City of Laredo
Purchasing Division
RENEWAL NOTICE

July 10, 2024

Mr. Neil Rodrigue
Eurofins Xenco, LLC.
4147 Greenbriar Drive
Stafford, Texas 77477

Re: FY21-082 Laboratory Analytical Services
Extension II

Dear Mr. Rodrigue,

This is to inform you that the renewal for contract FY21-082 which was approved by the City Council on August 2, 2021 is up for renewal. This is the second of three one-year extension periods. Please advise if you wish to renew this contract.

Contract Pricing

Table AA Wastewater Sampling Events
Table AA Miscellaneous Sampling Groups
Table A-Sludge Permit
Table B-Sludge TCLP (as per 40 CFR 261 Appendix II)
Table C-Sludge Pathogens
Table D-Soil
Table E- W.W. Groundwater Group A
Table F- W.W. Groundwater Group B
Table G- W.W. Metals
Table H-Root Zone Nutrients
Table I-W.W. Priority Pollutants
Table J-W.T. Metals Group A
Table K – W.T. Metals Group B
Table L- W.T. Pesticides/Herbicides
Table M- W.T. TTHM
Table N- W.T. HAA
Table O- W.T. TOC
Table OO- W.T. SUVA
Table OOO- W.T. SUVA
Table P- W.T. Radionuclides
Table Q- W.W. Process Control
Table R- W.T. Ion Analysis
Table S- Microbiology
Table T- Industrial Pretreatment
Table U- Storm Water Multi-sector General Permit

If there are any questions regarding this renewal notice, please feel free to call me at (956) 794-1731.

Sincerely,

Jaime E. Zapata
Purchasing Agent

Xc: Purchasing File

Eurofins Xenco

Accept X Reject _____

Authorized Signature: _____

Print Name: Ruben Builes

Date: 7/15/2024

City of Laredo
Purchasing Division
LETTER OF AWARD

August 8, 2023

Mr. Neil Rodrigue
Eurofins Xenco, LLC.
4147 Greenbriar Drive
Stafford, Texas 77477

Re: FY21-082 Laboratory Analytical Services
Extension I

Dear Mr. Rodrigue,

This is to inform you that the contract renewal for FY21-082 was approved by the City Council on August 7, 2023. The term of this contract shall be for a period of one year. This is the first of three extension periods.

Contract Pricing

Table AA Wastewater Sampling Events
Table AA Miscellaneous Sampling Groups
Table A-Sludge Permit
Table B-Sludge TCLP (as per 40 CFR 261 Appendix II)
Table C-Sludge Pathogens
Table D-Soil
Table E- W.W. Groundwater Group A
Table F- W.W. Groundwater Group B
Table G- W.W. Metals
Table H-Root Zone Nutrients
Table I-W.W. Priority Pollutants
Table J-W.T. Metals Group A
Table K – W.T. Metals Group B
Table L- W.T. Pesticides/Herbicides
Table M- W.T. TTHM
Table N- W.T. HAA
Table O- W.T. TOC
Table OO- W.T. SUVA
Table OOO- W.T. SUVA
Table P- W.T. Radionuclides
Table Q- W.W. Process Control
Table R- W.T. Ion Analysis
Table S- Microbiology
Table T- Industrial Pretreatment
Table U- Storm Water Multi-sector General Permit

As a reminder compliance with the contract terms are the responsibility of the awarded vendor(s) and the respective City user department(s). If there are any questions regarding this letter of award, please feel free to call me at (956) 794-1731.

Sincerely,

Miguel A. Pescador
Purchasing Agent

Xc: Purchasing File

City Council-Regular
Meeting Date: 08/07/2023
Initiated By: Rosario Cabello, Deputy City Manager
Staff Source: Arturo Garcia Jr., P.E., Utilities Department Director, Mark DeMay, Finance Department Director, Miguel A. Pescador, Purchasing Agent

SUBJECT

Consideration to renew annual service contract FY21-082 with Eurofins Xenco LLC., Stafford, Texas in an amount up to $350,000.00 to provide laboratory analytical services for water and wastewater samples in accordance to Environmental Protection Agency (EPA) approved standard methods. Sample testing is done on a daily, monthly, and quarterly basis. The term of this contract shall be for a period of one (1) year beginning as of the date of its execution and is contingent upon the availability of appropriated funds. There was no price increase during the last extension period. This contract can be renewed two (2) additional one (1) year extension periods, upon mutual agreement of the parties. Funding is available in the Utilities Department Waterworks and Sewer System funds.

VENDOR INFORMATION FOR COMMITTEE AGENDA

None.

PREVIOUS COUNCIL ACTION

Approved a two-year contract on 8/2/21.

BACKGROUND

This annual service contract establishes pricing for laboratory analytical services for water and wastewater samples for the Utilities Department. The testing laboratory is currently responsible for sample handling, analysis, and reporting on a wide range of environmental parameters in soil, water, and sludge samples for both water and wastewater applications. There was no price increase during the last extension period. This is the first of three extension periods.

The term of this contract shall be for a period of one (1) year beginning as of the date of its execution. The contract may be extended for two, additional one (1) year periods. Should the vendor desire to extend the contract for the additional one-year period, it must so notify the City in writing no later than sixty (60) days before the expiration of the prior term. Such notification shall be effective upon actual receipt by the City. Renewals shall be in writing and signed by the City's Purchasing Manager & City Manager or his designee, without further action by the Laredo City Council, subject to and contingent upon appropriation of funding therefore. All annual contracts shall

bound by the terms of the bid documents. The City shall also have the right to extend this contract under the same terms and conditions beyond the original term or any renewal thereof, on a month to month basis, not to exceed 3 months. Said month to month extensions shall be in writing, signed by the City's Purchasing Manager & City Manager or his designee, and shall not require City Council approval, subject to and contingent upon appropriation of funding therefore. The City reserves the right to renew or rebid this contract, if the appropriated funds initially approved by City Council are exhausted before the contract expiration date. This contract shall be the responsibility of and administered by the vendor and the City of Laredo Utilities Department.

Tables under contract

Table AA Wastewater Sampling Events
Table AA Miscellaneous Sampling Groups
Table A-Sludge Permit
Table B-Sludge TCLP (as per 40 CFR 261 Appendix II)
Table C-Sludge Pathogens
Table D-Soil
Table E- W.W. Groundwater Group A
Table F- W.W. Groundwater Group B
Table G- W.W. Metals
Table H-Root Zone Nutrients
Table I-W.W. Priority Pollutants
Table J-W.T. Metals Group A
Table K – W.T. Metals Group B
Table L- W.T. Pesticides/Herbicides
Table M- W.T. TTHM
Table N- W.T. HAA
Table O- W.T. TOC
Table OO- W.T. SUVA
Table OOO- W.T. SUVA
Table P- W.T. Radionuclides
Table Q- W.W. Process Control
Table R- W.T. Ion Analysis
Table S- Microbiology
Table T- Industrial Pretreatment
Table U- Storm Water Multi-sector General Permit

A complete bid tabulation is attached.

COMMITTEE RECOMMENDATION

None.

STAFF RECOMMENDATION

It is recommended that this contract be renewed.

	Fiscal Impact
Fiscal Year:	2023
Bugeted Y/N?:	Yes
Source of Funds:	
Account #:	559-4210-533-5514
Change Order: Exceeds 25% Y/N:	

FINANCIAL IMPACT:

The purpose of this contract is to establish prices for the commodities or services needed, should the City need to purchase these commodities or services. The City's obligation for performance of an annual supply contract beyond the current fiscal year is contingent upon the availability of appropriated funds from which payments for the contract purchases can be made. If no funds are appropriated and budgeted during the next fiscal year, this contract becomes null and void.

Fiscal Year:	2023
Bugeted Y/N?:	Yes
Source of Funds:	
Account #:	557-4120-533-5514
Change Order: Exceeds 25% Y/N:	
FINANCIAL IMPACT:	

Attachments

Bid Tab FY21-082
Contract FY21-082

City of Laredo
Purchasing Division
RENEWAL NOTICE

July 20, 2023

Mr. Neil Rodrigue
Eurofins Xenco, LLC.
4147 Greenbriar Drive
Stafford, Texas 77477

Re: FY21-082 Laboratory Analytical Services
Extension I

Dear Mr. Rodrigue,

This is to inform you that the renewal for contract FY21-082 which was approved by the City Council on August 2, 2021 is up for renewal. This is the first of three one-year extension periods. Please advise if you wish to renew this contract.

Contract Pricing

Table AA Wastewater Sampling Events
Table AA Miscellaneous Sampling Groups
Table A-Sludge Permit
Table B-Sludge TCLP (as per 40 CFR 261 Appendix II)
Table C-Sludge Pathogens
Table D-Soil
Table E- W.W. Groundwater Group A
Table F- W.W. Groundwater Group B
Table G- W.W. Metals
Table H-Root Zone Nutrients
Table I-W.W. Priority Pollutants
Table J-W.T. Metals Group A
Table K – W.T. Metals Group B
Table L- W.T. Pesticides/Herbicides
Table M- W.T. TTHM
Table N- W.T. HAA
Table O- W.T. TOC
Table OO- W.T. SUVA
Table OOO- W.T. SUVA
Table P- W.T. Radionuclides
Table Q- W.W. Process Control
Table R- W.T. Ion Analysis
Table S- Microbiology
Table T- Industrial Pretreatment
Table U- Storm Water Multi-sector General Permit

If there are any questions regarding this renewal notice, please feel free to call me at (956) 794-1731.

Sincerely,

Miguel A. Pescador
Purchasing Agent

Xc: Purchasing File

Eurofins Xenco

Accept X Reject _____

Authorized Signature: Christina M. Godines

Print Name: Christina Godines

Date: 7/21/2023

City of Laredo
Purchasing Division
LETTER OF AWARD

August 3, 2021

Mr. Neil Rodrigue
Eurofins Xenco, LLC.
4147 Greenbriar Drive
Stafford, Texas 77477

Re: FY21-082 Laboratory Analytical Services
Approved by City Council August 2, 2021

Dear Mr. Rodrigue,

This is to inform you that contract FY21-082 was approved by the City Council on August 2, 2021. The term of this contract shall be for a period of two years. This contract has three one-year extension periods.

Contract Pricing

Table AA Wastewater Sampling Events
Table AA Miscellaneous Sampling Groups
Table A-Sludge Permit
Table B-Sludge TCLP (as per 40 CFR 261 Appendix II)
Table C-Sludge Pathogens
Table D-Soil
Table E- W.W. Groundwater Group A
Table F- W.W. Groundwater Group B
Table G- W.W. Metals
Table H-Root Zone Nutrients
Table I-W.W. Priority Pollutants
Table J-W.T. Metals Group A
Table K – W.T. Metals Group B
Table L- W.T. Pesticides/Herbicides
Table M- W.T. TTHM
Table N- W.T. HAA
Table O- W.T. TOC
Table OO- W.T. SUVA
Table OOO- W.T. SUVA
Table P- W.T. Radionuclides
Table Q- W.W. Process Control
Table R- W.T. Ion Analysis
Table S- Microbiology
Table T- Industrial Pretreatment
Table U- Storm Water Multi-sector General Permit

Statutory Requirement to File Form 1295:
Texas Government Code Section 2252.908 and the Texas Ethics Commission ("TEC") Rules require certain business entities to submit a Form 1295 to certain governmental entities in Texas in connection with certain contracts, including bond purchase agreements that fit within the scope of the law. Failure to submit 1295 within 10 business days can result in cancelation of this contract. I have attached the link for form 1295 which must be completed and submitted electronically to the State of Texas Ethics Commission. https://www.ethics.state.tx.us/whatsnew/FAQ_Form1295.html. You scan and email a copy to mpescador@ci.laredo.tx.us If there are any questions regarding this authorization, please feel free to call me at (956) 794-1731.

Sincerely,

Miguel A. Pescador
Purchasing Agent

Xc: Purchasing File

City Council
Meeting Date: 08/02/2021
Initiated By: Riazul Mia, Assistant City Manager
Staff Source: Arturo Garcia Jr., P.E., Utilities Department Director, Miguel A. Pescador, Purchasing Agent

SUBJECT

Dynamic and Sustainable

Consideration to award a two (2) year service contract FY21-082 tothe sole bidder Eurofins Xenco LLC., Stafford, Texas in an amount up to $350,000.00 to provide laboratory analytical services for water and wastewater samples in accordance to Environmental Protection Agency (EPA) approved standard methods. Sample testing is done on a daily, monthly, and quarterly basis. The term of this contract shall be for a period of two (2) years beginning as of the date of its execution and is contingent upon the availability of appropriated funds. This contract can be renewed three (3) additional one (1) year extension periods, upon mutual agreement of the parties. Funding is available in the Utilities Department Budget, Water and Wastewater Treatment Divisions.

VENDOR INFORMATION FOR COMMITTEE AGENDA

None.

PREVIOUS COUNCIL ACTION

None.

BACKGROUND

The City received one (1) bid through Cit-E-Bid for awarding an annual service contract to provide laboratory analytical services for water and wastewater samples for the Utilities Department. The testing laboratory is currently responsible for sample handling, analysis, and reporting on a wide range of environmental parameters in soil, water, and sludge samples for both water and wastewater applications.

The term of this contract shall be for a period of two (2) years beginning as of the date of its execution. The contract may be extended for three, additional one (1) year periods. Should the vendor desire to extend the contract for the additional one year period, it must so notify the City in writing no later than sixty (60) days before the expiration of the prior term. Such notification shall be effective upon actual receipt by

the City. Renewals shall be in writing and signed by the City's Purchasing Manager & City Manager or his designee, without further action by the Laredo City Council, subject to and contingent upon appropriation of funding therefore. All annual contracts shall bound by the terms of the bid documents. The City shall also have the right to extend this contract under the same terms and conditions beyond the original term or any renewal thereof, on a month to month basis, not to exceed 3 months. Said month to month extensions shall be in writing, signed by the City's Purchasing Manager & City Manager or his designee, and shall not require City Council approval, subject to and contingent upon appropriation of funding therefore. The City reserves the right to renew or rebid this contract, if the appropriated funds initially approved by City Council are exhausted before the contract expiration date.

Tables under contract

Table AA Wastewater Sampling Events
Table AA Miscellaneous Sampling Groups
Table A-Sludge Permit
Table B-Sludge TCLP (as per 40 CFR 261 Appendix II)
Table C-Sludge Pathogens
Table D-Soil
Table E- W.W. Groundwater Group A
Table F- W.W. Groundwater Group B
Table G- W.W. Metals
Table H-Root Zone Nutrients
Table I-W.W. Priority Pollutants
Table J-W.T. Metals Group A
Table K – W.T. Metals Group B
Table L- W.T. Pesticides/Herbicides
Table M- W.T. TTHM
Table N- W.T. HAA
Table O- W.T. TOC
Table OO- W.T. SUVA
Table OOO- W.T. SUVA
Table P- W.T. Radionuclides
Table Q- W.W. Process Control
Table R- W.T. Ion Analysis
Table S- Microbiology
Table T- Industrial Pretreatment
Table U- Storm Water Multi-sector General Permit

A complete bid tabulation is attached.

COMMITTEE RECOMMENDATION
None.

STAFF RECOMMENDATION
It is recommended that this contract be approved.

	Fiscal Impact
Fiscal Year:	2021
Bugeted Y/N?:	Yes
Source of Funds:	
Account #:	559-4210-533-5514

Change Order: Exceeds 25% Y/N:

FINANCIAL IMPACT:

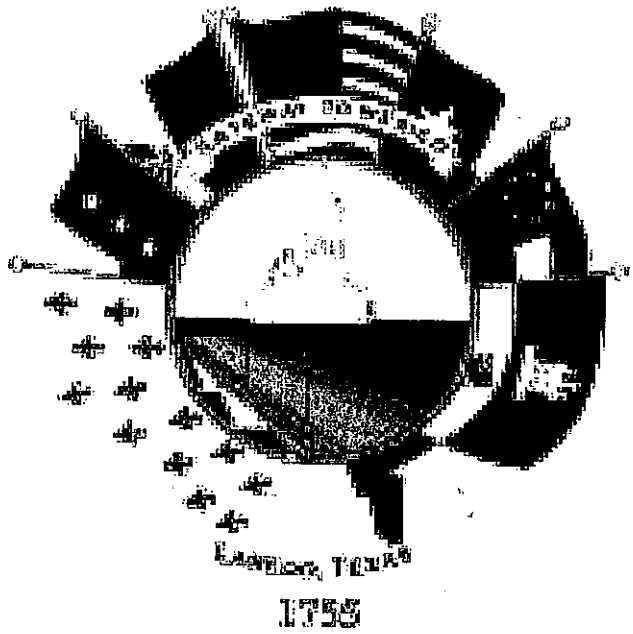
The purpose of this contract is to establish prices for the commodities or services needed, should the City need to purchase these commodities or services. The City's obligation for performance of an annual supply contract beyond the current fiscal year is contingent upon the availability of appropriated funds from which payments for the contract purchases can be made. If no funds are appropriated and budgeted during the next fiscal year, this contract becomes null and void.

Fiscal Year:	2021
Bugeted Y/N?:	Yes
Source of Funds:	
Account #:	557-4120-533-5514
Change Order: Exceeds 25% Y/N:	
FINANCIAL IMPACT:	

Attachments

Bid Tab FY21-082

FY21-082 Contract



FY21-082
Eurofins Xenco, LLC
Eurofins Xenco, LLC
Supplier Response

Event Information

Number:	FY21-082
Title:	Analytical Lab Services
Type:	Request For Bid
Issue Date:	6/28/2021
Deadline:	7/20/2021 05:00 PM (CT)
Notes:	MANUAL BID DROP-OFF PROCEDURES

NOTE: Manual Proposals will only be accepted the first 45 minutes of the hour before they are due. For example, if bid is due at 4:00, bids will only be accepted between 3:00 and 3:45 p.m.

1.Please make sure that the proposal is in a sealed envelope marked with

the following:

•Name of Proposal

•Name of Company submitting Proposal

•Address of Company submitting Proposal

1.Place Proposal Envelope on table right inside the door on the Houston Street side of City Hall. The receptionist will call the City Secretary's office to pick up.

2.If you need a copy of the time-stamped envelope, you will need to wait outside until we pick the envelope up, go back up to the 3rd floor to time-stamp the envelope, make a copy of it and bring it back to you.

Thank you for your understanding and help at this time of trying to stay healthy and safe.

City Secretary's Office

Contact Information

Contact: Enrique Aldape III
Address: Purchasing Division
Public Works Service Center
5512 Thomas Avenue
Laredo, TX 78041
Phone: 956 (794) 1733
Fax: 956 (790) 1805
Email: ealdape@ci.laredo.tx.us

Eurofins Xenco, LLC Information

Contact: Neil Rodrigue
Address: 4147 Greenbriar Drive
Stafford, TX 77477
Phone: (281) 240-4200
Email: neil.rodrigue@eurofinset.com

By submitting your response, you certify that you are authorized to represent and bind your company.

Neil Rodrigue
Signature

neil.rodrigue@eurofinset.com
Email

Submitted at 7/20/2021 2:02:44 PM

Requested Attachments

Non-Collusive Affidavit

TAB D Non Collusive Affidavit.pdf

Form 1295

Tab F Certificate of Interested Parties.pdf

Required upon award of bid.

Response Attachments

_City of Laredo_Eurofins Xenco.pdf

Proposal

Att 1 Example Report 560-95611.pdf

Example Report

Att 2 Resumes.pdf

Resumes

Att 3 EHS manual_rev_11_8jan2021_final-new.pdf

Safety Manual with Training information

Att 4 CCP-HS-01 Rev 3 Hazardous Waste Management Plan.pdf

Hazardous Waste Handling Information

Att 5 CC-QAM-001 Rev6 QA Manual.pdf

QA Manual

Att 6 Eurofins Employee Handbook 2021 - Ethics Policy excerpt.pdf

Ethics Policy

Att 7 SOPs.zip

SOPs

Att 8 PT Studies.zip

Performance Testing studies

Att 9 Audits.pdf

Audits

Att 10 Certifications.pdf

Certifications

Bid Documents TAB A B C D E F.pdf

Bid Documents

Bid Attributes

1	**Questionnaire Description** "The undersigned affirms that they are duly authorized to execute this contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other person engaged in this type of business prior to the official opening of this request. By submitting this bid the vendor agrees to the City of Laredo specifications and all terms and conditions stipulated in the proposed document. That I, individually and on behalf of the business named in this Business Questionnaire, do by my signature below, certify that the information provided in the questionnaire is true and correct ".
2	**Name of Offeror (Business) and Name & Phone Number of Authorized Person to sign bid** Eurofins Xenco, LLC Alex Montoya, President Phone: +1 281-240-4200 Mobile: +1 432-894-8698
3	**State how long under has the business been in its present business name** Eurofins Xenco, LLC has operated under this name for one year. Eurofins Xenco's Corpus Christi Laboratory is formerly known as TestAmerica Laboratories, Corpus Christi lab and has been in operation as an environmental testing laboratory since 1982.
4	**If applicable, list all other names under which the Business identified above operated in the last five years** Xenco Laboratories, Inc. was acquired by Eurofins effective 1 July 2020. Effective 1 January 2021, the ownership of TestAmerica Laboratories, Inc (Corpus Christi and Houston laboratories only) moved to Eurofins Xenco, LLC.
5	**State if the Company is a certified minority business enterprise** The below information is requested for statistical and tracking purposes only and will not influence the amount of expenditure the City will make with any given company.
6	**Questions Part 1** 1) Is any litigation pending against the Business? 2) Has the Business ever been declared "not responsive" for the purpose of any governmental agency contract award? 3) Has the Business been debarred, suspended, proposed for debarment, suspended, proposed for debarment, declared ineligible, voluntarily excluded, or other wise disqualified from bidding, proposing or contracting? 4) Are there any proceedings, pending relating to the Business responsibility, debarment, suspension, voluntary exclusion, or qualification to receive a public contract? 5) Has the government or other public entity requested or required enforcement of any of its rights under a surety agreement on the basis of default or in lieu of declaring the Business at default? All items under 6) Questions Part 1 - including items 1, 2, 3, 4, 5 - the answer is "no".
7	**Questions Part 2** 1) Is the Business in arrears in any contract or debt? 2) Has the Business been a defaulter, as a principal, surety, or otherwise? 3) Have liquidated damages or penalty provisions been assessed against the Business for failure to complete work on time or any other reason? All items under 7) Questions Part 2 - including items 1, 2, 3 - the answer is "no".
8	**State if the Company is a certified minority business enterprise** This company is not a certified minority business

9	**Conflict of Interest Disclosure** A form disclosing potential conflicts of interest involving counties, cities, and other local government entities may be required to be filed after January 1, 2006, by vendors or potential vendors to local government entities. The new requirements are set forth in Chapter 176 of the Texas Local Government Code added by H.B. No. 914 of the last Texas Legislature. Companies and individuals who contract, or seek to contract, with the City of Laredo and its agents may be required to file with the City Secretary's Office, 1110 Houston Street, Laredo, Texas 78040, a Conflict of Interest Questionnaire that describes affiliations or business relationships with the City of Laredo officers, or certain family members or business relationships of the City of Laredo officer, with which such persons do business, or any gifts in an amount of $250.00 or more to the listed City of Laredo officer (s) or certain family members. The new requirements are in addition to any other disclosures required by law. The dates for filing disclosure statements begin on January 1, 2006. A violation of the filing requirements is a Class C misdemeanor. The Conflict of Interest Questionnaire (Form CIQ) may be downloaded from http://www.ethics.state.tx.us/whatsnew/conflict forms.htm. The City of Laredo officials who come within Chapter 176 of the Local Government Code relating to filing of Conflicts of Interest Questionnaire (Form CIQ) include: 1. Mayor 2. Council Members 3. City Manager 4. Members of the Fire Fighters and Police Officers Civil Service Commission. 5. Members of the Planning and Zoning Commission. 6. Members of the Board of Adjustments 7. Members of the Building Standards Board 8. Parks & Leisure Advisory Committee Member, 9. Historic District Land Board Member, 10. Ethics Commission Board Member, 11. The Board of Commissioners of the Laredo Housing Authority 12. The Executive Director of the Laredo Housing Authority 13. Any other City of Laredo decision making board member If additional information is needed please contact Miguel A. Pescador, Purchasing Agent at 956-794-1731.
10	**Conflict of Interest Questionnaire Form CIQ** For vendor or other person doing business with local governmental entity. This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session. This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a). By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code. A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.
11	**Conflict of Interest Questionnaire** Vendor is required to submit Conflict of Interest Form for bid to be considered complete. Have you submitted your completed Conflict of Interest Form with your response? Yes
12	**Disclosure Form** For details on use of this form, see Section 4.01 of the City's Ethics Code.
13	**This is a** New Submission
14	**Question 1. Name of person submitting this disclosure form** Please include First Name, Middle Initial, Last Name and Suffix (if applicable) Alex Montoya
15	**Question 2. Contract Information** Please include the following: a)Contract or Project Name b)Originating Department Analytical Lab Services, FY21-082, Public Works Service Center
16	**Question 3. Name of individual(s) or entity(ies) seeking a contract with the city (i.e. parties to the contract)** Eurofins Xenco, LLC

17	**Question 4. List any business entity(ies) that is a partner, parent, subsidiary business entity(ies) of the individual or entity listed in Question 3.** It applies to my business
18	**Question 4. List any business entity(ies) that is a partner, parent, subsidiary business entity(ies) of the individual or entity listed in Question 3** If you selected Not Applicable on Question 4, skip this section. If it applies to you, please list the name of partner, parent, or subsidiary business entity(ies) in this section. TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica Eurofins Air Toxics, LLC Eurofins Eaton Analytical, LLC Eurofins Frontier Global Sciences, LLC Eurofins Lancaster Laboratories Environment Testing, LLC Eurofins Calscience, LLC Eurofins Environment Testing Philadelphia, LLC Eurofins Environment Testing Northeast, LLC Eurofins Ana Laboratories, LLC Eurofins CEI, Inc. Eurofins EPK Built Environment Testing, LLC Eurofins Aerotech Built Environment Testing, Inc. Eurofins J3 Resources, Inc. Eurofins Xenco, LLC
19	**Question 5. List any individuals or entities that will be subcontractors on this contract** It applies to my business
20	**Question 5. List any individuals or entities that will be subcontractors on this contract** If you selected Not Applicable on Question 5, please skip this section. If it applies to you, please list subcontractors in this section. Eurofins Xenco's Corpus Christi laboratory will serve as primary analytical support. Additional support from Eurofins Xenco, Houston, Eurofins TestAmerica Savannah, Eurofins TestAmerica St. Louis and Eurofins EMLab P&K as well as the City of Laredo's laboratory.
21	**Question 6. List any attorneys, lobbyists, or consultants that have been retained to assist in seeking this contract** Not Applicable
22	**Question 6. List any attorneys, lobbyists, or consultants that have been retained to assist in seeking this contract** If selected Not Applicable on question 6, please skip this section. If it applies to you, please list attorneys, lobbyists, or consultants that have been retained to assist in seeking this contract. N/A

23	**Question 7. Disclosure of political contributions** List any campaign or officeholder contributions made by the following individuals in the past 24 months totaling more than $100 to any current member of City Council, former member of City Council, any candidate for City Council, or to any political action committee that contributes to City Council elections. a) Any individual seeking contract with the city (Question 3) b) Any owner of officer of entity seeking contract with the city (Question 3) c) Any individual or owner or officer of any entity listed above as partner, parent, or subsidiary business (Question 4) d) Any subcontractor or owner/office of subcontracting entity for the contract (Question 5) e) The spouse of any individual listed in response to (a) through (d) above f) Any attorney, lobbyist, or consultant retained to assist in seeking contract (Question 6) Not Applicable
24	**Question 7. Disclosure of political contributions** If you selected Not Applicable on question 7, please skip this section. If it applies to you, please list all contributors in this section. N/A
25	**Updates on contributions required** Information regarding contributions must be updated by submission of a revised form from the date of the submission of this form, up through the time City Council takes action on the contracts identified in response to Question 2 and continuing for 30 calendar days after the contract has been awarded.
26	**Question 8. Disclosure of Conflict of Interest** Are you aware of any fact(s) with regard to this contract that would raise a "conflict of interest" issue under Section 2.01 of the Ethics Code for any City Council member or board/commission member that has not or will not be raised by these city officials? I am not aware of any conflict of interest
27	**8. Disclosure of Conflict of Interest** If you selected I am aware of conflict of interest is question 8, please list them in this section. N/A
28	**Question 9. Updates Required** I understand that this form must be updated by submission of a revised form if there is any change in the information before the discretionary contract is the subject of action by the City Council, and no later than five (5) business days after any changes has occurred, whichever comes first. This include information about political contributions made after the initial submission and up until thirty (30) calendar days after the contract has been awarded. ☑ I have read and understand this section (I have read and understand this section)
29	**Question 10. No Contract with City Officials or Staff during Contract Evaluation** I understand that a person or entity who seeks or applies for city contract or any other person acting on behalf of that person or entity is prohibited from contacting city officials and employees regarding the contract after a Request for Proposal (RFP), Request for Qualifications (RFQ), or other solicitation has been released. This no-contact provision shall conclude when the contract is posted as a City of Laredo Council agenda item. If contact is required with city officials or employees, the contact shall take place in accordance with procedures incorporated into the solicitation documents. Violation of this prohibited contacts provision set out in Section 2.09 of the Ethics Code by respondents or their agents may lead to disqualification of their offer from consideration. ☑ I have read and understand this section (I have read and understand this section)
30	**Question 11. Conflict of Interest Questionnaire (CIQ)** Chapter 176 of the Local Government Code requires contractor and vendors to submit a Conflict of Interest Form (CIQ) to the Office the of City Secretary. ☑ I have acknowledge that I have been advised (I have acknowledge that I have been advised)

31 **Question 11. Oath**

Please complete in this section the required information for your company: 1) Name 2) Title 3) Company or DBA 4) Date

Eurofins Xenco, LLC
Alex Montoya, President
July 14, 2021

32 **Question 12. Oath**

I swear or affirm that the statements contained in this Discretionary Contracts Disclosure Form, including any attachments, to the best of my knowledge and belief are true, correct, and complete.

