0.0005**	**mg/L**	0.0005		**7439-92-1**	02
N	**Nickel, Total**	**0.0502**	**mg/L**	0.001		**7440-02-0**	02
N	**Silver, Total**	**<0.0002**	**mg/L**	0.0002		**7440-22-4**	02
N	**Zinc, Total**	**0.00634**	**mg/L**	0.005		**7440-66-6**	02

####### **Sample ID** *Received:* 01/11/2017

Non-Potable Water *Collected by:* SR *Affiliation:* Client 01/10/2017 07:25:00

SM 4500-CN⁻ E-1999 *Prepared:* 699751 01/12/2017 10:00:00 *Analyzed* 700119 01/13/2017 12:26:00 MLC

	Parameter	Results	Units	RL	Flag	CAS	Bottle
N	**Cyanide, total**	**<0.005**	**mg/L**	0.005			02

####### **Sample ID** *Received:* 01/11/2017

Non-Potable Water *Collected by:* SR *Affiliation:* Client 01/10/2017 06:25:00

EPA 200.8 5.4 *Prepared:* 700049 01/13/2017 10:00:00 *Analyzed* 700200 01/13/2017 15:44:00 CLK

	Parameter	Results	Units	RL	Flag	CAS	Bottle
N	**Zinc, Total**	**0.00431**	**mg/L**	0.005	J	**7440-66-6**	02

####### **Sample ID** 8 Part Grab *Received:* 01/11/2017

Non-Potable Water *Collected by:* KG/SR *Affiliation:* Client 01/10/2017 12:55:00

Sample 1: Date 1/10/17 Time 0630 Tech SR
SR
Sample 2: Date 1/10/17 Time 0725 Tech
Sample 3: Date 1/10/17 Time 0820 Tech SR
Sample 4: Date 1/10/17 Time 0915 Tech SR
Sample 5: Date 1/10/17 Time 1010 Tech KG
Sample 6: Date 1/10/17 Time 1105 Tech KG/SR
Sample 7: Date 1/10/17 Time 1200 Tech KG/SR
Sample 8: Date 1/10/17 Time 1255 Tech KG/SR

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####### **Sample ID** 8 Part Grab *Received:* 01/11/2017

Non-Potable Water *Collected by:* KG/SR *Affiliation:* Client 01/10/2017 12:55:00

Sample 1: Date 1/10/17 Time 0630 Tech SR
SR
Sample 2: Date 1/10/17 Time 0725 Tech
Sample 3: Date 1/10/17 Time 0820 Tech SR
Sample 4: Date 1/10/17 Time 0915 Tech SR
Sample 5: Date 1/10/17 Time 1010 Tech KG
Sample 6: Date 1/10/17 Time 1105 Tech KG/SR
Sample 7: Date 1/10/17 Time 1200 Tech KG/SR
Sample 8: Date 1/10/17 Time 1255 Tech KG/SR

Prepared: 699959 01/12/2017 13:20:00 *Analyzed* 699959 01/12/2017 13:20:00 JRH

	Parameter	Results	Units	RL	Flags	CAS	Bottle
N	**Composite VOA vial pre-injection**	**1/1**	**ml**				01

EPA 624 *Prepared:* 699959 01/12/2017 14:38:00 *Analyzed* 699979 01/12/2017 14:38:00 JRH

	Parameter	Results	Units	RL	Flags	CAS	Bottle
N	**1,1,1,2-Tetrachloroethane**	**<0.001**	**mg/L**	0.001		**630-20-6**	17
N	**1,1,1-Trichloroethane**	**<0.001**	**mg/L**	0.001		**71-55-6**	17
N	**1,1,2,2-Tetrachloroethane**	**<0.001**	**mg/L**	0.001		**79-34-5**	17
N	**1,1,2-Trichloroethane**	**<0.001**	**mg/L**	0.001		**79-00-5**	17
N	**1,1-Dichloroethane**	**<0.001**	**mg/L**	0.001		**75-34-3**	17
N	**1,1-Dichloroethylene**	**<0.001**	**mg/L**	0.001		**75-35-4**	17
N	**1,2-Dichloroethane**	**<0.001**	**mg/L**	0.001		**107-06-2**	17
N	**1,2-Dichloropropane**	**<0.001**	**mg/L**	0.001		**78-87-5**	17
N	**2-Chloroethylvinyl ether**	**<0.001**	**mg/L**	0.001		**110-75-8**	17
N	**Acrolein**	**<0.005**	**mg/L**	0.005		**107-02-8**	17
N	**Acrylonitrile**	**<0.001**	**mg/L**	0.001		**107-13-1**	17
N	**Benzene**	**<0.001**	**mg/L**	0.001		**71-43-2**	17
N	**Bromodichloromethane**	**0.00121**	**mg/L**	0.001		**75-27-4**	17
N	**Bromoform**	**0.00098**	**mg/L**	0.001	J	**75-25-2**	17
N	**Bromomethane (Methyl Bromi**	**<0.001**	**mg/L**	0.001		**74-83-9**	17
N	**Carbon Tetrachloride**	**<0.001**	**mg/L**	0.001		**56-23-5**	17
N	**Chlorobenzene**	**<0.001**	**mg/L**	0.001		**108-90-7**	17
N	**Chloroethane**	**<0.001**	**mg/L**	0.001		**75-00-3**	17
N	**Chloroform**	**0.00083**	**mg/L**	0.001	J	**67-66-3**	17
N	**Chloromethane**	**<0.001**	**mg/L**	0.001		**74-87-3**	17
N	**cis-1,2-Dichloroethylene**	**<0.001**	**mg/L**	0.001		**156-59-2**	17
N	**cis-1,3-Dichloropropene**	**<0.001**	**mg/L**	0.001		**10061-01-5**	17
N	**Dibromochloromethane**	**0.00132**	**mg/L**	0.001		**124-48- 1**	17
N	**Dichlorodifluoromethane**	**<0.001**	**mg/L**	0.001		**75-71-8**	17
N	**Dichloromethane**	**<0.001**	**mg/L**	0.001		**75-09-2**	17
N	**Ethylbenzene**	**<0.001**	**mg/L**	0.001		**100-41-4**	17
N	**m- and p-Xylene**	**<0.001**	**mg/L**	0.001		**ARC-mpXyl**	17
N	**m-Dichlorobenzene**	**<0.001**	**mg/L**	0.001		**541-73-1**	17
N	**o-Dichlorobenzene**	**<0.001**	**mg/L**	0.001		**95-50-1**	17
N	**o-Xylene**	**<0.001**	**mg/L**	0.001		**95-47-6**	17
N	**p-Dichlorobenzene**	**<0.001**	**mg/L**	0.001		**106-46-7**	17
N	**Tetrachloroethylene**	**<0.00058**	**mg/L**	0.00058		**127-18-4**	17
N	**Toluene**	**<0.001**	**mg/L**	0.001		**108-88-3**	17
N	**trans-1,2-Dichloroethylene**	**<0.001**	**mg/L**	0.001		**156-60-5**	17

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Sample ID 8 Part Grab *Received:* 01/11/2017

Non-Potable Water *Collected by:* KG/SR *Affiliation:* Client 01/10/2017 12:55:00

Sample 1: Date 1/10/17 Time 0630 Tech SR
SR
Sample 2: Date 1/10/17 Time 0725 Tech
Sample 3: Date 1/10/17 Time 0820 Tech SR
Sample 4: Date 1/10/17 Time 0915 Tech SR
Sample 5: Date 1/10/17 Time 1010 Tech KG
Sample 6: Date 1/10/17 Time 1105 Tech KG/SR
Sample 7: Date 1/10/17 Time 1200 Tech KG/SR
Sample 8: Date 1/10/17 Time 1255 Tech KG/SR

EPA 624 *Prepared:* 699959 01/12/2017 14:38:00 *Analyzed* 699979 01/12/2017 14:38:00 JRH

	Parameter	Results	Units	RL	Flags	CAS	Bottle
N	**trans-1,3-Dichloropropene**	**<0.001**	**mg/L**	0.001	s	**10061-02-6**	17
N	**Trichloroethylene**	**<0.001**	**mg/L**	0.001		**79-01-6**	17
N	**Trichlorofluoromethane**	**<0.001**	**mg/L**	0.001		**75-69-4**	17
N	**Vinyl chloride**	**<0.001**	**mg/L**	0.001		**75-01-4**	17

Sample ID Comp: 1-10 0630 to 1255 *Received:* 01/11/2017

Non-Potable Water Composite Stop 12:55 1/10/17 *Collected by:* KG/SR *Affiliation:* Client 12:55:00

EPA 608 *Prepared:* 700453 01/17/2017 07:30:00 *Analyzed* 700846 01/18/2017 18:47:00 SLC

	Parameter	Results	Units	RL	Flags	CAS	Bottle
N	**4,4-DDD**	**<0.0000269**	**mg/L**	0.0000269		**72-54-8**	08
N	**4,4-DDE**	**<0.0000269**	**mg/L**	0.0000269		**72-55-9**	08
N	**4,4-DDT**	**<0.0000108**	**mg/L**	0.0000108		**50-29-3**	08
N	**Aldrin**	**<0.0000108**	**mg/L**	0.0000108		**309-00-2**	08
N	**Alpha-BHC(hexachlorocyclohexane)**	**<0.0000269**	**mg/L**	0.0000269		**319-84-6**	08
N	**Beta-BHC(hexachlorocyclohexane)**	**<0.0000108**	**mg/L**	0.0000108		**319-85-7**	08
N	**Chlordane**	**<0.0000108**	**mg/L**	0.0000108		**57-74-9**	08
N	**Delta-BHC(hexachlorocyclohexane)**	**<0.0000108**	**mg/L**	0.0000108		**319-86-8**	08
N	**Dieldrin**	**<0.0000108**	**mg/L**	0.0000108		**60-57-1**	08
N	**Endosulfan I (alpha)**	**<0.0000108**	**mg/L**	0.0000108		**959-98-8**	08
N	**Endosulfan II (beta)**	**<0.0000108**	**mg/L**	0.0000108		**33213-65-9**	08
N	**Endosulfan sulfate**	**<0.0000108**	**mg/L**	0.0000108		**1031-07-8**	08
N	**Endrin**	**<0.0000108**	**mg/L**	0.0000108		**72-20-8**	08
N	**Endrin aldehyde**	**<0.0000269**	**mg/L**	0.0000269		**7421-93-4**	08
N	**Gamma-BHC(Lindane)**	**<0.0000108**	**mg/L**	0.0000108		**58-89-9**	08
N	**Heptachlor**	**<0.0000108**	**mg/L**	0.0000108		**76-44-8**	08
N	**Heptachlor epoxide**	**<0.0000108**	**mg/L**	0.0000108		**1024-57-3**	08
N	**Toxaphene**	**<0.0000108**	**mg/L**	0.0000108		**8001-35-2**	08

EPA 608 *Prepared:* 700456 01/17/2017 07:30:00 *Analyzed* 700878 01/18/2017 18:47:00 SLC

	Parameter	Results	Units	RL	Flags	CAS	Bottle
N	**PCB-1016**	**<0.000215**	**mg/L**	0.000215	s	**12674-11-2**	09
N	**PCB-1221**	**<0.000215**	**mg/L**	0.000215		**11104-28-2**	09
N	**PCB-1232**	**<0.000215**	**mg/L**	0.000215		**11141-16-5**	09
N	**PCB-1242**	**<0.000215**	**mg/L**	0.000215		**53469-21-9**	09

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#######	**Sample ID**	Comp: 1-10 0630 to 1255	*Received:* 01/11/2017

Non-Potable Water Composite Stop 12:55 1/10/17 *Collected by:* KG/SR *Affiliation:* Client 12:55:00

EPA 608 *Prepared:* 700456 01/17/2017 07:30:00 *Analyzed* 700878 01/18/2017 18:47:00 SLC

	Parameter	Results	Units	RL	Flag	CAS	Bottle
N	**PCB-1248**	**<0.000215**	**mg/L**	0.000215	s	**12672-29-6**	09
N	**PCB-1254**	**<0.000215**	**mg/L**	0.000215		**11097-69-1**	09
N	**PCB-1260**	**<0.000215**	**mg/L**	0.000215		**11096-82-5**	09

EPA 617 *Prepared:* 700453 01/17/2017 07:30:00 *Analyzed* 700825 01/18/2017 18:47:00 SLC

	Parameter	Results	Units	RL	Flag	CAS	Bottle
z	**Kelthane (Dicofol)**	**<0.000108**	**mg/L**	0.000108		**115-32-2**	08
z	**Methoxychlor**	**<0.0000108**	**mg/L**	0.0000108		**72-43-5**	08
z	**Mirex**	**<0.0000215**	**mg/L**	0.0000215		**2385-85-5**	08

EPA 625 *Prepared:* 699946 01/13/2017 07:30:00 *Analyzed* 700404 01/16/2017 20:53:00 SLC

	Parameter	Results	Units	RL	Flag	CAS	Bottle
N	**1,2,4-Trichlorobenzene**	**<0.00106**	**mg/L**	0.00106	s	**120-82-1**	07
N	**1,2-DPH (as azobenzene)**	**<0.00106**	**mg/L**	0.00106		**122-66-7**	07
N	**2,4,6-Trichlorophenol**	**<0.00106**	**mg/L**	0.00106		**88-06-2**	07
N	**2,4-Dichlorophenol**	**<0.00106**	**mg/L**	0.00106		**120-83-2**	07
N	**2,4-Dimethylphenol**	**<0.00213**	**mg/L**	0.00213		**105-67-9**	07
N	**2,4-Dinitrophenol**	**<0.00106**	**mg/L**	0.00106	X	**51-28-5**	07
N	**2,4-Dinitrotoluene**	**<0.00106**	**mg/L**	0.00106		**121-14-2**	07
N	**2,6-Dinitrotoluene**	**<0.00106**	**mg/L**	0.00106		**606-20-2**	07
N	**2-Chloronaphthalene**	**<0.00106**	**mg/L**	0.00106		**91-58-7**	07
N	**2-Chlorophenol**	**<0.00106**	**mg/L**	0.00106		**95-57-8**	07
N	**2-Nitrophenol**	**<0.00106**	**mg/L**	0.00106		**88-75-5**	07
N	**3,3'-Dichlorobenzidine**	**<0.00106**	**mg/L**	0.00106		**91-94-1**	07
N	**4,6-Dinitro-2-methylphenol**	**<0.00106**	**mg/L**	0.00106		**534-52-1**	07
N	**4-Bromophenyl phenyl ether**	**<0.00106**	**mg/L**	0.00106		**101-55-3**	07
N	**4-Chlorophenyl phenyl ethe**	**<0.00106**	**mg/L**	0.00106		**7005-72-3**	07
N	**4-Nitrophenol**	**<0.00106**	**mg/L**	0.00106		**100-02-7**	07
N	**Acenaphthene**	**<0.00106**	**mg/L**	0.00106		**83-32-9**	07
N	**Acenaphthylene**	**<0.00106**	**mg/L**	0.00106		**208-96-8**	07
N	**Anthracene**	**<0.00106**	**mg/L**	0.00106		**120-12-7**	07
N	**Benzidine**	**<0.00532**	**mg/L**	0.00532	S	**92-87-5**	07
N	**Benzo(a)anthracene**	**<0.00106**	**mg/L**	0.00106		**56-55-3**	07
N	**Benzo(a)pyrene**	**<0.001**	**mg/L**	0.001		**50-32-8**	07
N	**Benzo(b)fluoranthene**	**<0.00106**	**mg/L**	0.00106		**205-99-2**	07
N	**Benzo(ghi)perylene**	**<0.00106**	**mg/L**	0.00106		**191-24-2**	07
N	**Benzo(k)fluoranthene**	**<0.00106**	**mg/L**	0.00106		**207-08-9**	07
N	**Benzyl Butyl phthalate**	**<0.00106**	**mg/L**	0.00106		**85-68-7**	07
N	**Bis(2-chloroethoxy)methane**	**<0.00106**	**mg/L**	0.00106		**111-91-1**	07
N	**Bis(2-chloroethyl)ether**	**<0.00106**	**mg/L**	0.00106		**111-44-4**	07
N	**Bis(2-chloroisopropyl)ether**	**<0.00106**	**mg/L**	0.00106		**108-60-1**	07
N	**Bis(2-ethylhexyl)phthalate**	**0.00213**	**mg/L**	0.00532	J	**117-81-7**	07
N	**Chrysene (Benzo(a)phenanthrene)**	**<0.00106**	**mg/L**	0.00106		**218-01-9**	07

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Results

Report Date: 01/19/2017 *Printed:* 08/16/2017

####### **Sample ID** Comp: 1-10 0630 to 1255 *Received:* 01/11/2017

Non-Potable Water Composite Stop 12:55 1/10/17 *Collected by:* KG/SR *Affiliation:* Client 12:55:00

EPA 625 *Prepared:* 699946 01/13/2017 07:30:00 *Analyzed* 700404 01/16/2017 20:53:00 *SLC*

	Parameter	*Results*	*Units*	*RL*	*Flag*	*CAS*	*Bottle*
N	**Dibenz(a,h)anthracene**	**<0.00106**	**mg/L**	0.00106	*s*	**53-70-3**	07
N	**Diethyl phthalate**	**<0.00106**	**mg/L**	0.00106		**84-66-2**	07
N	**Dimethyl phthalate**	**<0.00106**	**mg/L**	0.00106		**131-11-3**	07
N	**Di-n-butylphthalate**	**<0.00106**	**mg/L**	0.00106		**84-74-2**	07
N	**Di-n-octylphthalate**	**<0.00106**	**mg/L**	0.00106		**117-84-0**	07
N	**Fluoranthene(Benzo(j,k)fluorene)**	**<0.00106**	**mg/L**	0.00106		**206-44-0**	07
N	**Fluorene**	**<0.00106**	**mg/L**	0.00106		**86-73-7**	07
N	**Hexachlorobenzene**	**<0.00106**	**mg/L**	0.00106		**118-74-1**	07
N	**Hexachlorobutadiene**	**<0.00106**	**mg/L**	0.00106		**87-68-3**	07
N	**Hexachlorocyclopentadiene**	**<0.00106**	**mg/L**	0.00106		**77-47-4**	07
N	**Hexachloroethane**	**<0.00106**	**mg/L**	0.00106		**67-72-1**	07
N	**Indeno(1,2,3-cd)pyrene**	**<0.00106**	**mg/L**	0.00106		**193-39-5**	07
N	**Isophorone** *N*	**<0.00106**	**mg/L**	0.00106		**78-59-1**	07
	Naphthalene *N*	**<0.00106**	**mg/L**	0.00106		**91-20-3**	07
	Nitrobenzene	**<0.00106**	**mg/L**	0.00106		**98-95-3**	07
N	**N-Nitrosodimethylamine**	**<0.00106**	**mg/L**	0.00106		**62-75-9**	07
N	**N-Nitrosodi-n-propylamine**	**<0.00106**	**mg/L**	0.00106		**621-64-7**	07
N	**N-Nitrosodiphenylamine (as DPA**	**<0.00106**	**mg/L**	0.00106		**86-30-6**	07
N	**p-Chloro-m-Cresol (4-Chloro-3-me**	**<0.00106**	**mg/L**	0.00106		**59-50-7**	07
N	**Pentachlorophenol**	**<0.00106**	**mg/L**	0.00106		**87-86-5**	07
N	**Phenanthrene**	**<0.00106**	**mg/L**	0.00106		**85-01-8**	07
N	**Phenol**	**<0.00106**	**mg/L**	0.00106		**108-95-2**	07
N	**Pyrene**	**<0.00106**	**mg/L**	0.00106	D	**129-00-0**	07

EPA 625-scan *Prepared:* 699946 01/13/2017 07:30:00 *Analyzed* 700404 01/16/2017 20:53:00 *SLC*

	Parameter	*Results*	*Units*	*RL*	*Flag*	*CAS*	*Bottle*
z	**2,3,7,8-TCDD Scan**	**<0.00106**	**mg/L**	0.00106			07

Sample Preparation

####### **Sample ID** *Received:* 01/11/2017

SM 4500-CN⁻ E-1999 *Prepared:* 699751 01/12/2017 10:00:00 *Analyzed* 699751 01/12/2017 10:00:00 *GWA*