☑ I swear or affirm information is correct (I swear or affirm information is correct)

33 **Ordinace 2018-O-175**

The City of Laredo has established a local vendor preference ordinance 2018-O-175. All informal and formal Requests for bids for contracts will be evaluated with a 5% preference for local vendors.

No response

34 **Terms and Conditions for Request for Bids**

TERMS AND CONDITIONS OF INVITATIONS FOR BIDS GENERAL CONDITIONS Bidders are required to submit bids upon the following expressed conditions:
(a) Bidders shall thoroughly examine the specifications, schedule instructions and other contract documents. Once the award has been made, failure to read all specifications, instructions, and the contract documents, of the City shall not be cause to alter the original contract or for a vendor to requests additional compensation.
(b) Bidders shall make all investigations necessary to thoroughly inform themselves regarding facilities and locations for delivery of materials and equipment as required by the bid conditions. No pleas of ignorance by the bidder of conditions that exist or that may hereafter exist as a result of failure or omission on the part of the bidder to make the necessary examinations and investigations, or failure to fulfill in every detail the requirements of the contract documents, will be accepted as a basis for varying the requirements of the City or the compensation to the vendor.
(c) Bidders are advised that City contracts are subject to the all legal requirements provided for in the City Charter and/or applicable City Ordinances, State and Federal Statutes.
1.0 PREPARATION OF BIDS Bids will be prepared in accordance with the following:
(a) All information required by the bid form shall be furnished. For hand delivered submittals only, the vendor shall print or type the business name and manually sign the schedule. For electronic submittals, this information shall be submitted electronically on Cit-E-Bid system.
(b) Unit prices shall be shown and where there is an error in extension of price, the unit price shall govern.
(c) Alternate bids will not be considered unless authorized by the invitation for bids or any applicable addendum
(d) Proposed delivery time must be shown and shall include Sundays and holidays
(e) Bidders will not include Federal taxes or State of Texas limited sales tax in bid prices since the City of Laredo is exempt from payment of such taxes. An exemption certificate will be furnished upon request.
(f) The City shall pay no costs or other amounts incurred by any entity in responding to this RFB, or as a result of issuance of this RFB.
2.0 DESCRIPTION OF SUPPLIES Any catalog or manufacturer's reference used in describing an item is merely descriptive, and not restrictive, unless otherwise noted, and is used only to indicate type and quality of material. Bidder is required to state exactly what they intend to furnish; otherwise bidder shall be required to furnish the items as specified.
3.0 SUBMISSION OF BIDS
(a) Bids and changes thereto shall be enclosed in sealed envelopes, properly addressed and to include the date and hour of the bid opening and the material or services bid on shall be typed or written on the face of the envelope. If submitted electronically, this information shall be submitted electronically on Cit-E-Bid system by going to the following link: https://cityoflaredo.ionwave.net/Login.aspx
(b) Unless otherwise noted on the Notice to Bidders cover sheet, all hand delivered bids must be submitted to the Office of the City Secretary, City Hall, 1110 Houston Street.
(c) Bids forms can be downloaded and printed through Cit-E-Bid. **Mailed Bids (i.e. USPS, FedEx, UPS), telegraphic, or facsimile bids will not be considered.**
(d) Samples, when required, must be submitted within the time specified, at no expense to the City of Laredo. If not destroyed or used up during testing, samples will be returned upon request at the bidder's expense.

(e) Bids must be valid for a minimum period of sixty (60) days. An extension to hold bid pricing for actual quantity bids may be requested by the City.

4.0 REJECTION OF BIDS The City may reject a bid if:

(a) Bidder misstates or conceals any material fact in the bid.

(b) Bid does not strictly conform to the law or the requirements of the bid.

(c) Bidder is in arrears on existing contracts or taxes with the City of Laredo.

(d) If bids are conditional. Bidder may qualify their bid for acceptance by the City on an "ALL OR NONE" basis. An "ALL OR NONE" basis bid must include all items in the specifications.

(e) In the event that a bidder is delinquent in the payment of City taxes on the day the bids are opened, including state and local taxes, such fact shall constitute grounds for rejection of the bid or cancellation of the contract. A bidder is considered delinquent, regardless of any contract or agreed judgments to pay such delinquent taxes.

(f) No bid submitted herein shall be considered unless the bidder warrants that, upon execution of a contract with the City of Laredo, bidder will not engage in employment practices such as discriminating against employees because of race, color, sex, creed, or national origin. Bidder will submit such reports as the City may therefore require assuring compliance with said practices.

(g) The City may reject all bids or any part of a bid whenever it is deemed necessary.

(h) The City may waive any minor informalities or irregularities in any bid.

5.0 WITHDRAWAL OF BIDS Bids may not be withdrawn after they have been publicly opened, unless approved by the City Council.

6.0 LATE BIDS OR MODIFICATIONS Bids and modifications received after the time set for the bid deadline will not be considered. Late bids will be returned to the bidder unopened.

7.0 CLARIFICATION OR OBJECTION TO BID SPECIFICATIONS If any person contemplating submitting a bid for this contract is in doubt as to the true meaning of the specifications, or other bid documents or any part thereof, they may submit to the City Purchasing Agent on or before seven (7) calendar days prior to the scheduled bid deadline a request for clarification which must be submitted in writing through email seven (7) days prior to the scheduled date for opening to: CITY OF LAREDO PURCHASING AGENT Miguel A. Pescador 5512 Thomas Ave, Laredo, TX 78041 mpescador@ci.laredo.tx.us or Questions & Responses section on Cit-E-Bid system. Any vendor submitting questions shall make reference to a specific bid number, section, page and item of this solicitation. In case there are changes, additions, and/or edits to the original scope of work, and addendum will be issued by the purchasing agent to all vendors through Cit-E-Bid system under Questions and Responses section to clarify any inquiries. The City will not be responsible for any other explanations or interpretations of the proposed bid made or given prior to the bid opening or award of contract.

(a) Protest Procedures: The purpose of this procedure is to establish procedures whereby a vendor may protest specific procurement actions by the City of Laredo. The following sequence of activities must take place in filing a protest:

(b) To be performed by protesting vendor: Within ten (10) days prior to the time that the City Council considers the recommendation of the City's Purchasing Officer, the protesting vendor must provide written protest to the City Purchasing Officer. Such protest must include specific reasons for the protest.

(c) To be performed by City's Purchasing Officer: Shall review the records of procurement and determine legitimacy and procedural correctness. With five (5) working days, the City Purchasing Officer shall provide written response to the protesting vendor of the decision.

(d) If the protesting vendor is not satisfied with the decision of the City Purchasing Officer, such protesting vendor may appeal to the City Manager of the City of Laredo. If the protesting vendor cannot resolve the issue with the City Manager, he shall be entitled to address his concerns when the City Council of the City of Laredo considers the awarding of the contract. Such appeal may be made only after exhausting all administrative procedures through the City Manager. All protests must be duly submitted via Certified Mail to: City of Laredo - Purchasing Agent 5512 Thomas Ave. Laredo, Texas 78041.

8.0 BIDDER DISCOUNTS

(a) Percent discounts within a certain period of time will be accepted but cannot be used in the bid evaluation. The period of the discount offered should be sufficient to permit payments within such period in the regular course of business by the City of Laredo.

(b) In connection with any discounts offered, time will be computed from the date of receipt of supplies or service or from the date a correct invoice is received, whichever is the later date. Payment is deemed to be made on the date the check is mailed.

9.0 INTENT OF CONTRACT

a) ANNUAL SUPPLY/SERVICE CONTRACTS: This contract does not commit the City to purchase the quantities indicated. The quantities are estimates and are based on the best available information. The purpose of this contract is to establish prices for the commodities or services needed, should the City need to purchase these commodities or services. Since the quantities are estimates, the City may purchase more than the estimated quantities, less than the estimated quantities, or not purchase any quantities at all. The needs of the City shall govern the amount that is purchased. All annual contracts shall bound by the terms of the bid documents. In the

event a new contract cannot be executed on the anniversary date of the original term or renewal term, the contract may be renewed month to month until a new contract is executed. The City's obligation for performance of an annual supply contract beyond the current fiscal year is contingent upon the availability of appropriated funds from which payments for the contract purchases can be made. If no funds are appropriated and budgeted during the next fiscal year, this contract becomes null and void.

10.0 AWARD OF CONTRACT

(a) This contract will be awarded to the **(lowest responsive responsible bidder)**, in accordance to the provisions of Chapters 252 and 271 of the State of Texas – Local Government Code.

Definition of lowest responsive and responsible bidder as per the Institute for Public Procurement is:

"Lowest Responsive and Responsible Bidder: The bidder who fully complied with all of the bid requirements and whose past performance, reputation, and financial capability is deemed acceptable, and who has offered the most advantageous pricing or cost benefit, based on the criteria stipulated in the bid documents."

(b) The City reserves the right to accept any item or group of items in the bid specifications, unless the bidder qualifies it's bid by specific limitation. Proof: The bidder shall bear the burden of proof of compliance with the City of Laredo specifications.

(c) A written award of acceptance (a duly approved purchase order or Letter of Award) furnished by the City to the successful bidder results in a binding contract without further action by either party. These Terms and Conditions shall be the basis and governing document of the binding contract.

(d) Prices must be quoted F.O.B. Destination, Laredo, Texas, unless otherwise specified in the invitation to bid. The place of delivery shall be that set forth in the bid specifications and/or purchase order.

(e) Title & Risk of Loss: The title and risk of loss of goods shall not pass to the City of Laredo until the City actually receives and takes possession of the goods at the point or points of delivery. The terms of this agreement is "no arrival, no sale".

(f) Delivery time and prompt payment discounts will be considered in breaking ties. In the event of a tie bid, the successful bidder will be determined by choosing lots at the City Council meeting chambers.

(g) The City of Laredo shall give written notice to the contractor (supplier) if any of the following conditions exist:

1. Contractor does not provide materials in compliance with specifications and/or within the time schedule specified in bid.
2. Contractor neglects or refuses to remove materials or equipment which have been rejected by the City of Laredo if found not to comply with the specifications.
3. The contractor makes an unauthorized assignment for the benefit of any contractor.

Upon receiving written notification from the City that one of the above conditions has occurred, the contractor must remedy the problem within ten (10) calendar days, to the complete satisfaction of the City, or the contract will be immediately canceled.

11.0 PAYMENT & INVOICING

(a) All invoices to the City of Laredo have a 30 day term from receipt of supplies or completion of services.

(b) Discount terms will be computed from the date of receipt and acceptance of supplies or services. Payment shall be deemed to be made from that date.

(c) All invoices must show the purchase order number and invoices shall be legible. Items billed on invoices should be specific as to applicable stock, manufacturer catalog or part number. All items must show unit prices. If prices are based on discounts from list, then list prices must appear on bid schedule. All invoices shall be mailed to the Accounts Payable Office, City Hall, and PO. Box 210, Laredo, Texas 78042.

(d) The City of Laredo offers electronic funds transfer (ETF) payments in lieu of check payment when a vendor has filled out an Electronic Funds Transfer Authorization Form issued by the City of Laredo or upon request from the vendor. This ensures prompt payment directly deposited to a bank account. The estimated payment time is up fifteen (15) days from the date payment is processed. (e) For any inquires on payment status or general billing questions please contact: Jorge J. Jolly, Accounts Payable Manager 956-791-7328 jjolly@ci.laredo.tx.us 1110 Houston St. Laredo, TX 78040.

☑ I Agree to the Terms and Conditions (I Agree to the Terms and Conditions)

35	**Insurance Terms and Conditions**

INSURANCE REQUIREMENTS If and when applicable or required by the contract, the successful bidder(s) shall furnish the City with original copies of valid insurance policies herein required upon execution of the contract and shall maintain said policies in full force and effect at all times throughout the term of this contract.

(a) Commercial General Liability insurance at minimum combined single limits of $1,000,000 per-occurrence and $2,000,000 general aggregate for bodily injury and property damage, which coverage shall include products/completed operations ($1,000,000 products/completed operations aggregate) and XCU (Explosion, Collapse, Underground) hazards. Coverage must be written on an occurrence form. Contractual Liability must be maintained covering the Contractors obligations contained in the contract. The general aggregate limit must be at least two (2) times the each occurence limit.

(b) Workers Compensation insurance at statutory limits, including Employers Liability coverage a minimum limits of $1,000,000 each-occurrence each accident/$1,000,000 by disease each-occurrence/$1,000,000 by disease aggregate.

(c) Commercial Automobile Liability insurance at minimum combined single limits of $1,000,000 per-occurrence for bodily injury and property damage, including owned, non-owned, and hired car coverage.

(d) Professional Liability, Errors & Omissions coverage, with minimum limits of $1,000,000 per claim/ $2,000,000 annual aggregate. This coverage must be maintained for at least two years after the project is completed. If coverage is written on a claims-made basis, a policy retroactive date equivalent to the inception date of the contract (or earlier) must be maintained during the full term of the contract.

(e) Any Subcontractor(s) hired by the Contractor shall maintain insurance coverage equal to that required of the Contractor. It is the responsibility of the Contractor to assure compliance with this provision. The City of Laredo accepts no responsibility arising from the conduct, or lack of conduct, of the Subcontractor.

(f) A Comprehensive General Liability insurance form may be used in lieu of a Commercial General Liability insurance form. In this event, coverage must be written on an occurrence basis, at limits of $1,000,000 each-occurrence, combined single limit, and coverage must include a broad form Comprehensive General Liability Endorsement, products/completed operations, XCU hazards, and contractual liability.

(g) With reference to the foregoing insurance requirement, Contractor shall specifically endorse applicable insurance policies as follows:

1. The City of Laredo shall be named as an additional insured with respect to General Liability and Automobile Liability.
2. All liability policies shall contain no cross liability exclusions or insured versus insured restrictions.
3. A waiver of subrogation in favor of the City of Laredo shall be contained in the Workers compensation, and all liability policies.
4. All insurance policies shall be endorsed to require the insurer to immediately notify The City of Laredo of any material change in the insurance coverage.
5. All insurance policies shall be endorsed to the effect that The City of Laredo will receive at least sixty- (60) days' notice prior to cancellation or non-renewal of the insurance.
6. All insurance policies, which name The City of Laredo as an additional insured, must be endorsed to read as primary coverage regardless of the application of other insurance.
7. Required limits may be satisfied by any combination of primary and umbrella liability insurances.
8. Contractor may maintain reasonable and customary deductibles, subject to approval by The City of Laredo.
9. Insurance must be purchased from insurers that are financially acceptable to the City of Laredo. Insurer must be rated A- or greater by AM Best Rating with an admitted carrier licensed by the Texas Department of Insurance.

(h) All insurance must be written on forms filed with and approved by the Texas Department of Insurance. Certificates of Insurance shall be prepared and executed by the insurance company or its authorized agent and shall contain provisions representing and warranting the following:

1. Sets forth all endorsements and insurance coverage's according to requirements and instructions contained herein.
2. Shall specifically set forth the notice-of-cancellation or termination provisions to The City of Laredo.

(i) Upon request, Contractor shall furnish The City of Laredo with certified copies of all insurance policies.

(j) Certificates of insurance are always subject to review and approval from the City of Laredo Risk Management.

(k) Specialty certificates and licenses must be inspected and verified for accuracy and validity before award of contract.

(l) Awarded vendor is required to maintain current and active all: certifications, licenses, permits and/or insurance coverages, required to perform work, throughout the duration of this project/contract.

☑ I agree my insurance meets minumum requirements (I agree my insurance meets minumum requirements)

36	**Disqualification & Debarment Certification**

DISQUALIFICATION & DEBARMENT CERTIFICATION By submitting this request for bids, proposal or statement of qualifications, the firm certifies that it is not currently debarred or eligible for debarment from the City of Laredo pursuant to **Ordinance No. 2017-O-098**, and that it is not an agent of a person or entity that is currently debarred from receiving contracts from any political subdivision or agency of the State of Texas. The contract parties are further prohibited from making any award at any tier to any party that is debarred or suspended or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549, "Debarment and Suspension."

By executing this agreement, the Engineer certifies that it is not currently debarred, suspended, or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549. The parties to this contract shall require any party to a subcontract or purchase order awarded under this contract to certify it eligibility to receive Federal funds and, when requested by the City, to furnish a copy of the certification. Additionally, in accordance with Chapter 2270, Texas Government Code, a governmental entity may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract.

The signatory executing this contract on behalf of company verifies that the company does not boycott Israel and will not boycott Israel during the term of this contract. S.B. 252 (V. Taylor/S. Davis) is a bill relating to government contracts with terrorists. The bill provides that: (1) a governmental entity, including a city, may not enter into a governmental contract with a company that is identified on a list prepared and maintained by the comptroller and that does business with Iran, Sudan, or a foreign terrorist organization; and (2) a company that the United States government affirmatively declares to be excluded from its federal sanctions regime relating to Sudan, its federal sanctions regime relating to Iran, or any federal sanctions regime relating to a foreign terrorist organization is not subject to the contract prohibition under the bill.

☑ I certify to the terms and conditions (I certify to the terms and conditions)

37	Contract Requirements

1.CODE OF ETHICS ORDINANCE Vendors doing business with the City of Laredo shall comply with all provisions of the City of Laredo's Code of Ethics (Ordinance, as amended). Vendors may be required to participate in Code of Ethics trainings.

1.2 PROHIBITED CONTACTS DURING CONTRACT SOLICITATION PERIOD A person or entity who seeks or applies for a city contract or any other person acting on behalf of such person or entity, is prohibited from contacting city officials and employees regarding such a contract after a Formal Bid, Request for Proposal (RFP), Request for Qualification (RFQ) or other solicitation has been released. This no-contact provision shall conclude when the contract is awarded. The City of Laredo reserves the right to contact respondents and may require such contact as part of the evaluation process (for presentation, clarification) of bids and/or negotiation of RFP submittal(s) prior to the award of contract. If contact is required, such contact will be done in accordance with provisions of Chapter 252 and 271 of the Texas Local Government Code and procedures incorporated into the solicitation document. Violation of this provision by respondents or their agents may lead to disqualification of their offer from consideration.

1.3 NON-COLLUSIVE AFFIDAVIT (Form can be downloaded and submitted through Cit-E-Bid system) The City may require that vendors submit a Non-Collusive Affidavit. The vendor will be required to state that the party submitting a proposal or bid, that such proposal or bid is genuine and not collusive or sham; that said Bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any Bidder or Person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price or affiant or of any other Bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other Bidder, or to secure any advantage against the City of Laredo or any person interested in the proposed contract; and that all statements in said proposal or bid are true.

1.4 CONTRACT DISCLOSURE FORMS (This is submitted through Cit-E-Bid system) The City of Laredo requires the following forms to be completed as a part of this bid for consideration; 1. Company Information Questionnaire, 2. Signed Price Schedule, 3. Conflict of Interest Questionnaire, 4. Non-Collusive Affidavit 5. Discretionary Contracts Disclosure 6. Certificate of Interested Parties (Form 1295) ****Upon Award of RFP Only****

1.5 CONFLICT OF INTEREST FORMS (This is submitted through Cit-E-Bid system) Conflict of Interest Disclosure: A form disclosing potential conflicts of interest involving counties, cities, and other local government entities may be required to be filed after January 1, 2006, by vendors or potential vendors to local government entities. The new requirements are set forth in Chapter 176 of the Texas Local Government Code added by H.B. No. 914 of the last Texas Legislature.

1.6 TEXAS ETHICS COMMISSION (Form 1295, Form can be downloaded and submitted through Cit-E-Bid system) Certificate of Interested Parties (Form 1295) Implementation of House Bill 1295: In an effort to comply with state law the certificate of interested parties must be filled out once a vendor has been granted a contract. All of this information can be found on the state of Texas website, please use this link provided, https://www.ethics.state.tx.us/tec/1295-Info.htm In 2015, the Texas Legislature adopted House Bill 1295, which added section 2252.908 of the Government Code. The law states that a governmental entity or state agency may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental entity or state agency. The law applies only to a contract of a governmental entity or state agency that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least $1 million. The disclosure requirement applies to a contract entered into on or after January 1, 2016. In order to comply with state law the Certificate of Interested Parties (Form 1295) must be submitted to the Texas Ethics Commission within 10 days upon receiving notice of award of contract. This form must be submitted within the allotted time otherwise this may result in the cancellation of the contract.

Changes to Form 1295:
Changes to the law requiring certain businesses to file a Form 1295 are in effect for contracts entered into or amended on or after January 1, 2018. The changes exempt businesses from filing a Form 1295 for certain types of contracts and replace the need for a completed Form 1295 to be notarized. Instead, the person filing a 1295 needs to complete an "unsworn declaration."

☑ I have read and understand this section (I have read and understand this section)

Bid Lines

1	Package Header

Table AA - Wastewater Sampling Events

Quantity: 1 UOM: PKG Total: $40,778.00

Package Items

1.1 Sludge Permit

Quantity: 16 UOM: EA / Year Price: $294.00 Total: $4,704.00

1.2 Sludge TCLP

Quantity: 6 UOM: EA / Year Price: $555.00 Total: $3,330.00

1.3 Sludge Pathogens

Quantity: 4 UOM: EA / Year Price: $60.00 Total: $240.00

1.4 Soil

Quantity: 18 UOM: EA / Year Price: $310.00 Total: $5,580.00

1.5 W. W. Groundwater Group A

Quantity: 32 UOM: EA / Year Price: $261.00 Total: $8,352.00

1.6 W. W. Groundwater Group B

Quantity: 16 UOM: EA / Year Price: $218.00 Total: $3,488.00

1.7 W. W. Metals

Quantity: 40 UOM: EA / Year Price: $102.00 Total: $4,080.00

1.8 Root Zone Nutrients

Quantity: 12 UOM: EA / Year Price: $112.00 Total: $1,344.00

1.9 Priority Pollutants

Quantity: 12 UOM: EA / Year Price: $805.00 Total: $9,660.00

2 Package Header

Table AA - Water Sampling Events

Quantity: 1 UOM: PKG Total: $19,960.00

Package Items

2.1 W. T. Metals Group A

Quantity: 12 UOM: EA / Year Price: $48.00 Total: $576.00

2.2 W. T. Metals Group B

Quantity: 12 UOM: EA / Year Price: $62.00 Total: $744.00

2.3 W. T. Pesticides / Herbicides

Quantity: 12 UOM: EA / Year Price: $250.00 Total: $3,000.00

2.4 T.T.H.M.

Quantity: 24 UOM: EA / Year Price: $70.00 Total: $1,680.00

2.5 H.A.A.-5

Quantity: 24 UOM: EA / Year Price: $200.00 Total: $4,800.00

2.6 T.O.C.

Quantity: 48 UOM: EA / Year Price: $25.00 Total: $1,200.00

2.7 SUVA

Quantity: 48 UOM: EA / Year Price: $160.00 Total: $7,680.00

2.8 Radionuclides Total, a and ß

Quantity: 2 UOM: EA / Year Price: $140.00 Total: $280.00

3 Package Header

Table AA - Miscellaneous Sampling Groups

Quantity: 1 UOM: PKG Total: $84,814.00

Package Items

3.1 W.W. Permit & Process Control

Quantity: 365 UOM: EA / Year Price: $190.00 Total: $69,350.00

3.2 W.T. Ion Analysis

Quantity: 12 UOM: EA / Year Price: $162.00 Total: $1,944.00

3.3 Microbiology

Quantity: 32 UOM: EA / Year Price: $240.00 Total: $7,680.00

3.4 Industrial Pretreatment

Quantity: 20 UOM: EA / Year Price: $270.00 Total: $5,400.00

3.5 Storm Water Multi-Sector Permit

Quantity: 4 UOM: EA / Year Price: $110.00 Total: $440.00

4 Package Header

Table A - Sludge Permit

Quantity: 1 UOM: PKG Total: $294.00

Package Items

4.1 Arsenic, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

4.2 Cadmium, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

4.3 Chromium, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

4.4 Copper, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

4.5 Lead, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

4.6 Molybdenum, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

4.7 Nickel, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

4.8 Selenium, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

4.9 Silver, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

4.10 Zinc, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

4.11 Mercury

Quantity: 1 UOM: mg/Kg Price: $22.00 Total: $22.00

4.12 Phosphorus

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

4.13 Potassium

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

4.14 Corrosivity (pH – liquids)

Quantity: 1 UOM: s.u Price: $8.00 Total: $8.00

4.15 Specific Gravity

Quantity: 1 UOM: 25'C Price: $8.00 Total: $8.00

4.16 Total Volatile Solids

Quantity: 1 UOM: % Price: $15.00 Total: $15.00

4.17 Total Solids

Quantity: 1 UOM: % Price: $15.00 Total: $15.00

4.18 Ammonia Nitrogen (NH3-N)

Quantity: 1 UOM: mg/Kg Price: $25.00 Total: $25.00

4.19 Nitrate Nitrogen (NO3-N)

Quantity: 1 UOM: mg/Kg Price: $15.00 Total: $15.00

4.20 Total Nitrogen Kjeldahl (TKN)

Quantity: 1 UOM: mg/Kg Price: $30.00 Total: $30.00

4.21 Total PCB's

Quantity: 1 UOM: mg/Kg Price: $60.00 Total: $60.00

4.22 Extraction, Extract Clean Up, Determination

Quantity: 1 Price: $0.00 Total: $0.00

5 Package Header

Table B Sludge TCLP (as per 40 CFR 261 Appendix II & Part 268 Appendix I) (contaminants listed Table 1, 40 CFR section 261.24)

Quantity: 1 UOM: PKG Total: $555.00

Package Items

5.1 Metals

Quantity: 1 UOM: mg/L Price: $85.00 Total: $85.00

5.2 Pesticides

Quantity: 1 UOM: µg/L Price: $120.00 Total: $120.00

5.3 Herbicides

Quantity: 1 UOM: µg/L Price: $130.00 Total: $130.00

5.4 Volatile Organics

Quantity: 1 UOM: µg/L Price: $70.00 Total: $70.00

5.5 Semi -Volatile Organics

Quantity: 1 UOM: µg/L Price: $150.00 Total: $150.00

6 Package Header

Table C - Sludge Pathogens

Quantity: 1 UOM: PKG Total: $60.00

Package Items

6.1 Fecal Coliforms

Quantity: 1 UOM: MPN Price: $60.00 Total: $60.00

7 Package Header

Table D - Soil

Quantity: 1 UOM: PKG Total: $310.00

Package Items

7.1 Cationic Exchange Capacity

Quantity: 1 UOM: meq/100g Price: $40.00 Total: $40.00

7.2 Arsenic, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

7.3 Cadmium, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

7.4 Chromium, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

7.5 Copper, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

7.6 Lead, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

7.7 Nickel, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

7.8 Silver, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

7.9 Zinc, Total

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

7.10 Mercury

Quantity: 1 UOM: mg/Kg Price: $22.00 Total: $22.00

7.11 Phosphorus

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

7.12 Potassium

Quantity: 1 UOM: mg/Kg Price: $8.00 Total: $8.00

7.13 pH

Quantity: 1 UOM: s.u. Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 9045 for pH in soil

7.14 Total Volatile Solids

Quantity: 1 UOM: % Price: $15.00 Total: $15.00

7.15 Total Solids

Quantity: 1 UOM: % Price: $15.00 Total: $15.00

7.16 Ammonia Nitrogen

Quantity: 1 UOM: mg/Kg Price: $25.00 Total: $25.00

7.17 Nitrate Nitrogen

Quantity: 1 UOM: mg/Kg Price: $15.00 Total: $15.00

7.18 Total Nitrogen Kjeldahl (TKN)

Quantity: 1 UOM: mg/Kg Price: $30.00 Total: $30.00

7.19 Total PCB's

Quantity: 1 UOM: mg/Kg Price: $60.00 Total: $60.00

7.20 Extraction, Extract Clean Up, Determination 3540 / 3550; 3620 / 3640 / 3650; 8080

Quantity: 1 Price: $0.00 Total: $0.00

8 Package Header

Table E —WW Groundwater Group A

Quantity: 1 UOM: PKG Total: $261.00

Package Items

8.1 Fecal Coliforms

Quantity: 1 UOM: CFU/100 ml Price: $60.00 Total: $60.00

8.2 Total Alkalinity

Quantity: 1 UOM: mg/L CaCO3 Price: $15.00 Total: $15.00

8.3 Conductivity

Quantity: 1 UOM: µmho/cm Price: $8.00 Total: $8.00

Supplier Notes: Proposed method SM 2510

8.4 pH

Quantity: 1 UOM: S.U. Price: $8.00 Total: $8.00

Supplier Notes: Proposed method SM 4500H+

8.5 Total Dissolved Solids

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

Supplier Notes: Proposed method SM 2540C

8.6 Sulfate (SO4)

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

8.7 Chloride (Cl)

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

8.8 Phosphorus

Quantity: 1 UOM: mg/L Price: $30.00 Total: $30.00

8.9 Total Nitrogen Kjeldahl (TKN)

Quantity: 1 UOM: mg/L Price: $30.00 Total: $30.00

8.10 Ammonia Nitrogen (NH3-N)

Quantity: 1 UOM: mg/L Price: $25.00 Total: $25.00

Supplier Notes: Proposed method SM 4500

8.11 Nitrate Nitrogen (NO3-N)

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

8.12 Total Organic Carbon

Quantity: 1 UOM: mg/L Price: $25.00 Total: $25.00

Supplier Notes: Proposed method SM 5310B

9 **Package Header**

Table F —WW Groundwater Group B

Quantity: 1 UOM: PKG Total: $218.00

Package Items

9.1 Cadmium

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed Method 6010

9.2 Copper

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed Method 6010

9.3 Lead

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

9.4 Nickel

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

9.5 Potassium

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

9.6 Zinc

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

9.7 COD

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

Supplier Notes: Proposed method Hach 8000

9.8 Phenolics

Quantity: 1 UOM: mg/L Price: $25.00 Total: $25.00

Supplier Notes: Proposed method EPA 420.4

9.9 TOX

Quantity: 1 UOM: mg/L Price: $70.00 Total: $70.00

9.10 Total PCB's

Quantity: 1 UOM: mg/L Price: $60.00 Total: $60.00

9.11 Extraction, Extract Clean Up, Determination: 3540 / 3550; 3620 / 3640 / 3650; 8080

Quantity: 1 Price: $0.00 Total: $0.00

10 **Package Header**

Table G – W. W. Metals

Quantity: 1 UOM: PKG Total: $102.00

Package Items

10.1 Antimony, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

10.2 Barium, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

10.3 Lead, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

10.4 Nickel, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

10.5 Silicon, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

10.6 Chromium, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

10.7 Copper, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

10.8 Mercury, Total

Quantity: 1 UOM: mg/L Price: $22.00 Total: $22.00

10.9 Arsenic, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

10.10 Cadmium, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

10.11 Silver, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

11 Package Header

Table H – Root Zone Nutrients

Quantity: 1 UOM: PKG Total: $112.00

Package Items

11.1 pH

Quantity: 1 UOM: S.U. Price: $8.00 Total: $8.00

11.2 Potassium

Quantity: 1 UOM: mg/kg Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 6010

11.3 Phosphorus

Quantity: 1 UOM: mg/kg Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 6010

11.4 Total Nitrogen

Quantity: 1 UOM: mg/kg Price: $35.00 Total: $35.00

Supplier Notes: Proposed method calculation from 351.2 and 353.2

11.5 Conductivity

Quantity: 1 UOM: µmho/cm Price: $8.00 Total: $8.00

Supplier Notes: Proposed method SM 2510

11.6 Nitrogen, Nitrate Total (as N)

Quantity: 1 UOM: mg/K Price: $15.00 Total: $15.00

Supplier Notes: Proposed method 9056

11.7 Nitrogen, Kjeldahl Total (as N)

Quantity: 1 UOM: mg/K Price: $30.00 Total: $30.00

Supplier Notes: Proposed method 353.1

12 Package Header

Table I W. W. Priority Pollutants

Quantity: 1 UOM: PKG Total: $955.00

Package Items

12.1 Aluminum, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.2 Antimony, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.3 Arsenic, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.4 Barium, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.5 Beryllium, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.6 Cadmium, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.7 Chromium, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.8 Hex Chromium

Quantity: 1 UOM: µg/L Price: $25.00 Total: $25.00

Supplier Notes: Proposed method SM 3500

12.9 Copper, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.10 Cyanide, Total

Quantity: 1 UOM: µg/L Price: $25.00 Total: $25.00

Supplier Notes: Proposed method EPA 335.4

12.11 Lead, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.12 Manganese, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.13 Mercury, Total

Quantity: 1 UOM: µg/L Price: $22.00 Total: $22.00

12.14 Molybdenum, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 200.7

12.15 Nickel, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.16 Phenol, Total Recoverable

Quantity: 1 UOM: µg/L Price: $25.00 Total: $25.00

Supplier Notes: Proposed method EPA 420.4

12.17 Selenium, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.18 Silver, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.19 Thallium, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.20 Zinc, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

12.21 Acid Digestion, Total Metals

Quantity: 1 UOM: µg/L Price: $0.00 Total: $0.00

12.22 Concentrate ICAP Sx 2x Prior to Analysis

Quantity: 1 UOM: µg/L Price: $0.00 Total: $0.00

12.23 Extraction Chlorides Pesticides / PCBs Continuous Liquid – Liquid Extraction

Quantity: 1 UOM: µg/L Price: $0.00 Total: $0.00

12.24 Extraction Semi-volatile Compounds Continuous Liquid – Liquid Extraction

Quantity: 1 UOM: µg/L Price: $0.00 Total: $0.00

12.25 Pesticides / PCBs (25 Organochlorine)

Quantity: 1 UOM: µg/L Price: $140.00 Total: $140.00

Supplier Notes: Proposed method 608.3

12.26 Semi-volatile Organics (56)

Quantity: 1 UOM: µg/L Price: $150.00 Total: $150.00

Supplier Notes: Proposed method 625.1

12.27 Semi-volatile Organics (56)

Quantity: 1 UOM: µg/L Price: $150.00 Total: $150.00

Supplier Notes: Proposed method 625.1

12.28 Semi-volatile Organics-Non Standard List 1,2-Diphenylhydrazine as Azobenzene

Quantity: 1 UOM: µg/L Price: $150.00 Total: $150.00

Supplier Notes: Proposed method 625.1

12.29 Volatile Organics (27)

Quantity: 1 UOM: µg/L Price: $70.00 Total: $70.00

Supplier Notes: Proposed method 624.1

12.30 Volatile Organics – Non Standard List (2)

Quantity: 1 UOM: µg/L Price: $70.00 Total: $70.00

Supplier Notes: Proposed method 624.1

13 Package Header

Table J – W. T. Metals Group A

Quantity: 1 UOM: PKG Total: $48.00

Package Items

13.1 Arsenic, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

13.2 Barium, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

13.3 Cadmium, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

13.4 Chromium, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

13.5 Copper, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

13.6 Iron, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

14 Package Header

Table K – W. T. Metals Group B

Quantity: 1 UOM: PKG Total: $62.00

Package Items

14.1 Lead, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

14.2 Manganese, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

14.3 Mercury, Total

Quantity: 1 UOM: mg/L Price: $22.00 Total: $22.00

14.4 Selenium, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

14.5 Silver, Total

Quantity: 1 UOM: µg/L Price: $8.00 Total: $8.00

14.6 Zinc, Total

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

15 Package Header

Table L – W. T. Pesticides / Herbicides

Quantity: 1 UOM: PKG Total: $250.00

Package Items

15.1 Herbicides (Method Full List)

Quantity: 1 UOM: Each Price: $130.00 Total: $130.00

Supplier Notes: Proposed method 8151

15.2 Pesticides (Method Full List)

Quantity: 1 UOM: Each Price: $120.00 Total: $120.00

Supplier Notes: Proposed method EPA 608.3 or 8081

16 Package Header

Table M – W. T. TTHM

Quantity: 1 UOM: PKG Total: $70.00

Package Items

16.1 Bromoform

Quantity: 1 UOM: µg/L Price: *No response* Total: *No response*

Supplier Notes: Included in Total Trihalomethanes price

16.2 Chloroform

Quantity: 1 UOM: µg/L Price: *No response* Total: *No response*

Supplier Notes: Included in Total Trihalomethanes price

16.3 Bromodichloromethane

Quantity: 1 UOM: µg/L Price: *No response* Total: *No response*

Supplier Notes: Included in Total Trihalomethanes price

16.4 Dibromochloromethane

Quantity: 1 UOM: µg/L Price: *No response* Total: *No response*

Supplier Notes: Included in Total Trihalomethanes price

16.5 Total Trihalomethanes

Quantity: 1 UOM: µg/L Price: $70.00 Total: $70.00

Supplier Notes: Proposed method 624.1

17 Package Header

Table N – W. T. HAA - 5

Quantity: 1 UOM: PKG Total: $200.00

Package Items

17.1 Chloroacetic acid

Quantity: 1 UOM: µg/L Price: *No response* Total: *No response*

Supplier Notes: Included in Total regulated Haloacetic acids price

17.2 Dichloroacetic acid

Quantity: 1 UOM: µg/L Price: *No response* Total: *No response*

Supplier Notes: Included in Total regulated Haloacetic acids price

17.3 Trichloroacetic acid

Quantity: 1 UOM: µg/L Price: *No response* Total: *No response*

Supplier Notes: Included in Total regulated Haloacetic acids price

17.4 Bromoacetic acid

Quantity: 1 UOM: µg/L Price: *No response* Total: *No response*

Supplier Notes: Included in Total regulated Haloacetic acids price

17.5 Dibromoacetic acid

Quantity: 1 UOM: µg/L Price: *No response* Total: *No response*

Supplier Notes: Included in Total regulated Haloacetic acids price

17.6 Total regulated Haloacetic acids

Quantity: 1 UOM: µg/L Price: $200.00 Total: $200.00

Supplier Notes: Proposed method EPA 552

17.7 Bromochloroacetic acid

Quantity: 1 UOM: µg/L Price: *No response* Total: *No response*

Supplier Notes: Included in Total regulated Haloacetic acids price

18

Package Header

Table O – W. T. TOC

Quantity: 1 UOM: PKG Total: $25.00

Package Items

18.1 Total Organic Carbon

Quantity: 1 UOM: mg/L Price: $25.00 Total: $25.00

Supplier Notes: Proposed method SM 5310B

19

Package Header

Table OO– W. T.Distribution- Lead & Copper

Quantity: 1 UOM: PKG Total: $18.00

Package Items

19.1 Lead, Total

Quantity: 1 UOM: mg/L Price: $9.00 Total: $9.00

19.2 Copper, Total

Quantity: 1 UOM: mg/L Price: $9.00 Total: $9.00

20

Package Header

Table OOO- W.T. SUVA

Quantity: 1 UOM: PKG Total: $1.60

Package Items

20.1 Specific Ultraviolet Absorption (SUVA)

Quantity: 0.01 UOM: L/mg-M Price: $160.00 Total: $1.60

21

Package Header

Table P – W. T. Radionuclides

Quantity: 1 UOM: PKG Total: $140.00

Package Items

21.1 Radionuclides, Gross a

Quantity: 1 UOM: pCi/L Price: $0.00 Total: $0.00

Supplier Notes: Included in cost of Radionuclides, Total

21.2 Radionuclides, Gross ß

Quantity: 1 UOM: pCi/L Price: $0.00 Total: $0.00

Supplier Notes: Included in cost of Radionuclides, Total

21.3 Radionuclides, Total

Quantity: 1 UOM: pCi/L Price: $140.00 Total: $140.00

22 Package Header

Table Q – W. W. Permit & Process Control

Quantity: 1 UOM: PKG Total: $190.00

Item Notes: ** BOD5 ANALYSIS PER YEAR 2,120 (some WWTP permits require daily sampling for BOD5)
***TSS ANALYSIS PER YEAR 2,330
**** Ammonia as Nitrogen analysis per year 200

Package Items

22.1 **B.O.D. - 5

Quantity: 1 UOM: mg/L Price: $30.00 Total: $30.00

22.2 C.B.O.D. - 5

Quantity: 1 UOM: mg/L Price: $30.00 Total: $30.00

Supplier Notes: Proposed method SM 5210B

22.3 ***Total Suspended Solids

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

22.4 Volatile Suspended Solids

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

Supplier Notes: Proposed method EPA 160.4

22.5 ****Ammonia as Nitrogen

Quantity: 1 UOM: mg/L Price: $25.00 Total: $25.00

22.6 Fecal coliform

Quantity: 1 UOM: Cfu/100 ml Price: $60.00 Total: $60.00

22.7 Chemical Oxygen demand

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

Supplier Notes: Proposed method Hach 8000

23 Package Header

Table R – W. T. Ion Analysis

Quantity: 1 UOM: PKG Total: $162.00

Package Items

23.1 Fluoride

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

23.2 Bromide

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

23.3 Nitrite

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

23.4 Nitrate

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

23.5 Ortho-Phosphate

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

Supplier Notes: Proposed method 365.3

23.6 Sulfate

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

23.7 Chloride

Quantity: 1 UOM: mg/L Price: $15.00 Total: $15.00

23.8 Sodium

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method EPA 200.7

23.9 Potassium

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method EPA 200.7

23.10 Magnesium

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method EPA 200.7

23.11 Ammonium

Quantity: 1 UOM: mg/L Price: $25.00 Total: $25.00

Supplier Notes: Proposed method EPA 200.7

23.12 Calcium

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method EPA 200.7

24 Package Header

Table S – Microbiology

Quantity: 1 UOM: PKG Total: $240.00

Package Items

24.1 Total Coliforms

Quantity: 1 UOM: Each Price: $60.00 Total: $60.00

24.2 Fecal Coliforms

Quantity: 1 UOM: Each Price: $60.00 Total: $60.00

24.3 Chromogenic Substrate Total Coliforms

Quantity: 1 UOM: Each Price: $60.00 Total: $60.00

24.4 Fluorogenic Substrate Fecal Coliforms (E. coli)

Quantity: 1 UOM: Each Price: $60.00 Total: $60.00

25 Package Header

Table T – Industrial Pretreatment

Quantity: 1 UOM: PKG Total: $270.00

Package Items

25.1 Fats, Oils & Grease (FOG)

Quantity: 1 UOM: Each Price: $50.00 Total: $50.00

Supplier Notes: Proposed method 1664A

25.2 TOC (Total Organic Carbon)

Quantity: 1 UOM: Each Price: $25.00 Total: $25.00

Supplier Notes: Proposed method 5310B

25.3 TOX (Total Organic Halides)

Quantity: 1 UOM: Each Price: $70.00 Total: $70.00

Supplier Notes: Proposed method 9020

25.4 B-TEX

Quantity: 1 UOM: Each Price: $35.00 Total: $35.00

Supplier Notes: Proposed method 624.1

25.5 TPH (Total Petroleum Hydrocarbons)

Quantity: 1 UOM: Each Price: $40.00 Total: $40.00

Supplier Notes: Proposed method TX 1005

25.6 Cyanide

Quantity: 1 UOM: Each Price: $25.00 Total: $25.00

Supplier Notes: Proposed method 335.4

25.7 Phenols

Quantity: 1 UOM: Each Price: $25.00 Total: $25.00

Supplier Notes: Prooposed method 401.4

26 Package Header

Table U – Storm Water Multi-sector General Permit

Quantity: 1 UOM: PKG Total: $110.00

Package Items

26.1 Arsenic

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 200.7

26.2 Barium

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 200.7

26.3 Cadmium

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 200.7

26.4 Chromium

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 200.7

26.5 Copper

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 200.7

26.6 Lead

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 200.7

26.7 Manganese

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 200.7

26.8 Mercury

Quantity: 1 UOM: mg/L Price: $22.00 Total: $22.00

Supplier Notes: Proposed method 245.2

26.9 Nickel

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 200.7

26.10 Selenium

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 200.7

26.11 Silver

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 200.7

26.12 Zinc

Quantity: 1 UOM: mg/L Price: $8.00 Total: $8.00

Supplier Notes: Proposed method 200.7

Response Total: $150,205.60

CITY OF LAREDO
PURCHASING DIVISION

27.0 **Tab D** **AFFIDAVIT**

Project: FY21-082, Analytical lab Services

Form of Non-Collusive Affidavit

AFFIDAVIT

STATE OF TEXAS {}
COUNTY OF WEBB {}

Being first duly sworn, deposes and says:

That he/she is President of Eurofins Xenco, LLC
(a Partner of officer of the firm of, etc.)

The party making the foregoing proposal or bid, that such proposal or bid is genuine and not collusive or shame; that said Bidder has not colluded, conspired, connived or agreed directly or indirectly, with any Bidder or Person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price or affiant or of any other Bidder or to fix any overhead, profit or cost element of said bid price, or of that of any other Bidder, or to secure any advantage against the City of Laredo or any person interested in the proposed Contract; and that all statements in said proposal or bid are true.

Alex Montoya

Signature of:
Bidder, if the Bidder is an individual
Partner, if the Bidder is a Partnership
Officer, if the Bidder is a Corporation

Subscribed and sworn before me this 20 day of July 20 21

Notary Public

My commission expires:

29.0 Tab F – Certificate of Interested Parties (Form 1295)

In an effort to comply with state law the certificate of interested parties must be filled out once a vendor has been granted a contract. All of this information can be found on the State of Texas website, please use this link provided, **https://www.ethics.state.tx.us/tec/1295-Info.htm.**

Implementation of House Bill 1295

29.1 Certificate of Interested Parties (Form 1295):

In 2015, the Texas Legislature adopted House Bill 1295, which added section 2252.908 of the Government Code. The law states that a governmental entity or state agency may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental entity or state agency. The law applies only to a contract of a governmental entity or state agency that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least $1 million. The disclosure requirement applies to a contract entered into on or after January 1, 2016.

The Texas Ethics Commission was required to adopt rules necessary to implement that law, prescribe the disclosure of interested parties form, and post a copy of the form on the commission's website. The commission adopted the Certificate of Interested Parties form (Form 1295) on October 5, 2015. The commission also adopted new rules (Chapter 46) on November 30, 2015, to implement the law. The commission does not have any additional authority to enforce or interpret House Bill 1295.

29.2 Filing Process:

Staring on January 1, 2016, the commission will make available on its website a new filing application that must be used to file Form 1295. A business entity must use the application to enter the required information on Form 1295 and print a copy of the completed form, which will include a certification of filing that will contain a unique certification number. An authorized agent of the business entity must sign the printed copy of the form. The completed Form 1295 with the certification of filing must be filed with the governmental body or state agency with which the business entity is entering into the contract.

The governmental entity or state agency must notify the commission, using the commission's filing application, of the receipt of the filed Form 1295 with the certification of filing not later than the 30th day after the date the contract binds all parties to the contract. The commission will post the completed Form 1295 to its website within seven business days after receiving notice from the governmental entity or state agency.

Information regarding how to use the filing application will be available on this site starting on January 1, 2016.

Additional Information:

HB 1295

Certificate of Interested Parties (Form 1295)

New Chapter 46, Ethics Commission Rules:
- 46.1. Application
- 46.3. Definitions
- 46.5. Disclosure of Interested Parties Form

Eurofins Xenco will provide upon contract award

CITY OF LAREDO
PURCHASING DIVISION

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 **Name of business entity filing form, and the city, state and country of the business entity's place of business.**

2 **Name of governmental entity or state agency that is a party to the contract for which the form is being filed.**

3 **Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the goods or services to be provided under the contract.**

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary

5 **Check only if there is NO Interested Party.** ☐

6 **AFFIDAVIT**

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

_____
Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20_____, to certify which, witness my hand and seal of office.

_____ _____ _____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us Adopted 10/5/2015

**********Form does not need to be notarized*********

eurofins | Environment Testing Xenco

July 16, 2021

City of Laredo – City Secretary
C/O Jose A. Valdez Jr.
City Hall – Third Floor
1110 Houston Street
Laredo, Texas 78040

RE: **Analytical Lab Services – Utilities Department, FY21-082**

Dear Mr. Valdez:

Eurofins Xenco LLC is pleased to present this proposal for "Analytical Lab Services" to City of Laredo for support of Bid FY21-082. Eurofins Xenco's team has read the bid and reviewed all technical and reporting requirements. Eurofins Xenco understands the scope of work and can fully comply with the RFP requirements of this solicitation.

We are committed to ensuring your technical requirements are met and that all data complies with the City's programmatic and regulatory requirements. As incumbent laboratory, we are well versed in the City's requirements. We will continue to provide the City with the following benefits:

- A dedicated Laboratory **Project Manager** to serve as a single point of contact
- **Local presence** providing support from our Corpus Christi and Houston labs, as well as other work share locations
- **Knowledgeable and experienced** laboratory staff, fully trained and committed to meeting project specifications and requirements
- Access to **technical experts** who have been instrumental in working with various federal agencies to develop analytical methods and procedures
- Real-time access to your project data and details through our online data management system, **Total Access®**, at no additional charge

Thank you for the opportunity to submit this response to Bid No. FY21-082 for Analytical Lab Services. We look forward to continuing our work in support of the City's analytical program. Should you have questions or need any clarification to the responses below, please contact Mike Sullivan at Mike.Sullivan@eurofinset.com or 303-618-5112.

Sincerely,

Alex Montoya
President

Phone: 281-240-4200
Email: Alex.Montoya@eEurofinset.com

eurofins | Environment Testing America

Our Commitment:
Providing Quality Analytical Services

Response to:

Bid No. FY21-082
Analytical Lab Services

Prepared For:

City of Laredo
Attn: Jose A. Valdez Jr.
City of Laredo – City Secretary
City Hall – Third Floor
1110 Houston Street
Laredo, Texas 78040

Prepared By:

Eurofins Xenco LLC
1733 North Padre Island Drive
Corpus Christi, TX 78408

Eurofins Xenco Quote #: 56008928
Point of Contact: Mike Sullivan
Phone: 303-618-5112
Email: Mike.Sullivan@eurfofinset.com

Table of Contents

ATTACHMENTS

Att 1 Example Deliverable
Att 2 Resumes
Att 3 EHS Manual
Att 4 Hazardous Waste Management Plan
Att 5 QA Manual
Att 6 Ethics Policy
Att 7 SOPs
Att 8 PE Studies
Att 9 Audits
Att 10 Certifications
Att 11 Bid Documents - TABs A, B, C, D, E, F

Executive Summary

City of Laredo (City) requires a laboratory to provide support for your analytical testing services for the Utilities Department. Eurofins Xenco understands your requirements and will continue to provide premier quality analytical solutions, expertise, reliability and convenience at the best possible value. We have partnered with City of Laredo for many years and have proven ability to administer the required management structure and analytical support needed for your most sensitive and complex analytical laboratory needs.

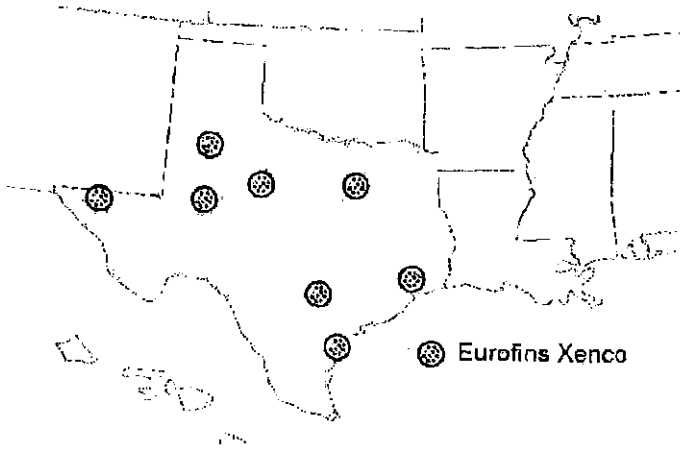
We will continue to provide City of Laredo with the following benefits:

- Demonstrated performance in **meeting turnaround time** requirements
- Dedicated **Project Manager** and backup Project Manager well versed in City of Laredo reporting and invoicing requirements
- A fully documented, rigorous and comprehensive **QA/QC program**
- Reporting through TotalAccess, our online tool with access to real time sample status and results
- Access to **Experts** who can provide value added services to assist in solving various analytical and regulatory challenges
- Established and entrenched **safety procedures**
- Data security through an industry leading disaster recovery plan that ensures critical data are backed up continually, as well as a fully functional redundant data center
- Continued easy access to historical data to support diagnostics through trending and analysis

Eurofins Xenco, Corpus Christi laboratory was formerly known as TestAmerica Laboratories.

Our founding laboratory was formed in Houston, Texas in 1990. Eurofins Xenco LLC has been part of Eurofins Environmental Testing America (EETA) network of independent laboratories since 2020. We have five (5) testing laboratory facilities located in Houston, Dallas, Midland, El Paso, and Corpus Christi, and three (3) Service Centers in San Antonio, Lubbock and Carlsbad, NM. As part of EETA, we can provide access to nearly a hundred locations in the country, as well as vast global resources. All facilities are state-of-the-art and are, at a minimum, accredited under the National Environmental Accreditation Program (NELAP) and participating State programs.

Eurofins Xenco locations



At Eurofins Xenco we strongly believe that our clients come first. Commitment to project success is implicit in everything we do. We are committed to exceeding our clients' expectations by providing unmatched data integrity, unequaled technical and professional services, and delivering unsurpassed client support.

We abide by a strong Code of Ethics and Conduct adopted by our employees and our affiliates. We envision operating under a system of waste minimization and strive toward a Carbon Neutral footprint. We create equal opportunity to all employees in a health and motivational working environment.

Approach

Eurofins Xenco proposes our Corpus Christi lab to provide primary analytical and logistical support to the City of Laredo's program. Additional support and backup capacity will be provided by our Houston laboratory with specialty testing support from Eurofins TestAmerica St. Louis, Eurofins TestAmerica Savannah, Eurofins EPK and City of Laredo.

Eurofins Xenco understands the City's expectation that we effectively manage network and subcontract laboratories to meet the City's requirements. We commit to providing seamless, effective management of our workshare and any subcontractor laboratories.

Sample Containers and Supplies

Eurofins Xenco, Corpus Christi will provide the City all the necessary sample containers, preservatives, supplies and instructions corresponding to the requested analyses. Our cost estimate includes the sample containers, packing material and coolers, delivered to the requested City location via ground transportation. A minimum of five business days' advance notice is requested to allow sufficient time to achieve timely delivery.

We obtain all sample containers from reputable manufacturers and meet all USEPA specifications.

Eurofins Xenco does not supply wet ice or blue ice for sample shipment to the laboratory.

One benefit of our Laboratory Information Management System, (LIMS), is the integration of our bottle order and project management modules.

Your Project Manager will

- Quickly generate bottle orders that match your established project methods
- Provide you an inventory of bottles included in each order

Our sampling kits include ice chests, packing material and pre-labeled sample containers with preservatives corresponding to the required analyses, Chain of Custody documents, sampling instructions, and trip blanks if the City requires volatile organic analyses.

Return Shipping

Because the City's location is outside the area of our courier service range, we will provide a return shipping label for sample shipment to the laboratory.

We will provide pre-paid Fedex labels for samples to be shipped to the laboratory using Fedex ground.

We recognize that due to scheduling and holding time, so samples may need to be shipped via Greyhound. We will cover cost of Greyhound for shipments sent for Monday receipt.

Turnaround Time

Eurofins Xenco commits to continuing to meet the requested turnaround times.. We calculate the turnaround time from the date of acceptable sample receipt by the laboratory to the date we provide the final report.

We request that City coordinate all rush turnaround time requests with your Project Manager.