N	**Cyanide Distillation**	**10/5**	**ml**				01

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#######	**Sample ID**								*Received:*	01/11/2017
SM 4500-CN⁻ E-1999		*Prepared:*	*699751*	*01/12/2017*	*10:00:00*	*Analyzed*	*699751*	*01/12/2017*	*10:00:00*	*GWA*
N **Cyanide Distillation**		**10/5**	**ml**							01
#######	**Sample ID**								*Received:*	01/11/2017
SM 4500-CN⁻ E-1999		*Prepared:*	*699751*	*01/12/2017*	*10:00:00*	*Analyzed*	*699751*	*01/12/2017*	*10:00:00*	*GWA*
N **Cyanide Distillation**		**10/5**	**ml**							01
1554315	**Sample ID**								*Received:*	01/11/2017
SM 4500-CN⁻ E-1999		*Prepared:*	*699751*	*01/12/2017*	*10:00:00*	*Analyzed*	*699751*	*01/12/2017*	*10:00:00*	*GWA*
N **Cyanide Distillation**		**10/5**	**ml**							01
SM 4500-CN⁻ E-1999		*Prepared:*	*700627*	*01/18/2017*	*10:30:00*	*Analyzed*	*700627*	*01/18/2017*	*10:30:00*	*GWA*
N **Cyanide Distillation**		**12/5**	**ml**							01
#######	**Sample ID**	Comp: 1-10 0630 to 1255							*Received:*	01/11/2017
	Composite Stop 12:55 1/10/17									
		Prepared:		*01/11/2017*	*13:20:00*	*Analyzed*		*01/11/2017*	*13:20:00*	*KAT*
z **Bottle pH**		**<2**	**SU**							01
EPA 200.2 2.8		*Prepared:*	*700049*	*01/13/2017*	*10:00:00*	*Analyzed*	*700049*	*01/13/2017*	*10:00:00*	*TES*
N **Liquid Metals Digestion**		**50/50**	**ml**							01

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#######	**Sample ID**					*Received:*	01/11/2017		
SM 4500-CN⁻ E-1999	*Prepared:*	*699751*	*01/12/2017*	*10:00:00*	*Analyzed*	*699751*	*01/12/2017*	*10:00:00*	*GWA*
N **Cyanide Distillation**	**10/5**	**ml**						01	

#######	**Sample ID**					*Received:*	01/11/2017		
	Prepared:		*01/11/2017*	*13:20:00*	*Analyzed*		*01/11/2017*	*13:20:00*	*KAT*
z **Bottle pH**	**<2**	**SU**						01	
EPA 200.2 2.8	*Prepared:*	*700049*	*01/13/2017*	*10:00:00*	*Analyzed*	*700049*	*01/13/2017*	*10:00:00*	*TES*
N **Liquid Metals Digestion**	**50/50**	**ml**						01	

#######	**Sample ID**	8 Part Grab				*Received:*	01/11/2017		
EPA 624	*Prepared:*	*699959*	*01/12/2017*	*14:38:00*	*Analyzed*	*699960*	*01/12/2017*	*14:38:00*	*JRH*
N **Acrolein/Acrylonitrile Exp.**	**Entered**							17	
N **TTO VOC 40 CFR Pt 122 Table II**	**Entered**							17	

#######	**Sample ID**	Comp: 1-10 0630 to 1255				*Received:*	01/11/2017		
	Composite Stop 12:55 1/10/17								
EPA 608	*Prepared:*	*700453*	*01/17/2017*	*07:30:00*	*Analyzed*	*700846*	*01/18/2017*	*18:47:00*	*SLC*
N **TTO Pesticides**	**Entered**							08	
EPA 608	*Prepared:*	*700456*	*01/17/2017*	*07:30:00*	*Analyzed*	*700456*	*01/17/2017*	*07:30:00*	*MCC*
PCB Liq-Liq Extr. W/Hex Exch.	**10/930**	**ml**						02	
EPA 608	*Prepared:*	*700456*	*01/17/2017*	*07:30:00*	*Analyzed*	*700878*	*01/18/2017*	*18:47:00*	*SLC*

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Results

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#######	**Sample ID**	Comp: 1-10 0630 to 1255	*Received:* 01/11/2017

Composite Stop 12:55 1/10/17

EPA 608	*Prepared:*	*700456*	*01/17/2017*	*07:30:00*	*Analyzed*	*700878*	*01/18/2017*	*18:47:00*	*SLC*	
N **TTO PCB**	**Entered**							09		
EPA 614/608/617/1657	*Prepared:*	*700453*	*01/17/2017*	*07:30:00*	*Analyzed*	*700453*	*01/17/2017*	*07:30:00*	*MCC*	
Liquid-Liquid Extr. W/Hex Ex	**10/930**		**ml**					02		
EPA 617	*Prepared:*	*700453*	*01/17/2017*	*07:30:00*	*Analyzed*	*700825*	*01/18/2017*	*18:47:00*	*SLC*	
For use with !PPR only	**Entered**							08		
EPA 625	*Prepared:*	*699946*	*01/13/2017*	*07:30:00*	*Analyzed*	*699946*	*01/13/2017*	*07:30:00*	*KRR*	
Liquid-Liquid Extraction, BNA	**1/940**		**ml**					01		
EPA 625	*Prepared:*	*699946*	*01/13/2017*	*07:30:00*	*Analyzed*	*700404*	*01/16/2017*	*20:53:00*	*SLC*	
N **TTO SVOC 40 CFR 122 Table II**	**Entered**							07		

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Qualifiers:

J - Analyte detected below quantitation limit
D - Duplicate RPD was higher than expected
S - Standard reads lower than desired
C - Confirmed value
X - Standard reads higher than desired.

We report results on an 'As Received' or wet basis unless marked 'Dry Weight'. Unless otherwise noted, testing was performed at Ana-lab's corporate laboratory that holds the following Federal and State certificates: Texas Department of Health Lead Firm Certificate 2110076, US Department of Agriculture Soil Import Permit S-37592, Texas Commisson on Environmental Quality Drinking Water Laboratory Certificate TX219, Texas Commission on Environmental Quality NELAP T104704201, Oklahoma Department of Environmental Quality Drinking Water Certification Lab ID# D9913, EPA Lab Number TX00063, USEPA Approved Perchlorate Testing Lab, Oklahoma Department of Environmental Quality Laboratory Certificate 8125, Arkansas Department of Environmental Quality Certification #03-070-0, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) # LA030020, US Department of Energy Approved, State of Kansas Department of Health and Environment Waste Water and Solid/Hazardous Waste Cert. E-10365. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.

These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.
RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.

***Signature**

Paul Zhang, Ph.D., Quality Director

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Employee Owned Integrity Caring Continual Improvement

Quality Control

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Report To

Client
Address Info

Tru-Tone Outfall-DTP1

Account	Project
####	Project #

Analytical Set **700119** **SM 4500-CN⁻ E-1999**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Cyanide, total	699751	ND	0.00256	0.005	mg/L	117217947

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Cyanide, total	0.469	0.500	mg/L	93.8	90.0 - 110	117217927
	0.546	0.500	mg/L	109	90.0 - 110	117217937
	0.452	0.500	mg/L	90.4	90.0 - 110	117217946
	0.542	0.500	mg/L	108	90.0 - 110	117217950
	0.540	0.500	mg/L	108	90.0 - 110	117217961
	0.455	0.500	mg/L	91.0	90.0 - 110	117217970
	0.545	0.500	mg/L	109	90.0 - 110	117217980
	0.550	0.500	mg/L	110	90.0 - 110	117217990
	0.505	0.500	mg/L	101	90.0 - 110	117217995

Duplicate

Parameter	Sample	Result	Unknown	Unit	RPD		Limit%
Cyanide, total	1553142	ND	ND	mg/L			20.0
	1554214	0.0662	0.0818	mg/L	21.1	*	20.0

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Cyanide, total	0.212	0.200	mg/L	106	90.0 - 110	117217926

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Cyanide, total	699751	0.186	0.212	0.200	90.0 - 110	93.0	106	mg/L	13.1	20.0

Mat. Spike

Parameter	Sample	Spike	Unknown	Known	Units	Recovery %	Limits %	File	
Cyanide, total	1553142	0.212	0.0493	0.200	mg/L	106	90.0 - 110	117217953	
	1554214	0.192	0.0818	0.200	mg/L	55.1	90.0 - 110	117217956	*

Analytical Set **700762** **SM 4500-CN⁻ E-1999**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Cyanide, total	700627	ND	0.00256	0.005	mg/L	117229590

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Cyanide, total	0.516	0.500	mg/L	103	90.0 - 110	117229589
	0.499	0.500	mg/L	99.8	90.0 - 110	117229599
	0.496	0.500	mg/L	99.2	90.0 - 110	117229606

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Duplicate

Parameter	Sample	Result	Unknown	Unit	RPD	Limit%
Cyanide, total	1553750	ND	ND	mg/L		20.0

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Cyanide, total	0.200	0.200	mg/L	100	90.0 - 110	117229588

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Cyanide, total	700627	0.187	0.199	0.200	90.0 - 110	93.5	99.5	mg/L	6.22	20.0

Mat. Spike

Parameter	Sample	Spike	Unknown	Known	Units	Recovery %	Limits %	File
Cyanide, total	1553750	0.500	ND	0.480	mg/L	104	90.0 - 110	117229595

Analytical Set **700200** **EPA 200.8 5.4**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units		File
Cadmium, Total	700049	ND	0.000095	0.0002	mg/L		117219848
Chromium, Total	700049	0.000207	0.0000423	0.0005	mg/L	*	117219848
Copper, Total	700049	ND	0.0005	0.001	mg/L		117219848
Lead, Total	700049	ND	0.00025	0.0005	mg/L		117219848
Nickel, Total	700049	ND	0.0005	0.001	mg/L		117219848
Silver, Total	700049	ND	0.0000628	0.0002	mg/L		117219848
Zinc, Total	700049	ND	0.0025	0.005	mg/L		117219848

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Cadmium, Total	0.0492	0.05	mg/L	98.4	90.0 - 110	117219847
	0.0492	0.05	mg/L	98.4	90.0 - 110	117219849
	0.0486	0.05	mg/L	97.2	90.0 - 110	117219858
	0.0487	0.05	mg/L	97.4	90.0 - 110	117219867
	0.0487	0.05	mg/L	97.4	90.0 - 110	117219877
	0.0482	0.05	mg/L	96.4	90.0 - 110	117219888
	0.0484	0.05	mg/L	96.8	90.0 - 110	117219898
	0.0477	0.05	mg/L	95.4	90.0 - 110	117219906
Chromium, Total	0.0509	0.05	mg/L	102	90.0 - 110	117219847
	0.0512	0.05	mg/L	102	90.0 - 110	117219849
	0.0502	0.05	mg/L	100	90.0 - 110	117219858
	0.0503	0.05	mg/L	101	90.0 - 110	117219867
	0.0504	0.05	mg/L	101	90.0 - 110	117219877
	0.0503	0.05	mg/L	101	90.0 - 110	117219888
	0.0511	0.05	mg/L	102	90.0 - 110	117219898
	0.0499	0.05	mg/L	99.8	90.0 - 110	117219906
Copper, Total	0.0498	0.05	mg/L	99.6	90.0 - 110	117219847
	0.0504	0.05	mg/L	101	90.0 - 110	117219849
	0.0501	0.05	mg/L	100	90.0 - 110	117219858
	0.0492	0.05	mg/L	98.4	90.0 - 110	117219867
	0.050	0.05	mg/L	100	90.0 - 110	117219877
	0.0487	0.05	mg/L	97.4	90.0 - 110	117219888
	0.0489	0.05	mg/L	97.8	90.0 - 110	117219898
	0.0478	0.05	mg/L	95.6	90.0 - 110	117219906

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CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Lead, Total	0.0509	0.05	mg/L	102	90.0 - 110	117219847
	0.0503	0.05	mg/L	101	90.0 - 110	117219849
	0.0498	0.05	mg/L	99.6	90.0 - 110	117219858
	0.0497	0.05	mg/L	99.4	90.0 - 110	117219867
	0.0498	0.05	mg/L	99.6	90.0 - 110	117219877
	0.0501	0.05	mg/L	100	90.0 - 110	117219888
	0.0502	0.05	mg/L	100	90.0 - 110	117219898
	0.0501	0.05	mg/L	100	90.0 - 110	117219906
Nickel, Total	0.0505	0.05	mg/L	101	90.0 - 110	117219847
	0.051	0.05	mg/L	102	90.0 - 110	117219849
	0.0493	0.05	mg/L	98.6	90.0 - 110	117219858
	0.0496	0.05	mg/L	99.2	90.0 - 110	117219867
	0.0492	0.05	mg/L	98.4	90.0 - 110	117219877
	0.049	0.05	mg/L	98.0	90.0 - 110	117219888
	0.0494	0.05	mg/L	98.8	90.0 - 110	117219898
	0.0491	0.05	mg/L	98.2	90.0 - 110	117219906
Silver, Total	0.0509	0.05	mg/L	102	90.0 - 110	117219847
	0.0519	0.05	mg/L	104	90.0 - 110	117219849
	0.0505	0.05	mg/L	101	90.0 - 110	117219858
	0.0505	0.05	mg/L	101	90.0 - 110	117219867
	0.0504	0.05	mg/L	101	90.0 - 110	117219877
	0.0499	0.05	mg/L	99.8	90.0 - 110	117219888
	0.0502	0.05	mg/L	100	90.0 - 110	117219898
	0.0494	0.05	mg/L	98.8	90.0 - 110	117219906
Zinc, Total	0.0494	0.05	mg/L	98.8	90.0 - 110	117219847
	0.0496	0.05	mg/L	99.2	90.0 - 110	117219849
	0.0501	0.05	mg/L	100	90.0 - 110	117219858
	0.0499	0.05	mg/L	99.8	90.0 - 110	117219867
	0.050	0.05	mg/L	100	90.0 - 110	117219877
	0.0496	0.05	mg/L	99.2	90.0 - 110	117219888
	0.0493	0.05	mg/L	98.6	90.0 - 110	117219898
	0.0477	0.05	mg/L	95.4	90.0 - 110	117219906

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Cadmium, Total	0.0501	0.05	mg/L	100	90.0 - 110	117219843
Chromium, Total	0.0522	0.05	mg/L	104	90.0 - 110	117219843
Copper, Total	0.0508	0.05	mg/L	102	90.0 - 110	117219843
Lead, Total	0.0515	0.05	mg/L	103	90.0 - 110	117219843
Nickel, Total	0.0523	0.05	mg/L	105	90.0 - 110	117219843
Silver, Total	0.052	0.05	mg/L	104	90.0 - 110	117219843
Zinc, Total	0.0507	0.05	mg/L	101	90.0 - 110	117219843

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Cadmium, Total	700049	0.257	0.259	0.250	85.0 - 115	103	104	mg/L	0.775	20.0
Chromium, Total	700049	0.521	0.526	0.500	85.0 - 115	104	105	mg/L	0.955	20.0
Copper, Total	700049	0.522	0.524	0.500	85.0 - 115	104	105	mg/L	0.382	20.0
Lead, Total	700049	0.512	0.515	0.500	85.0 - 115	102	103	mg/L	0.584	20.0
Nickel, Total	700049	0.527	0.530	0.500	85.0 - 115	105	106	mg/L	0.568	20.0

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LCS Dup

Parameter	PrepSet	LCS	LCSD		Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Silver, Total	700049	0.103	0.103		0.100	85.0 - 115	103	103	mg/L	0	20.0
Zinc, Total	700049	0.512	0.514		0.500	85.0 - 115	102	103	mg/L	0.390	20.0

LDR

Parameter	Reading	Known	Units	Recover%	Limits%	File
Cadmium, Total	9.73	10	mg/L	97.3	90.0 - 110	117219846
Chromium, Total	9.75	10	mg/L	97.5	90.0 - 110	117219846
Copper, Total	9.31	10	mg/L	93.1	90.0 - 110	117219846
Lead, Total	9.66	10	mg/L	96.6	90.0 - 110	117219846
Nickel, Total	9.59	10	mg/L	95.9	90.0 - 110	117219846
Zinc, Total	9.36	10	mg/L	93.6	90.0 - 110	117219846

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Cadmium, Total	1554806	0.253	0.252	ND	0.250	70.0 - 130	101	101	mg/L	0.396	20.0
Chromium, Total	1554806	0.504	0.506	0.000399	0.500	70.0 - 130	101	101	mg/L	0.396	20.0
Copper, Total	1554806	0.500	0.509	0.00701	0.500	70.0 - 130	98.6	100	mg/L	1.81	20.0
Lead, Total	1554806	0.505	0.501	0.000263	0.500	70.0 - 130	101	100	mg/L	0.796	20.0
Nickel, Total	1554806	0.493	0.498	0.00076	0.500	70.0 - 130	98.4	99.4	mg/L	1.01	20.0
Silver, Total	1554806	0.0987	0.0991	ND	0.100	70.0 - 130	98.7	99.1	mg/L	0.404	20.0
Zinc, Total	1554806	0.503	0.506	0.00881	0.500	70.0 - 130	98.8	99.4	mg/L	0.605	20.0
Cadmium, Total	1554896	0.253	0.254	ND	0.250	70.0 - 130	101	102	mg/L	0.394	20.0
Chromium, Total	1554896	0.519	0.514	0.000587	0.500	70.0 - 130	104	103	mg/L	0.969	20.0
Copper, Total	1554896	0.518	0.514	0.00109	0.500	70.0 - 130	103	103	mg/L	0.777	20.0
Lead, Total	1554896	0.510	0.513	ND	0.500	70.0 - 130	102	103	mg/L	0.587	20.0
Nickel, Total	1554896	0.512	0.507	ND	0.500	70.0 - 130	102	101	mg/L	0.981	20.0
Silver, Total	1554896	0.0994	0.0992	ND	0.100	70.0 - 130	99.4	99.2	mg/L	0.201	20.0
Zinc, Total	1554896	0.541	0.540	0.0289	0.500	70.0 - 130	102	102	mg/L	0.195	20.0

Analytical Set **699960** **EPA 624**

BFB

Parameter	Sample	RefMass	Reading	%	Limits%	File
BFB Mass 173	699960	174	355	1.6	0 - 2.00	117215457
BFB Mass 174	699960	95.0	22773	91.4	50.0 - 100	117215457
BFB Mass 175	699960	174	1720	7.6	5.00 - 9.00	117215457
BFB Mass 176	699960	174	22357	98.2	95.0 - 101	117215457
BFB Mass 177	699960	176	1458	6.5	5.00 - 9.00	117215457
BFB Mass 50	699960	95.0	4943	19.8	15.0 - 40.0	117215457
BFB Mass 75	699960	95.0	13608	54.6	30.0 - 60.0	117215457
BFB Mass 95	699960	95.0	24907	100.0	100 - 100	117215457
BFB Mass 96	699960	95.0	1740	7.0	5.00 - 9.00	117215457

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Acrolein	699960	ND	4.78	5.00	ug/L	117215461
Acrylonitrile	699960	ND	0.698	1.00	ug/L	117215461

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Acrolein	34.0	40.0	ug/L	85.0	70.0 - 130	117215458
Acrylonitrile	44.1	40.0	ug/L	110	70.0 - 130	117215458

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IS Areas

Parameter	Sample	Type	Reading	CCVISM	Low	High	File	PrepSet
1,4-DichlorobenzeneD4 (ISTD)	699960	LCS	117000	114800	57380	172100	117215459	699960
	699960	LCS Dup	114200	114800	57380	172100	117215460	699960
	699960	Blank	102100	114800	57380	172100	117215461	699960
ChlorobenzeneD5 (ISTD)	699960	LCS	185000	181400	90710	272100	117215459	699960
	699960	LCS Dup	176400	181400	90710	272100	117215460	699960
	699960	Blank	164000	181400	90710	272100	117215461	699960
1,4-DichlorobenzeneD4 (ISTD)	#######	UNKNOWN	101300	114800	57380	172100	117215463	699959
ChlorobenzeneD5 (ISTD)	#######	UNKNOWN	168100	181400	90710	272100	117215463	699959