Required Submittals

16.1 Experience

Eurofins Xenco, Corpus Christi has been providing high quality environmental analyses in the Gulf Coast for more than 38 years. Corpus Christi's main objective is to provide consistently high quality, legally defensible laboratory data within a reasonable time-frame in support of the environmental testing needs of industry and government.

16.2 Detection Limits

We have been providing support for this program for many years, and can meet the detection levels required under TCEQ and EPA regulations.

16.3 SOPs

Eurofins Xenco maintains extensive Standard Operating Procedures (SOPs), which accurately reflect all phases of laboratory activities, including test methods, data integrity and corrective actions.

These instructions are available in the laboratory for the operation of equipment as well as for the handling and preparation of samples. Non-analytical SOPs include sampling, handling, transport, storage and preparation of samples.

All relevant instructions, SOPs, reference methods and manuals are readily available to all staff. We document modifications of published methods in the laboratory's approved SOPs, and include the rationale for the modification.

SOPs are provided as Attachment 7.

16.4 Electronic Records

The laboratory will provide City with an analytical report and Electronic Data Deliverables (EDD) compliant with RFP specifications. We will submit all reports and EDDs to the City point of contact and upload them to TotalAccess.

If upon review, City determines that the results require contingency analyses, your Project Manager will initiate the appropriate notifications and analyses. We will report the results in the turnaround time specified, repeating the process in the above paragraphs.

TotalAccess™

TotalAccess makes it easy for the City to manage all aspects of your project, 24 hours a day, seven days a week, all in one place.

City authorized personnel, with individual levels of security, can log on to the City password-protected site and retrieve the information you need, when you need it:

Key features of TotalAccess include:

- Instant, Real Time Data Access
- Complete Document Management Library, online access and download of project documentation including invoices, reports, EDDs, and COCs, contacts for each site or program
- Instant notification of project status including results, electronic deliverables, and other documents generated by Eurofins Xenco
- Point and Click Downloads of Project Files
- User Customized Data Reporting Functionality
- Automated Comparison Against Hundreds of Regulatory Lists
- Data Relationship and Trending Wizard
- Analytical Budget Management

TotalAccess provides clients with access to services that enable faster communications, rapid access to data, and a centralized repository for all project information. TotalAccess can be a key to an organized, well communicated project.

The TotalAccess system is available free of charge to all Eurofins Xenco customers.

16.5 Key Personnel

Highly skilled, experienced people are essential in dealing with environmental programs like yours. Eurofins Xenco maintains a dedicated staff of experienced professional chemists and technicians. The majority of the staff have a Bachelor's Degree or higher in chemistry, biology, environmental science or another related field.

The key personnel are listed in the tables below with their title, educational experience and year started in the analytical industry.

Name	Position	Degree/ Discipline	Experience Start (Yr)	EETA Start (Yr)
Chip Meador	Laboratory Director and EH&S Coordinator	MS Botany & Ecology	1982	1988
Tiffany Fleming	Quality Assurance Coordinator	MBA; BS Animal Science	2018	2018
Gayland Fisher	Organics Department Manager	AS Science	1977	1987
Lindy Maingot	Project Manager	BBA Finance	1992	2007

Resumes are provided in Attachment 2.

Project Management

Efficient and effective project management is of prime importance to the successful execution of any contract. In our experience, it is the key to building lasting client relationships.

Supported by a team of experienced laboratory managers working together to plan, coordinate, integrate and monitor project activities, our PM's responsibility is to ensure that we meet your technical and contractual requirements and accomplish your analytical goals.
We are most successful when our PM can be involved as a virtual member of your project team; in dialogue from initial contact until data is reported, and available to answer questions or provide additional information after project completion.

Eurofins Xenco has a well-trained Management staff, who have created systems, procedures, and tools that allow us to deliver consistently defensible data on time to over 500 clients including the City of Laredo. Eurofins Xenco provides rapid, reliable, high quality, and cost-effective data to our clients.

Ms. Lindy Maingot will continue to serve as your laboratory Project Manager. Lindy will be your contact for day-to-day activities and coordination of analytical testing needs, bottle orders, project status, and lab services and capabilities.

Sample Login Requirements

Eurofins Xenco's normal office hours are 8 a.m. to 5 p.m., Monday through Friday. We accept sample shipments Monday through Saturday, and on Sundays as needed.

We realize that field sampling constraints may dictate your project schedule. Our sample receipt and laboratory working hours are flexible to meet your needs.

For weekend receipts, we request advance notice to ensure the appropriate laboratory personnel are available. If your project requires after-hours contact, we will provide telephone numbers for the appropriate personnel.

Sample Analysis Plan

Sample Receipt

When samples arrive at the laboratory, a designated sample custodian

- Inspects the cooler and custody seals
- Examines the contents of the cooler
- Records the cooler temperature
- Inspects all documents to ensure the samples received match the Chain of Custody (COC)

We will document any non-conformance, irregularity or compromised sample receipt and notify City immediately. If the cooler's temperature upon arrival exceeds the required or method specified temperature range, we consider the sample receipt compromised. A sample custodian will record the temperature deviation in the project documentation.

Once we check and verify sample(s), we log them into the LIMS. LIMS assigns each sample container a unique Sample Identification Number, which is cross-referenced to City's identification number. A sample custodian labels each sample container with its unique barcode for sample identification.

Within 24 hours of the completed login process, your Project Manager will email City the receipt confirmation and login summary.

If another laboratory, either network or external subcontractor, will be performing some of the analyses, we appropriately package and send out the samples under COC.

Following sample labeling, we place the sample(s) in an access-controlled storage area. We store all samples according to method requirements and in a manner preventing cross contamination or environmental contamination.

Unless specified by method or state regulation, we use a tolerance range of 0-6 degrees Celsius for samples that require cooling. We monitor and document the sample storage temperatures.

Sample Preparation, Analysis

As soon as we complete the sample login, LIMS notifies laboratory personnel of 1) samples that are ready for analysis 2) rush and short holding times so preparation and analysis can begin as soon as possible.

LIMS communicates the login information for each sample batch analysis group to the analyst. This includes identification of appropriate sample preparation, SOPs and extracts clean-up SOPs.

If an analyst encounters any issues during sample analysis, the analyst notifies the Project Manager. Your Project Manager will contact City to discuss, as appropriate. We capture any non-conformances in LIMS, and the quality assurance department tracks them. Your Project Manager monitors the status of the analyses through LIMS and through regular communication with any support laboratories.

Data Processing

The analyst executes the first tier review of all data at the bench level. The analyst is responsible for ensuring that the

- analytical data are correct and complete
- laboratory has followed the appropriate SOPs
- QC results are within acceptable limits.

The group leader/supervisor executes a second tier technical review.

Upon approval and release of the data, the Corpus Christi lab compiles the data and performs a third tier review for completeness.

Reporting

The laboratory will provide City with an analytical report and Electronic Data Deliverables (EDD) compliant with RFP specifications. We will submit all reports and EDDs to the City point of contact and upload them to TotalAccess.

If upon review, City determines that the results require contingency analyses, your Project Manager will initiate the appropriate notifications and analyses. We will report the results in the turnaround time specified, repeating the process in the above paragraphs.

Sample Disposal and Return

After we have completed the requested analyses, the sample custodian will maintain any remaining sample volume and sample extracts for a minimum of 30 days. Following that storage period, Eurofins Xenco will dispose of samples, sample extracts and digestates in full compliance of disposal regulations.

16.6 Performance Evaluations

All Eurofins Xenco laboratories participate semiannually in Proficiency Testing (PT) programs in support of their National Environmental Laboratory Accreditation Conference (NELAC) and

State certification requirements. Our PT performance scores are routinely in the upper ten percentile.

In addition to the PT program required for NELAC accreditation, our facilities participate in a number of PT programs managed by other state agencies. These PT samples may be submitted as known performance evaluation tests, or as blind or double-blind samples. Periodic double-blind performance audits are conducted internally to assess all aspects of laboratory performance, from project management handling of project initiation through analysis, reporting and invoicing.

At a minimum, Performance Tests (PTs) are conducted semi-annually in conformance with the NELAP requirements. Any results determined to be outside the Acceptable range are investigated as non-conformances and resolved.

We have provided the last 3 years of Performance Evaluations as Attachment 8.

Audit schedules have been impacted by COVID-19. Please see Attachment 9 for information regarding our 2019 TCEQ audit. We are happy to offer additional audit information as it becomes available, or to discuss other audit information upon request.

16.7 Certifications

Each of the laboratories we propose for this project/program hold certifications for the parameters each would support. We are committed to maintaining these certifications to support City programs for the duration of this contract and into the future.

Eurofins Xenco's Quality Systems are compliant with current NELAP standards.

Texas Commission on Environmental Quality – Certification Summary:

Laboratory	Lab ID #	Expiration Date
Eurofins Xenco, Corpus Christi	T104704210-21-27	3/31/2022
Eurofins Xenco, Houston	T104704215-21-43	6/30/2022
Eurofins TestAmerica, Savannah	T104704185-20-15	11/30/2021
Eurofins TestAmerica, St Louis	T104704193-21-18	7/31/2021
Eurofins EPK	T104704489-20-15	7/31/2021

Attachment 10 provides copies of Scopes of Accreditation

16.8 References

Eurofins Xenco meets the City's needs and provides the right solution to support this contract. We have successfully supported numerous municipal programs. The following references may be contacted to demonstrate our experience and quality service.

Client	Project Description
Valero Ardmore 1 Valero Way Ardmore, OK 73401 Ashley Bass (580-221-6637 Ashley.bass@valero.com **Regulatory Oversight:** OK DEQ	**Major Refinery in Central Oklahoma** Corpus Christi provides analytical support for environmental aspects of the operation and maintenance of a major refinery in central Oklahoma. The samples are analyzed for a variety of parameters, including volatile organic compounds, semivolatile organic compounds, Metals, plus other organic and inorganic analyses. UDS Level 2 reports are provided. Corpus Christi provides bottle drop-off and sample pickup services. Periodic rush samples are required on a 24 hour turnaround time basis. **Contract Value:** ~$50K/yr **Period of Performance:** 2013 to Present
Arcadis U.S. Inc. 711 N. Carancahua Corpus Christi, TX 78401 Kenneth Brandner 361-883-1353 Kenneth.brandner@arcadis-us.com **Regulatory Oversight:** TCEQ	**Cleanup Activities at a Smelter and Metals Processing Facility** Corpus Christi provides analytical support for cleanup activities of the site of a large smelter and metals processing facility. The samples are analyzed for volatile organic compounds, semivolatile organic compounds, Metals, plus various other organic and inorganic parameters. The lab provides a UDS Level 2 Report and samples are often run on a 24 hour rush turnaround time basis. The lab also provides bottle drop-off and sample pickup services at the facility. **Contract Value:** ~$100K/yr **Period of Performance:** 2012 to Present
Edwards Aquifer Authority 900 E. Quincy San Antonio, TX 78215 Gizelle Luevano 210-222-2204 gluevano@edwardsaquifer.org **Regulatory Oversight:** TCEQ	**Edwards Aquifer Authority** Corpus Christi provides analytical support for analysis on Edwards Aquifer Authority for metals, general chemistry and various organic compounds. The lab provides a UDS Level 2 report. Sample are periodically reported on a 24 hour rush turnaround time basis. The lab also provides bottle drop-off and sample pickup services. **Contract Value:** ~$100K/yr **Period of Performance:** 2010 to Present

Client	Project Description
City of Public Service 10830 Nacogdoches San Antonio, TX 78217 Terri Krenek 210-353-4018 takrenek@cpsenergy.com **Regulatory Oversight:** TCEQ	**Analytical Support for PCB Identification and Management Program** Corpus Christi performs analyses in support of PCB Identification and Management Program for the City of Public Service. Analytical testing includes volatile organic compounds, semivolatile organic compounds, Metals, plus other organic and inorganic analyses. The deliverable UDS Level 2 report is provided periodically on a 24 hour rush Turnaround time. Corpus Christ also provides bottle drop-off and sample pickup services. **Contract/Project Value:** ~$70K/yr **Period of Performance:** 2000 to Present

16.9 Availability

Eurofins Xenco has successfully supported the City for many years. We are ready to commence services immediately after successful contract award and to continue our support, demonstrate our quality laboratory and our customer service.

Clarifications

Eurofins Xenco, LLC ("Eurofins Xenco") Contracts Department has reviewed the City of Laredo's Formal Invitation for Bids for Laboratory Analytical Testing Services for Water and Wastewater Samples for the Utilities Department and has the following comments and proposed changes:

GENERAL CONDITIONS

11.0 PAYMENT AND INVOICING

(a) Eurofins Xenco typically issues invoices concurrently with the issuance of our analytical reports. Additionally, Eurofins Xenco expects to be paid within thirty (30) days of receipt of each invoice. The following language is therefore proposed for greater clarification:

Invoices may be submitted to the City of Laredo upon completion of any sample delivery group and the City of Laredo shall pay undisputed amounts net thirty (30) days.

(b) Eurofins Xenco does not offer discount terms. It is therefore requested that this section be removed.

12.0 INSURANCE REQUIREMENTS
(f) 4. It is Eurofins Xenco's practice to only provide notification when there is termination of an insurance policy. It is therefore requested that this be subsection be removed.

17.0 SPECIFICATIONS
17.2 Eurofins Xenco's record retention policy (consistent with NELAC requirements) calls for retention of project records for five (5) years. It is requested that this language be added to the last paragraph within this subsection as the second to last sentence. The proposed language is:

Records shall be retained by laboratory for the duration of five (5) years upon the completion of this agreement.

FORMAL INVITATION FOR BIDS ANALYTICAL LAB SERVICES UTILITIES DEPARTMENT

19.0 It is Eurofins Xenco's practice to only provide notification when there is termination of an insurance policy. Additionally, it is requested that Eurofins Xenco provide reasonable notice of any termination. It is therefore proposed that the third sentence me modified as follows:

Contractor(s) shall keep a current certificate of insurance in the City of Laredo Purchasing Division at all times and shall ~~immediately~~ report any termination ~~changes~~ to the Purchasing Office Administration within a reasonable time.

PROPOSED SECTION

INDEMNIFICATION/ LIMITATION OF LIABILITY

Eurofins Xenco believes that indemnification clauses should reflect a fair and equitable allocation of the risk involved in the work. Additionally, Eurofins Xenco cannot accept unlimited liability. It is therefore proposed that this section be added to the Agreement:

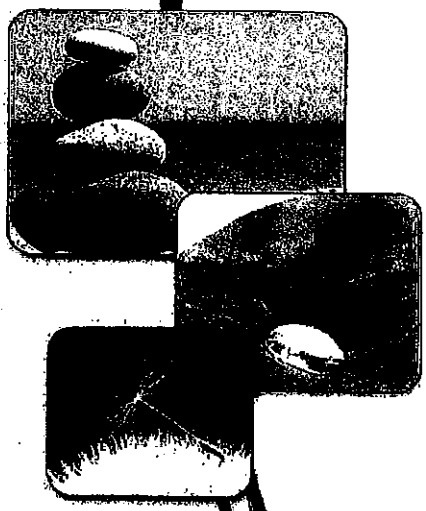
> *Laboratory and the City of Laredo shall indemnify, defend, and hold each other harmless form claims, demands, and causes of action asserted against indemnitee by any person (including, without limitation, Laboratory's and the City of Laredo's employees) for personal injury or death or for loss or damage to property and resulting from the indemnitor's negligence or willful misconduct hereunder. Where personal injury, death, or loss of or damage to property is the result of the joint negligence or misconduct of Laboratory and the City of Laredo , the indemnitor's duty of indemnification shall be in proportion to its allocable share of such joint negligence or misconduct. In no case will either party be held liable for consequential damages.*

Notwithstanding anything to the contrary stated elsewhere in this Agreement, Laboratory's maximum liability under this Agreement or any other attachments hereto whether based in contract, tort, warranty, negligence or otherwise shall not exceed amounts recoverable under the scope and limits of the insurance required under this Agreement, up to a maximum of $2,000,000. In no event shall Laboratory be liable to the City of Laredo for any special, indirect, or consequential damages occasioned by the services performed or by application or use of the reports prepared under this Agreement.

Closing

Thank you for the opportunity to submit this response to Bid No. FY21-082 for Analytical Lab Services. We look forward to continuing our work in support of the City's analytical program. Should you have questions or need any clarification to the responses below, please contact Mike Sullivan at Mike.Sullivan@eurofinset.com or 303-618-5112.

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Xenco, Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Tel: (361)289-2471

Laboratory Job ID: 560-95611-1
Client Project/Site: LCWWTP, 06/29/2021
Sampling Event: LCWWTP - Effluent & Influent

For:
City of Laredo
5816 Daugherty Avenue
Laredo, Texas 78041

Attn: Juan Rios

Authorized for release by:
7/8/2021 10:33:37 AM

Lindy Maingot, Project Manager I
(210)344-9751
Lindy.Maingot@Eurofinset.com

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

3

Job ID: 560-95611-1

Laboratory: Eurofins Xenco, Corpus Christi

Narrative

Job Narrative
560-95611-1

Receipt
The samples were received on 6/29/2021 8:08 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.3°C

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: City of Laredo
Project/Site: LCWWTP, 06/29/2021

Job ID: 560-95611-1

Client Sample ID: LCWWTP - Effluent

Lab Sample ID: 560-95611-1

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	7.8		2.0	2.0	mg/L	1		SM 2540D	Total/NA

Client Sample ID: LCWWTP - Influent

Lab Sample ID: 560-95611-2

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Volatile Suspended Solids	110		10	10	mg/L	1		2540E	Total/NA
Total Suspended Solids	160		2.0	2.0	mg/L	1		SM 2540D	Total/NA
Biochemical Oxygen Demand	41		24	24	mg/L	1		SM 5210B	Total/NA

4

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: City of Laredo
Project/Site: LCWWTP, 06/29/2021

Job ID: 560-95611-1

Client Sample ID: LCWWTP - Effluent
Date Collected: 06/28/21 10:30
Date Received: 06/29/21 08:08

Lab Sample ID: 560-95611-1
Matrix: Water

5

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	7.8		2.0	2.0	mg/L			06/29/21 12:19	1
Biochemical Oxygen Demand	<2.0		2.0	2.0	mg/L			06/30/21 08:30	1

Client Sample ID: LCWWTP - Influent
Date Collected: 06/28/21 10:39
Date Received: 06/29/21 08:08

Lab Sample ID: 560-95611-2
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Volatile Suspended Solids	110		10	10	mg/L			06/30/21 10:17	1
Total Suspended Solids	160		2.0	2.0	mg/L			06/29/21 12:19	1
Biochemical Oxygen Demand	41		24	24	mg/L			06/30/21 08:30	1

Method: 2540E - Solids, Volatile Suspended (VSS)

Lab Sample ID: MB 560-186825/1
Matrix: Water
Analysis Batch: 186825

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Volatile Suspended Solids	<10		10	10	mg/L			06/30/21 10:17	1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 560-186811/1
Matrix: Water
Analysis Batch: 186811

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<2.0		2.0	2.0	mg/L			06/29/21 12:19	1

Lab Sample ID: LCS 560-186811/2
Matrix: Water
Analysis Batch: 186811

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	200	219		mg/L		110	80 - 120

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 560-186838/1
Matrix: Water
Analysis Batch: 186838

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	<2.0		2.0	2.0	mg/L			06/30/21 08:30	1

Lab Sample ID: USB 560-186838/2
Matrix: Water
Analysis Batch: 186838

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	<2.0		2.0	2.0	mg/L			06/30/21 08:30	1

Lab Sample ID: LCS 560-186838/3
Matrix: Water
Analysis Batch: 186838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biochemical Oxygen Demand	198	214		mg/L		108	84.6 - 115.4

Accreditation/Certification Summary

Client: City of Laredo
Project/Site: LCWWTP, 06/29/2021

Job ID: 560-95611-1

Laboratory: Eurofins Xenco, Corpus Christi

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Louisiana	NELAP	05094	06-30-21
Oklahoma	State	2020-006	08-31-21
Texas	NELAP	T104704210-21-27	03-31-22
USDA	US Federal Programs	P330-18-00314	10-31-21

7

Method Summary

Client: City of Laredo
Project/Site: LCWWTP, 06/29/2021

Job ID: 560-95611-1

Method	Method Description	Protocol	Laboratory
2540E	Solids, Volatile Suspended (VSS)	SM	XEN CC
SM 2540D	Solids, Total Suspended (TSS)	SM	XEN CC
SM 5210B	BOD, 5-Day	SM	XEN CC

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

XEN CC = Eurofins Xenco, Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2471

8

Sample Summary

Client: City of Laredo
Project/Site: LCWWTP, 06/29/2021

Job ID: 560-95611-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
560-95611-1	LCWWTP - Effluent	Water	06/28/21 10:30	06/29/21 08:08	
560-95611-2	LCWWTP - Influent	Water	06/28/21 10:39	06/29/21 08:08	

9

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

1733 North Padre Island Drive
Corpus Christi, TX 78408
(361) 289 - 2673 Fax (361) 289 - 2471

Chain-of-Custody Record

Loc: 560
95611

LC-212806

95611

Customer Information		Project Information		Analyses / Method Requested	
P.O.	235837	Project Name	City of Laredo	A. BOD	E. VSS
W.O.		Lab Number		B. CBOD	F. Organic Matter
Company	City of Laredo	Bill To	Same	C. TSS	
Send Report To:	Adriana Vela, B.S.	Invoice Attn		D. NH3-N	
Address:	5816 Daugherty Ave	Address:			
City/State/Zip	Laredo, TX. 78041	City/State/Zip			
Phone	956-721-2000 X 3057	Phone			
Fax	956-721-2001	Fax			

Sx No.	Sample Description	Sample Date	Sample Time	Sample Matrix	Container Type	Preservative	No. of Bottles	A	B	C	D	E	F	G	H	I	J	K	L	Comments
1	LCWWTP - Effluent	6/28/2021	1030	Liquid	1 Liter Pl.	ICE	2	X		X										Sample arrived at lab at H20
2	LCWWTP - Influent	6/28/2021	1039	Liquid	1 Liter Pl.	ICE	1	X		X		X								
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

560-95611 Chain of Custody

Sampler Name: Plant Operator	Shipment Method: Greyhound		Air bill No:		Required Turnaround: Normal		
Relinquished by: EC	Date: 06/28/2021	Relinquished by:	Date		Relinquished by:	Date	
Company Name: City of Laredo Utilities	Time: See Air Bill	Company Name:	Time		Company Name:	Time	
Received by:	Date: 6/29/21	Recevied by:	Date		Received by:	Date	
Company Name: EuroFins	Time: 0808	Company Name:	Time		Company Name:	Time	

Temp = 0.5
corrected = 0.3
C.F IR 13

7/8/2021

Login Sample Receipt Checklist

Client: City of Laredo

Job Number: 560-95611-1

Login Number: 95611
List Number: 1
Creator: Hunter, Jeffery A

List Source: Eurofins Xenco, Corpus Christi

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

eurofins | Environment Testing America

Personnel Resume

Raymond "Chip" Meador
Laboratory Director

Qualifications Summary

Mr. Meador has a M.S. in Botany and Ecology from University of Florida. He has been in the environmental laboratory industry since 1982. He is responsible for the technical and administrative management of Eurofins Houston laboratory. In addition, his responsibilities include adherence to budget, staff development and control, quality assurance and quality control, scheduling, client support/liaison, as well as profit and loss. Previously Mr. Meador was General Manager of Eurofins TestAmerica nationwide, managing P&L, business development initiatives, and regulatory compliance. He hired, trained, and developed management personnel to drive business growth. In addition, he coordinated with sales and marketing departments to innovate strategic business plan and identify client support improvements. He ensured high customer satisfaction.

Professional Experience

Laboratory Director – Eurofins Xenco Corpus Christi – 2015 to Present
Mr. Meador is responsible for the technical and administrative management of the laboratory. His responsibilities include adherence to budget, staff development and control, quality assurance and quality control, scheduling, client support/liaison, as well as profit and loss of the facility.

Laboratory Director – ALS Global Laboratories, Houston – 2014 to 2015
He was responsible for restoration of operations and profitability for the Houston laboratory. He completed a LIMS implementation and installed a management structure.

Director of Gulf Coast Operations – Calscience Environmental Laboratories–2012 to 2014
He established relationships with decision makers at major environmental consulting companies and industrial complexes throughout the Gulf Coast.

General Manager – TestAmerica Nationwide – 2007 to 2011
Mr. Meador managed P&L, business development initiatives, and regulatory compliance. He hired, trained, and developed management personnel to drive business growth. In addition, he coordinated with sales and marketing departments to innovate strategic business plan and identify client support improvements. He ensured high customer satisfaction.

Laboratory Director – Severn Trent Laboratories – 1999 to 2007

Regional Manager – Core Laboratories – 1988 to 1999

Lab Manager – Chemical Waste Management - 1982 to 1988

Education

- M.S. in Botany and Ecology – University of Florida – Gainesville, FL
- B.S. in Botany – University of Florida – Gainesville, FL

Professional Training

- Ethics
- Leadership Training
- Safety Training

eurofins | Environment Testing America

Personnel Resume

Tiffany Fleming
QA Coordinator

Qualifications Summary

Ms. Fleming has a Master's of Business Administration and a Bachelor of Science degree from Texas A&M University. She has been in the environmental industry since 2018. She has knowledge of the TCEQ, local, state and federal regulations.

Professional Experience

QA Coordinator – Eurofins Xenco Corpus Christi – 2020 to Present
Ms. Fleming has extensive knowledge of quality assurance procedures in the laboratory and implements quality improvements and quality programs to comply with NELAP laboratory accreditation requirements. She is familiar with state and federal regulatory authorities and oversees the maintenance of quality control for the laboratory. Responsibilities include internal/external audits, maintaining the laboratory certification requirements, Proficiency testing program, corrective actions, data review, method review and monitoring new regulations to ensure the lab is in compliance with the latest regulatory revisions, and other quality assurance functions.

Project Management Assistant – Eurofins TestAmerica Corpus Christi – 2018 to 2020

- Reviewing sample logins when new jobs are created to assure accuracy and sending a sample receipt confirmation to the respective client
- New project set-up, preparation of bottle orders, and assisting new and established clients with questions to provide outstanding customer service.
- Review, assembly and issuing final analytical reports to clients, including TRRP reports.

Research Assistant – START Center for Cancer Care San Antonio– 2017-2018

- Collected internally generated data including small animal body weights and tumor dimensions using mechanical and electronic devices and stored on an internal server
- Prepared, aliquoted and properly stored vehicles, drugs, media, and other laboratory solutions
- Performed blood and tissue collection and processing, tumor implantation, and sample processing including cryopreservation, cryofreezing and fixation

Student Intern – MD Anderson Department of Veterinary Sciences Neotropical Primate Unit – Bishop – 2016
Aided in research and associated surgeries for a NIH sponsored laboratory studying reproductive biology and behavior in the genus Saimiri.

Education

- M.B Administration – Texas A&M University – Corpus Christi, Texas
- B.S. Animal Science – Texas A&M University – Kingsville, Texas

eurofins | Environment Testing America

Personnel Resume

Lindy Maingot
Project Manager

Qualifications Summary

Ms. Maingot holds a BBA in Finance from Texas A&M University. She has been in the environmental laboratory industry since 1992. Her experience includes managing all facets of the San Antonio service center operations and extensive Project Management responsibilities establishing new accounts, and services her industrial and consulting/engineering clients with an overall emphasis on customer service.

Professional Experience

Project Manager – Eurofins Xenco Corpus Christi – 1994 to Present
Ms. Maingot's project management responsibilities include working with clients on project setup and coordinating the laboratory schedules to meet project requirements. She prepares reports, monitors the work in progress and makes sure that the final deliverables adhere to all of the requirements needed by the client. She maintains client contact throughout a project's duration to ensure that the clients are delighted by our level of service.

Service Center Manager/Project Manager – Eurofins Xenco San Antonio – 1994-2020
Ms. Maingot was responsible for managing all facets of the service center operations; preparing project kits; scheduling delivery of sampling supplies and sample pick up and coordinating distribution of samples as required by the project specifications. Ms. Maingot's project management responsibilities included working with clients on project setup and coordinating the laboratory schedules to meet project requirements.

Sample Login/Sample Management – 1992-1994
Mrs. Maingot was responsible for managing the sample receipts from the clients and the shipment of all samples. She logged samples into the Laboratory Information Management System, labeled the sample containers for processing by laboratory technicians, and provided Project Managers the appropriate project documentation. She also prepared and shipped bottle kits to clients in accordance with all EPA and DOT requirements.

Education

- Bachelor of Business Administration, degree in Finance– Texas A&M University – 1991

Professional Training

- Ethics Training
- Customer Service Training

TITLE:

ENVIRONMENTAL HEALTH AND SAFETY MANUAL

January 2021

Controlled Source: Intranet **Facility Distribution No.** _____

ENVIRONMENTAL HEALTH AND SAFETY MANUAL

Approval Signatures

Raymond J. Frederici
Vice President – Quality Assurance and Environmental Health & Safety
08 January 2021
Date

Daniel W. Helfrich
Manager - Environmental Health & Safety
08 January 2021
Date

Kene' Kasperek
Manager – Environmental Health & Safety
08 January 2021

Michael Ridenhower
Manager – Environmental Health & Safety
08 January 2021
Date

Joe Schairer
Manager – Environmental Health & Safety
08 January 2021
Date

Controlled Source: Intranet **Facility Distribution No. _____**

The Environmental Health and Safety Manual (EH&S) is applicable to the Eurofins Environment Testing Laboratories and EMLab P&K.

The Division manual is reviewed on an annual basis. Each section is independently revised. Facility/Laboratory Directors and EH&S Coordinators are responsible for replacing the updated sections of their manuals with the most recent revisions. The latest revision dates for each section are listed in the table below.

Section Number	Title	Effective Date
1	Policy, Scope and Purpose	01/08/2021
2	Responsibilities	01/08/2021
3	General Principles for Work with Hazardous Chemicals	01/08/2021
4	Training Requirements	01/08/2021
5	Hazard Communication Programs	01/08/2021
6	Facility Requirements	01/08/2021
7	Procedures for Responding to Emergencies	01/08/2021
8	Personal Protective Equipment (PPE) and Apparel	01/08/2021
9	Basic Rules and Procedures	01/08/2021
10	Use of Hazardous Materials	01/08/2021
11	Systems Under Pressure or Vacuum	01/08/2021
12	Inspections and Equipment Tests	01/08/2021
13	Waste Management & Pollution Prevention	01/08/2021
14	Transportation and Fleet Safety Program	01/08/2021
15	Office Safety/Ergonomics in the Work Place	01/08/2021
16	Microbiological Testing Laboratories	01/08/2021
17	Field Safety	01/08/2021
18	Radioactive Samples and Materials	01/08/2021
19	Blood borne Pathogen Program for Field Personnel and Employees That Could Work with Bloodborne Pathogens	01/08/2021
20	Changes From Previous Revision	01/08/2021
Appendix I	State of California Requirements	01/08/2021
Appendix II	References	01/08/2021
Appendix III	SDS Components	01/08/2021
Appendix IV	NFPA Rating System	01/08/2021
Appendix V	Use of Toxicity Data	01/08/2021
Appendix VI	Incompatible Chemicals	01/08/2021
Appendix VII	List of EH&S Forms [1]	01/08/2021
Appendix VIII	Procedures for Preparing Safety Analysis for Work Areas	01/08/2021

Section Number	Title	Effective Date
Appendix IX	Guidance for Employees on Investigating Incidents	01/08/2021
Appendix X	Confined Space Entry Policy	01/08/2021
Appendix XI	Methylene Chloride Compliance Program	01/08/2021
Appendix XII	Carcinogen List	01/08/2021
Appendix XIII	List of Acronyms	01/08/2021
Appendix XIV	Electronic Filing	01/08/2021

[1] **EH&S Forms are available on the Company's Intranet (TANet / EH&S).**

DEFINITIONS

Action Level

The action level is the airborne concentration of a chemical designated in 29CFR1910 calculated as an 8-hour time-weighted average, which initiates certain required activities such as exposure monitoring and medical surveillance. For chemicals listed in 29CFR1910.1000 Table Z-2, the action level is listed in the Table or shall be defined as 50 percent of the PEL or TLV, whichever is lower.

Acute Health Effect

An acute health effect is defined as an adverse effect on a human or animal body with symptoms that develop rapidly.

Acute Toxicity

Acute toxicity is the adverse effects resulting from a single dose of or exposure to a material and is ordinarily used to denote effects observed in experimental animals.

Authorized Personnel

These are employees who have been advised of the potential hazards of the chemicals being used in, and have the approval of the department supervisor to enter and work in, a designated area.

Bloodborne Pathogens

Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Carcinogen

A carcinogen is a substance that:

- OSHA regulates as a carcinogen;
- the National Toxicity Program (NTP) lists as "Known to be [a] carcinogen;"
- the International Agency for Research on Cancer (IARC) lists as Group 1, "carcinogenic to humans;"
- the IARC lists as Group 2A or 2B; or
- NTP lists as "reasonably anticipated to be [a] carcinogen," and causes statistically significant tumor incidence in animals.

Chemical Hygiene Officer (CHO)

An employee who is designated by the employer and who is qualified by training or experience to provide technical guidance in the development and implementation of the provisions of the Chemical Hygiene Plan.

Chemical Hygiene Plan

A written program developed and implemented by the employer which sets forth procedures, equipment, personal protective equipment and work practices that are capable of protecting employees from the health hazards presented by hazardous chemicals used in the workplace and meets the requirements of paragraph (e) of the lab regulations. The Chemical Hygiene Plan is the Environmental Health and Safety Manual.

Chronic Health Effect

A chronic health effect is an adverse effect on a human or animal body with symptoms that develop slowly over a long period of time or that recur frequently.

Chronic Toxicity

Chronic toxicity is an adverse effect(s) resulting from repeated doses of, or exposures to, a material over a relatively prolonged period of time and is ordinarily used to denote effects observed in experimental animals.

Designated Area

A designated area is an area that may be used for work with "select carcinogens", reproductive hazards, or substances that have a high degree of acute toxicity. The area may be an entire laboratory, or even a laboratory fume hood.

Energized Equipment

Energized equipment is equipment that is connected to an energy source, or contains residual or stored energy. The energy may be electrical, thermal, chemical, hydraulic, or pneumatic in nature.

Hazardous Chemical

A hazardous chemical is one for, which there is statistically significant evidence, based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatoxins, nephrotoxins, neurotoxins, agents that act on the hematopoietic systems, and agents that damage the lungs, skin, eyes, or mucous membranes.

Hepatoxins

Chemicals that may produce liver damage.

Laboratory

A facility or area where the "laboratory use of hazardous chemicals" occurs constitutes a laboratory. It is a workplace where relatively small quantities of hazardous chemicals are used or stored on a non-production basis. A laboratory also includes any area where samples are used or stored, including sample receiving. No personal clothing, except that worn by the person during regular duties, may be hung or stored in a laboratory area.

Laboratory Fume Hood

A laboratory fume hood is a device enclosed on five sides with a moveable sash, or fixed partial enclosure, on the remaining side. The hood is constructed and maintained to draw air from the laboratory and to prevent or minimize the escape of air contaminants into the laboratory. The hood allows chemical manipulations to be conducted in the enclosure without any portion of the employee's body other than the hands and arms having to be placed inside the hood.

Medical Consultation

A consultation which takes place between an employee and a licensed physician for the purpose of determining what medical examinations or procedures, if any, are appropriate in cases where a significant exposure to a hazardous chemical may have taken place!

Mobile Laboratory

A mobile laboratory is a temporary laboratory facility moved to a site.

Mutagen

A mutagen is a chemical that causes changes in the gene structure that results in altered cell reproduction.

Nephrotoxins

Chemicals that may produce kidney damage.

Neurotoxins

Chemicals that may damage the nervous system.

Permissible Exposure Limit

Permissible Exposure Limit **(PEL)** is the maximum amount or concentration of a chemical that a worker may be exposed to under OSHA regulations.

Regulated Chemical

A regulated chemical is one that is considered to be particularly hazardous such that protective measures in addition to the provisions of the safe work practices are required. These chemicals include carcinogens, reproductive toxins, and others that exhibit a high degree of acute or chronic toxicity.

Reproductive Toxin

A reproductive toxin is any agent that has a harmful effect on the adult male or female reproductive system or on the developing fetus or child. Such hazards may affect people in several ways, including loss of sexual drive, mental disorders, impotence, infertility, sterility, teratogenic effects on the fetus, and trans-placental carcinogenesis.

Short Term Exposure Limit

Short-term exposure limit **(STEL)** is the acceptable average exposure over a short period of time, usually 15 minutes, as long as the time-weighted average is not exceeded.

Temporary Employee

A temporary employee is any person working for, or contracted by the company, to perform a task in the laboratory for a limited time, and who may handle hazardous chemicals or samples as part of the assignment.

Teratogen

A teratogen is a chemical that has a toxic effect on an embryo.

Time Weighted Average

Time Weighted Average (TWA) is equal to the sum of the portion of each time period multiplied by the levels of the substance or agent during the time period divided by the hours in the workday.

SECTION 1

1.0 POLICY, SCOPE AND PURPOSE

1.1 General

This Division Environmental Health and Safety (EH&S) Manual describes the Company's policies and procedures for all facilities. (Refer to Appendix 1 for the operational requirements of facilities located in the State of California.)

1.2 Policy

The Company strives to provide a work environment free from recognized environmental safety and health hazards; and requires employees to conduct all work in a manner safe to the employee, the community and the environment. Protection of our employees, the community and the environment is a team effort that begins at the highest level of management.

Every employee can work without incurring an injury or unreasonable exposure to hazardous work conditions. Injuries are preventable and safety is an inherent part of good operating procedures. All employees must adhere to the necessary precautions and time to perform work safely; no job is so urgent that safety precautions need to be compromised. If a job cannot be performed safely, it will not be performed.

Furthermore, all work will be performed in a manner that complies with all Local, State and Federal regulations. The Company will make every reasonable effort to design programs that protect the environment.

1.3 Scope and Purpose

This EH&S Manual is the primary component of the Hazard Communication/Waste Management Plan for the Company. For regulatory purposes, this Manual will serve as the Chemical Hygiene Plan (CHP) for laboratory operations and the Hazard Communication Program (HCP) for non-laboratory operations. This Manual does not cover issues relating to radiation safety. Facilities with radioactive materials licenses will prepare a separate radiation safety manual for operations that are carried out at that facility.

This Manual specifically addresses:

- Designation of employees responsible for implementation of the CHP and HCP, including the assignment of Chemical Hygiene Officers (CHO) and Hazard Communication Officers (HCO).
- Control measures for reducing employee exposure to hazardous chemicals including engineering controls, the use of personal protective equipment (PPE), and personal hygiene practices.
- Circumstances under which a particular laboratory operation, procedure, or activity shall require approval from the facility CHO before implementation.
- Measures to ensure the proper functioning and adequate performance of engineering equipment.
- Procedures to be followed during emergencies.

Employees are required to read the sections that apply to the work that they perform and abide by the policies outlined herein. This Manual defines the **minimum requirements** for any Company operation and provides consistent directions for all employees. No exceptions to this Manual shall be permitted without the written approval of the Vice President (VP) – Quality & Environmental Health and Safety (EHS). If a facility exception is approved, the exception shall be attached to the facility copies of the Manual and must be signed off by the VP-Quality & EHS for that division. A facility may implement more stringent requirements with the approval of the VP-Quality & EHS and the Facility/Laboratory Director.

Adherence to EH&S policies and procedures is mandatory and considered an integral part of each employee's performance. When an unsafe condition is observed, the Company expects the employee to take responsibility and immediate action. Every employee is responsible for their own actions and the actions of others around them.

1.4 Facility Addendums

Each facility must prepare an addendum to this document that covers specific safety issues (e.g., emergency contacts, list of emergency equipment, etc.) that pertain to that facility. At the front of the local addendum when it is printed must be a Quick Reference Guide, for first responders. In electronic format, this may be an appendix to the local addendum. At a minimum the quick reference guide will be printed and placed where it is readily and easily identifiable for first responders entering the building. This quick reference guide will include:

- Emergency Contact List, with the primary building emergency coordinator identified as such, as the first entry on the list. This list must include phone numbers for the emergency coordinator and any backups. See paragraph 7.2 for the minimum requirement of who must be included on this list.
- Building Floor Plan, including evacuation meeting points
- Building Floor Plan that shows where emergency equipment is located.
- Printed chemical inventory identifying where chemicals are stored. Locations referenced on the inventory must match the building floor plan.

The facility addendum will include:

- Emergency Contingency Plan (refer to Section 7.2). Where possible, include floor plans to indicate where PPE is required, emergency equipment is located and direct evacuation routes.
- List of all transition and exclusion areas in the facility (refer to Section 9.3).
- Lone Worker Policy (includes Couriers). Define such procedures as those taken in case of emergency; steps to take to maintain safety while working alone; and procedures for couriers entering/leaving sites pickups until their return to operations. This policy does not apply to employees who are on business travel.

NOTE: Employees at mobile operations, couriers, and those that perform field work must have a communication system so that contact can be established, and must regularly report-in to confirm the status of their safety.

EH&S Document Matrix that describes where information necessary for regulatory and non-regulatory audits is maintained. This is for any information that is not stored electronically as described below and in Appendix XIV. The information in this matrix must contain enough detail for any employee to readily access the data if the Environmental Health and Safety Coordinator (EHSC) is not present. (Changes to this information must be added to the addendum or updated by December 31 of each calendar year).

- Reliable and accessible records storage is a business continuity measure to ensure that safety information and records can be easily obtained when needed. All locations will maintain their historical and current safety records as required by this SOP on the Division Safety Folder, in the sub-folder EHS_Facilities, in their own location sub-folder. While EHSC's may choose to maintain some current/active paper files for convenience/ease of access, or maintain their own local electronic files, the primary storage location for these files is the on-line folder described here. These files are regularly backed up and may be accessed by any EHS Manager or any other EHS Coordinator. Each facility EHSC is responsible for maintaining all of their files in compliance with the company records retention policy and this SOP. The layout of these electronic records is standardized, and is shown in Appendix XIV, Electronic Storage of Safety Related Files and Information. Any files or records that are not maintained electronically, including logbooks, binders or folders maintained at the point of use, must still be addressed in the document matrix of the local addendum. Additional related information may be maintained in the appropriate folder, and the EHSC may create additional sub-folders to store safety related information that may not be addressed here. Some facilities or companies in may not need all of these sections, or may produce records for topics/areas that are not addressed here. In those cases, delete the un-needed folder, retitle an existing folder that is broadly similar, or add folders as needed for totally unrelated topics not part of the company-wide safety program. Those facilities without access to Division Safety Folder should use this outline and Appendix XIV to create an electronic records storage location on their own server (not on a desktop or laptop PC), and that server must be backed up regularly.
- Facility-Specific/Facility Requirements (refer to Section 6.1) Safety issues (e.g., current construction issues).
- Facility exceptions – must be approved by the VP-Quality & EHS.
- List of designated area(s) where carcinogens, reproductive toxins or highly toxic materials may be handled. A designated area may be a specific fume hood within a defined room.

SECTION 2

2.0 RESPONSIBILITIES

2.1 Chief Operating Officer (CEO), Business Unit Presidents, and General Managers

The Company COO is ultimately responsible for the health and safety of all employees. The COO shall hold managers responsible for implementing the provisions of this manual and other programs required under the various regulations; and is responsible for providing ongoing support of the EH&S program.

The COO, Business Unit Presidents and the Vice Presidents of Operations are responsible for ensuring that the requirements of this Manual are complied with by the Facility/Laboratory Directors, the EHSC's and other individuals who report to them. They are responsible for holding these individuals and other employees responsible for the implementation and management of this program for the operations under their control.

2.2 Environmental Health & Safety Director (VP-Quality & EHS)

The VP-Quality & EHS is responsible for the development and implementation of the Company's EH&S program and has the authority to stop any operation that has been deemed to have the potential for causing serious damage or injury to employees and/or the environment. Unless there is an immediate threat to life, this decision will only be made after consulting with the executive management. Additional responsibilities include:

- Fulfill all duties and responsibilities as the Division Chemical Hygiene Officer (CHO), Hazard Communication Officer (HCO),
- Provide leadership and technical assistance to the Company in EH&S areas.
- Monitor regulatory developments in EH&S, distribute relevant information to operations, and establish guidelines for regulatory compliance.
- Annually review and update the EH&S Manual.
- Evaluate safety audits, and review records to verify implementation of the EH&S Manual and other safety programs.
- Act as a resource to the Company for environmental, safety and industrial hygiene and related training.
- Ensure executive management is informed of developments that affect Company operations.
- Prepare annual action plans to help ensure facilities are in compliance with Division policies and protocols.
- Identify all reasonable foreseeable situations that could have an impact on operations.
- Respond to emergency situations that develop at facilities.
- Develop and maintain EH&S policies that meet Company policies and protocols.
- Assist operations in developing targets and goals for improving EH&S performance.
- Monitor, audit, and review programs to ensure that they meet the requirements of government regulations and corporate policies.
- Represent employee concerns to executive management.

- Coordinate responses to outside agencies for citations or warnings of regulatory non-compliance.
- Ensure that all accidents are adequately investigated.
- Manage and support the EH&S Managers & RSO.

2.3 Division Radiation Safety Officer (RSO)

The Division RSO is responsible for the Company's radiation safety program. The RSO reports directly to the VP-Quality & EHS. Responsibilities of the RSO are as follows:

- Maintains direct access to the VP-Quality & EHS on matters relating to radiological protection.
- Implements the radiation safety program that provides compliance with pertinent regulatory requirements, license provisions, and the Radiation Protection Program.
- Maintains sufficient organizational independence to review and evaluate activities involving the use of radioactive materials.
- Provides Authorized Users and radiation workers with the instruments, protective devices, dosimetry, training, and other items needed to perform their work in accordance with the radiological protection program elements.
- Maintains original copies of all facility licenses/permits, including attachments and amendments, for radioactive materials.
- Directs program to monitor and control radioactive materials throughout the laboratory.
- Conducts radiation safety training.
- Maintains inventory of standards, tracers, and radiological samples.
- Manages segregated area for storing radioactive and mixed wastes.
- Assists facility(s) in developing written plans for handing radioactive wastes.

2.4 Facility/Laboratory Directors

Facility/Laboratory Directors have direct responsibility for the prevention of accidents and protection of all individuals who are involved with Company activities in their facilities. This includes employees and all visitors. Facility/Laboratory Directors shall:

- Provide for a safety committee (for all operations with at least 20 people) comprised of the local safety coordinator and representatives from various departments or areas where work is performed (refer to Section 2.10 for additional information).
- Ensure that all facility-specific exceptions to the EH&S Manual are approved by the VP-Quality & EHS.
- Enforce the EH&S program and the requirements of the manual in conjunction with the EHSC.
- Ensure that all employees – this includes full-time, part-time and temporary hires- are trained in the EH&S aspects of their jobs.
- Assist in the development of appropriate safety precautions for new projects and procedures.
- Monitor the collection, storage and disposal of hazardous wastes to ensure regulatory compliance.

- Monitor use of engineering controls, such as fume hoods, and arrange for prompt repairs as needed.
- Verify that exposure monitoring is properly conducted, when required.
- Ensure that periodic inspections are conducted
- Conduct a safety walk through of all work areas at least once every week or when they visit each operation. This does not have to be documented.
- Ensure that EH&S deficiencies are corrected in a timely manner.
- Participate in the investigation process for accidents and near misses.
- Ensure that accidents, near misses, visits or notices of violation from regulatory agencies, or adverse EH&S situations are promptly reported to the VP-Quality & EHS.
- Ensure the lone worker policy as described in this manual is complied with.

2.5 Operation Managers

Operation Mangers shall:

- Ensure that the EH&S program is enforced and that this manual is implemented in the facilities under their control.
- Ensure that all employees – this includes full-time, part-time and temporary hires- receive specific training on the hazards of the work to be performed before starting any work.
- Participate in the safety inspection program.
- Ensure that EH&S deficiencies are corrected in a timely manner.
- Conduct periodic walk-throughs of areas to ensure they are safe. This should be performed at a minimum of once a week and more often if reasonably possible. The walk-throughs do not have to be documented.
- Participate in investigating all accidents/incidents that occur.
- Ensure the lone worker policy as described in this manual is complied with.

2.6 EH&S Manager

The role of the EH&S Manager is to provide additional resources for the EH&S program throughout the Company, These managers are a resource for the EHSC's, provide guidance in EH&S policies and procedures, and enhance communication on EH&S activities across the Company. The EH&S Managers work collectively with the VP-Quality & EHS for the advancement of the EH&S program across the Company. Their specific duties include:

- Overseeing the EH&S program for the operations within their respective groups, including review of monthly safety reports, incident reports, safety audits, waste handling and investigating the reviews of all incidents/accidents/spills/near misses.
- Assisting and mentoring the EHSC's with developing and implementing specific areas of the EH&S program (e.g., conducting safety audits, evaluating compliance with Division policies and procedures).
- Serving as an expert resource in one or more areas of the EH&S program and be a liaison for such issues to the Company.
- Coordinates questions, inquires, and guidance on EH&S issues.
- Provides support and training for new EHSC's.
- Performs facility/laboratory on-site EH&S audits.

- Ensure that personnel receive appropriate regulatory training as required by the employee's position (e.g., HAZWOPER, DOT, RCRA, Driver's Training).

2.7 Environmental, Health & Safety Coordinator (EHSC)

Every laboratory must have a designated EHSC that oversees the day-to-day EH&S activities at the facility and their compliance with this Company's EH&S policies and procedures. Various tasks that are generally performed by the EHSC may be delegated by the Facility/Laboratory Director to employees in the facility. For instance, the facility may have an individual responsible for overseeing the waste management program or the shipping program. The EHSC shall:

- Enforce the EH&S program and the requirements of the manual in conjunction with the local management team.
- Act as the facility CHO or HCO per the OSHA regulations.
- Perform periodic audits to ensure the provisions of the EH&S Manual are being followed.
- Be knowledgeable in the regulations that affect EH&S at the facility where they work.
- Coordinate the investigation of all accidents and incidents.
- Maintain statistics on accidents and injuries. Review the annual reporting of the OSHA 300 Log for correctness, have the Facility/Laboratory Director sign it and ensure it is posted as required.
- Assure that accidents are reported and Workers Compensation requirements are followed.
- Approve safety aspects listed in technical method standard operating procedures.
- Ensure a current chemical inventory or list of chemicals that are used is maintained. The inventory shall be reviewed and updated annually.
- Ensure manufacturers' Safety Data Sheets (SDSs) are current and readily available to all employees.
- Conduct reviews of chemical usage in the facility to assess the potential for exposure to chemical, physical and biological hazards, the need for workplace monitoring, and compliance with environmental regulations.
- Conduct and/or coordinate industrial hygiene activities.
- Coordinate emergency response activities for the facility.
- Ensure that the hazardous waste program meets regulatory requirements.
- Ensure that hazardous materials shipments meet regulatory requirements.
- Ensure that a waste minimization program is developed and implemented as required under any Federal or State regulations for the facility. This is not required for Small Quantity Generators or Very Small Quantity Generators. In some cases, operations may be able to obtain exemptions from their state for this requirement.
- Ensure that appropriate PPE is available, that employees are properly trained in its use, and that correct use of PPE is required and enforced.
- Ensure that training specified in this Manual is provided for all employees; that this training is documented and that make-up sessions are available.
- Participate in discussions of safety matters that relate to the design of new or rehabilitated facilities, or facility capabilities changes that bring different hazards into the building.

- Oversee installation of safety equipment upgrades or modifications to ensure safe working conditions.
- Forward suggestions for improving the Company's EH&S program to the EHS Manager and/or the VP-Quality & EHS.
- Ensure that adequate quarterly inspections are conducted of the main work areas. Office areas should be inspected at least once every year.
- Ensure that inspections of emergency equipment and fume hoods are performed within the required time period.
- Investigate non-conformances and violations of regulations and Company policies regarding environmental and safety issues.
- Accompany an EH&S Manager on an annual audit for one of the operations within at least 3-months of when they are appointed to the position, or review the latest EH&S audit report and findings covering the EHSC's home facility with the EHSM.
- Conduct internal audits for compliance with regulations and Company policies. Implement a system to assure proper tracking and closure of audit findings.
- Submit a monthly report of environmental and safety activities to the VP-Quality & EHS.
- Act as a designated contact with local regulatory agencies in matters relating to environmental health and safety.

2.8 Department Managers and Supervisors

Department Managers and Supervisors are responsible for the immediate safety of the employees they supervise and will not permit work to be carried out in an unsafe manner. It is imperative that Department Managers and Supervisors enforce all Company EH&S policies & programs. Their responsibilities are as follows:

- Review the appropriate sections of the Safety Manual.
- Ensure all necessary steps are taken to comply with known environmental and safety issues.
- Communicate, implement, support, and enforce all Company safety policies and programs.
- Review and comment on all reports relating to environmental and safety issues.
- Assure that each new employee, whether temporary or permanent, receives appropriate safety training at the start of employment. Managers and Supervisors will use the new-employee safety orientation checklist as the means for training new employees. This form, once completed and signed, should be maintained in the employee's personnel file. The Division Safety Manual also serves as the basis for employee safety training. The "Training Presentation and Tests" of the EHS page on TANet OASIS provides further information on safety training information available; safety meeting presentations are available on selected topics to assist supervisors with periodic safety training.
- Ensure employees attend or make up all monthly or mandatory training sessions.
- Conduct an Area Safety Analysis for your work area. It is critical that all work areas be organized in a manner that will allow employees to work safely. Hazards that can be reasonably anticipated must be identified and controlled. Work areas must be assessed for hazards to identify actions that need to be taken to reduce the potential risk to the employees, others who enter the work area and the Company. Each operation will prepare an Area/Job Safety Analysis Form (ASA/JSA) of the various work areas throughout the operation.

- Each supervisor is required to conduct regular inspections of their work area. Conduct periodic self-audits of the work areas they supervise. It is recommended that a daily walk through of work areas be conducted. Even though it is not a requirement to document the walk through it is recommended that notes of problems found and corrective actions be kept.
- Ensure that all employees have current certifications and training as required by their job function.
- Ensure that all reported environmental and safety hazards are properly eliminated or corrected. Hazards that cannot be immediately corrected should be reported to the local EHSC, or if necessary the VP-Quality & EHS. These individuals will assist in developing and implementing corrective actions whenever possible.
- Document violations of EH&S policies, procedures and rules. This includes documenting any disciplinary action that might be taken.
- Assist the EHSC in determining the required levels of PPE.
- Review PPE requirements with their employees; ensure that the PPE is available and in working order; and in use by all employees.
- Ensure that EH&S deficiencies are corrected in a timely manner.
- Ensure that employees review the SDSs or receive training on new materials which are received for use.
- Participate in investigating all accidents/incidents that occur in their area. Supervisors should involve their employees in their accident prevention activities. Employee observation and feedback to correct at-risk behaviors of coworkers and praise safe behaviors is an effective and recommended technique. A team of employees for investigating accidents and incidents and to perform workplace inspections is recommended.
- Ensure the Lone Worker Policy as described in this Manual is complied with.

2.9 Employees

The effectiveness of any safety program is dependent upon the actions of each employee who must follow all Company EH&S rules and policies set forth. It is imperative that each individual thoroughly understands the risk and hazards that might be associated with the work they perform. If an employee is ever in doubt as to whether work can be performed safely, he/she must discuss such concerns with his/her department manager or supervisor. If necessary, contact their EHSC, EH&S Manager and/or the VP-Quality & EHS. Employees shall:

- Think before acting.
- Read the sections of this document and any related EH&S documents that are applicable to the work they perform. This must be performed before work is conducted for the first time.
- Observe safety rules outlined in this Manual and any other EH&S documents.
- Develop and practice good work habits and safety practices.
- Conduct activities in a safe manner to ensure his/her safety as well as that of their co-workers.
- Properly use PPE.
- Incorporate the information learned during ongoing training sessions into the work being performed.
- Correct unsafe work practices or conditions when first observed.
- Notify department managers or supervisors and the EHSC of any potential health or safety hazards that may be observed. Ensure that all containers of chemicals are properly labeled

with the identity of the chemical and its hazards.

- Be alert for unsafe conditions that might affect other employees and visitors and take responsibility to ensure that issues are corrected.
- Immediately report all accidents and incidents to department managers or supervisors and the EHSC.
- Assist the EHSC in completing all required accidents forms.
- Assist and help train new or temporary employees who are not familiar with the work being performed.

2.10 Safety Committees

The safety committee is a mandatory requirement for all laboratory operations. The purpose of the committee is to assist management in implementing safety programs and procedures, while providing staff members with a means to express concerns relating to safety. If used properly, a safety committee will prove a positive asset to local operations. For the purpose of 29 CFR 1910.1450, this committee is also referred to as the Chemical Hygiene Committee.