IS RetTime

Parameter	Sample	Type	Reading	CCVISM	Low	High	File	PrepSet
1,4-DichlorobenzeneD4 (ISTD)	699960	LCS	12.01	12.01	11.95	12.07	117215459	699960
	699960	LCS Dup	12.01	12.01	11.95	12.07	117215460	699960
	699960	Blank	12.01	12.01	11.95	12.07	117215461	699960
ChlorobenzeneD5 (ISTD)	699960	LCS	9.622	9.622	9.562	9.682	117215459	699960
	699960	LCS Dup	9.622	9.622	9.562	9.682	117215460	699960
	699960	Blank	9.622	9.622	9.562	9.682	117215461	699960
1,4-DichlorobenzeneD4 (ISTD)	#######	UNKNOWN	12.01	12.01	11.95	12.07	117215463	699959
ChlorobenzeneD5 (ISTD)	#######	UNKNOWN	9.622	9.622	9.562	9.682	117215463	699959

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Acrolein	699960	29.5	35.8	40.0	0.100 - 425	73.8	89.5	ug/L	19.2	30.0
Acrylonitrile	699960	39.6	43.5	40.0	71.0 - 117	99.0	109	ug/L	9.62	30.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Acrolein	1554595	9.33	11.3	ND	40.0	70.0 - 130	23.3 *	28.2 *	ug/L	19.1	30.0
Acrylonitrile	1554595	39.4	43.5	ND	40.0	70.0 - 130	98.5	109	ug/L	9.89	30.0

Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
1,2-DCA-d4 (SURR)	699960	CCV	21.2	20.0	ug/L	106	70.0 - 130	117215458
	699960	LCS	20.8	20.0	ug/L	104	70.0 - 130	117215459
	699960	LCS Dup	21.6	20.0	ug/L	108	70.0 - 130	117215460
	699960	Blank	22.8	20.0	ug/L	114	70.0 - 130	117215461
Bromofluorobenzene (SURR)	699960	CCV	20.3	20.0	ug/L	102	70.0 - 142	117215458
	699960	LCS	20.7	20.0	ug/L	104	70.0 - 142	117215459
	699960	LCS Dup	20.3	20.0	ug/L	102	70.0 - 142	117215460
	699960	Blank	20.6	20.0	ug/L	103	70.0 - 142	117215461
Dibromofluoromethane (SURR)	699960	CCV	20.3	20.0	ug/L	102	70.0 - 140	117215458
	699960	LCS	21.4	20.0	ug/L	107	70.0 - 140	117215459
	699960	LCS Dup	21.3	20.0	ug/L	106	70.0 - 140	117215460
	699960	Blank	22.4	20.0	ug/L	112	70.0 - 140	117215461
TolueneD8 (SURR)	699960	CCV	20.1	20.0	ug/L	100	70.0 - 140	117215458
	699960	LCS	20.2	20.0	ug/L	101	70.0 - 140	117215459
	699960	LCS Dup	20.6	20.0	ug/L	103	70.0 - 140	117215460

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Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
ToluneneD8 (SURR)	699960	Blank	20.8	20.0	ug/L	104	70.0 - 140	117215461
1,2-DCA-d4 (SURR)	#######	UNKNOWN	21.8	20.0	ug/L	109	70.0 - 130	117215463
Bromofluorobenzene (SURR)	#######	UNKNOWN	20.9	20.0	ug/L	104	70.0 - 142	117215463
Dibromofluoromethane (SURR)	#######	UNKNOWN	21.1	20.0	ug/L	106	70.0 - 140	117215463
ToluneneD8 (SURR)	#######	UNKNOWN	20.1	20.0	ug/L	100	70.0 - 140	117215463
1,2-DCA-d4 (SURR)	1554595	MS	22.2	20.0	ug/L	111	70.0 - 130	117215468
	1554595	MSD	22.2	20.0	ug/L	111	70.0 - 130	117215469
Bromofluorobenzene (SURR)	1554595	MS	20.6	20.0	ug/L	103	70.0 - 142	117215468
	1554595	MSD	21.3	20.0	ug/L	106	70.0 - 142	117215469
Dibromofluoromethane (SURR)	1554595	MS	22.3	20.0	ug/L	112	70.0 - 140	117215468
	1554595	MSD	21.7	20.0	ug/L	108	70.0 - 140	117215469
ToluneneD8 (SURR)	1554595	MS	20.7	20.0	ug/L	104	70.0 - 140	117215468
	1554595	MSD	20.9	20.0	ug/L	104	70.0 - 140	117215469

Analytical Set **699979** **EPA 624**

BFB

Parameter	Sample	RefMass	Reading	%	Limits%	File
BFB Mass 173	699979	174	355	1.6	0 - 2.00	117215660
BFB Mass 174	699979	95.0	22773	91.4	50.0 - 100	117215660
BFB Mass 175	699979	174	1720	7.6	5.00 - 9.00	117215660
BFB Mass 176	699979	174	22357	98.2	95.0 - 101	117215660
BFB Mass 177	699979	176	1458	6.5	5.00 - 9.00	117215660
BFB Mass 50	699979	95.0	4943	19.8	15.0 - 40.0	117215660
BFB Mass 75	699979	95.0	13608	54.6	30.0 - 60.0	117215660
BFB Mass 95	699979	95.0	24907	100.0	100 - 100	117215660
BFB Mass 96	699979	95.0	1740	7.0	5.00 - 9.00	117215660

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
1,1,1,2-Tetrachloroethane	699979	ND	0.388	1.00	ug/L	117215664
1,1,1-Trichloroethane	699979	ND	0.265	1.00	ug/L	117215664
1,1,2,2-Tetrachloroethane	699979	ND	0.270	1.00	ug/L	117215664
1,1,2-Trichloroethane	699979	ND	0.425	1.00	ug/L	117215664
1,1-Dichloroethane	699979	ND	0.496	1.00	ug/L	117215664
1,1-Dichloroethylene	699979	ND	0.404	1.00	ug/L	117215664
1,2-Dichloroethane	699979	ND	0.456	1.00	ug/L	117215664
1,2-Dichloropropane	699979	ND	0.415	1.00	ug/L	117215664
2-Chloroethylvinyl ether	699979	ND	0.423	1.00	ug/L	117215664
Benzene	699979	ND	0.187	1.00	ug/L	117215664
Bromodichloromethane	699979	ND	0.307	1.00	ug/L	117215664
Bromoform	699979	ND	0.288	1.00	ug/L	117215664
Bromomethane (Methyl Bromi	699979	ND	0.554	1.00	ug/L	117215664
Carbon Tetrachloride	699979	ND	0.359	1.00	ug/L	117215664
Chlorobenzene	699979	ND	0.226	1.00	ug/L	117215664
Chloroethane	699979	ND	0.396	1.00	ug/L	117215664
Chloroform	699979	ND	0.211	1.00	ug/L	117215664

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Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Chloromethane	699979	ND	0.391	1.00	ug/L	117215664
cis-1,2-Dichloroethylene	699979	ND	0.502	1.00	ug/L	117215664
cis-1,3-Dichloropropene	699979	ND	0.488	1.00	ug/L	117215664
Dibromochloromethane	699979	ND	0.185	1.00	ug/L	117215664
Dichlorodifluoromethane	699979	ND	0.405	1.00	ug/L	117215664
Dichloromethane	699979	ND	0.570	1.00	ug/L	117215664
Ethylbenzene	699979	ND	0.180	1.00	ug/L	117215664
m- and p-Xylene	699979	ND	0.325	1.00	ug/L	117215664
m-Dichlorobenzene	699979	ND	0.315	1.00	ug/L	117215664
o-Dichlorobenzene	699979	ND	0.292	1.00	ug/L	117215664
o-Xylene	699979	ND	0.190	1.00	ug/L	117215664
p-Dichlorobenzene	699979	ND	0.294	1.00	ug/L	117215664
Tetrachloroethylene	699979	ND	0.391	1.00	ug/L	117215664
Toluene	699979	ND	0.314	1.00	ug/L	117215664
trans-1,2-Dichloroethylene	699979	ND	0.518	1.00	ug/L	117215664
trans-1,3-Dichloropropene	699979	ND	0.223	1.00	ug/L	117215664
Trichloroethylene	699979	ND	0.562	1.00	ug/L	117215664
Trichlorofluoromethane	699979	ND	0.514	1.00	ug/L	117215664
Vinyl chloride	699979	ND	0.228	1.00	ug/L	117215664

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
1,1,1,2-Tetrachloroethane	19.0	20.0	ug/L	95.0	70.0 - 130	117215661
1,1,1-Trichloroethane	20.7	20.0	ug/L	104	70.0 - 130	117215661
1,1,2,2-Tetrachloroethane	18.2	20.0	ug/L	91.0	70.0 - 130	117215661
1,1,2-Trichloroethane	18.1	20.0	ug/L	90.5	70.0 - 130	117215661
1,1-Dichloroethane	19.7	20.0	ug/L	98.5	70.0 - 130	117215661
1,1-Dichloroethylene	19.7	20.0	ug/L	98.5	70.0 - 130	117215661
1,2-Dichloroethane	20.2	20.0	ug/L	101	70.0 - 130	117215661
1,2-Dichloropropane	20.1	20.0	ug/L	100	70.0 - 130	117215661
2-Chloroethylvinyl ether	16.7	20.0	ug/L	83.5	70.0 - 130	117215661
Benzene	19.3	20.0	ug/L	96.5	70.0 - 130	117215661
Bromodichloromethane	18.4	20.0	ug/L	92.0	70.0 - 130	117215661
Bromoform	16.7	20.0	ug/L	83.5	70.0 - 130	117215661
Bromomethane (Methyl Bromi	15.1	20.0	ug/L	75.5	70.0 - 130	117215661
Carbon Tetrachloride	19.7	20.0	ug/L	98.5	70.0 - 130	117215661
Chlorobenzene	18.4	20.0	ug/L	92.0	70.0 - 130	117215661
Chloroethane	23.3	20.0	ug/L	116	70.0 - 130	117215661
Chloroform	19.6	20.0	ug/L	98.0	70.0 - 130	117215661
Chloromethane	19.7	20.0	ug/L	98.5	70.0 - 130	117215661
cis-1,2-Dichloroethylene	19.7	20.0	ug/L	98.5	70.0 - 130	117215661
cis-1,3-Dichloropropene	19.1	20.0	ug/L	95.5	70.0 - 130	117215661
Dibromochloromethane	17.5	20.0	ug/L	87.5	70.0 - 130	117215661
Dichlorodifluoromethane	19.2	20.0	ug/L	96.0	70.0 - 130	117215661
Dichloromethane	18.6	20.0	ug/L	93.0	70.0 - 130	117215661
Ethylbenzene	17.8	20.0	ug/L	89.0	70.0 - 130	117215661
m- and p-Xylene	35.5	40.0	ug/L	88.8	70.0 - 130	117215661
m-Dichlorobenzene	18.6	20.0	ug/L	93.0	70.0 - 130	117215661
o-Dichlorobenzene	18.3	20.0	ug/L	91.5	70.0 - 130	117215661

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CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
o-Xylene	18.4	20.0	ug/L	92.0	70.0 - 130	117215661
p-Dichlorobenzene	18.6	20.0	ug/L	93.0	70.0 - 130	117215661
Tetrachloroethylene	19.2	20.0	ug/L	96.0	70.0 - 130	117215661
Toluene	18.4	20.0	ug/L	92.0	70.0 - 130	117215661
trans-1,2-Dichloroethylene	19.5	20.0	ug/L	97.5	70.0 - 130	117215661
trans-1,3-Dichloropropene	17.0	20.0	ug/L	85.0	70.0 - 130	117215661
Trichloroethylene	19.0	20.0	ug/L	95.0	70.0 - 130	117215661
Trichlorofluoromethane	21.0	20.0	ug/L	105	70.0 - 130	117215661

IS Areas

Parameter	Sample	Type	Reading	CCVISM	Low	High	File	PrepSet
1,4-DichlorobenzeneD4 (ISTD)	699979	LCS	117000	114800	57380	172100	117215662	699979
	699979	LCS Dup	114200	114800	57380	172100	117215663	699979
	699979	Blank	102100	114800	57380	172100	117215664	699979
ChlorobenzeneD5 (ISTD)	699979	LCS	185000	181400	90710	272100	117215662	699979
	699979	LCS Dup	176400	181400	90710	272100	117215663	699979
	699979	Blank	164000	181400	90710	272100	117215664	699979
1,4-DichlorobenzeneD4 (ISTD)	#######	UNKNOWN	101300	114800	57380	172100	117215666	699959
ChlorobenzeneD5 (ISTD)	#######	UNKNOWN	168100	181400	90710	272100	117215666	699959

IS RetTime

Parameter	Sample	Type	Reading	CCVISM	Low	High	File	PrepSet
1,4-DichlorobenzeneD4 (ISTD)	699979	LCS	12.01	12.01	11.95	12.07	117215662	699979
	699979	LCS Dup	12.01	12.01	11.95	12.07	117215663	699979
	699979	Blank	12.01	12.01	11.95	12.07	117215664	699979
ChlorobenzeneD5 (ISTD)	699979	LCS	9.622	9.622	9.562	9.682	117215662	699979
	699979	LCS Dup	9.622	9.622	9.562	9.682	117215663	699979
	699979	Blank	9.622	9.622	9.562	9.682	117215664	699979
1,4-DichlorobenzeneD4 (ISTD)	#######	UNKNOWN	12.01	12.01	11.95	12.07	117215666	699959
ChlorobenzeneD5 (ISTD)	#######	UNKNOWN	9.622	9.622	9.562	9.682	117215666	699959

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
1,1,1,2-Tetrachloroethane	699979	21.3	21.6	20.0	81.0 - 118	106	108	ug/L	1.87	14.0
1,1,1-Trichloroethane	699979	20.5	20.9	20.0	75.0 - 125	102	104	ug/L	1.94	30.0
1,1,2,2-Tetrachloroethane	699979	20.0	20.5	20.0	60.0 - 140	100	102	ug/L	1.98	30.0
1,1,2-Trichloroethane	699979	20.0	21.2	20.0	71.0 - 129	100	106	ug/L	5.83	30.0
1,1-Dichloroethane	699979	21.1	21.0	20.0	72.0 - 128	106	105	ug/L	0.948	30.0
1,1-Dichloroethylene	699979	20.2	20.2	20.0	50.0 - 150	101	101	ug/L	0	30.0
1,2-Dichloroethane	699979	22.1	22.3	20.0	68.0 - 132	110	112	ug/L	1.80	30.0
1,2-Dichloropropane	699979	21.7	21.9	20.0	34.0 - 166	108	110	ug/L	1.83	30.0
2-Chloroethylvinyl ether	699979	19.1	19.9	20.0	10.0 - 224	95.5	99.5	ug/L	4.10	30.0
Benzene	699979	20.2	20.8	20.0	64.0 - 136	101	104	ug/L	2.93	30.0
Bromodichloromethane	699979	20.1	20.5	20.0	65.0 - 135	100	102	ug/L	1.98	30.0
Bromoform	699979	19.1	18.8	20.0	71.0 - 129	95.5	94.0	ug/L	1.58	30.0
Bromomethane (Methyl	699979	12.1	9.83	20.0	14.0 - 186	60.5	49.2	ug/L	20.6	30.0
Carbon Tetrachloride	699979	19.6	19.9	20.0	73.0 - 127	98.0	99.5	ug/L	1.52	30.0
Bromi										

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LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Chlorobenzene	699979	19.9	19.7	20.0	66.0 - 134	99.5	98.5	ug/L	1.01	30.0
Chloroethane	699979	19.4	17.6	20.0	38.0 - 162	97.0	88.0	ug/L	9.73	30.0
Chloroform	699979	20.2	21.3	20.0	67.0 - 133	101	106	ug/L	4.83	30.0
Chloromethane	699979	17.6	18.6	20.0	10.0 - 204	88.0	93.0	ug/L	5.52	30.0
cis-1,2-Dichloroethylene	699979	20.7	19.6	20.0	78.0 - 114	104	98.0	ug/L	5.94	14.0
cis-1,3-Dichloropropene	699979	17.9	18.5	20.0	24.0 - 176	89.5	92.5	ug/L	3.30	30.0
Dibromochloromethane	699979	19.2	19.3	20.0	67.0 - 133	96.0	96.5	ug/L	0.519	30.0
Dichlorodifluoromethane	699979	15.9	16.3	20.0	45.0 - 146	79.5	81.5	ug/L	2.48	14.0
Dichloromethane	699979	19.5	19.5	20.0	60.0 - 140	97.5	97.5	ug/L	0	30.0
Ethylbenzene	699979	19.2	18.9	20.0	59.0 - 141	96.0	94.5	ug/L	1.57	30.0
m- and p-Xylene	699979	38.6	39.2	40.0	80.0 - 117	96.5	98.0	ug/L	1.54	14.0
m-Dichlorobenzene	699979	19.2	19.5	20.0	73.0 - 127	96.0	97.5	ug/L	1.55	30.0
o-Dichlorobenzene	699979	19.6	19.4	20.0	63.0 - 137	98.0	97.0	ug/L	1.03	30.0
o-Xylene	699979	19.3	19.6	20.0	82.0 - 118	96.5	98.0	ug/L	1.54	14.0
p-Dichlorobenzene	699979	19.6	19.7	20.0	63.0 - 137	98.0	98.5	ug/L	0.509	30.0
Tetrachloroethylene	699979	19.9	19.4	20.0	73.0 - 126	99.5	97.0	ug/L	2.54	30.0
Toluene	699979	19.6	19.8	20.0	74.0 - 126	98.0	99.0	ug/L	1.02	30.0
trans-1,2-Dichloroethylene	699979	19.6	20.6	20.0	69.0 - 131	98.0	103	ug/L	4.98	30.0
trans-1,3-Dichloropropene	699979	18.8	18.3	20.0	50.0 - 150	94.0	91.5	ug/L	2.70	30.0
Trichloroethylene	699979	20.7	20.9	20.0	66.0 - 133	104	104	ug/L	0	30.0
Trichlorofluoromethane	699979	18.0	18.9	20.0	48.0 - 152	90.0	94.5	ug/L	4.88	30.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
1,1,1,2-Tetrachloroethane	1554595	20.5	21.2	ND	20.0	70.0 - 130	102	106	ug/L	3.36	30.0
1,1,1-Trichloroethane	1554595	21.1	20.4	ND	20.0	52.0 - 162	106	102	ug/L	3.37	30.0
1,1,2,2-Tetrachloroethane	1554595	16.4	17.5	ND	20.0	46.0 - 157	82.0	87.5	ug/L	6.49	30.0
1,1,2-Trichloroethane	1554595	20.8	20.1	ND	20.0	52.0 - 150	104	100	ug/L	3.42	30.0
1,1-Dichloroethane	1554595	21.9	20.8	ND	20.0	59.0 - 155	110	104	ug/L	5.15	30.0
1,1-Dichloroethylene	1554595	21.9	21.8	ND	20.0	0.100 - 234	110	109	ug/L	0.458	30.0
1,2-Dichloroethane	1554595	21.8	22.2	ND	20.0	49.0 - 155	109	111	ug/L	1.82	30.0
1,2-Dichloropropane	1554595	22.4	21.9	ND	20.0	0.100 - 210	112	110	ug/L	2.26	30.0
2-Chloroethylvinyl ether	1554595	9.93	12.7	ND	20.0	0.100 - 305	49.6	63.5	ug/L	24.5	30.0
Benzene	1554595	20.8	20.2	ND	20.0	37.0 - 151	104	101	ug/L	2.93	30.0
Bromodichloromethane	1554595	35.2	34.4	15.2	20.0	35.0 - 155	100	96.0	ug/L	4.08	30.0
Bromoform	1554595	17.9	17.9	0.840	20.0	45.0 - 169	85.3	85.3	ug/L	0	30.0
Bromomethane (Methyl Bromi	1554595	4.08	4.24	ND	20.0	0.100 - 242	20.4	21.2	ug/L	3.85	30.0
Carbon Tetrachloride	1554595	20.7	20.4	ND	20.0	70.0 - 140	104	102	ug/L	1.46	30.0
Chlorobenzene	1554595	20.2	19.4	ND	20.0	37.0 - 160	101	97.0	ug/L	4.04	30.0
Chloroethane	1554595	21.6	20.0	ND	20.0	14.0 - 230	108	100	ug/L	7.69	30.0
Chloroform	1554595	42.5	40.7	22.0	20.0	51.0 - 138	102	93.5	ug/L	9.18	30.0
Chloromethane	1554595	17.0	15.9	ND	20.0	0.100 - 273	85.0	79.5	ug/L	6.69	30.0
cis-1,2-Dichloroethylene	1554595	21.1	20.0	ND	20.0	70.0 - 130	106	100	ug/L	5.35	30.0
cis-1,3-Dichloropropene	1554595	15.8	14.4	ND	20.0	0.100 - 227	79.0	72.0	ug/L	9.27	30.0
Dibromochloromethane	1554595	27.5	26.2	8.64	20.0	53.0 - 149	94.3	87.8	ug/L	7.14	30.0
Dichlorodifluoromethane	1554595	16.0	15.7	ND	20.0	70.0 - 130	80.0	78.5	ug/L	1.89	30.0
Dichloromethane	1554595	20.8	20.1	ND	20.0	0.100 - 221	104	100	ug/L	3.42	30.0
Ethylbenzene	1554595	19.9	18.5	ND	20.0	37.0 - 162	99.5	92.5	ug/L	7.29	30.0
m- and p-Xylene	1554595	37.6	37.3	ND	40.0	70.0 - 130	94.0	93.2	ug/L	0.801	30.0