Any facility with 20 or more employees will have an active safety committee. Some states (e.g., California) require operations with more than 10 employees to have a safety committee. If state regulations are stricter, the state regulation will be followed. The committee will include representatives from various departments with the majority of the members from non-management roles. Members should serve for no more than 2-years and preferably no more than 1-year; and should attend every meeting. The EHSC will serve as the permanent chair for the safety committee.

The safety committee members shall:

- Attend scheduled meetings which will meet at least six times per year on a bi-monthly basis
- Maintain meeting records and post meeting minutes within their facility and in the Division EHSC folder \\tacorp\Corp\EHS\EHS_Coordinator or equivalent shared/secured IT location.
- Present safety concerns from staff members they represent to the safety committee and management.
- Provide recommendations for resolving safety issues.
- Assist, as necessary, in analyzing safety issues and accident investigations.
- Report information covered during safety committee meetings to employees they represent.
- Assist the EHSC in ongoing safety training as necessary.
- Maintain a high level of safety program awareness and visibility.

SECTION 3

3.0 GENERAL PRINCIPLES FOR WORKING WITH HAZARDOUS CHEMICALS

3.1 Chemical Exposures

The key factor in working safely with chemical, physical and biological hazards is preventing or minimizing potential exposure. **NOTE:** Precautions protect employees from radiological hazards are included in the Radiation Protection Program for each facility – where applicable. Exposure levels can be greatly reduced or eliminated through the use of engineering controls, administrative controls, and personal protective equipment (refer to Sec. 8).

It is prudent to minimize all chemical exposures. General precautions for handling chemicals are included in this manual. Precautions that are specific to a particular procedure or method are available in the standard operating procedures (SOP) used at the specific facility. The individual SDSs should be consulted for the precautions that relate to specific chemicals.

Samples received at any of our facilities usually have an unknown degree of hazard. Unless otherwise informed, employees must assume samples are hazardous and minimize exposure (e.g., use of PPE). It should be assumed that mixtures are more toxic than the most toxic component, and that all substances of unknown toxicity are toxic.

3.2 Engineering Controls

Protection of the employee is accomplished by developing an awareness of the chemical hazards and by keeping chemical exposure under control through the use of engineering and administrative controls. Laboratory employees must be familiar with the proper use of these safeguards. The EHSC or designated personnel must monitor employees to ensure engineering controls are functioning properly and are being used correctly.

Our facilities use various engineering controls to reduce, capture, or contain chemical hazards. Examples include but are not limited to:

- Ventilation systems (Heating and Air Conditioning)
- Fume Hoods (e.g., sash testing))
- Approved storage containers (e.g., refrigerators, freezers) and storage cabinets.
- Fire Extinguishers
- Satellite Waste Accumulation

Engineering controls will be properly maintained and inspected; and must not be used beyond their designed limits.

3.3 Prevention of Fires and Adverse Reactions

The risk of fire can be reduced by limiting the quantity of chemicals stored and by reducing the use of ignition sources or open flames. The proper storage of chemicals minimizes the risk of hazardous chemical reactions.

3.4 Implementation of the Chemical Hygiene / Waste Management Plan

The minimum requirements for implementation of the EH&S Manual as the Chemical Hygiene Plan (CHP) and the Hazard Communication Plan (HCP) (refer to Section 1.3) includes the following elements:

- Provide initial training and refresher training on the requirements of the OSHA Laboratory Standard (29 CFR 1910.1450) or general industry Hazard Communication Standard (29 CFR 1910.1200) as they apply to the individual operations, EPA waste regulations, DOT regulations and the contents of this manual.
- Evaluate and modify, if necessary, the engineering controls available in the facility.
- Enforce safe work practices.
- Implement an effective hazardous waste management program.
- Evaluate the use of hazardous chemicals. Based on this evaluation, workplace monitoring shall be conducted as needed.
- Implement a medical surveillance that meets regulatory requirements.
- Implement an effective ergonomics program.
- Implement an effective hazardous materials shipping program.
- Conduct annual reviews of the EH&S Manual and site specific Facility Addendums.
- Conduct annual reviews of Hazardous Waste Programs and Contingency (Emergency Action) Plans for each facility.

It must be understood that this program is designed to minimize potential exposures. Implementation must be a continual effort for effectiveness.

3.5 Enforcement of Safety Policies (Administrative Control)

Laboratory management is responsible for implementing and enforcing the elements of the EH&S Manual (refer to Section 2). Failure to adhere to the requirements in this Manual may result in disciplinary action up to and including termination of employment. Disciplinary actions will be coordinated with Human Resources to ensure compliance with Company policies.

3.6 Guidelines to Stop an Unsafe Operation

The Company is required to provide employees with a work place that is free of known hazards. In certain cases, it may be necessary to stop work on a project or procedure. It must be clearly understood that each employee has the right to stop work when conditions are unsafe. All employees have a responsibility to assist in correcting unsafe conditions. The decision to stop an operation or procedure should be carefully considered since it can have a financial impact on the local operation. Reasons a procedure or operation might have to be stopped include:

- Employees experience serious symptoms that indicate an overexposure to hazardous chemicals in use.
- Failure of critical equipment (e.g., fume hoods) used in the procedures being performed.

- Employees are faced with a serious safety issue (e.g., employee injury or serious weather conditions that might endanger the employees).

The following procedure is to be followed when an operation or procedure must be stopped.

- Immediately contact the Department Manager/Supervisor and the EHSC. Management and the EHSC will decide if workplace conditions represent an immediate risk of injury or illness to employees. All reasonable efforts will be made to resolve the issues. If necessary, the ESHC will issue a Stop Work Order*. A Stop Work order is immediately binding and must be followed by all affected employees and subcontractors.
- If a Stop Work Order is issued, the EHSC must contact the Facility/Laboratory Director and request assistance in implementing corrective action so that operations may be safely resumed. This must be performed as soon as possible. The ESHC will review the situation and decide on actions to be taken. Work may not proceed until both the ESHC and management determine the operation to be safe.
- If all parties are unable to agree on a corrective action plan, or the appropriateness of the Stop Work Order, the issue will be referred to the Vice President of Operations for the laboratory and the VP-Quality & EHS. These individuals shall review the findings and approve, reject, or offer an alternate solution.
- Once all parties have determined that the operation is safe, work may be resumed.

***NOTE:** When a Stop Work Order is issued, the EHSC will log an Accident/Illness/Incident report in the VELOCITY EHS database (Refer to Section 7). The EHSC may collect the information pertaining to the Incident on an Accident/Illness/Incident Worksheet, form number CW-E-WI-001, in order to facilitate the preparation of the official VELOCITY EHS report.

3.7 Permissible Exposure Limits (PEL)

Management and employees are responsible to maintain their potential exposures as low as reasonably possible. Exposures to hazardous materials must be kept below the PELs specified under 29 CFR 1910.1000 Subpart Z. If the facility is located in a state that has a state run OSHA program, and regulations for that state are stricter than the Federal regulations, the limits in the state program will take precedence. If a hazardous chemical has not been assigned a PEL by OSHA but has been assigned a TLV by NIOSH or the ACGIH, all reasonable efforts will be made to keep exposures below the limits established by these organizations.

Certain chemicals are assigned an action level. This is usually half of the PEL. If the material has a specified action level, the provisions of the applicable standard will be followed. If OSHA, NIOSH or ACGIH have not assigned an action level to a hazardous chemical, the Company will consider the action level to be ½ of PEL for the material.

SECTION 4

4.0 TRAINING REQUIREMENTS

4.1 General

Federal OSHA Standard 29 CFR 1910, State regulations and good safety practices require that every employee be adequately trained to recognize and avoid hazards that could cause injury or an accident resulting in personal injury, property damage or loss of productivity. The major cause of many accidents directly relates to a lack of proper training. For this reason, the Company has adopted the following policy relating to training of employees:

- All employees will be properly trained to recognize and avoid the hazards of their jobs prior to performing their job/task.
- Training will be performed within the time frame specified in the applicable regulations and this Manual.
- Accurate records will be maintained to document training. (Refer to Sec. 4.9 for documentation requirements.)

This section outlines the training requirements and encompasses the following categories:

- New Employee Orientation
- On-The-Job Training
- Specialized Training
- On-Going Monthly Training
- Refresher Training

Each of these categories has slightly different requirements. All employees, including temporary and part-time employees, must receive the same level of training as full-time employees.

4.2 New Employee/Orientation Training

All employees must complete this training before beginning work. The training must be documented on the New Employee Safety Orientation Training Checklist (form number CW-E-WI-004). In addition to this checklist, new employees will be given a follow-up test to determine if he/she retained the information provided during the orientation training. The test will be given to the employees 30 to 60 days after completion of the orientation training.

New employee training will include a review of the following (as applicable):

- Applicable sections of this Manual to the employee's job responsibilities.
- General safety and work practices that apply to the employee's work.
- Emergency procedures.
- Alarm systems and available emergency equipment.
- Employee's right to access medical records.
- Employee's right to seek medical attention.

NOTE: This includes procedures to be followed for obtaining medical attention. Employees will be instructed that the Company will pay for medical consultations and treatment for work related injuries, illnesses or exposures that could adversely affect the employee's health. The employees in the analytical laboratory division will be required to review and sign the Annual Carcinogen Review Form (form number CW-E-WI-014)

- Reporting accidents and near misses.
- DOT familiarization training.

Employees who ship hazardous materials or hazardous waste must receive basic general DOT familiarization training at least once every 3-years. Employees who prepare and ship hazardous materials (per 49 CFR regulations) must have general awareness training. [Refer to Training Presentation number CW-E-T-007, Shipping Small & Excepted Quantities (DOT Haz. Materials - Sampling Kits) available on the Company's Intranet Site (Oasis/EH&S)]. All other employees must be made aware of the Company policy prohibiting them from packaging and shipping any hazardous materials.

- How to detect the presence or release of hazardous chemicals.*
- Review the Hazard Communication and Laboratory Standard PowerPoint (Oasis/EH&S), as appropriate. This training will include but is not limited to physical and health hazards of the chemicals most commonly used at the facility or on the job where the employee works.
- Review the carcinogens that could be used in the methods and the list of carcinogens that may be contained in the stock standards used in the various methods carried out. The employees in the analytical laboratory division will be required to review and sign the Annual Carcinogen Review Form referenced above.
- Methods for obtaining SDS's and what to do if an SDS is not available.
- Protective measures to prevent or minimize exposure to hazardous chemicals.
- PPE requirements as required by the work performed by the employee. *
- Waste storage, handling and disposal procedures. *
- Ergonomics in the work place.
- Proper lifting procedures.

Employees who handle ice chests and sample shipping containers, such as couriers, bottle prep and sample receiving/admin staff, must receive basic Manual Material Handling training when they start and annual refresher training. [Refer to Training Presentation number CW-E-T-010, Manual Material Handling – Part 2, along with the video and quiz, available on the Company's Intranet Site (Oasis/EH&S)].

*This information does not have to be covered with employees in clerical or administrative positions. Training documents are available on the Company's Intranet Site (Oasis) under the EH&S directory.

4.3 On-the-Job Training

The materials in this manual are intended to focus on general safety concerns that are applicable to a wide-range of situations. Some tasks have specific safety concerns that must be addressed by alternate means. On-the-job training will address these issues and routinely be conducted by the department manager, supervisor or designee. The EHSC will assist wherever possible. Employees will not be allowed to work unsupervised until completing this training.

4.4 Specialized Training

The reasons for specialized training will vary depending on the situation. There may be a limited number of employees who perform a task, and training may not be required for the majority of the work force. There may be special requirements under the regulations governing the work being performed, or special skills may be required to perform the work. Specialized safety requirements must be listed in the SOP for the work being conducted.

When specialized training is required, it will be conducted by the EHSC and/or a qualified outside vendor. The Company has established a training program to meet most of these regulatory training requirements. The Company's Oasis/EH&S Intranet site provides a schedule and a catalog of the courses offered.

Areas where specialized training is required include, but are not limited to:

4.4.1 How to prepare an Accident/Illness/Incident Worksheet (Form No. CW-E-WI-001)

Training must be completed by the EHSC, human resource coordinators, department managers, or the Facility/Laboratory director.

4.4.2 How to prepare a Area / Job Safety Analysis (Form No. CW-E-WI-009) for Work Areas (refer to Section 17)

Mandatory training for all EHSC's, Department Managers, and Facility/Laboratory Directors. Training records will be filed in the employees training file by the EHSC. This training is also suggested for the safety committee representatives to assist them in the process of preparing the Area/Job Safety Analysis.

4.4.3 Hazardous Materials Emergency Response Activities (HAZWOPER/29 CFR 1910.120)

Mandatory training for individuals who work on Superfund clean-up sites; are the primary emergency coordinator on a site where RCRA hazardous waste is generated; or who are part of a spill response team at sites where RCRA hazardous waste is generated.

- The minimum level of training for the primary emergency responder and employees who are designated to respond to spills which require a designated emergency responder is 24-hours per the standard.
- If an employee serves on a response team and will be required to wear a respirator, they must have 16-hours of additional training per the standard. All other employees must complete 40-hours of training per the standard.
- All employees who are required to complete this training must complete 8-hours of refresher training every year.

Employees who have been trained as emergency responders as per 29 CFR 1910.120 or who may have to work at Superfund or waste clean-up sites must also receive 8-hours of refresher training at least once each year for their certification to remain valid.

4.4.4 Waste Management Regulations

Mandatory training for all individual(s) who oversees the RCRA hazardous waste program at a facility. The employee who manages the waste management program at the facility must receive refresher training on waste management regulations (RCRA) at least once each year. This individual may train other employees on procedures for managing waste on site.

4.4.5 Transportation of Hazardous Materials

Training must be completed every 3-years by individuals who sign hazardous waste manifests or who may ship hazardous materials off-site. The training must cover the DOT regulations which apply to the work performed by the employee. Employees who only prepare and ship sample kits to clients via common couriers must have current training on procedures for shipping materials under the provisions for exempt small quantities of hazardous materials. If sample kits are shipped to clients in Company vehicles or by private couriers, the employees must be trained on the DOT 49 CFR Section 173.6 requirements for shipping materials of trade. They may not ship larger quantities of hazardous materials unless they have completed full DOT training on procedures for packaging and shipping hazardous materials.

4.4.6 First Aid/CPR

In compliance with ANSI and OSHA guidelines, operations that do not have ready access to emergency medical services shall have employees who are First Aid trained. Ready access is defined as being able to obtain the services of an Emergency Medical Technician within approximately 3-4-minutes. However, operations may choose to offer First Aid/CPR training to individuals on a voluntary basis. The decision to do so is up to the Facility/Laboratory Director. All Company facilities have ready access to emergency medical services and some field services personnel may work on industrial or remote sites where they do not have ready access. These personnel will receive this training once every year by a certified instructor.

4.4.7 Use of Lockout/Tag-out (LOTO) Devices

Training must be completed annually for all individuals who perform maintenance on equipment that might require the use of LOTO devices. LOTO is used to prevent equipment from being accidentally turned on while the maintenance is being performed. In most cases, this work will be performed by outside vendors who must provide a copy of their LOTO program to the EHSC for review. If the work is carried out by Company employees, the facility must have a separate LOTO program for employees. Training must be in accordance with OSHA Standard 29 CFR 1910.147.

4.4.8 Exposure to Bloodborne Pathogens

Training must be completed annually by individuals who might handle materials that could be contaminated with Bloodborne Pathogens per the OSHA Standard 29 CFR 1910.1030 or whose job requires them to have First Aid/CPR training. Employees who fall into this category will be trained on Section 19, Bloodborne Pathogen Program, on an annual basis.

4.4.9 Use of Respiratory Protection

Training must be completed annually for individuals whose work requires the use of a respirator. Operations must have a separate written respiratory protection program that meets the requirements of OSHA Standard 29 CFR 1910.134.

4.4.10 Work with Radioactive Materials

Training is required annually for individuals with radioactive materials licenses. The percentage of employees who must be trained and the level of training will vary depending on the provisions specified in the facility's radioactive materials license.

4.4.11 Radiation Safety Officer (RSO) Training

Per NRC regulations, RSOs at operations with major radioactive materials licenses must complete a certified and documented training course for Radiation Safety Officers prior to being appointed to the position. This generally does not apply to operations whose license only covers minor sources such as ECDs. Consult your individual operation or contact the VP-Quality & EHS if you are unsure if this requirement applies to your operation. If the requirement applies to your operation, the RSO must attend refresher training at least once every 5-years. If the RSO's initial training is more than 7-years old and he/she has not completed regular refresher training every 5-years, he/she must attend a complete new course.

4.4.12 Electrical Service or Repair

Training required annually for any individual who works on or services electrical equipment or systems. The training must comply with the OSHA standard 29 CFR 1910.147, the control of hazardous energy (LOTO).

4.4.13 Use of Forklifts

Training required every 3-years by individuals who are authorized to use forklifts.

4.4.14 Safe Driving

All employees who drive Company-owned or leased vehicles must complete safe driving training once every 3-years. Employees must complete further training after being involved in a preventable vehicle accident or when there are indications the employee needs to repeat the training.

4.4.15 24-hours of Laboratory Safety Training or 30-Hour OSHA Certification Training

Training must be completed by a qualified vendor within 2-years of assuming this position.

4.5 Monthly/Bimonthly Training

Department managers and supervisors must ensure that employees attend ongoing EH&S training sessions. These sessions are necessary to keep staff members' current of safety concerns that might affect operations. These meetings should minimize the impact on production and be designed to fit each department's needs.

At a minimum, a training session must be conducted at least once every 2-months by the EHSC's or designee. Shorter monthly sessions are encouraged as they can be more effective than less frequent and lengthy sessions. If the VP-Quality & EHS determines that the local program is experiencing problems and would benefit from additional training sessions, the VP-Quality & EHS may require an operation to training on a monthly basis. If training is conducted ever other month, at least two topics which apply to the majority of the employee issues must be addressed. Training conducted on a monthly basis will only address one topic.

All of the topics listed in Section 4.6 will be addressed over a 12-month period. Each training topic should last between 15-30 minutes. If monthly sessions are conducted, the training should be able to be conducted within this time frame. If training is conducted every other month, 30-60 minutes should be allotted for the training.

One additional training session or another type of venue determined by the Facility/Laboratory Director (e.g., laboratory meeting) will be used to review the findings from the annual audit (refer to Section 12).

Employees must attend as many training sessions as appropriate to their position and duties and based on the guidance in Section 4.6. Employees may only be excused for compelling business reasons or if on approved leave. Facility/Laboratory Directors must approve absences due to business reasons. Unless there are extraordinary circumstances, employees are required to make up training by the end of the following month of which the original training session was conducted. Knowledge gained from these training sessions will be evaluated during Division EH&S safety audits.

Training provided by clients or outside vendors that coincide with a topic defined in Section 4.6 may be used to comply with this requirement. In many instances, the EHSC or safety committee representatives will be able to conduct the training. Regardless of the meeting format, these meetings will be documented (refer to Section 4.9). Training documents for monthly training sessions must be filed with the EHSC.

4.6 Monthly/Bimonthly Training Topics

Many functions require refresher training on a periodic basis. Employees who work in laboratories or non-administrative positions must receive annual training on the topics listed below. Managers who oversee employees working in laboratories or non-administrative areas must also attend these trainings. The training may be modified or abbreviated as necessary for employees working at remote operations. All training presentations and quizzes are available in the Company's Intranet website (Oasis/EH&S/Safety Training and Tests).

4.6.1 Hazard Communications [e.g., OSHA Laboratory Standard] – Awareness to hazards that apply to the operation where the employee works (Section 5). This EH&S Manual is the communication mechanism for the Company's EH&S program.

NOTE: A list of the carcinogens that might be used by employees is provided in Appendix XII. Awareness of this list & their possible use of these chemicals (e.g., stock standards) must be documented using the Annual Carcinogen Review Form (form number CW-E-WI-014).

4.6.2 Annual EH&S Manual Review – Detailed review of changes/amendments to the EH&S Manual for the upcoming calendar year, including basic topics not covered in other presentations.

4.6.3 PPE – Requirements for laboratory & field employees as well as visitors [e.g., clients, vendors]. (Section 8).

4.6.4 Emergency Procedures – How to respond to emergency situations [e.g., Evacuations, Accident/Illness, Exposures] which include specific information for each facility's addendum]. (Section 7).

4.6.5 Fire Extinguishers – Proper use & use by trained personnel only.

4.6.6 Waste Management – Waste disposal procedures and pollution prevention that apply to facility work & state regulations including specifics on each facility's Waste Management Plan, as appropriate. (Section 13).

4.6.7 Glassware Safety/Cut Protection – Proper procedures for handling glassware to avoid accidents/injuries (Section 9.7).

4.6.8 Use and Storage of Hazardous Materials – Procedures for minimizing exposure (PPE) & available resources (e.g., SDS's, Personnel). Refer to Section 10 for Non-Microbiological Labs/Section 16 for Microbiological Labs.

4.6.9 Ergonomics – Adapting the work place to reduce the probability accidents and illnesses. (Section 15).

4.6.10 Proper Lifting procedures – Ensure physical safety (e.g., Back Safety) (Section 15)

Administrative employees are required to attend training sessions on items 4.6.1 – 4.6.5; 4.6.9 and 4.6.10.

Any employee who is absent from a training sessions must attend a secondary session by the end of the following month. With the exception of the manual review (4.6.2), documentation for all mandatory topics must include a test to demonstrate that the employees understand the material presented.

4.7 Training Guidelines for Other Training

EHSC's may determine that additional training may be beneficial to their employees. OSHA has developed guidelines for developing training.

- Determine if training is needed.
  - Recent audit comments; internal walk-through evaluations.
- Identify who needs to attend the training.
  - Administrative personnel; selective lab groups
- Identify the goals and objectives.
  - Recent or past incidents; local or alternate facility issues warning objectives.
- Develop learning activities.
  - Question the audience for input/opinions.
- Conduct the training.
  - PowerPoint is generally the preferred media.

- Evaluate the effectiveness of the training
  - Quiz the audience on the training content (take as a group; documented).
- Improve or supplement the training as necessary.
  - Follow-up discussions.

4.8 Documentation

New employee orientation training (refer to Oasis/EH&S) will be documented on the New Employee Safety Orientation Training Checklist (form number CW-E-WI-004). There are three options to document other training at the facilities:

- Questionnaire – The answer sheet must be dated and signed by both the employee and the instructor. This method must be used to document training for mandatory topics.
- Certificate of Completion or Attendance – Usually provided by the vendor or trainer conducting the session. This may be accompanied by a memo describing the specific training that was conducted.
- Attendance sheet.

A detailed description of the training material or a class outline will be included with all training documentation (e.g., Attendance Roster). If multiple topics are presented during one session, a description of each topic will be included on the attendance roster or a separate training roster for each topic will be used.

All safety training records must be filed with the facilities EHSC. Training records for mandatory training (e.g., annual waste training, DOT hazardous materials training, etc.) will be filed in the employees training file. Records for monthly training sessions will be maintained by the EHSC.

SECTION 5

5.0 HAZARD COMMUNICATION PROGRAMS

5.1 General Overview

All employees have the right to be informed of the hazards of the materials they work with, and to be properly trained to handle those materials in a safe manner. There are two OSHA regulations that specifically address these issues. The OSHA Laboratory Standard (29 CFR 1910.1450) addresses employees that work in laboratories; whereas the general Industry Hazard Communication Standard (29 CFR 1910.1200) addresses employees at other types of operations. The intent of these regulations is to ensure that employers inform their employees about the hazards of materials to be used and the methods employees will follow to protect themselves. The OSHA laboratory standard requires the employer to develop and maintain a written Chemical Hygiene Plan (CHP) to address these items for operations. The 29 CFR general industry standard additionally requires the employer to develop a Hazard Communication Program (HCP) for operations.

As previously stated, this manual serves as the CHP and HCP for the various Company operations. The EHSC for each site will serve as the Chemical Hygiene Officer (CHO) or Hazard Communication Officer (HCO) for that location. The EHSC has the full authority for the implementation and execution of all provisions of this EH&S Manual. The VP-Quality & EHS will serve as the CHO for the Company.

5.2 Components of the Company Environmental Health & Safety Program

In order to understand the EH&S Manual, the employee must recognize its use in the Company's overall EH&S Program. The Manual is designed to provide our employees with the basic information to recognize health and safety hazards of the materials and surroundings within in their workplace in order to conduct their work in a manner safe to themselves, their co-workers and the environment. There are several other components of the EH&S program that also contribute critical information to employees. These components are discussed in further detail in the sections below. A copy of the EH&S Manual is available on the Company's intranet site (Oasis/EH&S).

5.2.1 Standard Operating Procedures (SOPs)

Every method or procedure carried out by Company employees must have an SOP, which is available to the employees. These procedures contain information concerning specific hazards that are associated with the work process as well as a list of specific hazards and chemicals that will be used by the employee. Employees must review the SDS's for all listed materials.

5.2.2 Chemical Inventories/Lists

The facility must provide the employee with a list of hazardous materials they could be exposed to during the work process. There are two acceptable ways for facilities to accomplish this goal.

- The EHSC may prepare and maintain an inventory of all chemicals, or reagents, used at their facility.
- List all materials used in the individual SOPs for work that is conducted.

The EHSC is responsible for maintaining a list of all chemicals that employees could be exposed to by contractors who work at Company facilities. Each contractor is responsible for providing this list. Employees must review the SDSs for the materials they will handle. The VP-Quality & EHS and/or an EH&S Manager will periodically audit Company facilities to ensure that the list of chemicals is current and accurate.

5.2.3 SDS / Files

All manufacturers are required to prepare SDSs for materials they produce or import. They, or their distributors, are required to provide copies of these SDSs to those who purchase these materials. If an employer cannot obtain an SDS for a material, they are to set the material aside until an SDS can be obtained.

Electronic copies of SDSs are readily available in a database on the Company's Intranet. Facilities may also keep additional copies of SDSs in a master file. However, this is not required and the copies will have to be maintained up-to-date to be of use. Employees who work at client sites must have a current copy of all material SDSs for the materials used available on their vehicle. A copy of the SDS for each material used as a preservative must be given to all clients (e.g., generally forward with their initial container shipment).

In general, all SDSs will be sent directly to the vendor who maintains the Company's SDS database. In some cases, SDSs may arrive with a shipment of a material or they may also be shipped to the facility separately from the material. Regardless of the situation, staff members will send all SDSs they receive to their EHSC who will forward the documents to the vendor who is responsible for maintaining the Company's SDS database. The SDSs will be periodically reviewed by the EHSC for each facility who is responsible for notifying the Facility/Laboratory Director of pertinent changes.

5.3 SDS Overview

5.3.1 Manufacturers' Obligations

In general, all chemical manufacturers and importers of chemicals are required to provide SDSs for materials they produce or import. [A detailed discussion of the components of a SDS is available in Appendix III.] Each SDS must include all essential information on the hazards associated with that material. Subjects that must be included are:

- Brand/Chemical names
- Main components in the material as prescribed in the regulation
- Manufacturer's name and address
- Emergency contact number
- Physical and chemical characteristics
- Physical and health hazards
- Primary routes of exposure
- Exposure limits
- Status as a carcinogen
- General precautions for safe handling of the material
- Control measures (e.g., engineering controls and PPE) that should be used
- Emergency and first aid procedures

- Date the SDS was prepared
- Revision date

5.3.2 Reviewing SDSs

Employees will receive training on SDSs prior to using the materials for the first time, or whenever there are pertinent changes to a SDS. The only exception is for materials that are used in a manner constituting "normal household use" or as a consumer commodity as intended by the manufacturer, e.g., Windex™, when it is only occasionally used to clean office mirrors or windows. Under Company policy, Department Managers/Supervisors are responsible for ensuring this is completed. The Department Managers/Supervisors may conduct the training, may appoint someone to conduct the training, may ask the EHSC to conduct the training, or may allow employees to self-train by reading the SDSs.

5.3.3 Obtaining SDSs

NOTE: As per regulation 29 CFR 1910.1200 and Company policy, no employee is to use a material when an SDS is not available.

There are three ways an employee may obtain an SDS for a material they are going to use:
- View and/or print a copy of the SDS from the Company's Intranet site (preferred).
- Contact the EHSC. The EHSC will locate an SDS for the material and provide it to the employee.
- View manufacturers' website.

5.3.4 What to do when a SDS is not available

It is possible that an employee may not be able to obtain a SDS using any of the methods listed above. If a SDS is not available, the employee will set the material aside and immediately contact their EHSC. The EHSC will contact the manufacturer and obtain a SDS for the material. Work may not continue until the employee obtains a SDS for the material and has reviewed it.