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MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
m-Dichlorobenzene	1554595	19.4	18.9	ND	20.0	59.0 - 156	97.0	94.5	ug/L	2.61	30.0
o-Dichlorobenzene	1554595	19.4	20.2	ND	20.0	18.0 - 190	97.0	101	ug/L	4.04	30.0
o-Xylene	1554595	19.4	18.5	ND	20.0	70.0 - 130	97.0	92.5	ug/L	4.75	30.0
p-Dichlorobenzene	1554595	19.7	19.3	ND	20.0	18.0 - 190	98.5	96.5	ug/L	2.05	30.0
Tetrachloroethylene	1554595	21.1	20.4	ND	20.0	64.0 - 148	106	102	ug/L	3.37	30.0
Toluene	1554595	19.9	19.7	ND	20.0	47.0 - 150	99.5	98.5	ug/L	1.01	30.0
trans-1,2-Dichloroethylene	1554595	21.9	21.5	ND	20.0	54.0 - 156	110	108	ug/L	1.84	30.0
trans-1,3-Dichloropropene	1554595	16.4	16.3	ND	20.0	17.0 - 183	82.0	81.5	ug/L	0.612	30.0
Trichloroethylene	1554595	23.9	23.9	ND	20.0	71.0 - 157	120	120	ug/L	0	30.0
Trichlorofluoromethane	1554595	18.5	18.1	ND	20.0	17.0 - 181	92.5	90.5	ug/L	2.19	30.0

Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
1,2-DCA-d4 (SURR)	699979	CCV	21.2	20.0	ug/L	106	70.0 - 130	117215661
	699979	LCS	20.8	20.0	ug/L	104	70.0 - 130	117215662
	699979	LCS Dup	21.6	20.0	ug/L	108	70.0 - 130	117215663
	699979	Blank	22.8	20.0	ug/L	114	70.0 - 130	117215664
Bromofluorobenzene	699979	CCV	20.3	20.0	ug/L	102	70.0 - 142	117215661
(SURR)	699979	LCS	20.7	20.0	ug/L	104	70.0 - 142	117215662
	699979	LCS Dup	20.3	20.0	ug/L	102	70.0 - 142	117215663
	699979	Blank	20.6	20.0	ug/L	103	70.0 - 142	117215664
Dibromofluoromethane	699979	CCV	20.3	20.0	ug/L	102	70.0 - 140	117215661
(SURR)	699979	LCS	21.4	20.0	ug/L	107	70.0 - 140	117215662
	699979	LCS Dup	21.3	20.0	ug/L	106	70.0 - 140	117215663
	699979	Blank	22.4	20.0	ug/L	112	70.0 - 140	117215664
TolueneD8 (SURR)	699979	CCV	20.1	20.0	ug/L	100	70.0 - 140	117215661
	699979	LCS	20.2	20.0	ug/L	101	70.0 - 140	117215662
	699979	LCS Dup	20.6	20.0	ug/L	103	70.0 - 140	117215663
	699979	Blank	20.8	20.0	ug/L	104	70.0 - 140	117215664
1,2-DCA-d4 (SURR)	#######	UNKNOWN	21.8	20.0	ug/L	109	70.0 - 130	117215666
Bromofluorobenzene	#######	UNKNOWN	20.9	20.0	ug/L	104	70.0 - 142	117215666
(SURR)								
Dibromofluoromethane (SURR)	#######	UNKNOWN	21.1	20.0	ug/L	106	70.0 - 140	117215666
TolueneD8 (SURR)	#######	UNKNOWN	20.1	20.0	ug/L	100	70.0 - 140	117215666
1,2-DCA-d4 (SURR)	1554595	MS	22.2	20.0	ug/L	111	70.0 - 130	117215670
	1554595	MSD	22.2	20.0	ug/L	111	70.0 - 130	117215671
Bromofluorobenzene	1554595	MS	20.6	20.0	ug/L	103	70.0 - 142	117215670
(SURR)	1554595	MSD	21.3	20.0	ug/L	106	70.0 - 142	117215671
Dibromofluoromethane	1554595	MS	22.3	20.0	ug/L	112	70.0 - 140	117215670
(SURR)	1554595	MSD	21.7	20.0	ug/L	108	70.0 - 140	117215671
TolueneD8 (SURR)	1554595	MS	20.7	20.0	ug/L	104	70.0 - 140	117215670
	1554595	MSD	20.9	20.0	ug/L	104	70.0 - 140	117215671

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Analytical Set

Parameter	PrepSet	Reading	MDL	MQL	Units	File
1,2,4-Trichlorobenzene	699946	ND	0.286	1.00	ug/L	117223615

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Parameter	PrepSet	Reading	MDL	MQL	Units	File
1,2-DPH (as azobenzene)	699946	ND	0.290	1.00	ug/L	117223615
2,4,6-Trichlorophenol	699946	ND	0.308	1.00	ug/L	117223615
2,4-Dichlorophenol	699946	ND	0.321	1.00	ug/L	117223615
2,4-Dimethylphenol	699946	ND	1.10	2.00	ug/L	117223615
2,4-Dinitrophenol	699946	ND	0.413	1.00	ug/L	117223615
2,4-Dinitrotoluene	699946	ND	0.282	1.00	ug/L	117223615
2,6-Dinitrotoluene	699946	ND	0.295	1.00	ug/L	117223615
2-Chloronaphthalene	699946	ND	0.307	1.00	ug/L	117223615
2-Chlorophenol	699946	ND	0.354	1.00	ug/L	117223615
2-Nitrophenol	699946	ND	0.397	1.00	ug/L	117223615
3,3'-Dichlorobenzidine	699946	ND	0.467	1.00	ug/L	117223615
4,6-Dinitro-2-methylphenol	699946	ND	0.246	1.00	ug/L	117223615
4-Bromophenyl phenyl ether	699946	ND	0.266	1.00	ug/L	117223615
4-Chlorophenyl phenyl ethe	699946	ND	0.303	1.00	ug/L	117223615
4-Nitrophenol	699946	ND	0.109	1.00	ug/L	117223615
Acenaphthene	699946	ND	0.309	1.00	ug/L	117223615
Acenaphthylene	699946	ND	0.308	1.00	ug/L	117223615
Anthracene	699946	ND	0.309	1.00	ug/L	117223615
Benzidine	699946	ND	3.96	5.00	ug/L	117223615
Benzo(a)anthracene	699946	ND	0.218	1.00	ug/L	117223615
Benzo(a)pyrene	699946	ND	0.186	1.00	ug/L	117223615
Benzo(b)fluoranthene	699946	ND	0.200	1.00	ug/L	117223615
Benzo(ghi)perylene	699946	ND	0.348	1.00	ug/L	117223615
Benzo(k)fluoranthene	699946	ND	0.341	1.00	ug/L	117223615
Benzyl Butyl phthalate	699946	ND	0.359	1.00	ug/L	117223615
Bis(2-chloroethoxy)methane	699946	ND	0.427	1.00	ug/L	117223615
Bis(2-chloroethyl)ether	699946	ND	0.443	1.00	ug/L	117223615
Bis(2-chloroisopropyl)ether	699946	ND	0.440	1.00	ug/L	117223615
Bis(2-ethylhexyl)phthalate	699946	ND	1.07	5.00	ug/L	117223615
Chrysene	699946	ND	0.149	1.00	ug/L	117223615
(Benzo(a)phenanthrene) Dibenz(a,h)anthracene	699946	ND	0.318	1.00	ug/L	117223615
Diethyl phthalate	699946	ND	0.396	1.00	ug/L	117223615
Dimethyl phthalate	699946	ND	0.355	1.00	ug/L	117223615
Di-n-butylphthalate	699946	ND	0.761	1.00	ug/L	117223615
Di-n-octylphthalate	699946	ND	0.411	1.00	ug/L	117223615
Fluoranthene(Benzo(j,k)fluor ene)	699946	ND	0.367	1.00	ug/L	117223615
Fluorene	699946	ND	0.326	1.00	ug/L	117223615
Hexachlorobenzene	699946	ND	0.292	1.00	ug/L	117223615
Hexachlorobutadiene	699946	ND	0.276	1.00	ug/L	117223615
Hexachlorocyclopentadiene	699946	ND	0.305	1.00	ug/L	117223615
Hexachloroethane	699946	ND	0.258	1.00	ug/L	117223615
Indeno(1,2,3-cd)pyrene	699946	ND	0.320	1.00	ug/L	117223615
Isophorone	699946	ND	0.413	1.00	ug/L	117223615
Naphthalene	699946	ND	0.335	1.00	ug/L	117223615
Nitrobenzene	699946	ND	0.380	1.00	ug/L	117223615
N-Nitrosodi-n-propylamine	699946	ND	0.460	1.00	ug/L	117223615
N-Nitrosodiphenylamine (as DPA	699946	ND	0.531	1.00	ug/L	117223615

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Parameter	PrepSet	Reading	MDL	MQL	Units	File
p-Chloro-m-Cresol (4-Chloro-3-me	699946	ND	0.308	1.00	ug/L	117223615
Pentachlorophenol	699946	ND	0.332	1.00	ug/L	117223615
Phenanthrene	699946	ND	0.291	1.00	ug/L	117223615
Phenol	699946	ND	0.597	1.00	ug/L	117223615
Pyrene	699946	ND	0.448	1.00	ug/L	117223615

CCV

Parameter	Reading	Known	Units	Recover%	Limits%		File
1,2,4-Trichlorobenzene	52600	50000	ug/L	105	80.0 - 120		117223614
1,2-DPH (as azobenzene)	45400	50000	ug/L	90.8	80.0 - 120		117223614
2,4,6-Trichlorophenol	56000	50000	ug/L	112	80.0 - 120		117223614
2,4-Dichlorophenol	53100	50000	ug/L	106	80.0 - 120		117223614
2,4-Dimethylphenol	52600	50000	ug/L	105	80.0 - 120		117223614
2,4-Dinitrophenol	68000	50000	ug/L	136	80.0 - 120	*	117223614
2,4-Dinitrotoluene	53300	50000	ug/L	107	80.0 - 120		117223614
2,6-Dinitrotoluene	53300	50000	ug/L	107	80.0 - 120		117223614
2-Chloronaphthalene	52100	50000	ug/L	104	80.0 - 120		117223614
2-Chlorophenol	49800	50000	ug/L	99.6	80.0 - 120		117223614
2-Nitrophenol	54900	50000	ug/L	110	80.0 - 120		117223614
3,3'-Dichlorobenzidine	41200	50000	ug/L	82.4	80.0 - 120		117223614
4,6-Dinitro-2-methylphenol	59700	50000	ug/L	119	80.0 - 120		117223614
4-Bromophenyl phenyl ether	51400	50000	ug/L	103	80.0 - 120		117223614
4-Chlorophenyl phenyl ethe	52200	50000	ug/L	104	80.0 - 120		117223614
4-Nitrophenol	59100	50000	ug/L	118	80.0 - 120		117223614
Acenaphthene	51700	50000	ug/L	103	80.0 - 120		117223614
Acenaphthylene	52100	50000	ug/L	104	80.0 - 120		117223614
Anthracene	52400	50000	ug/L	105	80.0 - 120		117223614
Benzidine	42500	50000	ug/L	85.0	80.0 - 120		117223614
Benzo(a)anthracene	51900	50000	ug/L	104	80.0 - 120		117223614
Benzo(a)pyrene	51600	50000	ug/L	103	80.0 - 120		117223614
Benzo(b)fluoranthene	42400	50000	ug/L	84.8	80.0 - 120		117223614
Benzo(ghi)perylene	44900	50000	ug/L	89.8	80.0 - 120		117223614
Benzo(k)fluoranthene	53900	50000	ug/L	108	80.0 - 120		117223614
Benzyl Butyl phthalate	49400	50000	ug/L	98.8	80.0 - 120		117223614
Bis(2-chloroethoxy)methane	53900	50000	ug/L	108	80.0 - 120		117223614
Bis(2-chloroethyl)ether	50200	50000	ug/L	100	80.0 - 120		117223614
Bis(2-chloroisopropyl)ether	52300	50000	ug/L	105	80.0 - 120		117223614
Bis(2-ethylhexyl)phthalate	50400	50000	ug/L	101	80.0 - 120		117223614
Chrysene	51600	50000	ug/L	103	80.0 - 120		117223614
(Benzo(a)phenanthrene) Dibenz(a,h)anthracene	46000	50000	ug/L	92.0	80.0 - 120		117223614
Diethyl phthalate	52400	50000	ug/L	105	80.0 - 120		117223614
Dimethyl phthalate	52400	50000	ug/L	105	80.0 - 120		117223614
Di-n-butylphthalate	51800	50000	ug/L	104	80.0 - 120		117223614
Di-n-octylphthalate	58900	50000	ug/L	118	80.0 - 120		117223614
Fluoranthene(Benzo(j,k)fluor	54700	50000	ug/L	109	80.0 - 120		117223614
(Dbc) Fluorene	52100	50000	ug/L	104	80.0 - 120		117223614
Hexachlorobenzene	52300	50000	ug/L	105	80.0 - 120		117223614
Hexachlorobutadiene	50200	50000	ug/L	100	80.0 - 120		117223614

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CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Hexachlorocyclopentadiene	42900	50000	ug/L	85.8	80.0 - 120	117223614
Hexachloroethane	51000	50000	ug/L	102	80.0 - 120	117223614
Indeno(1,2,3-cd)pyrene	45800	50000	ug/L	91.6	80.0 - 120	117223614
Isophorone	54000	50000	ug/L	108	80.0 - 120	117223614
Naphthalene	51800	50000	ug/L	104	80.0 - 120	117223614
Nitrobenzene	51400	50000	ug/L	103	80.0 - 120	117223614
N-Nitrosodimethylamine	46200	50000	ug/L	92.4	80.0 - 120	117223614
N-Nitrosodi-n-propylamine	51400	50000	ug/L	103	80.0 - 120	117223614
N-Nitrosodiphenylamine (as	51500	50000	ug/L	103	80.0 - 120	117223614
DPA p-Chloro-m-Cresol (4-Chloro-3-me	51800	50000	ug/L	104	80.0 - 120	117223614
Pentachlorophenol	57600	50000	ug/L	115	80.0 - 120	117223614
Phenanthrene	51700	50000	ug/L	103	80.0 - 120	117223614
Phenol	50600	50000	ug/L	101	80.0 - 120	117223614
Pyrene	41800	50000	ug/L	83.6	80.0 - 120	117223614

DFTPP

Parameter		RefMass	Reading	%	Limits%	File
DFTPP Mass 127	580146	198	32302	51.7	40.0 - 60.0	117223613
DFTPP Mass 197	580146	198	0	0.0	0 - 1.00	117223613
DFTPP Mass 198	580146	198	62456	100.0	100 - 100	117223613
DFTPP Mass 199	580146	198	4238	6.8	5.00 - 9.00	117223613
DFTPP Mass 275	580146	198	12937	20.7	10.0 - 30.0	117223613
DFTPP Mass 365	580146	198	1329	2.1	1.00 - 100	117223613
DFTPP Mass 441	580146	443	5904	77.8	0 - 100	117223613
DFTPP Mass 442	580146	198	40248	64.4	40.0 - 100	117223613
DFTPP Mass 443	580146	442	7589	18.9	17.0 - 23.0	117223613
DFTPP Mass 51	580146	198	19207	30.8	30.0 - 60.0	117223613
DFTPP Mass 68	580146	69.0	45	0.2	0 - 2.00	117223613
DFTPP Mass 69	580146	198	22469	36.0	0 - 100	117223613
DFTPP Mass 70	580146	69.0	122	0.5	0 - 2.00	117223613

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
1,2,4-Trichlorobenzene	699946	15.7	15.8	25.0	22.0 - 147	62.8	63.2	ug/L	0.635	30.0
1,2-DPH (as azobenzene)	699946	22.1	23.5	25.0	0.100 - 130	88.4	94.0	ug/L	6.14	30.0
2,4,6-Trichlorophenol	699946	24.2	23.6	25.0	37.0 - 144	96.8	94.4	ug/L	2.51	30.0
2,4-Dichlorophenol	699946	23.1	22.4	25.0	39.0 - 135	92.4	89.6	ug/L	3.08	30.0
2,4-Dimethylphenol	699946	13.1	11.3	25.0	32.0 - 119	52.4	45.2	ug/L	14.8	30.0
2,4-Dinitrophenol	699946	25.6	24.3	25.0	0.100 - 191	102	97.2	ug/L	4.82	30.0
2,4-Dinitrotoluene	699946	24.3	22.5	25.0	39.0 - 139	97.2	90.0	ug/L	7.69	30.0
2,6-Dinitrotoluene	699946	24.3	22.5	25.0	50.0 - 158	97.2	90.0	ug/L	7.69	30.0
2-Chloronaphthalene	699946	20.3	20.2	25.0	60.0 - 118	81.2	80.8	ug/L	0.494	30.0
2-Chlorophenol	699946	20.1	19.8	25.0	23.0 - 134	80.4	79.2	ug/L	1.50	30.0
2-Nitrophenol	699946	23.0	22.7	25.0	29.0 - 182	92.0	90.8	ug/L	1.31	30.0
3,3'-Dichlorobenzidine	699946	15.8	15.0	25.0	0.100 - 262	63.2	60.0	ug/L	5.19	30.0
4,6-Dinitro-2-methylphenol	699946	26.0	29.4	25.0	0.100 - 191	104	118	ug/L	12.6	30.0
4-Bromophenyl phenyl ether	699946	23.4	21.9	25.0	53.0 - 127	93.6	87.6	ug/L	6.62	30.0
4-Chlorophenyl phenyl ethe	699946	24.4	23.5	25.0	25.0 - 158	97.6	94.0	ug/L	3.76	30.0
4-Nitrophenol	699946	16.9	12.8	25.0	0.100 - 132	67.6	51.2	ug/L	27.6	30.0

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LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Acenaphthene	699946	22.5	22.0	25.0	47.0 - 145	90.0	88.0	ug/L	2.25	30.0
Acenaphthylene	699946	21.2	20.6	25.0	33.0 - 145	84.8	82.4	ug/L	2.87	30.0
Anthracene	699946	25.5	23.6	25.0	27.0 - 133	102	94.4	ug/L	7.74	30.0
Benzo(a)anthracene	699946	24.0	22.6	25.0	33.0 - 143	96.0	90.4	ug/L	6.01	30.0
Benzo(a)pyrene	699946	24.2	22.8	25.0	17.0 - 163	96.8	91.2	ug/L	5.96	30.0
Benzo(b)fluoranthene	699946	25.2	24.2	25.0	24.0 - 159	101	96.8	ug/L	4.25	30.0
Benzo(ghi)perylene	699946	19.9	17.3	25.0	0.100 - 219	79.6	69.2	ug/L	14.0	30.0
Benzo(k)fluoranthene	699946	23.9	21.9	25.0	11.0 - 162	95.6	87.6	ug/L	8.73	30.0
Benzyl Butyl phthalate	699946	24.6	23.0	25.0	0.100 - 152	98.4	92.0	ug/L	6.72	30.0
Bis(2-chloroethoxy)methane	699946	23.7	22.8	25.0	33.0 - 184	94.8	91.2	ug/L	3.87	30.0
Bis(2-chloroethyl)ether	699946	21.1	19.9	25.0	33.0 - 184	84.4	79.6	ug/L	5.85	30.0
Bis(2-chloroisopropyl)ether	699946	22.1	21.1	25.0	36.0 - 166	88.4	84.4	ug/L	4.63	30.0
Bis(2-ethylhexyl)phthalate	699946	25.0	23.7	25.0	8.00 - 158	100	94.8	ug/L	5.34	30.0
Chrysene	699946	24.4	22.8	25.0	17.0 - 168	97.6	91.2	ug/L	6.78	30.0
(Benzo(a)phenanthrene) Dibenz(a,h)anthracene	699946	18.9	16.6	25.0	0.100 - 227	75.6	66.4	ug/L	13.0	30.0
Diethyl phthalate	699946	24.8	23.3	25.0	0.100 - 114	99.2	93.2	ug/L	6.24	30.0
Dimethyl phthalate	699946	24.0	23.2	25.0	0.100 - 112	96.0	92.8	ug/L	3.39	30.0
Di-n-butylphthalate	699946	26.3	24.1	25.0	1.00 - 118	105	96.4	ug/L	8.54	30.0
Di-n-octylphthalate	699946	28.4	28.8	25.0	4.00 - 146	114	115	ug/L	0.873	30.0
Fluoranthene(Benzo(j,k)fluor ene)	699946	27.0	26.3	25.0	26.0 - 137	108	105	ug/L	2.82	30.0
Fluorene	699946	24.1	23.4	25.0	59.0 - 121	96.4	93.6	ug/L	2.95	30.0
Hexachlorobenzene	699946	23.4	21.9	25.0	0.100 - 152	93.6	87.6	ug/L	6.62	30.0
Hexachlorobutadiene	699946	12.7	12.8	25.0	24.0 - 116	50.8	51.2	ug/L	0.784	30.0
Hexachlorocyclopentadiene	699946	7.18	6.39	25.0	0.100 - 130	28.7	25.6	ug/L	11.4	30.0
Hexachloroethane	699946	13.6	13.4	25.0	40.0 - 113	54.4	53.6	ug/L	1.48	30.0
Indeno(1,2,3-cd)pyrene	699946	19.9	17.5	25.0	0.100 - 171	79.6	70.0	ug/L	12.8	30.0
Isophorone	699946	22.8	22.1	25.0	21.0 - 196	91.2	88.4	ug/L	3.12	30.0
Naphthalene	699946	19.3	18.9	25.0	21.0 - 133	77.2	75.6	ug/L	2.09	30.0
Nitrobenzene	699946	22.0	21.1	25.0	35.0 - 180	88.0	84.4	ug/L	4.18	30.0
N-Nitrosodimethylamine	699946	17.1	14.4	25.0	50.0 - 130	68.4	57.6	ug/L	17.1	30.0
N-Nitrosodi-n-propylamine	699946	21.9	21.7	25.0	0.100 - 230	87.6	86.8	ug/L	0.917	30.0
N-Nitrosodiphenylamine (as DPA	699946	25.5	29.7	25.0	0.100 - 130	102	119	ug/L	15.4	30.0
p-Chloro-m-Cresol (4-Chloro-3-me	699946	23.4	21.9	25.0	22.0 - 147	93.6	87.6	ug/L	6.62	30.0
Pentachlorophenol	699946	25.5	23.1	25.0	5.00 - 112	102	92.4	ug/L	9.88	30.0
Phenanthrene	699946	24.7	22.9	25.0	54.0 - 120	98.8	91.6	ug/L	7.56	30.0
Phenol	699946	10.6	8.99	25.0	5.00 - 112	42.4	36.0	ug/L	16.3	30.0
Pyrene	699946	23.3	17.2	25.0	52.0 - 115	93.2	68.8	ug/L	30.1 *	30.0

Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
2,4,6-Tribromophenol	580256	CCV	55100	100000	ug/L	55.1	10.0 - 150	117223614
2-Fluorobiphenyl-SURR	580256	CCV	51400	50000	ug/L	103	30.0 - 150	117223614
2-Fluorophenol-SURR	580256	CCV	48800	100000	ug/L	48.8	10.0 - 150	117223614
4-Terphenyl-d14-SURR	580256	CCV	42800	50000	ug/L	85.6	30.0 - 150	117223614
Nitrobenzene-d5-SURR	580256	CCV	52200	50000	ug/L	104	30.0 - 150	117223614
Phenol-d6-SURR	580256	CCV	51000	100000	ug/L	51.0	10.0 - 150	117223614
2,4,6-Tribromophenol	699946	Blank	72.5	100	ug/L	72.5	10.0 - 150	117223615

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Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
2,4,6-Tribromophenol	699946	LCS	75.6	100	ug/L	75.6	10.0 - 150	117223616
	699946	LCS Dup	66.8	100	ug/L	66.8	10.0 - 150	117223617
2-Fluorobiphenyl-SURR	699946	Blank	27800	50000	ug/L	55.6	30.0 - 150	117223615
	699946	LCS	31400	50000	ug/L	62.8	30.0 - 150	117223616
	699946	LCS Dup	31100	50000	ug/L	62.2	30.0 - 150	117223617
2-Fluorophenol-SURR	699946	Blank	41500	100000	ug/L	41.5	10.0 - 150	117223615
	699946	LCS	37800	100000	ug/L	37.8	10.0 - 150	117223616
	699946	LCS Dup	40000	100000	ug/L	40.0	10.0 - 150	117223617
4-Terphenyl-d14-SURR	699946	Blank	31500	50000	ug/L	63.0	30.0 - 150	117223615
	699946	LCS	34300	50000	ug/L	68.6	30.0 - 150	117223616
	699946	LCS Dup	30100	50000	ug/L	60.2	30.0 - 150	117223617
Nitrobenzene-d5-SURR	699946	Blank	29400	50000	ug/L	58.8	30.0 - 150	117223615
	699946	LCS	33500	50000	ug/L	67.0	30.0 - 150	117223616
	699946	LCS Dup	32600	50000	ug/L	65.2	30.0 - 150	117223617
Phenol-d6-SURR	699946	Blank	32200	100000	ug/L	32.2	10.0 - 150	117223615
	699946	LCS	34100	100000	ug/L	34.1	10.0 - 150	117223616
	699946	LCS Dup	29200	100000	ug/L	29.2	10.0 - 150	117223617
2,4,6-Tribromophenol	#######	UNKNOWN	71.4	106	ug/L	67.4	10.0 - 150	117223622
2-Fluorobiphenyl-SURR	#######	UNKNOWN	28.7	53.2	ug/L	53.9	30.0 - 150	117223622
2-Fluorophenol-SURR	#######	UNKNOWN	35.1	106	ug/L	33.1	10.0 - 150	117223622
4-Terphenyl-d14-SURR	#######	UNKNOWN	28.1	53.2	ug/L	52.8	30.0 - 150	117223622
Nitrobenzene-d5-SURR	#######	UNKNOWN	29.2	53.2	ug/L	54.9	30.0 - 150	117223622
Phenol-d6-SURR	#######	UNKNOWN	-1.74	106	ug/L	-1.64 *	10.0 - 150	117223622

Analytical Set **700825** **EPA 617**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Kelthane (Dicofol)	700453	0.0858	0.028	0.100	ug/L	117230849
Methoxychlor	700453	ND	0.563	1.00	ug/L	117230849
Mirex	700453	ND	0.00889	0.020	ug/L	117230849

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Kelthane (Dicofol)	199	200	ug/L	99.5	70.0 - 130	117230975
	179	200	ug/L	89.5	70.0 - 130	117230861
Methoxychlor	107	100	ug/L	107	70.0 - 130	117230975
	108	100	ug/L	108	70.0 - 130	117230861
Mirex	106	100	ug/L	106	70.0 - 130	117230975
	108	100	ug/L	108	70.0 - 130	117230861

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Kelthane (Dicofol)	700453	0.998	0.972	2.00	0.100 - 148	49.9	48.6	ug/L	2.64	30.0
Methoxychlor	700453	106	100	100	32.8 - 151	106	100	ug/L	5.83	30.0
Mirex	700453	0.996	0.909	1.00	42.6 - 135	99.6	90.9	ug/L	9.13	30.0

Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
Decachlorobiphenyl	579265	CCV	89.7	100	ug/L	89.7	10.0 - 150	117230975
	579265	CCV	94.7	100	ug/L	94.7	10.0 - 150	117230861

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Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
Tetrachloro-m-Xylene (Surr)	579265	CCV	98.5	100	ug/L	98.5	10.0 - 150	117230975
	579265	CCV	99.0	100	ug/L	99.0	10.0 - 150	117230861
Decachlorobiphenyl	700453	Blank	67.5	100	ug/L	67.5	10.0 - 150	117230849
	700453	LCS	89.7	100	ug/L	89.7	10.0 - 150	117230850
	700453	LCS Dup	80.9	100	ug/L	80.9	10.0 - 150	117230851
Tetrachloro-m-Xylene (Surr)	700453	Blank	32.1	100	ug/L	32.1	10.0 - 150	117230849
	700453	LCS	72.7	100	ug/L	72.7	10.0 - 150	117230850
	700453	LCS Dup	72.4	100	ug/L	72.4	10.0 - 150	117230851
Decachlorobiphenyl	#######	UNKNOWN	0.885	1.08	ug/L	81.9	10.0 - 150	117230853
Tetrachloro-m-Xylene (Surr)	#######	UNKNOWN	0.427	1.08	ug/L	39.5	10.0 - 150	117230853

Analytical Set **700846** **EPA 608**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
4,4-DDD	700453	ND	0.0194	0.025	ug/L	117231068
4,4-DDE	700453	ND	0.0161	0.025	ug/L	117231068
4,4-DDT	700453	ND	0.00591	0.010	ug/L	117231068
Aldrin	700453	ND	0.00253	0.010	ug/L	117231068
Alpha-BHC(hexachlorocyclohexane)	700453	ND	0.015	0.025	ug/L	117231068
Beta-BHC(hexachlorocyclohexane)	700453	ND	0.00871	0.010	ug/L	117231068
Chlordane	700453	ND	0.00188	0.010	ug/L	117231068
Delta-BHC(hexachlorocyclohexane)	700453	ND	0.00523	0.010	ug/L	117231068
Dieldrin	700453	ND	0.00653	0.010	ug/L	117231068
Endosulfan I (alpha)	700453	ND	0.00719	0.010	ug/L	117231068
Endosulfan II (beta)	700453	ND	0.00767	0.010	ug/L	117231068
Endosulfan sulfate	700453	ND	0.00333	0.010	ug/L	117231068
Endrin	700453	ND	0.00857	0.010	ug/L	117231068
Endrin aldehyde	700453	ND	0.0144	0.025	ug/L	117231068
Gamma-BHC(Lindane)	700453	ND	0.00897	0.010	ug/L	117231068
Heptachlor	700453	ND	0.00147	0.010	ug/L	117231068
Heptachlor epoxide	700453	ND	0.00128	0.010	ug/L	117231068
Toxaphene	700453	ND	0.00373	0.010	ug/L	117231068

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
4,4-DDD	100	100	ug/L	100	85.0 - 115	117231067
	99.9	100	ug/L	99.9	85.0 - 115	117231080
4,4-DDE	98.8	100	ug/L	98.8	85.0 - 115	117231067
	101	100	ug/L	101	85.0 - 115	117231080
4,4-DDT	101	100	ug/L	101	85.0 - 115	117231067
	100	100	ug/L	100	85.0 - 115	117231080
Aldrin	105	100	ug/L	105	85.0 - 115	117231067
	104	100	ug/L	104	85.0 - 115	117231080
Alpha-BHC(hexachlorocyclohexane)	107	100	ug/L	107	85.0 - 115	117231067
	101	100	ug/L	101	85.0 - 115	117231080
Beta-BHC(hexachlorocyclohexane)	103	100	ug/L	103	85.0 - 115	117231067

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CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Beta-BHC(hexachlorocyclohexane)	98.2	100	ug/L	98.2	85.0 - 115	117231080
Delta-BHC(hexachlorocyclohexane)	105	100	ug/L	105	85.0 - 115	117231067
	99.1	100	ug/L	99.1	85.0 - 115	117231080
Dieldrin	109	100	ug/L	109	85.0 - 115	117231067
	104	100	ug/L	104	85.0 - 115	117231080
Endosulfan I (alpha)	101	100	ug/L	101	85.0 - 115	117231067
	94.8	100	ug/L	94.8	85.0 - 115	117231080
Endosulfan II (beta)	96.3	100	ug/L	96.3	85.0 - 115	117231067
	92.7	100	ug/L	92.7	85.0 - 115	117231080
Endosulfan sulfate	99.2	100	ug/L	99.2	85.0 - 115	117231067
	93.7	100	ug/L	93.7	85.0 - 115	117231080
Endrin	97.5	100	ug/L	97.5	85.0 - 115	117231067
	95.8	100	ug/L	95.8	85.0 - 115	117231080
Endrin aldehyde	96.6	100	ug/L	96.6	85.0 - 115	117231067
	93.4	100	ug/L	93.4	85.0 - 115	117231080
Gamma-BHC(Lindane)	107	100	ug/L	107	85.0 - 115	117231067
	98.2	100	ug/L	98.2	85.0 - 115	117231080
Heptachlor	103	100	ug/L	103	85.0 - 115	117231067
	101	100	ug/L	101	85.0 - 115	117231080
Heptachlor epoxide	100	100	ug/L	100	85.0 - 115	117231067
	97.2	100	ug/L	97.2	85.0 - 115	117231080

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
4,4-DDD	700453	0.983	0.907	1.00	50.1 - 132	98.3	90.7	ug/L	8.04	40.0
4,4-DDE	700453	0.920	0.853	1.00	54.1 - 123	92.0	85.3	ug/L	7.56	40.0
4,4-DDT	700453	0.954	0.890	1.00	38.1 - 136	95.4	89.0	ug/L	6.94	40.0
Aldrin	700453	0.848	0.841	1.00	43.6 - 117	84.8	84.1	ug/L	0.829	40.0
Alpha-BHC(hexachlorocyclohexane)	700453	1.03	0.953	1.00	48.0 - 122	103	95.3	ug/L	7.77	40.0
Beta-BHC(hexachlorocyclohexane)	700453	0.976	0.875	1.00	52.7 - 131	97.6	87.5	ug/L	10.9	40.0
Delta-BHC(hexachlorocyclohexane)	700453	0.997	0.901	1.00	52.1 - 130	99.7	90.1	ug/L	10.1	40.0
Dieldrin	700453	1.05	0.950	1.00	54.8 - 131	105	95.0	ug/L	10.0	40.0
Endosulfan I (alpha)	700453	0.880	0.815	1.00	47.5 - 120	88.0	81.5	ug/L	7.67	40.0
Endosulfan II (beta)	700453	0.882	0.817	1.00	51.4 - 126	88.2	81.7	ug/L	7.65	40.0
Endosulfan sulfate	700453	0.987	0.916	1.00	56.8 - 130	98.7	91.6	ug/L	7.46	40.0
Endrin	700453	0.925	0.833	1.00	54.4 - 135	92.5	83.3	ug/L	10.5	40.0
Endrin aldehyde	700453	1.02	0.896	1.00	55.8 - 129	102	89.6	ug/L	12.9	40.0
Gamma-BHC(Lindane)	700453	0.959	0.831	1.00	44.2 - 127	95.9	83.1	ug/L	14.3	40.0
Heptachlor	700453	0.840	0.794	1.00	37.5 - 125	84.0	79.4	ug/L	5.63	40.0
Heptachlor epoxide	700453	0.970	0.890	1.00	53.5 - 124	97.0	89.0	ug/L	8.60	40.0

Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
Decachlorobiphenyl	579265	CCV	89.7	100	ug/L	89.7	4.40 - 155	117231067
	579265	CCV	94.7	100	ug/L	94.7	4.40 - 155	117231080
Tetrachloro-m-Xylene (Surr)	579265	CCV	98.5	100	ug/L	98.5	0.100 - 137	117231067
	579265	CCV	99.0	100	ug/L	99.0	0.100 - 137	117231080

Quality Control

Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
Decachlorobiphenyl	700453	Blank	67.5	100	ug/L	67.5	4.40 - 155	117231068
	700453	LCS	89.7	100	ug/L	89.7	4.40 - 155	117231069
	700453	LCS Dup	80.9	100	ug/L	80.9	4.40 - 155	117231070
Tetrachloro-m-Xylene (Surr)	700453	Blank	32.1	100	ug/L	32.1	0.100 - 137	117231068
	700453	LCS	72.7	100	ug/L	72.7	0.100 - 137	117231069
	700453	LCS Dup	72.4	100	ug/L	72.4	0.100 - 137	117231070
Decachlorobiphenyl	#######	UNKNOWN	0.885	1.08	ug/L	81.9	4.40 - 155	117231072
Tetrachloro-m-Xylene (Surr)	#######	UNKNOWN	0.427	1.08	ug/L	39.5	0.100 - 137	117231072

Analytical Set **700869** **EPA 608**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
PCB-1016	700453	ND	0.155	0.200	ug/L	117231524
PCB-1221	700453	ND	0.143	0.200	ug/L	117231524
PCB-1232	700453	ND	0.143	0.200	ug/L	117231524
PCB-1242	700453	ND	0.143	0.200	ug/L	117231524
PCB-1248	700453	ND	0.143	0.200	ug/L	117231524
PCB-1254	700453	ND	0.143	0.200	ug/L	117231524
PCB-1260	700453	ND	0.143	0.200	ug/L	117231524

Analytical Set **700878** **EPA 608**

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
PCB-1016	700456	ND	0.155	0.200	ug/L	117231578
PCB-1221	700456	ND	0.143	0.200	ug/L	117231578
PCB-1232	700456	ND	0.143	0.200	ug/L	117231578
PCB-1242	700456	ND	0.143	0.200	ug/L	117231578
PCB-1248	700456	ND	0.143	0.200	ug/L	117231578
PCB-1254	700456	ND	0.143	0.200	ug/L	117231578
PCB-1260	700456	ND	0.143	0.200	ug/L	117231578

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
PCB-1016	1030	1000	ug/L	103	80.0 - 120	117231577
	1020	1000	ug/L	102	80.0 - 120	117231582
PCB-1260	984	1000	ug/L	98.4	80.0 - 120	117231577
	1000	1000	ug/L	100	80.0 - 120	117231582

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
PCB-1016	700456	8.31	8.57	10.0	45.5 - 139	83.1	85.7	ug/L	3.08	30.0
PCB-1260	700456	9.17	8.10	10.0	43.1 - 151	91.7	81.0	ug/L	12.4	30.0

Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
Decachlorobiphenyl	700456	Blank	67.5	100	ug/L	67.5	10.0 - 200	117231578
Tetrachloro-m-Xylene (Surr)	700456	Blank	32.1	100	ug/L	32.1	10.0 - 200	117231578
Decachlorobiphenyl	#######	UNKNOWN	0.885	1.08	ug/L	81.9	10.0 - 200	117231581
Tetrachloro-m-Xylene (Surr)	#######	UNKNOWN	0.427	1.08	ug/L	39.5	10.0 - 200	117231581

Ana-Lab Corp. P.O. Box 9000 Kilgore, TX 75663

Phone 903/984-0551 FAX 903/984-5914 e-Mail corp@ana-lab.com LELAP-accredited #02008

Employee Owned Integrity Caring Continual Improvement

Quality Control

Printed 08/16/2017

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100%

Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank; CCV - Continuing Calibration Verification; BFB - GC/MS Tuning Compound; ICV - Initial Calibration Verification; LDR - Linear Dynamic Range Standard; DFTPP - GC/MS Tuning Compound

Chain(s) of Custody

And

Shipping Forms

Chain(s) of Custody

And

Shipping Forms

Chain(s) of Custody

And

Shipping Forms

Chain(s) of Custody

And

Shipping Forms

Ana-Lab Corp.
P.O. Box 9000
Kilgore, TX 75663
903/984-0551

Invoice

Invoice ##

Invoice Date ##/##/####

Printed 08/01/2018 Page 1 of 1

Corporate
Tax ID 75-1255643
Duns # 05 866 7809

Report To **Client Code**

Client Name
Billing Address

Client Name
Report To Address

PO: PO# if provided

Date	Sample	Mail	Project	Description		Fee
7/24/18	Sample####	7/31/18	Proj###	Price List/TAT]		###.00
	VOAI		VOA by GC/MS		EPA 8260B	###.00
*	!TPH		Texas1005 TPH Expansion - C36		TX Method 1005	##.00
7/24/18	Sample####	7/31/18	Proj###	Price List/TAT]		###.00
	VOAI		VOA by GC/MS		EPA 8260B	###.00
*	!TPH		Texas1005 TPH Expansion - C36		TX Method 1005	##.00
7/24/18	Sample####	7/31/18	Proj###	Price List/TAT]		###.00
	VOAI		VOA by GC/MS		EPA 8260B	###.00
*	!TPH		Texas1005 TPH Expansion - C36		TX Method 1005	##.00
7/24/18	Sample####	7/31/18	Proj###	Price List/TAT]		###.00
	VOAI		VOA by GC/MS		EPA 8260B	###.00
*	!TPH		Texas1005 TPH Expansion - C36		TX Method 1005	##.00
7/24/18	Sample####	7/31/18	Proj###	Price List/TAT]		###.00
	VOAI		VOA by GC/MS		EPA 8260B	###.00
*	!TPH		Texas1005 TPH Expansion - C36		TX Method 1005	##.00
7/24/18	Sample####	7/31/18	Proj###	Price List/TAT]		###.00
	VOAI		VOA by GC/MS		EPA 8260B	###.00
*	!TPH		Texas1005 TPH Expansion - C36		TX Method 1005	##.00

Please remit payment to:

Ana-Lab Corp.
P.O. Box 9000
Kilgore, TX 75663-9000

Sub Total: ####.00
Tax: 0.00

Terms of Payment: Net 30 Days

Total Due $#####.00

To ensure proper credit, please include our invoice number with your payment.