5.4 Training Requirements

All employees who work with or may be exposed to hazardous chemicals must receive training as per regulation 29 CFR 1910.1200 that is applicable to the area where they work. Refer to the Company's Intranet site for the Hazardous Materials Management (Initial Training) Course and the Hazardous Materials Management (Annual Refresher Training) Course. This training is applicable to administrative employees.

Under the Hazards Communication Program, there are four types of training that must be provided. These are initial or orientation training, a review of the contents of the SDSs, job specific training, and refresher training.

5.4.1 Training Components

Employees will be trained in the following manner:

- Provided a hardcopy training presentation or shown a video, which explains the applicable standard.
- Attend a review session that addresses all applicable sections of the EH&S Manual.
- Read the SDS for each material possibly handled or exposed to while working.

5.4.2 Job-Specific Training

Some jobs or tasks will have very specific safety concerns that are not covered in this section. These types of concerns must be listed in the SOP for the work being conducted. Employees must be notified of any such concerns before they are allowed to carry out a procedure. In addition, they must not be allowed to work unsupervised until their supervisor or manager is confident they understand the safety issues related to the work being performed.

5.4.3 Refresher Training

Refer to Section 4.6 for the topics covered in monthly/bimonthly training sessions. Refresher training on the EH&S Manual and the applicable hazard communication standard must be conducted at least once a year. Depending on the circumstances, refresher training may be needed more often. Refresher training will consist of a review of this and any other applicable sections of the EH&S Manual. Employees will sign a statement that they have read and understood the applicable sections of the manual.

5.5 Exposure Monitoring

Whenever employees might be exposed at or near the exposure limits for the materials they handle, exposure monitoring will be conducted. Exposure monitoring is normally conducted when the employee might use large quantities of materials, or when an employee experiences potential symptoms of exposure. Exposure monitoring will also be conducted when the employee reports symptoms that may indicate an adverse exposure has occurred. There are two types of monitoring that may need to be conducted. They are environmental monitoring and medical monitoring. Both types of monitoring are discussed in more detail below. Employees must be informed of the results of any monitoring studies that are conducted. This must be completed within 15-days of the Company receiving the test results. Refer to Appendix XI for additional details

5.5.1 Environmental Monitoring

Environmental monitoring can be conducted in several manners, depending on the situation. Continuous monitoring devices, such as meters or badges, may be used in some cases. A primary example of this type of monitoring requires the use of badges and audible alarms that are used to detect hydrogen sulfide gas. A second type of monitoring utilizes detection meters. Noise would be monitored using a sound level meter which may or may not be equipped with alarms.

A third way to monitor for exposure is by collecting air samples using sampling pumps with collection tubes attached or passive monitoring badges. This is the most common form of monitoring. The collection tubes are filled with a sampling media that either changes color or

must be extracted for analysis. Exact exposure levels must be determined using methods, which conform to OSHA guidelines. These types of samples often provide the most exact values. However, the disadvantage is that results may not be available for several days.

Areas will be monitored at least annually where employees work with elevated levels of Methylene Chloride. Areas where employees use other chemicals in elevated quantities will be monitored at least once every two years. This requirement may be met by collecting a sample for each individual employee or by collecting samples from a representative group of employees. If a representative group of employees are monitored, the work performed must represent the worst possible exposure scenario. The sample group should include any new employees who were hired since the last time monitoring was conducted. If the monitoring results are higher than any limits specified in a standard, the medical monitoring requirements listed in the standard will be complied with.

5.5.2 Medical Monitoring

Employees will be offered an opportunity for a medical consultation whenever any of the following circumstances exist.

- Acute exposure (e.g., significant amounts of material splashed on or ingested by the employee). A significant amount would be any quantity that would require the use of the emergency shower or eyewash.
- Environmental monitoring indicates that the employee could be exposed to more than 50% of a recommended published exposure limit.
- Employee indicates that he/she is experiencing symptoms that would indicate an adverse exposure might have occurred.
- Regulatory requirement to conduct the medical monitoring (e.g., when employees must wear respirators or are exposed to more than the action level for a particular material).

If any of these situations develop, a qualified physician will decide what tests need to be performed. The decision to seek medical monitoring will be based on specific work conditions, regulatory requirements and potential exposure levels that exist. Whenever there is any doubt as to whether medical monitoring is necessary, contact the VP-Quality & EHS. The monitoring will be provided at the Company's expense. Unless specified under a specific standard, employees cannot be forced to undergo the medical evaluation. Examples of standards which require medical evaluations are the respiratory protection standard (29 CFR 1910.134, Respiratory Protection) and the standard for exposure for hazardous levels of noise (29 CFR 1910.95, Occupational Noise Exposure). If an employee declines the medical evaluation, they must sign the Medical Evaluation Declination Form (Form No. CW-E-WI-002). Employees who decline a medical evaluation may request one at a later date.

5.6 Access to Medical Records

Employees have a right to access medical records, which directly relate to their potential exposure to hazardous materials or conditions in the work place. The Human Resources Department is responsible for maintaining all written opinions and other medical records received from physicians who conduct medical exams on the behalf of the employee or employer that relate to work performed at Company facilities. The local Human Resource contact may delegate the responsibility for maintaining these records to the local EHSC. The records will be secured in a confidential manner and maintained for 30-years after the last date

of employment. Employees will need to contact the Human Resources Department to obtain or view a copy of their records. All requests for copies must be in writing.

5.7 Signs and Labels

5.7.1 Signs

Areas that have special or unusual hazards will have posted warning signs. Standard signs and symbols have been established for a number of special situations, such as biological hazards, fire hazards, and laser operations. Areas designated for use of carcinogens, or other high hazard materials shall be identified and posted.

Signs providing information shall be posted to show the location of safety items such as:

- Eye wash stations
- Safety showers
- Fire extinguishers
- First aid kits
- Emergency spill equipment
- Exits (floor plans with marked routes and "you-are-here" indicators)
- Areas where hard hats, safety glasses and other PPE is required
- Permit required Confined Space areas
- Equipment that requires the use of Lockout/Tagout (LOTO) devices

Refer to Section 6.6 for further information on Safety/Emergency Equipment associated to these safety signs.

5.7.2 General Labeling Requirements

Employees are not permitted to use containers of material that are not clearly labeled except as noted below. The manufactures' labels will be maintained on all original containers and will not be defaced. Containers of one type of material must not be used for other materials unless the container is clearly marked to define the contents. When a material is transferred from the manufacturer's container to a secondary container (e.g., squirt bottle, solvent can, etc.), that secondary container must also be labeled. This includes containers that hold non-hazardous materials such as deionized water. If this container is placed in secondary spill containment and the label on the container cannot be read, the secondary spill container must also be labeled. (Refer to Section 6.5.1 for approved storage containers.)

Bulk containers will have the following information posted on the container:

- Identity or name of the product
- Applicable hazard warnings (e.g., NFPA or HMIS warning numbers)
- Name and address of parties who are responsible for the bulk container
- General usage information

Secondary containers at laboratory operations must contain the name of the material. Chemical abbreviations are allowed at laboratory operations; however, the abbreviation must be one that is standard in the laboratory industry (e.g., H_2O, MeOH).

Chemical abbreviations are not allowed on secondary containers at non-laboratory operations. Secondary containers at non-laboratory operations must have the following information on the container:

- Identity of the product. This must exactly match the name on the original manufacturer's container.
- Applicable hazard warnings (e.g., NFPA or HMIS warning numbers)

The only exception to the requirements for labeling secondary containers is when a material meets the following criteria:

- Completely used in one shift
- One person will only use the material and is always in control of the person using the material.

A container is considered to be in a person's control if they can see it or touch it.

Pipes or pipe systems shall be marked with the same information that is required for secondary containers. These markings or labels must be located at all inlet and outlet valves.

The employee may use signs, placards, process sheets, batch tickets, operating procedures, or other such written materials in lieu of affixing labels to individual stationary process containers, as long as the alternative method identifies the containers to which it is applicable and it contains all necessary hazard warnings.

5.7.3 Globally Harmonized System (GHS) of Classification and Labeling of Chemicals

OSHA has modified the Hazard Communication Standard (HCS) to adopt the GHS to improve the safety and health of workers through more effective communications on chemical hazards. Since it was first promulgated in 1983, the HCS has provided employers and employees extensive information about the chemicals in their workplaces. The original standard is performance-oriented, allowing chemical manufacturers and importers to convey information on labels and SDSs in whatever format they choose. While the available information has been helpful in improving employee safety and health, a more standardized approach to classifying the hazards and conveying the information will be more effective, and provide further improvements in American workplaces. The GHS provides such a standardized approach, including detailed criteria for determining what hazardous effects a chemical poses, as well as standardized label elements assigned by hazard class and category. This program enhances both employer and worker comprehension of the hazards, which will help to ensure appropriate handling and safe use of workplace chemicals. In addition, the SDS requirements establish an order of information that is standardized. The harmonized format of the SDS will enable employers, workers, health professionals, and emergency responders to access the information more efficiently and effectively, thus increasing their utility.

Adoption of the GHS in the US and around the world will help to improve information received from other countries—since the US is both a major importer and exporter of chemicals, American workers often see labels and safety data sheets from other countries. The diverse and sometimes conflicting national and international requirements can create confusion among those who seek to use hazard information effectively. For example, labels and SDSs may include symbols and hazard statements that are unfamiliar to readers or not well understood.

Containers may be labeled with such a large volume of information that important statements are not easily recognized. Given the differences in hazard classification criteria, labels may also be incorrect when used in other countries. If countries around the world adopt the GHS, these problems will be minimized, and chemicals crossing borders will have consistent information, thus improving communication globally.

The three major changes to the revised HCS are in hazard classification, labels, and safety data sheets.

Hazard classification: The definitions of hazard have been changed to provide specific criteria for classification of health and physical hazards, as well as classification of mixtures. These specific criteria will help to ensure that evaluations of hazardous effects are consistent across manufacturers, and that labels and SDSs are more accurate as a result.

Labels: Chemical manufacturers and importers will be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided.

Safety Data Sheets: Will now have a specified 16-section format.

5.8 Contractor Work and Multi-Facility Work

There are two major concerns when contractors conduct work at Company facilities or Company employees work at operating company facilities. The first concern is that the contractor not be adversely exposed to any materials used by Company employees. The second concern is that Company employees not be adversely exposed to any materials used by the contractor. For these reasons, the following precautions must be taken when a contractor is allowed to work at Company facilities or Company employees work at operating company facilities.

Prior to allowing a contractor to begin work at a Company operation, the EHSC or designee will complete a Contractor Communication Form (form number CW-E-WI-006). This form provides for the following information:

The contractor will:

- Provide a list of substances Company employees could be exposed to
- Provide SDSs for these materials
- Recommend precautions and protective measures Company employees should take when the hazardous materials are being used
- Review the SDSs of the materials to be used with the Company EHSC
- Provide a list of the physical hazards that Company employees will be exposed to while the work is being carried out
- Assist Company employees in implementing any precautionary measures necessary to protect themselves
- Describe hazards associated with the work (e.g., verification that the Contractor has a Fall Protection Program, a Confined Space Program, etc.).

Company employees will:

- Identify any hazardous materials used by Company employees that the contractor might be exposed to

- Provide the contractor or operating company representative with SDSs for the materials Company employees will use that the contractor's employees could be exposed to
- Provide the contractor with a list of the physical hazards that the contractor's employees may be exposed to while work is being carried out at the Company operation
- Recommend precautions and protective measures to the contractor or operating company representative
- Review emergency procedures for the facility with the contractor's representative. This includes reviewing evacuation routes and procedures, emergency telephone numbers, and specific warning signs and signals for the facility.

If the contract involves work that will be conducted on a routine basis (e.g., janitorial services or air handling maintenance), the form will be completed once before the contractor's employees begin work at the Company operation. It must be reviewed and signed off at least annually to verify if there are any changes. The form does not have to be completed if the vendor is only picking up or delivering materials. Each of the contractor's employees as well as any other visitors who will tour the operation will read and sign a visitor orientation form CW-E-WI-005.

5.9 Office Areas

Generally, employees who work in office or administrative areas will not be exposed to hazardous substances. Likewise, there is a limited likelihood that drivers or couriers who only pick up samples from clients' sites would be exposed to elevated levels of hazardous materials. However, the regulations recognize that these individuals have a right to know what hazardous substances are used around them. For this reason, all administrative employees who work in office areas and drivers or couriers will be given a general overview of the hazard communication standard or laboratory standard as it applies to the facility where they work. This review will include emergency procedures to be followed and where information relating to the hazards of the work performed around them is located.

SECTION 6

6.0 FACILITY REQUIREMENTS

6.1 General

It is critical that all work areas be organized in a manner that will allow employees to work safely. Hazards that can be reasonably anticipated must be identified and controlled. Work areas must be assessed for hazards to identify actions that need to be taken to reduce the potential risk to the employees, others who enter the work area and the Company. Each operation will prepare an Area/Job Safety Analysis Form (ASA/JSA) of the various work areas through out the operation. An ASA/JSA is a method used to identify, review and document:

- Processes involved in performing a specific job.
  - Initially to assess risks that are present and what actions need to be taken to control the risks.

- Existing or potential safety and health hazards associated with each Process or step
  - When major changes are complete to the setup of a work area (e.g., when additional equipment is added or major changes are made to the way the equipment is setup or arranged.
  - When major modifications are made to the facility (e.g., construction work).

- Recommended actions/procedures that will eliminate or reduce these hazards and the risk of a workplace injury or illness.
  - When an incident occurs that indicates that a risk was not adequately identified in the last ASA/JSA.
  - No more than 3-years after the last ASA/JSA was performed to determine if there are any changes

The ASA/JSA for each work area will be documented on the designated form (Form No. CW-E-WI-009)

In addition to the ASA/JSA, the VP-Quality & EHS and/or EH&S Manager will conduct an assessment to determine the general needs for each operation. The assessment shall include, but is not limited, to the following (Operations must assure that):

- All equipment is suitable for use, the intended purpose, and conditions in which it is used (e.g., protective/fixed guards installed; sturdy bench-top; appropriate electrical voltage).
- Equipment is only to be used for the tasks for which it was designed (e.g., thick-walled glassware designed for use under pressure; refrigerators for samples only [no food)]).
- All equipment is maintained in a safe condition for use so that employee's health and safety is not put at risk (e.g., fume hood velocity testing).
- Where applicable, equipment must be inspected to ensure that it is, and continues to be, safe for use. Any inspection should be completed by a person trained on the equipment and the EHSC and, where feasible, a record must be kept of the inspection. Inspections should typically be carried out during the following scenarios:
  - After installation but before the equipment is placed into service for the first time.

  - After assembly at a new site or in a new location to ensure that equipment has been installed correctly and is safe to operate.
  - After work equipment has been exposed to any conditions causing deterioration, which is liable to cause a dangerous situation.
  - At suitable intervals, as recommended by the manufacturer or under industry standards.
  - Each time exceptional circumstances occur that are liable to jeopardize the safety of work equipment.

- Possible risks created by the use of equipment are eliminated where possible.
- Employees using work equipment have received adequate training, instruction and information for that particular equipment. (Refer to Section 4.9 for training documentation requirements.)
- All markings are clearly visible and warnings or warning devices incorporated into work equipment for reasons of operator safety are unambiguous, easily perceived and easily understood.
- Dangerous machinery (e.g., glass crushers) has fixed guards or, if that is not practicable because the technology does not exist, other forms of guard or protection devices are available. If none of this is practicable, information, instruction, training and supervision must be provided. (Refer to Section 4.9 for training documentation requirements.) Where possible, such equipment should not be used.
- Workers are not exposed to risks arising from:
  - Articles or substances falling or being ejected from work equipment (e.g., dust from grinding machines).
  - The rupture or disintegration of the equipment (e.g., abrasive wheels).
  - The equipment catching fire or overheating.
  - The unintended or premature discharge of any article, gas, dust, liquid, vapour or other substance which is used, produced or stored by the equipment.
  - Explosions of the equipment or any article or substance used, produced or stored in the equipment.
- As per regulation 29 CFR 1910, workers are protected against burns, scalds and cold sores likely to be caused by any part of work equipment or articles or substances used, produced or stored by equipment.
- All fixed and mobile equipment is stabilized to prevent it from collapsing or overturning.
- Sufficient lighting is provided for workers to use equipment safely.
- Equipment has controls for starting and controlling its use where that is appropriate, and ending operation safely.
- Equipment has, where appropriate, emergency stop controls.
- All controls for work equipment are both clearly identifiable and visible.
- Powered equipment requiring the use of LOTO devices can be isolated from its source of energy (the electricity, gas, air or water that drives it) and the means of isolation is clearly identifiable.

6.2 Ventilation Requirements

6.2.1 General

Each facility will be equipped with ventilation systems that minimize the potential exposure of employees to hazardous materials. As defined in the OSHA Technical Manual Section III, Chapter 3, Ventilation Investigation, exhaust stacks should extend at least 10-feet above the highest point on the roof. If the exhaust is within 30-feet of an air intake, the stack must be at least 10-feet above the center point of the air intake. When exhaust fans are installed or repaired, they should be tested to ensure they do not rotate backwards.

General airflow should not be turbulent and should be relatively uniform throughout the facility. Airflow into and within fume hoods must not be excessively turbulent. Employees can reduce personal exposure to hazardous chemicals by using the following techniques:

- Use hoods for all operations that might result in release of hazardous chemical vapors.
- Confirm adequate hood performance before starting each procedure. Deficiencies in hood operation must be reported to the manager or supervisor and EHSC as soon as they are detected.
- Use local exhaust ventilation or traps for equipment that can release hazardous vapors into the room (e.g., vacuum pumps, GCs, distillation columns, etc.). Some traps (e.g., GCMS vacuum pump traps) will need to be replaced periodically based on manufacturer's recommendations.

6.2.2 Fume Hoods

Fume hoods are designed to protect employees who work with hazardous chemicals by removing toxic materials from the workers' breathing zone. This equipment is critical for proper ventilation in a laboratory. Fume hoods:

- Should not be positioned at 90° angles and in close proximity to each other.
- Must be tested every 6-months with a calibrated instrument, such as hot wire anemometer to ensure adequate flow and a visual test (e.g., smoke or water vapors). Calibration of flow meter must be within 12 months of each use. If the average face velocity has decreased by more than 10% from the last test, the hood must be retested within 3-months. In most instances, fume hood face velocities will be required to meet the AIHA/ANSI standard for laboratory ventilation (AIHA/ANSI Z9.5-2003). The only exception is when there are specific requirements in a state regulation which requires higher face velocities. Unless otherwise specified, the following guidelines must be used when the face velocities for fume hoods are measured:
  - For the use of extremely small amounts of materials under controlled circumstances (e.g., preparation of small amounts of solvents) - average face velocity of as low as 60 feet per minute (fpm).
  - For other purposes - average face velocity of between 80 and 120 fpm.
  - Continued use with face velocities as high as 150 fpm. However, it is recommended that the velocities be reduced to below 120 fpm.
  - Not to be used with face velocities of less than 60 fpm or more than 150 fpm.

- Must have the sash marked to identify the required position for achieving the minimum desired airflow rate.

  Note: The opening at which an employee can effectively use a hood will vary from task to task.
- Don't lift the sash above effective height unless it is to put materials in or take them out of the hood. Always keep the sash between the inside of the hood and your body. Lower the sash if the height is too high to protect your body and face. **Never** climb inside the fume hood or stick your head inside the fume hood.
- Based on best business practices and industry standards, facilities should have face velocities posted on the face of each hood. Documentation on face velocity measurements will be maintained by the EHSC.
- Shall be equipped with a device that will allow employees to verify that the fume hood is operating. This could be as simple as a ribbon that will flutter when the hood is operating. Some states mandate more specific systems to verify both that the fume hood is functioning and that it is functioning at the required level. Employees cannot rely on hearing the fan motor to determine if the hood is operating properly.
- Fume hoods shall be taken out-of-service if the face velocity is such that the sash must be lowered to a point that the operator cannot use the hood effectively.
- Fume hoods shall be taken out-of-service if the sash is not functioning properly, or if the glass is cracked or broken. Never prop open a broken sash.
- When taken out-of-service, it must have a sign posted on it to inform employees that the hood is not working correctly. The sign shall clearly indicate that the fume hood may not be used. It is the responsibility of the area manager or supervisor and Facility/Laboratory Director to ensure that repairs are promptly carried out. The face velocity shall be measured after repairs are complete in order to ensure that the hood is working correctly before it is returned to service.
- Shall not be relied upon to provide explosion (blast) protection unless specifically designed to do so.
- Shall be run continuously when hazardous chemicals are located in the hood or stored in cabinets under the hood that are vented into the hood.

Fume hoods are work areas and are not to be used for storage. Materials and equipment in the hoods shall be kept to a minimum. Equipment and materials must be set up and placed where they will not block vents or reduce airflow.

Based on best business practices and industry standards, materials should be positioned at least 4-6 inches inside the fume hood and away from the edge. When possible, use small blocks or cork rings to lift permanent items such as hot water baths, secondary containers and such as 1-2 inches off of the floor of the fume hood. This configuration allows clear air flow around such items and improves hood performance. The installation of small shelves may help keep the inside of the fume hood more organized.

Each facility will identify those hoods that must be operated at all times to ensure proper ventilation and those which may be turned off when they are not in use.

6.2.3 Local Exhaust

Local exhaust systems, such as canopy hoods and snorkels, provide supplemental control by removing small volumes of air directly at the source. To be effective, these exhausts must be placed close to the source of the emissions that must be controlled.

Canopy hoods and slotted hoods provide little, if any, protection when positioned more than a few inches from the source of contamination. The use of these types of hoods can be significantly improved by the installation of tracks and sliding doors (glass or plastic depending on the operation), which contain the operation and function similar to an exhaust hood. Unmodified canopy hoods may be used in conjunction with heat-generating equipment, such as ovens. Canopy hoods must not be used for operations involving hazardous materials, such as mixing chemicals. These types of hoods should be tested every 6-months using a visual test to ensure the smoke or vapors are being adequately extracted.

NOTE: Canopy hoods are not to be used for preparation of samples or large quantities of chemicals (e.g., greater than 50-mls) unless the materials have a 0 or 1 NFPA health hazard rating as outlined in Appendix IV (NFPA Rating System).

Ductless hoods that pass air from the hood interior through an absorption filter and then discharge the air into the laboratory are only to be used with nuisance vapors and dust that do not present a fire or toxicity hazard.

6.3 Maintenance of Facilities or Engineering Controls

All maintenance and repairs of engineering controls shall be documented. Good equipment maintenance is important for safe, efficient operations. Equipment failure can create an unacceptable hazard level within the laboratory. If the operation cannot be performed safely, the operation or procedure preparation will not continue. Equipment shall be inspected and maintained regularly following the manufacturers' service schedules. Each facility should establish a written maintenance schedule for key equipment. Each operation must establish which equipment is considered key for that facility.

Fume hoods and ventilation systems should be given preventive maintenance by a qualified technician at least every 6-months. When possible, maintenance should be scheduled and performed when the unit can be taken out of production.

Maintenance plans shall include procedures to ensure that when key devices are out-of-service, they cannot be restarted (e.g., remain locked out) until repairs are complete and authorization is granted to proceed. All energized equipment shall be tagged and have in place appropriate devices to allow locks to be attached and to prevent the equipment from being operated while it is being repaired or inspected. Vendor LOTO procedures may only be used with approval of the EHSC.

Only trained individuals shall perform equipment repair.

6.4 Alteration of Facilities or Engineering Controls

The EHSC shall review and approve all facility or operation changes related to EH&S. Major facility changes such as addition or relocation of fume hoods, and other ventilation changes, require the approval of the VP-Quality & EHS. Input from qualified Industrial Ventilation Engineers must be obtained when changes in facility exhaust systems are planned. The facility

EHSC shall assist management in reviewing health and safety issues that relate to proposed operation changes.

6.5 Hazardous Material Storage

The following rules apply to storage of hazardous materials. If the quantities specified in the following sections are exceeded, the materials must be kept in rooms or storage areas that meet National Fire Protection Association (NFPA) or Uniform Fire Code (UFC) requirements for storage of hazardous materials. The VP-Quality & EHS and/or an EH&S Manager should be consulted whenever there are questions regarding storage of hazardous materials.

6.5.1 Approved Storage Containers

Chemicals must be kept in the manufacturers' original containers or approved containers that are compatible with the material. When possible, large quantities of materials (e.g., 1-gallon or more) that are transferred from the manufacturer's original container should be stored in ANSI approved storage containers. Smaller quantities of materials may be stored in non-ANSI approved containers as long as the container is compatible with the material being used. Refer to Section 5.7.2 for information on General Labeling Requirements.

As a general rule, containers should not be filled beyond 95% of their storage capacity.

6.5.2 Flammable Liquids

The NFPA defines a flammable liquid as any liquid with a flash point less than 93°C (200°F). Flammable liquids are subdivided into Class I, II, and III liquids. Table 6.1 describes the definition for each class of flammable materials.

Table 6.1
Classification of Flammable and Combustible Liquids

Classification	Flash Point (°F)	Boiling Point (°F)
I-A	< 73	< 100
I-B	< 73	≥ 100
I-C	≥ 73 & < 100	N/A
II	≥ 100 & < 140	N/A
III-A	≥ 140 & < 200	N/A
III-B	≥ 200	N/A

Operations will comply with the storage limits specified in the UFC. Table 6.2 lists the maximum amount of material that may be stored in controlled areas. A controlled area is defined as any area other than a warehouse section or liquid storage room that has been designed to meet the requirements of the UFC. Each building may have up to 4-controlled areas as long as there is a 1-hour fire-resistive separation between the areas. The amount of flammable liquid that may be stored in a controlled area may be doubled if the material is stored in an approved storage cabinet. The amount of flammable liquid may also be doubled if the area is protected by a sprinkler system. The amount of flammable liquid that may be stored in a controlled area may be increased by a factor of 4 if the material is stored in approved cabinets and there is also a sprinkler system.

Table 6.2
Maximum Amount of Flammable and Combustible Liquids that may be stored in Controlled Areas

Class of Liquid	Maximum Amount in Gallons
I-A	30
I-B	60
I-C	90
Combination of I-A, I-B, I-C	120
II	120
III-A	330

Table 6.3 lists the maximum amount of flammable liquids that may be stored in warehouse areas and/or liquid storage rooms that have been designed to meet the requirements of the UFC. The materials must be stored in the original DOT shipping containers. If they are transferred to shelves or placed in spill containers for storage, the requirements for controlled areas must be met. Cases of flammable liquids may not be stacked above 7 feet.

Table 6.3
Maximum Amount of Flammable and Combustible Materials that may be stored in Warehouse Areas or Liquid Storage Rooms

Class of Liquid	Maximum Amount in Gallons
I-A	7,500
I-B	15,000
I-C	15,000
II	24,000
III-A	48,000

No more than 5-gallons of Class I flammable liquids may be open and in use at any one time in any individual area. No more than 10-gallons of Class II and Class III flammable liquids may be open and in use at any one time in any individual area.

6.5.3 Gases

There are 3-types of gases that may be used within the Company. These are:

- Flammable Gases,
- Non-Flammable Gases, and
- Oxygen

In all cases, gas cylinders must be secured so they cannot accidentally tip over.

Flammable gases must be stored at least 20-feet away from all cylinders of Oxygen. The only exception to this rule is when the cylinders are in use by equipment such as a welder or analytical instrument. With the exception of Acetylene, no more than 1000 cubic feet of flammable gas may be stored in any one building. This number may be increased to 2000-cubic feet if the building is equipped throughout with an automatic sprinkler system. The amount may be increased to 4000-cubic feet if the cylinders are stored in a NFPA-approved storage

cabinet or the room has been equipped with a ventilation system that meets NFPA requirements. Larger quantities of these types of materials must be stored in a room that meets NFPA requirements for storage of gases. Specific state or local regulations may further limit the number of flammable gases allowed on site.

6.5.4 Other Hazardous Materials

The SDS for each material must be consulted for special storage requirements. In most cases, the maximum amount of other hazardous materials that may be stored in any one area may not exceed 500-pounds of any one compound. This amount may normally be doubled if the material is stored in storage cabinets that meet NFPA requirements. Larger quantities must be stored in areas that meet NFPA requirements for storage of hazardous materials

6.5.5 Cold Rooms

Cold rooms (walk-in freezers/coolers) must have provisions for rapid escape and emergency lighting in the event of an electrical failure. Escape latches on walk-in cold rooms should be tested at least annually. If temperature in a cold room reaches 70°F, special precautions should be taken to minimize worker exposure to volatile chemicals.