Thank you for choosing Ana-Lab!

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www.ana-lab.com EMAIL corp@ana-lab.com

Standard Operating Procedure

RECORD MANAGEMENT, REVISION 09

File Name: J:\word\SOP\Active_Record_Management_09.doc
Date Initiated: 10/15/2001
Date Revised: 02/06/2017

PURPOSE

Procedure establishes a record system that ensures unequivocal, accurate records that record all laboratory activities - technical, quality, hazardous waste, and business.

SUMMARY

A record is a complete and accurate written account of an activity. Records can be either manual, electronic, or a combination, and include links to supporting data and traceability, if applicable. Corrections are made in a manner to preserve the integrity of the data and to record responsibility for the change. All records are retained, secure and confidential for 5 years, except environmental lead records and Louisiana client records which are retained for 10 years, hazardous waste records which are retained permanently, and business office records which are retained in accordance with Appendix I and II. Records are disposed in a manner to protect confidentiality.

DEFINITIONS

See Definitions and Acronyms SOP

EQUIPMENT AND SUPPLIES

1. Computer with LDS software and printer.
2. Instrument computers interfaced to LDS.
3. Scanner interfaced to the network.
4. Records, paper and electronic.
5. Fire proof filing cabinets.
6. External backup media and equipment.
7. Ballpoint pen, black waterproof ink.
8. Permanent marker, Sharpie or equivalent.
9. General office supplies.

PROCEDURE

RECORDS

1. A record is a complete and accurate account of an activity and is identifiable to that activity.
2. Records may be technical, quality, hazardous waste, or business.
3. Records include all necessary information, including links to supporting data, to establish an audit trail.
4. Records must be readily retrievable.
5. Where practical, records are scanned into the network and archived electronically.
   a. The scanned image becomes the original record.

6. Electronic records are secure, backed up, and reproducible.
7. Paper records are stored in a secure area with a suitable environment to prevent damage or deterioration and to prevent loss.
8. Corrections
   a. All information associated with a correction (incorrect data, corrected data, date and initials) must be legible.
   b. Write overs , >correction fluid=, erasures, etc. are not permitted
   c. Data must not be made illegible or deleted.
   d. Draw one line through the data to be changed.
   e. Record the correct data alongside.
   f. Personnel responsible for correction will date and initial the data.
   g. Corrections made to manual data must also be made to the corresponding electronic data.
9. Refer to:
   a. SOP - Confidentiality and Proprietary Rights.
   b. SOP - Records: CD Backups.
   c. SOP - Records: Electronic Security.
   d. SOP - Records: Electronic Backups.
   e. SOP - Scanning

TECHNICAL RECORDS

1. A technical record is an accumulation of analytical data and information and indicates if specified quality or process parameters are achieved.
2. Observations, data, traceability, and calculations are recorded in real time.
3. Technical records include:
   a. All necessary information, including links to supporting data, to establish an audit trail and to enable the activity to be reproduced under conditions as close to the original conditions as possible.
   b. Original data
      i. All original data must be kept.
      ii. Transferred data is not the same as original data.

Do not record data on paper towels, gloves, tape, digestion tubes, extraction vessels, ETC.

   c. Derived data, with sufficient information for an audit trail.
   d. Calibration records.
   e. Personnel training records.
   f. Copy of each test report issued. (Reconstructed from LDS data.)
   g. Information for determining uncertainty, if possible.
   h. Identity of the personnel responsible for:

i. Sample collection.
ii. Preparation.
iii. Analysis.
iv. Verification of results.

4. Corrections - refer to corrections above.
5. The record is reviewed for completeness.
6. The data is reviewed to verify accuracy, precision, and integrity of the data collected.
7. If the record and data are acceptable, the data is verified and released for reporting.

QUALITY RECORDS

1. A quality record indicates adherence to a quality policy or procedure.
2. Quality records include:
   a. Corrective action reports.
   b. External audits or assessments and responses.
   c. Internal audits.
   d. Management reviews.
   e. Preventive action reports.
   f. Proficiency Test reports.
   g. Traceability.
   h. Any record related to a quality policy or procedure.

HAZARDOUS WASTE RECORDS

1. All original records pertaining to hazardous waste storage, transportation, and disposal.
2. Refer to SOP- Hazardous Waste

BUSINESS OFFICE RECORDS

1. Business records may include human resource, corporation, financial and other business operation records.
2. Records to be kept permanently must be kept as originals.
   a. Refer to Appendix II for our Personnel Files Policy for details on retention requirements for employee files and records containing sensitive employee information

ANALYTICAL DATA COLLECTION

1. Analytical data is generated and entered in to a LDS set (electronic file) either by manual data entry or direct instrument interface.
   a. The set has a unique set number that is used for identification.
2. Analytical data will contain all necessary information, including links to supporting data.
   a. Traceability is required because it provides the means for comparing the data to

national or international standards.

MANUAL RECORDS

1. Analytical personnel are responsible for the preservation of data sheets while being used.
2. Data sheets are kept in chronological order in a binder.
   a. Loose paper is not allowed.
      i. Data does not have to be in the binder ring, pockets can be used to organize individual data sheets.
   b. When ready to submit for data verification, data sheets are placed in a folder and put in the designated pickup location.
3. All data must be legible.
4. The following must be on each data sheet in a set:
   a. Test, test code or other unique identification.
   b. Date, Time, Technician=s Initials.
   c. Set number.
5. Traceability must be included and recorded on an approved data sheet.
6. Data entry
   a. All data is recorded directly on an approved data sheet.
      i. All original data must be kept.
      ii. Transferred data is not the same as original data.

Do not record data on: paper towels, gloves, tape, digestion tubes, extraction vessels, ETC.

   b. Data entries are made in real time and in chronological order.
      i. Each measurement or observation is a unique entry and is recorded individually.
      ii. Down arrows for similar data are not allowed
   c. Traceability must be recorded.
   d. All entries are made using a ballpoint pen with black waterproof ink.
      i. Check with the Quality Department before using markers, highlighters, etc.
   e. Corrections are made in accordance with this SOP.
   f. Enter applicable data into LDS.
   g. Print the required printouts, complete Level I, Analyst Review, and review.
      i. Manual data sheet and electronic data must match.
      ii. Make corrections if necessary.
   h. Manual entries are checked and verified by Quality Department personnel.
   i. Refer to SOP - Data: Verification.

ELECTRONIC RECORDS

P. O. BOX 9000 - KILGORE, TEXAS 75663-9000 - 903/984-0551- FAX 903/984-5914
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Standard Operating Procedure

RECORD MANAGEMENT, REVISION 09

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1. Data must be retrievable.
2. The following must be on each page of a set:
   a. File name, test or test code, or other unique identification.
   b. Date, Time, Technician's Initials.
   c. Set number
3. Traceability must be recorded either in the electronic file or on an approved data sheet.
4. Data is downloaded from the instrument computer into LDS.
5. Data Entry:
   a. Data is recorded directly into a LDS set via software specifically designed to interface instrumentation with LDS.
   b. Records are reviewed for accuracy.
      i. Refer to Data Verification SOP.
6. Corrections:
   a. Make corrections and verify prior to issuing the final report
7. LDS updates the record each time it is accessed with date, time and initials.
8. After the data is downloaded to LDS and reported, changes are not allowed.
9. Printing converts the record to a >read only file that cannot be edited or altered.

RECORD RETENTION

1. Records are maintained confidential and secure for 5 years after the record is completed.
   a. Exceptions
      i. Environmental lead records are retained 10 years after the record is completed
      ii. Louisiana client records are retained for 10 years.
      iii. Hazardous waste records are retained permanently.
      iv. Business office record retention time is based on the type of record.
         (1) Refer to Appendix I and II.
      v. Scanned paper records are shredded after the electronic record is verified.
2. Chain of Custodies (CoCs)
   a. Scan and archive electronically.
   b. Printed with analytical report
3. Technical record storage
   a. In progress records
      i. Manual data - fireproof filing cabinets.
      ii. Set data - in LDS.
      iii. Instrument data - on instrument hard drive.
   b. Completed records
      i. Manual data is entered into LDS.
      ii. Set data is completed in LDS.
      iii. Instrument data is downloaded into LDS.

iv. Associated paper records are scanned into the network.
v. The electronic file becomes the permanent record.
vi. Paper records are stored for a short time and then disposed.

4. Quality record storage.
   a. Electronic records are backed up.
   b. Where practical, scan paper records and archive electronically.
   c. Paper is stored in the quality department or a secure storage area with limited access.
      i. Access is limited to management and quality department personnel.
      ii. An access log is maintained.
5. Hazardous waste record storage
   a. All records permanently to hazardous waste storage, transport, and disposal are kept in a fireproof filing cabinet.
   b. Access is limited to the Operations Manager or designee.
      i. An access log is maintained.
6. Business office record storage
   a. All business records to be retained are stored in the business office or in a secure storage area with restricted access.
   b. Access is limited by rights associated with position and job description.
   c. Refer to Appendix II for our Personnel Files Policy for details on storage requirements for employee files and records containing sensitive employee information
7. Electronic Backups:
   a. Electronic files are stored in multiple backups.
   b. Access to backup files is limited to Laboratory Manager and Information Technology Manager or designee.
   c. Refer to SOP - Records: Electronic Backup
8. External Electronic Backups
   a. CDs are >read only and cannot be edited or altered.
      i. Records are transferred to CD and the transfer is confirmed.
      ii. Two >read only copies are made.
      iii. Copy one - stored in the quality department.
      iv. Copy two - stored in a bank box
      v. Refer to SOP - Records: CD Backups
      vi. CD backup are no longer made. They were replaced as a backup media by external hard drives.
   b. External hard drives
      i. Records are transferred to external hard drive and the transfer is confirmed.
      ii. During use, the external hard drive is stored in a fire proof filing cabinet with an access log in LDS notes.

iii. When completed, the external hard drive is stored in a bank box.

c. Internet external backups are also made.

9. In the event that the lab transferred ownership or went out of business:
   a. All clients would be notified 60 days in advance of the transfer or closure.
   b. An agreement would be reached ensuring that the records are maintained or transferred according to the clients' instructions and applicable regulations.

RECORD DISPOSAL

1. All confidential and proprietary records are disposed of in a manner to preserve confidentiality.
   a. Paper is shredded.
      i. Shred service comes on a regular basis to the corporate location.
      ii. Each building has a 96 gallon shred bin to collect materials for shredding.
      iii. Anyone disposing of the following documents will need to complete a "QS: Record Disposal" note detailing what was sent to shred along with the date and resolve the note once the documents are placed in one of the shred bins.
         (1) Business-related documents, if documentation of their disposal is required.
         (2) Scanned chain of custody forms
         (3) Scanned raw data
         (4) Etc
      iv. The shred service will supply a certificate after each shred session with the details of when and how much was shred. This certificate will be scanned to note topic "QS: Record Disposal."
         (1) Notate the month of disposal in the body of the note.
   b. Electronic records are removed from computers.
   c. External backups are destroyed.
2. Refer to SOP - Confidentiality and Proprietary Right

REFERENCES

1. See Quality Manual for references

APPROVED BY

Bill Peery	Approval Date	02/06/2017
President	Effective Date	02/11/2017

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Date Revised: 02/06/2017

Revised by:	Date	Reviewed by:	Date
TWV, Quality Manager	Feb 2017	BLZ, Dir of QA and Ethics	Feb 2017

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APPENDIX I BUSINESS RECORD RETENTION

Business records retention period begins with settlement of claim, disposal of asset, termination of contract, end of employment, or final action date related to record.

Disposal of business records prior to retention guidelines requires the approval of a corporation officer.

Type of Record	Retention
Appraisals	Permanently
Articles of incorporation, by laws	Permanently
Asset records (Equipment, vehicles, etc.)	7 years
Bank statements, reconciliations	4 years
Cancelled checks – general expense	4 years
Capital stock and bond records	Permanently
Chart of accounts	Permanently
Check vouchers, stubs	4 years
Contracts and agreements	7 years
Credit and collection correspondence	7 years
Credit memos	4 years
Damage and theft reports	7 years
Deeds	Permanently
Deposit slips	4 years
Depreciation Schedules	7 years
Expense reports	4 years
Financial reports, annual audited	Permanently
Freight bills, bill of lading	4 years
Insurance policies and records	4 years
Invoices, sales and general expenses	4 years
Leases	7 years
Ledgers and journals, cash receipts and disbursements	Permanently
Ledgers and journals, journal entries	Permanently
Ledgers and journals, purchases and sales	7 years
Mortgages	7 years
Petty cash records	4 years
Purchase orders, invoices	4 years
Repair and maintenance records	4 years

Routing customer and vendor correspondence	1 years
Subsidiary ledgers (receivables, payables, etc.)	7 years
Tax, income and related records	Permanently
Tax, payroll and related records	Permanently
Tax, sales and use and related records	Permanently

P. O. BOX 9000 - KILGORE, TEXAS 75663-9000 - 903/984-0551- FAX 903/984-5914
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APPENDIX II: PERSONNEL FILES POLICY

PURPOSE

This Policy/Procedure establishes a record management system to protect extremely sensitive employee information that is required by law and subject to auditing and litigation.

SUMMARY

Employee information records are required by law to be kept with specific guidelines that govern their retention, filing methods and destruction as regulated by Title VII, Age Discrimination Act, FLSA, FMLA, ERISA, the Equal Pay Act (EPA), EEOC, HIPPA laws and OSHA as well.

POLICY

All employee files and records containing sensitive employee information will be filed in accordance to the guidelines put in place by the Federal Government and its agencies to protect the private information of each employee. It will be kept in either the Human Resources office or the Corporate Secretary's office behind a locked door and inside a locked fireproof filing cabinet. Access to these sensitive files will be restricted to Human Resources and upper management and to any Government Agency requesting access for the purpose of an audit or litigation. All records will be in compliance with all HIPPA, EEOC, ACA, ERISA, ADA, IRS and DOL filing and retention requirements and audited yearly.

These segregated records will include, but not be limited to:

1. Personnel files – applications, new hire packets, handbook, pre-employment testing, performance reviews, rate changes, position changes, leaves, transfers, promotions, demotions, disciplinary actions, job descriptions, termination forms, exit interviews and all performance documentation. Kept in Human Resources office files.
2. I-9 – Kept in a separate designated file by employee name with copies of supporting documentation per IRS guidelines, completed and signed by day 3 of employment. Kept in Human Resources files.
3. Payroll Records – Payroll registers, W4's, State withholding forms, garnishments, pay information, time keeping records, wage deduction acknowledgments and supporting documentation as required by DOL. Kept in the Corporate Secretary's files.
4. Terminated Employee files – complete records kept separate from active employee files per Government guidelines. Kept in Human Resources files.
5. Resume's – retained with copy of job applied for and any interview notes with supporting documentation per EEOC, ACA reporting guidelines. Kept in Human Resources office.
6. ESOP files – all supporting documents required will be kept in the Corporate Secretary's office.
7. Employee Medical Files – all insurance forms, enrollment forms, beneficiary forms, drug testing, hiring ADA, FMLA, Workers Comp, doctor's notes, Benefit Summary Plan and all supporting documents will be kept in Corporate Secretary's office.
8. OSHA records – all required reporting documentation will be kept in Corporate Secretary's office.

9. 401K records – enrollment forms, beneficiary forms, plan change forms, contribution reports, Employee Census, ERISA forms, Safe Harbor reporting, Plan Summary and all supporting documentation will be kept in the Human Resources office.
10. ACA, Affirmative Action, EEO auditing documentation will be kept in the Human Resources office.
11. Harassment/Grievance complaints – All records and documentation will be kept separately from personnel files and filed by month of complaint and kept in the Human Resources office.

RETENTION AND DESTRUCTION:

Document Destruction: All documents will be destroyed by shredding in either a locked shred bin located in the corporate office, or physically shred in the shredder located in the postage room in the corporate office.

Retention of all documents will follow the current Federal Guidelines listed in the attached table. Human Resources will be responsible for the maintenance, retention and legal destruction of all Personnel files kept in the Human Resources office as outlined in the Federal Guidelines.

The Corporate Secretary will be responsible for the maintenance, retention and legal destruction of all Personnel files kept in the Corporate Secretary's office.

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Standard Operating Procedure

RECORD MANAGEMENT, REVISION 09

File Name: J:\word\SOP\Active_Record_Management_09.doc
Date Initiated: 10/15/2001
Date Revised: 02/06/2017

RETENTION TABLE:

Resume's, applications (not hired)	3 years
Personnel Files Resume's, applications (hired)	Length of employment/4 years after termination
Background checks, drug tests, driving records, employment verifications	1 year 5 years for DOT
I9 forms	The later of: 3 years from date of hire or 1 year following termination
Payroll, Compensation, job history, timekeeping	4 years after termination
FMLA/USERRA leave	3 years after termination
Performance reviews, disciplinary action forms	4 years after termination
Job/Applicant records	3 years
Medical/Benefit records FMLA, HIPPA	Later of: 6 years after filing dates/length of employment
Dispute issues/wage investigations DOL, EEOC, arbitrations, court actions	2 years after resolution
OSHA	5 years after termination
Workers' Comp	30 years after date of injury/illness
State New Hire reports	1 year after filing
EEO-1	2 years after filing
Annual Affirmative Action Plans	2 years after close of AAP year
Form 5500	6 years after filing
Federal/State tax reports	4 years after filing
COBRA (ERISA requirements)	6 years from date of record
W4 Forms	4 years

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Appendix III REVISION INDEX

Rev#	Action	Initials	Section	Description
09	Change	TWV	References	Deleted all and added reference to Quality Manual
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File Name: J:\word\SOP\Active_Record_Management_09.doc
Date Initiated: 10/15/2001
Date Revised: 02/06/2017

PURPOSE

Procedure establishes a record system that ensures unequivocal, accurate records that record all laboratory activities - technical, quality, hazardous waste, and business.

SUMMARY

A record is a complete and accurate written account of an activity. Records can be either manual, electronic, or a combination, and include links to supporting data and traceability, if applicable. Corrections are made in a manner to preserve the integrity of the data and to record responsibility for the change. All records are retained, secure and confidential for 5 years, except environmental lead records and Louisiana client records which are retained for 10 years, hazardous waste records which are retained permanently, and business office records which are retained in accordance with Appendix I and II. Records are disposed in a manner to protect confidentiality.

DEFINITIONS

See Definitions and Acronyms SOP

EQUIPMENT AND SUPPLIES

1. Computer with LDS software and printer.
2. Instrument computers interfaced to LDS.
3. Scanner interfaced to the network.
4. Records, paper and electronic.
5. Fire proof filing cabinets.
6. External backup media and equipment.
7. Ballpoint pen, black waterproof ink.
8. Permanent marker, Sharpie or equivalent.
9. General office supplies.

PROCEDURE

RECORDS

1. A record is a complete and accurate account of an activity and is identifiable to that activity.
2. Records may be technical, quality, hazardous waste, or business.
3. Records include all necessary information, including links to supporting data, to establish an audit trail.
4. Records must be readily retrievable.
5. Where practical, records are scanned into the network and archived electronically.
   a. The scanned image becomes the original record.

6. Electronic records are secure, backed up, and reproducible.
7. Paper records are stored in a secure area with a suitable environment to prevent damage or deterioration and to prevent loss.
8. Corrections
   a. All information associated with a correction (incorrect data, corrected data, date and initials) must be legible.
   b. Write overs , >correction fluid=, erasures, etc. are not permitted
   c. Data must not be made illegible or deleted.
   d. Draw one line through the data to be changed.
   e. Record the correct data alongside.
   f. Personnel responsible for correction will date and initial the data.
   g. Corrections made to manual data must also be made to the corresponding electronic data.
9. Refer to:
   a. SOP - Confidentiality and Proprietary Rights.
   b. SOP - Records: CD Backups.
   c. SOP - Records: Electronic Security.
   d. SOP - Records: Electronic Backups.
   e. SOP - Scanning

TECHNICAL RECORDS

1. A technical record is an accumulation of analytical data and information and indicates if specified quality or process parameters are achieved.
2. Observations, data, traceability, and calculations are recorded in real time.
3. Technical records include:
   a. All necessary information, including links to supporting data, to establish an audit trail and to enable the activity to be reproduced under conditions as close to the original conditions as possible.
   b. Original data
      i. All original data must be kept.
      ii. Transferred data is not the same as original data.

Do not record data on paper towels, gloves, tape, digestion tubes, extraction vessels, ETC.

   c. Derived data, with sufficient information for an audit trail.
   d. Calibration records.
   e. Personnel training records.
   f. Copy of each test report issued. (Reconstructed from LDS data.)
   g. Information for determining uncertainty, if possible.
   h. Identity of the personnel responsible for:

i. Sample collection.
ii. Preparation.
iii. Analysis.
iv. Verification of results.

4. Corrections - refer to corrections above.
5. The record is reviewed for completeness.
6. The data is reviewed to verify accuracy, precision, and integrity of the data collected.
7. If the record and data are acceptable, the data is verified and released for reporting.

QUALITY RECORDS

1. A quality record indicates adherence to a quality policy or procedure.
2. Quality records include:
   a. Corrective action reports.
   b. External audits or assessments and responses.
   c. Internal audits.
   d. Management reviews.
   e. Preventive action reports.
   f. Proficiency Test reports.
   g. Traceability.
   h. Any record related to a quality policy or procedure.

HAZARDOUS WASTE RECORDS

1. All original records pertaining to hazardous waste storage, transportation, and disposal.
2. Refer to SOP- Hazardous Waste

BUSINESS OFFICE RECORDS

1. Business records may include human resource, corporation, financial and other business operation records.
2. Records to be kept permanently must be kept as originals.
   a. Refer to Appendix II for our Personnel Files Policy for details on retention requirements for employee files and records containing sensitive employee information

ANALYTICAL DATA COLLECTION

1. Analytical data is generated and entered in to a LDS set (electronic file) either by manual data entry or direct instrument interface.
   a. The set has a unique set number that is used for identification.
2. Analytical data will contain all necessary information, including links to supporting data.
   a. Traceability is required because it provides the means for comparing the data to

national or international standards.

MANUAL RECORDS

1. Analytical personnel are responsible for the preservation of data sheets while being used.
2. Data sheets are kept in chronological order in a binder.
   a. Loose paper is not allowed.
      i. Data does not have to be in the binder ring, pockets can be used to organize individual data sheets.
   b. When ready to submit for data verification, data sheets are placed in a folder and put in the designated pickup location.
3. All data must be legible.
4. The following must be on each data sheet in a set:
   a. Test, test code or other unique identification.
   b. Date, Time, Technician=s Initials.
   c. Set number.
5. Traceability must be included and recorded on an approved data sheet.
6. Data entry
   a. All data is recorded directly on an approved data sheet.
      i. All original data must be kept.
      ii. Transferred data is not the same as original data.

Do not record data on: paper towels, gloves, tape, digestion tubes, extraction vessels, ETC.

   b. Data entries are made in real time and in chronological order.
      i. Each measurement or observation is a unique entry and is recorded individually.
      ii. Down arrows for similar data are not allowed
   c. Traceability must be recorded.
   d. All entries are made using a ballpoint pen with black waterproof ink.
      i. Check with the Quality Department before using markers, highlighters, etc.
   e. Corrections are made in accordance with this SOP.
   f. Enter applicable data into LDS.
   g. Print the required printouts, complete Level I, Analyst Review, and review.
      i. Manual data sheet and electronic data must match.
      ii. Make corrections if necessary.
   h. Manual entries are checked and verified by Quality Department personnel.
   i. Refer to SOP - Data: Verification.

ELECTRONIC RECORDS

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1. Data must be retrievable.
2. The following must be on each page of a set:
   a. File name, test or test code, or other unique identification.
   b. Date, Time, Technician's Initials.
   c. Set number
3. Traceability must be recorded either in the electronic file or on an approved data sheet.
4. Data is downloaded from the instrument computer into LDS.
5. Data Entry:
   a. Data is recorded directly into a LDS set via software specifically designed to interface instrumentation with LDS.
   b. Records are reviewed for accuracy.
      i. Refer to Data Verification SOP.
6. Corrections:
   a. Make corrections and verify prior to issuing the final report
7. LDS updates the record each time it is accessed with date, time and initials.
8. After the data is downloaded to LDS and reported, changes are not allowed.
9. Printing converts the record to a >read only file that cannot be edited or altered.

RECORD RETENTION

1. Records are maintained confidential and secure for 5 years after the record is completed.
   a. Exceptions
      i. Environmental lead records are retained 10 years after the record is completed
      ii. Louisiana client records are retained for 10 years.
      iii. Hazardous waste records are retained permanently.
      iv. Business office record retention time is based on the type of record.
         (1) Refer to Appendix I and II.
      v. Scanned paper records are shredded after the electronic record is verified.
2. Chain of Custodies (CoCs)
   a. Scan and archive electronically.
   b. Printed with analytical report
3. Technical record storage
   a. In progress records
      i. Manual data - fireproof filing cabinets.
      ii. Set data - in LDS.
      iii. Instrument data - on instrument hard drive.
   b. Completed records
      i. Manual data is entered into LDS.
      ii. Set data is completed in LDS.
      iii. Instrument data is downloaded into LDS.

iv. Associated paper records are scanned into the network.
v. The electronic file becomes the permanent record.
vi. Paper records are stored for a short time and then disposed.

4. Quality record storage.
   a. Electronic records are backed up.
   b. Where practical, scan paper records and archive electronically.
   c. Paper is stored in the quality department or a secure storage area with limited access.
      i. Access is limited to management and quality department personnel.
      ii. An access log is maintained.
5. Hazardous waste record storage
   a. All records permanently to hazardous waste storage, transport, and disposal are kept in a fireproof filing cabinet.
   b. Access is limited to the Operations Manager or designee.
      i. An access log is maintained.
6. Business office record storage
   a. All business records to be retained are stored in the business office or in a secure storage area with restricted access.
   b. Access is limited by rights associated with position and job description.
   c. Refer to Appendix II for our Personnel Files Policy for details on storage requirements for employee files and records containing sensitive employee information
7. Electronic Backups:
   a. Electronic files are stored in multiple backups.
   b. Access to backup files is limited to Laboratory Manager and Information Technology Manager or designee.
   c. Refer to SOP - Records: Electronic Backup
8. External Electronic Backups
   a. CDs are >read only and cannot be edited or altered.
      i. Records are transferred to CD and the transfer is confirmed.
      ii. Two >read only copies are made.
      iii. Copy one - stored in the quality department.
      iv. Copy two - stored in a bank box
      v. Refer to SOP - Records: CD Backups
      vi. CD backup are no longer made. They were replaced as a backup media by external hard drives.
   b. External hard drives
      i. Records are transferred to external hard drive and the transfer is confirmed.
      ii. During use, the external hard drive is stored in a fire proof filing cabinet with an access log in LDS notes.

iii. When completed, the external hard drive is stored in a bank box.

c. Internet external backups are also made.

9. In the event that the lab transferred ownership or went out of business:
   a. All clients would be notified 60 days in advance of the transfer or closure.
   b. An agreement would be reached ensuring that the records are maintained or transferred according to the clients' instructions and applicable regulations.

RECORD DISPOSAL

1. All confidential and proprietary records are disposed of in a manner to preserve confidentiality.
   a. Paper is shredded.
      i. Shred service comes on a regular basis to the corporate location.
      ii. Each building has a 96 gallon shred bin to collect materials for shredding.
      iii. Anyone disposing of the following documents will need to complete a "QS: Record Disposal" note detailing what was sent to shred along with the date and resolve the note once the documents are placed in one of the shred bins.
         (1) Business-related documents, if documentation of their disposal is required.
         (2) Scanned chain of custody forms
         (3) Scanned raw data
         (4) Etc
      iv. The shred service will supply a certificate after each shred session with the details of when and how much was shred. This certificate will be scanned to note topic "QS: Record Disposal."
         (1) Notate the month of disposal in the body of the note.
   b. Electronic records are removed from computers.
   c. External backups are destroyed.
2. Refer to SOP - Confidentiality and Proprietary Right

REFERENCES

1. See Quality Manual for references

APPROVED BY

Bill Peery	Approval Date	02/06/2017
President	Effective Date	02/11/2017

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Revised by:	Date	Reviewed by:	Date
TWV, Quality Manager	Feb 2017	BLZ, Dir of QA and Ethics	Feb 2017

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APPENDIX I BUSINESS RECORD RETENTION

Business records retention period begins with settlement of claim, disposal of asset, termination of contract, end of employment, or final action date related to record.

Disposal of business records prior to retention guidelines requires the approval of a corporation officer.

Type of Record	Retention
Appraisals	Permanently
Articles of incorporation, by laws	Permanently
Asset records (Equipment, vehicles, etc.)	7 years
Bank statements, reconciliations	4 years
Cancelled checks – general expense	4 years
Capital stock and bond records	Permanently
Chart of accounts	Permanently
Check vouchers, stubs	4 years
Contracts and agreements	7 years
Credit and collection correspondence	7 years
Credit memos	4 years
Damage and theft reports	7 years
Deeds	Permanently
Deposit slips	4 years
Depreciation Schedules	7 years
Expense reports	4 years
Financial reports, annual audited	Permanently
Freight bills, bill of lading	4 years
Insurance policies and records	4 years
Invoices, sales and general expenses	4 years
Leases	7 years
Ledgers and journals, cash receipts and disbursements	Permanently
Ledgers and journals, journal entries	Permanently
Ledgers and journals, purchases and sales	7 years
Mortgages	7 years
Petty cash records	4 years
Purchase orders, invoices	4 years
Repair and maintenance records	4 years

Routing customer and vendor correspondence	1 years
Subsidiary ledgers (receivables, payables, etc.)	7 years
Tax, income and related records	Permanently
Tax, payroll and related records	Permanently
Tax, sales and use and related records	Permanently

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APPENDIX II: PERSONNEL FILES POLICY

PURPOSE

This Policy/Procedure establishes a record management system to protect extremely sensitive employee information that is required by law and subject to auditing and litigation.

SUMMARY

Employee information records are required by law to be kept with specific guidelines that govern their retention, filing methods and destruction as regulated by Title VII, Age Discrimination Act, FLSA, FMLA, ERISA, the Equal Pay Act (EPA), EEOC, HIPPA laws and OSHA as well.

POLICY

All employee files and records containing sensitive employee information will be filed in accordance to the guidelines put in place by the Federal Government and its agencies to protect the private information of each employee. It will be kept in either the Human Resources office or the Corporate Secretary's office behind a locked door and inside a locked fireproof filing cabinet. Access to these sensitive files will be restricted to Human Resources and upper management and to any Government Agency requesting access for the purpose of an audit or litigation. All records will be in compliance with all HIPPA, EEOC, ACA, ERISA, ADA, IRS and DOL filing and retention requirements and audited yearly.

These segregated records will include, but not be limited to:

1. Personnel files – applications, new hire packets, handbook, pre-employment testing, performance reviews, rate changes, position changes, leaves, transfers, promotions, demotions, disciplinary actions, job descriptions, termination forms, exit interviews and all performance documentation. Kept in Human Resources office files.
2. I-9 – Kept in a separate designated file by employee name with copies of supporting documentation per IRS guidelines, completed and signed by day 3 of employment. Kept in Human Resources files.
3. Payroll Records – Payroll registers, W4's, State withholding forms, garnishments, pay information, time keeping records, wage deduction acknowledgments and supporting documentation as required by DOL. Kept in the Corporate Secretary's files.
4. Terminated Employee files – complete records kept separate from active employee files per Government guidelines. Kept in Human Resources files.
5. Resume's – retained with copy of job applied for and any interview notes with supporting documentation per EEOC, ACA reporting guidelines. Kept in Human Resources office.
6. ESOP files – all supporting documents required will be kept in the Corporate Secretary's office.
7. Employee Medical Files – all insurance forms, enrollment forms, beneficiary forms, drug testing, hiring ADA, FMLA, Workers Comp, doctor's notes, Benefit Summary Plan and all supporting documents will be kept in Corporate Secretary's office.
8. OSHA records – all required reporting documentation will be kept in Corporate Secretary's office.

9. 401K records – enrollment forms, beneficiary forms, plan change forms, contribution reports, Employee Census, ERISA forms, Safe Harbor reporting, Plan Summary and all supporting documentation will be kept in the Human Resources office.
10. ACA, Affirmative Action, EEO auditing documentation will be kept in the Human Resources office.
11. Harassment/Grievance complaints – All records and documentation will be kept separately from personnel files and filed by month of complaint and kept in the Human Resources office.

RETENTION AND DESTRUCTION:

Document Destruction: All documents will be destroyed by shredding in either a locked shred bin located in the corporate office, or physically shred in the shredder located in the postage room in the corporate office.

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STANDARD OPERATING PROCEDURE

#FLP / FLASHPOINT, REVISION 07

File Name: J:\word\SOP\Active\Flp_Flashpoint_07.doc
Date Initiated: 02/19/1999
Date Revised: 10-26-2011

METHODS

Potable Water:.....EPA 1010A
Nonpotable Water: .....EPA 1010A

SCOPE AND APPLICATION

Procedure determines the flashpoint of liquids. This includes oils, organic liquids, liquids which form surface films, liquids containing non-filterable suspended solids and other liquids.

*** The client's DQOs take precedence if they differ from those stated in this SOP and apply only to samples governed by the client's DQOs. If client's DQOs are less stringent than the referenced method or NELAC requirements, the analysis is flagged on the analytical report as not meeting NELAC requirements because the client's supplied DQO's govern.

Procedure is performed by trained personnel with current demonstration of capability and authorization. Refer to Appendix I for training needs.

SUMMARY

Using a Pensky-Martens Closed Tester, sample is heated at a slow, constant rate with continual stirring. A small flame is applied at regular intervals while stirring is stopped. The flash point is lowest temperature at which test flame ignites vapor above sample. Flash point is usually reported in °F.

DEFINITIONS

1. GENERAL DEFINITIONS
   a. APHA Standard Methods, Part 1000.
   b. EPA SW846, Chapter One, 5.0 Definitions.
   c. Refer to referenced methods.
2. BATCH - 1 to 20 production samples of like matrix plus associated quality control; processed as a unit.
3. DQO (Data Quality Objective) - identifies and defines the type, quality, and quantity of data needed to satisfy a specified use; qualitative and quantitative statements.
4. Duplicate - replicate of the sample, quantifies precision.
5. Holding Time - time allowed between sample collection and analysis.
6. LDS (Laboratory Data Services) - in-house LIMS; computer software.
7. PRODUCTION SAMPLE - Sample logged-in to LDS with a unique sample number.
8. STANDARD - used to confirm the accuracy of an analytical process; independent of the

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Standard Operating Procedure

#Flp / Flashpoint, Revision 07

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Date Revised: 10-26-2011

calibration, if applicable.

9. Set - processed as a unit; an analytical group / analytical batch.

Interferences

1. Erroneously high flash points may be obtained if precautions are not taken to avoid the loss of volatile material.
   a. Do not open containers unnecessarily and make a transfer unless the sample temperature is at least the equivalent of 8°F below the expected flash point
2. Do not use samples from leaky containers.
   a. Make sure containers are in good condition.
3. Do not store samples in plastic containers, since volatile material may diffuse through the walls of the enclosure.
   a. Store samples in glass containers.

Safety

1. Follow Chemical Hygiene Plan for routine laboratory practices.
2. Follow MSDSs for safe handling of solvents and target analytes.
3. Wear appropriate personal protective clothing and equipment.
4. Exercise precaution during initial application of test flame, samples containing low-flash material may give abnormally strong flash when test flame is first applied.
5. Be sure a fire extinguisher is in work area.

Accommodations and Environmental Conditions.

1. **Draft-free work area**

Equipment and Supplies

1. Pensky-Martens Closed Cup Flash Tester or equivalent.
2. Thermometer, range of 20 – 230 °F
3. Barometer, readings measured in mm.
4. Hood or safety shield.
5. 5 gallon propane bottle.
6. Lighter, extended length.

Critical Supplies.

None.

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NON-CRITICAL SUPPLIES.

NONE

SUPPLEMENTAL EQUIPMENT AND SUPPLIES

1. Computer with LDS software and printer.
2. Equipment manual(s).
3. Testing list for applicable test codes.
4. Data sheets and notebook.
5. Ballpoint pen, black waterproof ink.
6. Permanent marker, Sharpie or equivalent.

REAGENTS

GENERAL

1. PURCHASED REAGENTS
   a. Traceable by the Chemical Log number. (**C#**)
   b. Purchased reference materials and chemicals are traceable to NIST and to CoAs, meet the specified requirement of the analytical method, and cannot be used past the expiration date.
   c. Stored in the chemical or the solvent storage room or in the designated lab work area.
   d. Follow Chemical Log SOP.
2. PREPARED REAGENTS
   a. Traceable by the Reagent Log number (SW#)
   b. Reagents1 prepared in house are traceable to reference materials and chemicals, meet the specified requirement of the analytical method, and cannot be used past the expiration date.
   c. Stored in a reagent bottle in designated lab work area unless otherwise noted.
      i. **NOTE:** Daily Reagents – record on data sheet or in instrument log and dispose at the end of the day.
   d. Follow Reagent SOP.
3. Preparation Techniques
   a. Follow Personnel: Training, Basic Technical Skills SOP.

REAGENTS

1. p-xylene, 95% purity minimum, Neat material

SAMPLE COLLECTION, PRESERVATION AND STORAGE

Aqueous sample is collected in Glass Quart with Teflon lined lid stored at **≤6**°C, and analyzed within 14 days of collection.

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Non-aqueous sample is collected in unpreserved glass sample bottle with a Teflon lid, stored at ≤6°C, and analyzed within 14 days of collection.

QUALITY CONTROL

Any quality control outside acceptable control limits will be evaluated for significance of nonconformity by the Quality Department. Refer to Corrective Action SOP.

Type	Minimum Frequency	Acceptance Limits	Corrective Action
Standard	1 per batch [NOTE 1]	81 ± 2°F	Correct problem, re-analyze
Duplicate	1 per 10 production samples	If < 220°F, then ± 4°F If > 220°F, then ± 10°F	Correct problem, re-analyze [NOTE 2]

NOTES
1. A batch is 20 production samples, or less, of like matrix.
2. Report with an appropriate data qualifier.

PROCEDURE

PREPARATION OF APPARATUS

1. Work in hood.
2. Place tester on level, steady surface.
3. Clean and dry all parts of the cup and its accessories before starting the test - taking care to remove any solvent used during cleaning.

PREPARATION OF SAMPLE

1. Samples suspected of containing volatile contaminants:
   a. No preparation is required.
2. Samples that are viscous:
   a. Sample aliquot may be warmed until reasonably fluid (no more than absolutely necessary).
   b. Sample aliquot must never be heated to within 17°C of expected flash point.
3. Samples containing dissolved or free water:
   a. Sample aliquot may be dehydrated by filtering through a qualitative filter paper.
   b. Sample aliquot may be warmed if necessary (not for prolonged periods).
   c. Sample aliquot must never be heated to within 17°C of expected flash point.

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PROCEDURE

1. Fill clean, dry cup with sample to the indicator mark.
2. Place lid on cup.
3. Set cup in stove.
4. Be sure locating or locking device is properly engaged.
5. Insert thermometer.
6. Warm sample to 15°F or 11°F lower than estimated flashpoint, whichever is less.
7. Light the flame and adjust to 4 mm in diameter.
8. Heat sample so that the temperature increases by:
   a. 5-6°F per minute for samples containing liquid.
   b. 1-1.5°F per minute for viscous samples.
9. Turn on stirrer:
   a. 90-120 rpm, stirring in a downward direction for samples containing liquid.
   b. 250±10 rpm, stirring in a downward direction for viscous samples.
10. To introduce flame:
    a. Open shutter.
    b. Lower test flame into vapor space of cup in 0.5 seconds.
    c. Leave test flame in lowered position for 1 second.
    d. Quickly raise test flame to high position.
11. Do not stir the sample while applying the test flame.
12. Introduce flame beginning at 17-28°F below the expected flashpoint.
    a. Temperature limits not enforced for possible volatile samples.
13. Continue to introduce the flame every 1°F thereafter.
14. Record flashpoint (not a bluish halo surrounding flame)
    a. The sample is deemed to have flashed when a large flame appears and instantaneously propagates itself over the surface of the sample.
    b. If sample burns when flame is introduced.
15. If flame is extinguished when introduced into cup:
    a. Test is complete, vapors present will not flash.
    b. Report >201°F.
16. Observe and record ambient barometric pressure (mm) in lab at time of test.
17. Be sure to clean and cool the sample cup between samples. Rinse at least 3X.
18. A standard consisting of p-xylene should yield a flashpoint of 81 ± 2°F.

DATA ENTRY

1. **Using LDSClient,** create a set.
2. Enter or download data **including QC** into LDS.
3. Post **results and QC**

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4. **Perform Level 1, Analyst Review**
5. **Print required printouts and review exceptions**
6. Submit raw data and LDSClient **set** printouts second level of review and verification

Record Management

1. Follow Record Management SOP
2. Record will contain all necessary information including links to supporting data.

Data Analysis and Calculations

Qualitation and Quantitaton

Refer to EPA 1010 and ASTM D93-85.

Calculations

Flashpoint: Observed reading.

Corrected °F = Observed °F + [0.06(760 - Barometric Pressure in mm)]

Data Reporting Instructions

1. Flashpoint is usually reported in °F.
2. If required, report the appropriate data qualifier with the result.

Method Performance

1. Refer to EPA 1010 and ASTM D93-85.

Uncertainty

1. Loss of volatile material
2. Samples stored in plastic containers
3. Contaminated cup
4. Temperature increase
5. Thermometer calibration

Pollution Control

1. Employ techniques to reduce or eliminate the quantity or toxicity of waste generation.
2. Quantity of chemicals purchased is based on expected usage and shelf life.

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3. Reagent preparation volumes reflect anticipated usage and reagent stability.

Waste Management

Follow Disposal SOPs.

References

1. EPA, Test Methods for Evaluating Solid Waste, SW846, Volume 1C, Chapter 8, Section 8.1, Method 1010A, Revision 1, November 2004.
2. ASTM, American Society for Testing and Materials, Revised 1986, Volume 04.09, Method 93.
3. **NELAC (National Environmental Laboratory Accreditation Conference), Chapter 5 Quality Systems, Approved June 5, 2003, Effective July 1, 2005.**
4. **TNI Standard, Volume 1: Management and Technical Requirements for Laboratories Performing Environmental Analysis, Effective July 1, 2011.**

Approved By

Bill Posey	Approval Date	10-26-2011
Technical Director	Effective Date	11-3-2011

Revised by:	Date	Reviewed by:	Date
RDH/JWK, Supervisors	Oct 2011	TWV, Asst QA Mgr	Oct 2011
Technical Method Review		Quality NELAC Review	

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STANDARD OPERATING PROCEDURE

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Appendix I

Training Needs

1. Use of Pensky-Martens Closed Cup Flash Tester
2. Reading a thermometer
3. Reading a barometer
4. Safe use of a lighter to light flame on flash tester
5. Cleaning flash tester

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APPENDIX II:

	Revision Checklist			
Rev#	Action	Initials	Section	Description
7	add	RDH	new	Accomodations and Environmental Conditions.
7	add	RDH	Accomodations	Draft-free work area
7	add	RDH	new	Critical Supplies.
7	add	RDH	Critical Supplies	None.
7	add	RDH	new	Non-Critical Supplies.
7	add	RDH	Non-Critical Supplies	None.

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Standard Operating Procedure

SHIPPING, REVISION 04

File Name: J:\Word\SOP\Active\SOP_Shipping_04.Doc
Date Initiated: 03 /11/2004
Date Revised: 06/11/2012

PURPOSE

This procedure provides instructions for shipping requested items to the appropriate recipient and for maintaining a shipping record.

SUMMARY

A list of items to ship is used to prepare the shipment. This list can be obtained via a Tech List, LDS notes, e-mail, and/or verbal/written instructions. A courier is selected and shipment information is completed. A shipping log will be maintained.

DEFINITIONS

1. **See Definitions and Acronyms SOP.**
2. **Relevant Test codes:**
   a. Bret – Test code for cooler return with sample bottles.
   b. CRet – Test code for cooler return with no sample bottles.
   c. RRNB – Test code for cooler return without sample bottles returned to client by route drivers.
   d. RRWB – Test code for cooler return with sample bottles returned to client by route drivers.
   e. Sret – Test code for sample bottle return at a client's request.

SAFETY

1. Follow Chemical Hygiene Plan for routine laboratory practices.
2. Follow manufacturer's operating instructions.
3. Follow applicable MSDSs for safe handling of chemicals and samples.
4. Wear appropriate personal protective clothing and equipment.

EQUIPMENT

1. Computer with LDS software, shipping software, internet access, and printer.
2. List of applicable test codes
3. Shipping orders received via LDS notes, e-mail, and/or verbal/written instructions.
4. Bottle preservation sheets
5. CoC for each returned sample
6. Shipping Log
7. Shipping labels, including Hazardous Materials, if applicable
8. Packing materials; e.g. duct tape, clear shipping tape, bubble wrap/bags, packing peanuts, etc.
   a) Hazardous Materials packing materials when applicable.
9. Scales for weighing shipments

10. Ballpoint pen, black waterproof ink
11. Permanent marker; e.g. Sharpie or equivalent
12. Cleaning solutions; e.g. Alconox and water
13. Paper towels
14. General office supplies as needed.

PROCEDURE

ITEMS TO SHIP:

1. Regional Offices
   a. Items as requested.
   b. List received via LDS Notes, e-mail, and Purchase Orders.
      i. **See Appendix I for format.**
      ii. **Shipping technician will line through each item as it is packed.**
2. Client
   a. Samples, sample bottles, coolers, etc that client wants returned.
   b. Unused sample bottles and/or coolers for new samples.
   c. Other items as requested by the client.
   d. List received via LDS notes or e-mail.
3. Equipment for repair/calibration
   a. As requested by management.
4. Management specified samples returned to the client.
   a. List received via LDS notes or e-mail.
5. Samples sub-contracted to outside labs.
   a. Sub-contract shipping order received from login.

RETURNS:

1. Print a BRet/CRet tech list.
   a. Log into LDSClient
   b. Click Tests.
   c. Click Tech List
   d. Type “SHP”
   e. Click Print.
2. Using tech list determine if shipping Bret or CRet.
3. If applicable, print Bret CoC.
   a. Log into LDSClient
   b. Enter Sample #
   c. Click “Sample”
   d. Click “Routine”
      i. If not a routine sample, click “Bottles” to see what bottles were received.

e. Click CoC Tab.
f. Click Print

4. If applicable, print SRet CoC.
   a. Log into LDSClient
   b. Enter Sample #
   c. Click “Sample”
   d. Click “Project”
   e. Click “Print EDD” tab
   f. Click “Print CoC”
   g. Click Print
5. If applicable, print Routine Sample CoC.
   a. Log into LDSClient
   b. Enter Client Code
   c. Click “Client”
   d. Click “Sample” tab
   e. Click “routine”
   f. Locate routine in the list.
   g. Highlight and double-click.
   h. Click “CoC” tab
   i. Click “Print CoC”
   j. Check “Sample” or “Project” as required.
   k. Click Print
6. Send applicable COC and QEC Custody Seal with bottle (s).
7. Determine shipping address.
8. Use applicable courier
9. Record shipping data in Shipping Log and in LDSClient as required.

SHIPPING:

1. Clean cooler with appropriate cleaning solution.
2. Pack cooler
   a. All preserved bottles must be in plastic bags. Like bottles may be placed in the same bag.
   b. All glass bottles must be in bubble bags.
3. Place CoC, bottle preservation sheet, and QEC Custody Seal in zip lock baggie.
4. Place black 2ml plastic bag and zip time in cooler with instructions for use.
5. Fill empty spaces with bubble wrap and/or packing peanuts.
6. Close and secure with duct tape.
7. Apply necessary labels to identify contents; e.g. fragile, etc.
8. Date and sign QEC Custody Seal and place across lid and cooler body.
9. Weigh cooler.

10. Use appropriate courier internet site.
11. Record shipping data in Shipping Log.
    a. Date/Tech Name
    b. Destination, Use Client Code or name
    c. Carrier
    d. Quantity of coolers/boxes
    e. Tracking #
    f. Sample #
    g. Notes and other information as needed.

SHIPPING SAMPLES TO SUB-CONTRACT LAB

1. Obtain sub-contract order from Log-In.
2. Collect samples from cooler checking sample number(s) with sub-contract order.
3. Follow shipping instructions on sub-contract order.
4. Check if sub-contract needs to be shipped on ice, if not stated on order.
    a. Log into LDSClient
    b. Enter Sample #
    c. Click “Sample”
    d. Click “Tests”
    e. Click “Method”
    f. Click “Units”
    g. Click Collect Temp.
5. Make a copy of sub-contract order to keep for shipping records. Place original in a zip-lock bag. Place in shipping container with sample.
6. If shipping sample on ice, ensure sample is well covered. Tape zip-lock bag containing sub-contract order on inside of cooler lid.
    a. Tape cooler lid to body with duct tape, insuring all leak points are covered.
7. Proceed with shipping steps 7-11.
8. Record tracking # on subcontract shipping copy and place in file cabinet.
9. Record data in LDSClient.

DATA ENTRY FOR BRET/CRET/SRET/SUB-CONTRACT SHIPMENTS:

1. Log into LDSClient
2. Enter Sample #
3. Click Tests
4. Double-click Test Code.
5. Click Edit
6. Fill in required fields.
    a) In results field, enter “Returned” for Bret, CRet, and “Ship/Lab Name” for sub-contract.
    b) Enter date shipped

c) Enter time shipped
d) Enter shipper's initials
e) Enter "Y" in verified field

7. Click Save

LONESTAR OVERNIGHT SHIPPING PROCEDURES

1. An account number, log on name, and password are required.
   a. ****acct#
   b. ****login
   c. ****password
2. Using Shipping Computer, open Internet Explorer (LSO log on page automatically opens).
3. Click File
   a. Click Page Set-up
   b. Click Printer
4. Open Drop-Down window
   a. Select "**********"
   b. Click "Ok"
   c. Click "Landscape"
   d. Click "Ok"
   e. Ensure all margins are at "0"

NOTE: These steps are used every time you log onto LSO.

5. Open Quick Code drop-down window.
   a. Select Client Code
   b. Click on empty space to "Lock-in"
   c. Quick Code should be the same as Client Code when possible.
6. Check appropriate Shipping Priority
7. Enter Weight to nearest pound
8. Enter 3rd party billing as applicable
   a. Refer to LSO Client Code/Branch Office 3rd Party Billing Log
9. Click Print
   a. Click Pages -1-
   b. Click Print
   c. To add a new client:
      i. Click Quick Code drop-down menu
      ii. Click New
      iii. Fill in required fields
      iv. Click Save
   d. Write weight on label above Destination Code and place label on container
   e. CRet – Follow same shipping procedure as for BRet
   f. SRet – Follow same shipping procedure as for BRet with exception that sample must be

shipped on ice. When this is needed:
i. Use double bagging and fill baggie ¾ full of ice.
ii. Pack around samples to be shipped.
iii. Insulate top with layers of bubble wrap.

g. Attached label to container
h. Enter information in Shipping Log.
i. Place Shipping Order in filing cabinet.
i. If shipping sub-contract, enter tracking number on Shipping Order.
j. DO NOT ship to P.O. Boxes.

UPS SHIPPING PROCEDURES:

1. Enter Client Code in Customer ID field
2. Press Tab button
   a. All required fields will automatically fill in.
   b. If not, open drop down window in Company or Name field, locate client and double click.
   c. To add new client:
      i. Click Tools
      ii. Click Address Book Editor
      iii. Fill in required fields
      iv. Click "Add New Address"
      v. Click Close
3. Enter Service Type
4. Click Process Shipment.
5. Fold and place shipping label in pouch and attach pouch to container.
6. Enter information in Shipping log
7. Place Shipping Order in file cabinet
   a. If shipping sub-contract, enter tracking number on shipping order.
8. DO NOT ship to a P.O. Box.
9. When the last package is processed and shipment is ready for pickup:
   a. Click on "End of Day" icon in top right of UPS Tool Bar.
   b. When asked if you are ready to close today's shipping and send information to UPS, click on "Yes".
   c. A Pick-up Summary barcode and a Daily Shipment Detail report will print.
   d. Place the barcode with the shipment. The UPS driver will sign the report to verify packages were picked up.
   e. Keep both reports in shipping records for future reference.
10. If necessary to void shipment, click "History".
    a. Click Week Day's Pending Pickup
    b. Click **********
    c. Click Client Name

d. Click Void
e. Click Yes
f. Click Shipping

PREPARING UPS DANGEROUS GOODS PARCEL

1. Shipping personnel may prepare Dangerous Goods parcels only under the direct supervision of Trained and Authorized personnel.
2. All Hazardous Materials must be prepared following IAW USDOT Hazardous Materials Regulations (49 CFR) and UPS guidelines.
3. All containers and packaging materials must be new or like new, no mark outs or previous labels.
4. Banding and strapping to form a bundle is prohibited.
5. Duct tape and masking tape is prohibited. Use only clear shipping tape.

Procedure:

1. Place sample in a 2ml bag large enough to contain sample and absorbent material.
2. Surround and cover sample container with vermiculite.
3. Close bag and seal with twist tie.
4. Place bag in box and cover with vermiculite.
5. Seal box with clear shipping tape.
6. Place appropriate Diamond Hazard Label, Proper Shipping Name, and UN # on box.
7. Place box containing sample into a larger shipping carton, ensuring equal distance on all sides.
8. Fill all voids with absorbent material.
9. Seal with clear shipping tape using 6 point seal. (1 strip horizontal, 2 strips vertical top and bottom)
10. Place appropriate Diamond Hazard Label, Proper Shipping Name, and UN# on box.
11. Package is not ready to ship.

SHIPPING DANGEROUS GOODS:

1. Only trained and Authorized Personnel may ship Dangerous Goods.
2. These persons must be trained to IAW DOT 49 CFR requirements.
   a. At this time only the RSV and LWH may ship Dangerous Goods.

Procedure:

1. Dangerous Goods is shipped using UPS Worldship only. LSO is not qualified.
2. Enter shipping information in same manner as a normal shipment.
3. Click Options Tab.
4. Click Dangerous Goods. Ensure Current regulation is set to 49 CFR.
5. Open DG reference 1.
6. Click New Record.

7. Click View Chemical Records.
8. Click UPS Chemical Table.
9. Locate and highlight applicable UN# with applicable Packing Group, then click Select.
10. Fill in all blue fields: Quantity, Unit of Measure, Packaging Type, and Transportation Mode.
11. Fill in Emergency Phone # and ER Registrant (Ana-Lab Corp), and then click OK.
12. Place 1 sheet Red Border UPS DG Shipping Paper face down in copy machine feed tray ensuring letters are facing rear of tray (Letters will be upside down).
13. Place 1 sheet blank copy paper on top. This is the address label which prints first.
14. Click Tools, and then click System Preference Editor.
15. Click Printing Setup Tab; select Dangerous Goods in the Printer Drop down Window and Click OK.
16. Click Process Shipment.
17. Ensure all fields are filled in and sign both copies. Place address label on carton. Label must be computer generated.
18. Peel and place Red Border Label Section on box adjacent to address label.
19. Fold and place remaining copies in Red Striped UPS DG pouch with signature facing out.
20. At “End of Day” printout and sign both Dangerous Goods Manifest copies and place with UPS Pickup Sheet.

RECORD MANAGEMENT

1. Follow Record Management SOP
2. Record will contain all necessary information including links to supporting data.
3. Data is scanned into the network and archived electronically.
4. Electronic records have multiple backups.

POLLUTION CONTROL

1. Employ techniques to reduce or eliminate the quantity or toxicity of waste generation.

WASTE MANAGEMENT

1. Follow Disposal SOPs.

REFERENCES

1. DOT 49 CFR 173
2. DOT 49 U.S.C. 5103
3. UPS Guidelines, http://www.ups.com/content/us/en/resources/ship/hazardous

APPROVED BY

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Standard Operating Procedure

SHIPPING, REVISION 04

File Name: J:\Word\SOP\Active\SOP_Shipping_04.Doc
Date Initiated: 03 /11/2004
Date Revised: 06/11/2012

Bill Posey	Approval Date	06/11/2012
Technical Director	Effective Date	06/18/2012

Revised by:	Date	Reviewed by:	Date
TWV, Asst. Quality Manager	June 2012	CPS/LDH QAQC	June 2012

APPENDIX I:
SHIPPING REQUEST FORMAT FOR LDS NOTES AND E-MAIL

Delivery:

Routine
Overnight

Packaging:

Cooler
Box

COC Required?

Custom
Generic

Bottles required:

 # Type

Other Items to send:

Standard Operating Procedure

SHIPPING, REVISION 04

File Name: J:\Word\SOP\Active\SOP_Shipping_04.Doc
Date Initiated: 03 /11/2004
Date Revised: 06/11/2012

Appendix II: Revision Index

Rev #	Action	By	Section	Description
04	**Add**	**TWV**	**Procedure – Items to Ship**	**Added the following to 1.b;** i. **See Appendix I for format.** **ii. Shipping technician will line through each item as it is packed.**
04	**Change**	**TWV**	**Definitions**	**Deleted definitions/acronyms and referenced the Definitions& Acronyms SOP. Added #2 as relevant test codes and listed those previously in this section.**
04	**Add**	**TWV**	**Appendix I &II**	**Added Appendix I – Shipping Request Format and Appendix II – Revision Index**

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 3/7/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Linda Tidwell	
Threlkeld & Company Insurance 515 WSW Loop 323 Tyler TX 75701	PHONE (A/C, No, Ext): (903)581-0077	FAX (A/C, No): (903)306-0652
	E-MAIL ADDRESS: ltidwell@threlkeld.com	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : Homeland Insurance	
INSURED	INSURER B : Atlantic Specialty	BWASI
Ana-Lab Corporation P.O. Box 9000 Kilgore TX 75663	INSURER C : TEXAS MUTUAL INSURANCE COMPANY	22945
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** 16/17 Certs- All Lines **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY [ ] PRO-JECT [ ] LOC [ ] OTHER:			793-00-10-48-0004	12/24/2016	12/24/2017	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 50,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO [ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS X HIRED AUTOS X NON-OWNED AUTOS			793-00-10-49-0004	12/24/2016	12/24/2017	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) PIP-Basic	$ 1,000,000 $ $ $ $ 5,000
A	[ ] UMBRELLA LIAB X OCCUR X EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			793-00-10-50-0004	12/24/2016	12/24/2017	EACH OCCURRENCE AGGREGATE	$ 5,000,000 $ 5,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N: N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		TX Policy - 0001318126 LA & OK Policy - Argonaut 92-821-832701-4	12/24/2016	12/24/2017	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
A	Professional Liability Pollution Liability			793-00-10-48-0004	12/24/2016	12/24/2017	Each Act Per Condition	$2,000,000 $2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

The general liability and automobile policies include a blanket automatic additional insured endorsement provision that provides additional insured status to the certificate holder only when there is a written contract between the insured and the certificate holder that requires such status.

The general liability, automobile, excess liability and workers compensation policies include a blanket automatic waiver of subrogation endorsement that provides this feature only when there is a written contract between the named insured and the certificate holder that requires it.

CERTIFICATE HOLDER

GHD Services Inc
2055 Niagara Falls Boulevard
Niagara Falls, NY 14304

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Todd Threlkeld/U104 Todd W. Threlkeld