6.5.6 Refrigerators/Freezers

Flammable materials that must be refrigerated must be stored in flammable-safe or explosion proof refrigerators or freezers. The only exception to this rule is for sealed vials or ampoules that contain 10-milliliters (mls) or less of hexane, methanol, acetone, or acetonitrile. The vials or ampoules must be stored in a manner that will ensure they cannot be accidentally tipped over, and they must be stored in a secondary container with a lid. Refrigerators or freezers less than 6-cubic feet in size must be flammable-safe or explosion proof to store flammable solvents in any quantity. The use of domestic refrigerators or freezers for the storage of some laboratory solvents creates a significant fire hazard. In addition to vapor accumulation, a domestic refrigerator/freezer contains readily available ignition sources, such as thermostats, light switches and heater strips, all within or exposed to the refrigerated storage area. The compressor and its circuits are located at the bottom of the unit, where vapors from liquid spills or leaks would accumulate. Each refrigerator, cooler or freezer must be clearly marked to indicate whether or not it may be used to store flammable liquids.

6.6 Safety/Emergency Equipment

Emergency equipment is stationed at strategic locations in every facility. Signs throughout the facility will indicate the locations of the emergency equipment. Objects and other materials must not be allowed to obscure the signs. The location of key safety equipment such as safety showers, eye wash stations, first aid kits, spill equipment and fire extinguishers must be indicated in the facilities addendum to this document.

6.6.1 Emergency Showers and Eyewashes

Emergency showers and eyewashes must be immediately accessible to all employees – especially those who handle large quantities hazardous materials. These units must be able to provide at least 15-minutes of continual flow. OSHA requires operations to comply with the ANSI Standard Z358-1. This standard requires an eyewash and shower to be within a 10-second walk of any employee when there is an elevated potential for a splash which might get

into an employee's eye or result in a major splash that would require the employee to remove clothing and wash exposed parts of the body. The units must be able to provide 15-minutes of continuous flow. As a general rule, these units should be located within 50-feet of the operation being performed. There must be no obstructions, such as closed doors, between the operation and the device. Emergency eyewashes and showers that provide continuous flow must be activated weekly in accordance with the requirements listed in Section 12. Self-contained eyewash systems must be inspected at least once every quarter to ensure the expiration date of the fluid has not been exceeded.

6.6.2 Fire Extinguishers

Each facility must be equipped with fire extinguishers that are compatible with the hazards in the facility. Employees who have not received training on how to properly use a fire extinguisher are not allowed to use one if a fire breaks out. These employees must immediately evacuate the area without attempting to put the fire out. Fire extinguishers must be visually inspected each month and be certified on an annual basis by a qualified technician.

6.6.3 Spill Cleanup Kits

Each facility must be equipped with spill cleanup kits containing adequate absorbent and neutralizers for the materials routinely used in each area. These kits should be checked monthly to determine if any materials need to be replaced.

6.6.4 Emergency Lights/Exits

The exits for all work areas must be prominently marked. Exit signs that are not adequately illuminated by an emergency light must be equipped with an internal light. Phosphorescent signs may also be used in lieu of signs with internal lights.

Emergency lights must be located throughout the facility. These devices must be capable of providing adequate illumination for employees to evacuate the work area in an emergency. They must be activated automatically in the event of a power failure. Emergency lights are not to be used as work lights. If the lights are activated by a power failure, employees must evacuate the work area. Unless there is more than one emergency light in an area to provide back up, the lights shall be tested monthly to ensure the batteries are functioning properly. If there is more than one emergency light in an area and the additional lights provide adequate light for employees to safely evacuate the area, the lights must be tested every 6-months.

6.6.5 First Aid Supplies

Each operation must maintain adequate first aid kits for employees who work at the facility. First aid kits are not required in every room. However, the kits must be placed in locations that are easily accessible to employees. It is recommended that a portable first aid kit be available to be taken out of the lab in the event the personnel have to evacuate the building. Each Company vehicle will be equipped with a first aid kit.

At a minimum, each first aid kit must contain the materials specified by the ANSI Standard Z308.1-2015, "Minimum Requirements for Workplace First Aid Kits." Table 6.4 lists the minimum requirements set forth in the ANSI standard.

Table 6.4
Minimum Materials Required in First Aid Kits

Item with Minimum Size or Volume	Minimum Quantity	Comments
Adhesive bandage, 1" x 3"	16 each	
Adhesive tape, roll	1 each	
Antibiotic application, individual packet	10 each	Remember to replace just before expiration.
Antiseptic wipe, individual	10 each	
Breathing barrier, CPR	1 each	
Burn dressing (gel soaked), 4" x 4"	1 each	Remember to replace just before expiration.
Burn treatment, ind	10 each	Remember to replace just before expiration.
Cold pack, chemical	1 each	
Eye covering/patch, w/ attachment	1 each	Use tape, roller bandage or triangular bandage if your eyepatches do not have integral attachment.
Eye Skin Wash, 1 oz	1 each	Use eyewashes/showers, so don't add this unless in a vehicle first aid kit, and remember to replace before it expires.
First aid guide	1 each	
Hand sanitizer, ind packet	6 each	Remember to replace just before expiration.
Medical exam gloves (nitrile only, no latex)	2 pair, no size rqmt	Recommend 1 pair each S, M, L, XL, or 1 x L & 1 x XL.
Roller bandage 2"	1 each	
Scissors (bandage)	1 pair	
Sterile pad, 3" x 3"	2 each	
Trauma pad	1 each	"Absorbent compress, 32 sq in, no side less than 4", sometimes marked "Bloodstopper".
Triangular bandage, 40" x 40" x 56"	1 each	
Incident report form	1 each	
First aid kit inventory form	1 each	This Form

6.6.6 Security and Fencing

Each operation must ensure there is adequate security to protect employees and Company property. An assessment of the security needs will be conducted to determine if there are areas where fences may be necessary and what precautions need to be taken to keep unauthorized personnel from entering work areas. If there are fenced areas, they shall be inspected quarterly and the results shall be noted on the quarterly inspection reports.

6.7 Visitors and Contractors

6.7.1 Visitors

To provide for the safety and security of employees and the facility, only authorized visitors are allowed in the workplace. All authorized visitors must enter through the main entrance, sign in at the front desk, and complete a visitor orientation form CW-E-WI-005. All authorized visitors must adhere to the PPE requirements for the area(s) in which they are conducting business.

6.7.2 Contractors

An individual or individuals will be assigned to oversee the operations of the contractors when they are on site. All contractors must sign in when they arrive at the operation, complete the visitor orientation form and when appropriate a Contractor Communication Form CW-E-WI-006 before actually starting work and must update the Contractor Communication Form annually. If the work performed represents an elevated risk (e.g., work on roofs or the electrical system) to themselves or others, they must check in with the Company individual assigned to oversee their work before starting any work on-site. This Company-assigned individual will periodically check on their progress to verify they are working in a safe manner. If they are not working safely, the Company-individual will stop the work until all problems are corrected.

6.7.3 Contractor and Visitor Sign-In Forms

In addition to the Visitor Orientation Form CW-E-WI-005 and when appropriate the Contractor Communication Form CW-E-WI-006, Contractors and Visitors must also sign the Visitor Confidentiality Release Agreement form CA-L-WI-011. If for any reason the Contractor or Visitor refuses to sign this form they must sign the Visitor Agreement Supplemental Form CA-L-WI-013.

6.7.4 Visitor Sign-In Logbook

A Facility may use a modified Visitor Orientation Form that incorporates all of the instructions into a bound logbook, rather than individual sheets, and consolidate a Visitor Sign-In Log with the Visitor Orientation Form.

6.8 Hot Work Permits

Hot work is temporary work such as welding, brazing, and cutting or soldering that involves flames or sparks that creates a fire risk both during the operation and following the operation. It may only be performed with the knowledge and approval of management, and certain requirements must be met before, during and after the work is performed.

- The permit itself is a non-reusable multi-copy paper form, available from many vendors or locally produced, that includes the identity of the person performing the work and information about the work, the valid period for the permit, and pre-work, during work, and post-work safety checks and procedures that are to be followed. A copy of the permit is retained by the issuer, and a copy is posted at the work site.
- In leased buildings this may be issued by either the landlord or tenant, depending on the terms of the agreement for work to be done within the building.

SECTION 7

7.0 PROCEDURES FOR RESPONDING TO EMERGENCIES

7.1 General

Employees must be aware of procedures to respond to all emergencies that might occur in the workplace or at facilities run by operating companies. This section discusses general emergency procedures, all of which may not apply to every facility. Employees must be familiar with the procedures that apply to their operations.

Field employees must also be aware of emergency procedures where they might perform work. Each operating company is responsible for providing this information to Company employees. Many operating companies will conduct this training for the employee before allowing the work to begin at the facility. If the operating company does not provide this information, it must be provided to the local EHSC. The EHSC will then ensure that the Company employees are adequately trained.

Division policy requires all incidents that could have a negative impact on operations be reported to the executive management. The VP-Quality & EHS will be notified of all accidents, illnesses, near misses or other events. Minor events may be reported by phone, fax or email. As a general rule, the VP-Quality & EHS will be notified of minor events within 24-hours of when the event occurs or is reported by the employee.

Significant or serious events will be reported to the EHSM - by phone - within 2 hours of when the event occurred or was reported by the employee. The EHSM will notify the VP-Quality & EHS. If the event may have a significant impact on the Company and the EHSM cannot be reached, contact the VP-Quality & EHS, or any available Division manager (refer to the Company's intranet site – TANet Oasis / Operations or EH&S).

http://tanet.Eurofins Environment Testing America inc.com/ehs/ehs-contacts/

*The VP-Quality & EHS can be reached toll free 24-hours a day at **877-785-7233.***

The following is a list of significant or serious events that must be reported to the VP-Quality & EHS within 2-hours:

- Adverse media attention which could discredit the Company.
- An occurrence which is likely to have a major financial impact (e.g., $10,000 or more) on the Company.
- A major explosion, fire or disaster on a site.
- Extortion, kidnapping or other events that would involve ransoms.
- A fatality, serious injury (including amputation, loss of an eye, or employee work-related in-patient hospitalization), or any other serious event affecting health and safety.
- An invasion, threat or public demonstration which impacts the operational integrity of laboratories and other operational sites.
- An event-affecting international interests involving insurrection, abduction or operational disaster attracting the attention of the international media.
- Any other event which the Facility/Laboratory Director believes that executive management should be aware of due to its sensitivity.

The Occupational Safety and Health Administration (OSHA) revised recordkeeping rule requires all work related fatalities be reported to OSHA within 8 hours and all work-related in-patient hospitalizations, amputation, and loss of an eye be reported to OSHA within 24 hours. In the event of a fatality, work-related in-patient hospitalization, amputation, or loss of an eye, immediately notify an EHSM who will report the incident to OSHA. If an EHSM is not available, contact the VP-Quality & EHS. If an EHSM or the VP-Quality & EHS is not available, contact the Lab Director who will notify OSHA of the incident. In the event none are available, contact your EHSC or Supervisor who will report the incident to OSHA.

To report a fatality or severe injury to OSHA call 1-800-321-OSHA (6742) or online; https://www.osha.gov/report_online/

7.2 Facility Contingency Plans

Employees must be familiar with the location and proper operation of all emergency equipment, evacuation routes and designated assembly areas for all areas where they work. Every facility will prepare a Contingency Plan for the facility or facilities under their management. This plan will be included in the facility addendum (refer to Section 1) and will include instructions on:

- Evacuation routes and designated assembly areas.
- Description of alarms or the methods that will be used to notify employees that work areas must be evacuated.
- Procedures to be followed in the event emergencies occur. This requirement often may be met by referencing this section of this manual.
- List of emergency phone numbers available to employees and must be placed by every phone. Emergency phone numbers will include:
  - Emergency Coordinator or Coordinators. If more than one emergency coordinator is listed, the plan must designate the primary coordinator.
  - Facility/Laboratory Director
  - Operation Manager (if applicable)
  - VP-Quality & EHS
  - EHSC
  - Group Leaders/Department Managers/Supervisors
  - Local Fire Department
  - Local Medical Emergency Team
  - Nearest Hospital
  - Local Police Department.
  - Radiation Safety Officer and backup (if applicable)
- List of the emergency equipment that is available at the facility and a description of its capability.
- Description of the arrangements that have been made with local authorities.
- Description of where utility mains (electric, gas, water) enter your building, and where the shutoff points are located.
- Description of how to shut off any of those utilities if necessary, but especially electricity and natural gas, and including propane if the facility is supplied from an onsite propane tank.

Large Quantity Generators (LQG) of hazardous waste (defined in Sec. 13.3) will provide copies of the contingency plan to all local authorities that might respond if an emergency occurs. Additional LQG requirements are provide in Section 13.3.

Responsibilities

Unless the Facility/Laboratory Director designates otherwise, the EHSC is responsible for coordinating all emergency response activities at Company facilities. The EHSC will ensure emergency response phone numbers are properly posted. The emergency phone number for the primary emergency coordinator, the fire department and police must be posted by or near every phone. It is recommended that the list also include the phone numbers of other key individuals at the operation who may have to be contacted after hours. Arrangements with emergency medical facilities and other authorities must be made in advance. SDSs should have been sent to all emergency rooms and other emergency facilities in advance. The EHSC is responsible for ensuring this is completed.

The EHSC will ensure that the contents of this section are reviewed with all employees before beginning working in an area. Refresher training, conducted annually, may also be conducted when conditions indicate that employees are not adequately aware of the procedures in this section, or refuse to follow the procedures in this section.

All emergency situations, occupational accidents, occupational illnesses and near misses will be reported to the EHSC and the VP-Quality & EHS (refer to Sec. 7.1). This is the responsibility of the Manager or Supervisor for the area. Verbal notification is acceptable; however, it must be followed by an email communication that summarizes the event.

The EHSC will coordinate the investigation of all emergency situations, accidents, illnesses and near misses. The investigation will be started within 48-hours of receiving a verbal or written report of the event. Refer to Section 7.5.4 for instructions on conducting an investigation.

7.3 Evacuation of Work Areas

Some situations may require employees to evacuate the areas where they are working. All facilities and work sites must have a designated evacuation route and assembly area; and provide these maps within their Contingency Plan. Employees must be aware of the layout of the facility or area where they are to work in order to evacuate in an emergency situation.

If an area must be evacuated, employees will:

- Alert all personnel in the immediate area;
- Go to the designated assembly area; and
- Check in with their Supervisor or other designated employees

Each facility will establish a method for ensuring all employees and visitors have safely evacuated the work areas. The VP-Quality & EHS will be notified whenever an emergency evacuation is conducted and the situation could result in negative consequences to the Company. Each operation will conduct at least two emergency drills each year. Actual evacuations which occur due to false alarms or inadvertent activation of alarm systems may be used in lieu of an emergency drill if they are documented.

There may be employees working at remote sites that do not have established evacuation routes, assembly areas, or emergency response plans. Employees working at such sites will survey the area and establish evacuation routes and a designated assembly area. This will be performed before any work is allowed to begin. Employees working at remote sites without established emergency response plans will follow the procedures outlined in this manual.

7.4 Accidents, Illnesses and Near Misses

All accidents, illnesses and near misses will be reported. The reports will be made on the Company's VELOCITY EHS Incident Reporting System, as described in Section 9, Basic Rules and Procedures. Data reporting and recordkeeping procedures are in accordance with 29 CFR Parts 1904 and 1952.

- An injury is any event where an employee is hurt in a single instantaneous incident.
- An illness is any event where the employee is hurt after several repeat incidents.
- A near miss is any event that could have caused injury or damage to property or assets.

Minor injuries are injuries that are not life threatening and do not involve severe damage or danger to the employee. Nonetheless, these injuries must be reported. Managers, Supervisors and the EHSC must exercise their best judgment when deciding if an injury is minor or major. When in doubt, assume the injury is major.

Illnesses can include skin diseases, dust diseases, respiratory conditions, poisoning, disorders brought on by physical agents, repetitive trauma disorders, and so forth. The key is the harm it caused over an extended period of time.

Written reports do not have to be completed before medical attention is sought. Employees will stabilize the situation and seek any necessary medical attention. After this has been completed, the EHSC may use the Accident/Illness/Incident Worksheet (form number CW-E-WI-001) to collect information regarding the situation.

Vehicle accidents will be reported in the VELOCITY EHS System and also on the Company's Vehicle Accident Supplement Form (form number CW-E-WI-003). (Refer to Section 14.9 for details on handling vehicle accidents.) Unless there are unusual circumstances, reports will be completed within 24 hours of the event being reported to the Supervisor, EHSC or Facility/Laboratory Director.

For incidents that are likely to be classified as OSHA recordables, a drug screen test will be administered as soon as practical, and conducted in accordance with the Company's Drug Free Workplace Policy (CW-H-P-003).

7.4.1 Transportation to Medical Facilities

Employees with minor injuries may be transported to medical facilities in Company or personal vehicles. Supervisors must use caution in these decisions. If there is any doubt as to the seriousness of the injury, call an ambulance or emergency response employees. Do not allow employees to transport themselves to a medical facility.

Employees who are seriously injured or unconscious must be transported to medical facilities in an ambulance or other appropriate emergency vehicle. The only exception is when no emergency vehicle is available and the situation is life threatening.

7.4.2 Treatment of Minor Injuries

When a minor injury occurs, employees will:

- Apply basic first aid as trained. First Aid Responders are not try to perform any procedures that they are not trained to perform. Employees who do not have first aid training are not to attempt to provide first aid.
- Contact the local fire department, paramedics, or other designated emergency responders for the area.
- Have the person transported to the nearest urgent care or other appropriate medical facility.

  NOTE: Employees cannot be forced to seek medical attention for injuries. However, it is their right to seek medical services whenever they are injured. If an employee refuses to seek medical attention, the Company reserves the rights to have the employee sign the Medical Evaluation Declination Form (CW-E-WI-002) declaring that he/she has chosen to do so.
- Have someone call ahead to inform the medical facility that the employee is enroute.
- If a hazardous material is expected to be involved, fax copies of all applicable SDSs to the medical facility.
- Notify the EHSC and the employee's Manager or Supervisor. The EHSC will notify the VP-Quality & EHS.
- Complete all necessary reports.

7.4.3 Treatment for Major Injuries

When a major injury occurs, stay calm. Employees need to do whatever is necessary to protect life. When a major injury occurs:

- Move all employees to a safe area. The injured employee should only be moved if this can be accomplished without causing further injury, or when there is a life-threatening situation.

  CAUTION: People have been badly injured and killed when attempting to rescue unconscious people from areas where there is a dangerous atmosphere. Unless it is known that the hazardous atmosphere has been cleared and is safe, do not attempt to rescue unconscious personnel. Wait for the fire department or other trained responders to arrive with the proper rescue equipment and training.
- Apply basic first aid as trained. First Aid Responders are not to perform any procedures that they are not trained to perform. Employees who do not have first aid training are not to attempt to provide first aid.
- Alert other employees in surrounding areas of any potential hazards to their safety.
- Contact the local fire department, paramedics, or other designated emergency responders for the area.
- Arrange for an ambulance for the injured employee to be transported to the nearest emergency medical facility.
- If a hazardous material is expected to be involved, fax copies of all applicable SDSs to the medical facility.
- Notify the EHSC and the employee's Manager or Supervisor. The EHSC will notify the VP-Quality & EHS.
- Complete all necessary reports.

7.4.4 Investigations of Accidents / Illnesses / Incidents / Near Misses

The EHSC will coordinate the investigations of all accidents, illnesses and near misses which will be started within 48-hours of the event being reported. Each investigation will be carried out as a fact-finding mission, not a fault-finding mission. The circumstances of the incident may require the formation of a team to conduct the investigation. Investigations may be carried out by one or more of the following:

- EHSC;
- Department Managers or Supervisors;
- Facility/Laboratory Director;
- Human Resource Generalist;
- VP-Quality & EHS and/or a team appointed by the executive management team.

Incident Investigation reports are to be prepared by a third party not involved in the incident. Employees are not to prepare incident reports if they were involved in the incident. However, they may complete a report and provide it to the employee conducting the investigation as part of the final report. The individual conducting the investigation may use the services of other employees to assist in completing the investigation. Each of these individuals must complete training on how to conduct an incident investigation and prepare an incident report. Refer to EH&S Safety Training Section on the Company's intranet site (Oasis / EH&S) for all training presentations.

Appendix IX contains guidelines for conducting an incident investigation. The purposes for conducting an investigation are to:

- Assure all actions necessary to resolve, report and/or conclude the incident have been taken.
- Learn how to prevent similar events.
- Determine what deviations or actions resulted in the event.
- Collect data for educating employees about potential hazards.
- Emphasize accident prevention in the workplace.
- Establish facts that may have a bearing on legal liability.
- Help prevent injuries.

The Investigator will perform a Root Cause Analysis (RCA) that includes the following actions:

- Inspect the site of the event.
- Interview employees and witnesses that were involved. The Investigator needs to be careful not to ask leading questions. All information must be accurately recorded as given by witnesses or employees. The interview must be conducted as soon as possible after the event has occurred.

- Determine:
  - What was abnormal before the accident occurred?
  - Where the abnormality occurred.
  - When it was first noted.
  - How did it occur?
  - Why did it occur?

- Prepare a summary report, which includes recommended actions to prevent a reoccurrence.
- Conduct a post investigation briefing with management.

Some key facts to look for when conducting an accident investigation and RCA include:

- The nature of any injuries or damage.
- Parts of the body or environment that were damaged.
- Potential sources of the problems.
- The type of accident or event.
- Were there any unusual hazardous conditions?
- The source of the accident.
- Were there any unsafe acts involved?

7.5 Fires

Fires are critical events that can cause severe damage and injury. Handled properly, damage and injury can be minimized. Handled improperly, a fire can cause severe damage and even result in death. The following are steps and rules that pertain to employees.

7.5.1 Procedures for Responding to Fires

In the event a fire occurs in an area where employees are working, the employees will:

- Evacuate the immediate area.
- Notify all other employees to evacuate the surrounding area.
- Contact the fire department. If the operation does not have an alarm system which is set up to contact the fire department, call 911.
- [1]Attempt to put the fire out. Employees should only do this after they have notified all other employees and are confident that they can do so safely.

  [1]NOTE: Only trained personnel are allowed to use fire extinguishers (refer to Sec. 7.6.2). All other employees are required to evacuate the area. Do not attempt to do this step if you are not trained or are not sure of your ability to safely handle the situation.
- Go to the designated assembly area.

If an employee's clothing catches on fire, the employee will:

- Stop, drop and roll. If the employee panics, fellow employees should try to trip or knock them down so they can begin rolling on the ground.
- Call for emergency medical assistance.

If the area the employee is working in begins to fill with smoke, the employee must stay low and crawl out of the area. If reasonably possible, attempt to close doors after exiting a smoke-filled room.

7.5.2 Use of Fire Extinguishers

All facilities and vehicles are equipped with fire extinguishers. Only trained employees are allowed to use them. All other employees will evacuate the area when a fire occurs. Training for the authorized use of fire extinguishers will be repeated on an annual basis and includes information about their general principles & the hazards of attempting to put a fire out. Training will be provided before the employee is assigned to a job where they might have to use the device. Generally, the EHSC will conduct the training (Oasis/EH&S).

There are several things that are common and yet unique to all fire extinguishers. These properties make the extinguishers suitable for different types of fires.

The most important & common distinction to all fire extinguishers is that they are intended for use on relatively small fires. Attempting to use a fire extinguisher to fight a large fire can be dangerous and deadly. All fire extinguishers are equipped with a safety pin and a security seal. This pin must be pulled before the fire extinguisher can be used. All extinguishers have a discharge spout that may be a short rigid tube, or a long extended hose. Most are equipped with a pressure gauge that is used to determine if the extinguisher is adequately charged. Fire extinguishers that might be used by employees are used in the same manner.

Procedures for using a fire extinguisher are:

- **P**ull the safety pin.
- **A**im the discharge spout at the front of the base of the fire.
- **S**queeze the trigger.
- **S**weep the material in the extinguisher in a side-to-side motion.

NOTE: Employees must continue to depress the trigger until all extinguishing media has been discharged. Otherwise, the fire is likely to flare up again.

- Using a side-to-side sweeping motion, slowly move the discharge toward the back of the fire.
- Go to the designated assemble area and check in.

The most important difference between fire extinguishers is the extinguishing media they contain. These materials allow the extinguishers to be used for different types of materials that may burn. Fires are classified into groups ranging from A to D. Fires that may occur at Company operations include Class A, B, and C and at a few locations Class D. Table 7.1 describes these classes and the type of extinguishing media that would be appropriate for each class.

Table 7.1

Class	Type of Material	Typical Extinguishing Media
A	Wood, Paper, Plastic, Textiles	Water, Dry Chemicals, Foam
B	Flammable Liquids, Gasoline, Greases	Dry Chemicals, Foam, Halon, Carbon Dioxide
C	Energized Electrical Equipment	Dry Chemicals, Halon, Carbon Dioxide
D	Burning metal, e.g. white phosphorus, magnesium.	Dry powder (not dry chemical)

Each fire extinguisher contains pictograms that indicate the class of fires they may be used for. Employees must familiarize themselves with the specific type of extinguisher in their area. If a pictogram is not on a fire extinguisher, the extinguisher is not normally rated for that class of fire, but could be used if necessary. If a pictogram has a red line across it, it must never be used for that class of fire. An example of this is extinguishers with water based media. The Class C pictogram will have a red line across it because use might result in an electrical shock. Selection of the fire extinguishers to be used depends on which type of fire is being fought. Although the use of any Type BC fire extinguisher will put out instrument (electrical) fires, dry chemicals and foam will further damage any electronic components they come in contact with. The preferred extinguisher for instrument/electronic fires is Halon, and then carbon dioxide. But, the primary concern when attempting to fight a fire is that the fire be extinguished quickly. Do not delay use of a fire extinguisher while attempting to locate another one which may be less damaging to whatever is burning. Instead, ensure that appropriate fire extinguishers are selected and positioned based on the most likely type(s) of fire to be encountered at that location.

7.5.3 Hazards of Fighting Fires

Fire extinguishers are only to be used by trained employees against relatively small fires. No employee is required to fight a fire. If an employee is not confident of their ability to handle the situation, they must leave and wait for emergency response personnel.

Employees who choose to use a fire extinguisher to put out a fire must ensure that they have a safe evacuation route. Employees must not attempt to put out the fire until all other employees have been notified. Otherwise, the fire can get out of control, spread, and trap employees. Employees should have a second person available who can ensure the evacuation route is clear. This is especially important for fires in buildings or other areas where access is limited. If the area begins to fill with smoke, get out. More people die from smoke inhalation than fires.

7.5.4 Maintenance of Fire Extinguishers

All fire extinguishers must be checked and maintained on an annual basis by a certified technician. This technician will attach a state approved certification tag to each unit. On a monthly basis, the extinguisher must be checked to ensure that the seal on the safety pin is intact and the pressure is adequate. The EHSC is responsible for making sure this task is performed but can delegate this task. The employee who checks the extinguisher(s) must initial the certification tag, place a dated sticker on the tag, or complete a form which shows that each extinguisher was checked. All inspection records will be kept for at least 5 years.

7.6 Chemical Exposures

There are four ways an employee may be exposed to chemicals. They may inhale the chemical, their skin or eyes may come into contact with the chemical, ingestion, or injection with the chemical. Chemical exposures may also involve physical injuries such as cuts, contusions, broken bones and so forth. The following procedures are to be followed when a chemical exposure has occurred.

7.6.1 Exposures Due to Inhalation

- Remove the exposed employee to fresh air.
- If necessary, call emergency personnel.
- Seek medical attention for the exposed employee. Only a qualified physician can determine what treatment is necessary.
- Inform the EHSC and the employee's manager or supervisor of the event.
- Complete all required paperwork.*

7.6.2 Exposures Due to Skin Contact

- Proceed to the nearest water source. Small exposures can be handled at a sink or with a hose. All facilities where there might be large-scale exposures must be equipped with emergency showers and eyewashes.
- Begin flushing the exposed area with water. Unless otherwise indicated in the SDS, the affected area should be flushed with water for at least 15-minutes.
- While flushing the skin, remove all contaminated clothing. In the event of an emergency, when an employee's clothing is contaminated, each facility will have on hand extra clothing for the employee. Facility addendums must also be updated to include the clothing that is provided and the location of the items.
- Seek medical attention.
- Inform the EHSC and the employee's manager or supervisor of the event.
- Complete all required paperwork. *

7.6.3 Exposure Due to Eye Contact

This type of chemical exposure can be extremely harmful if not handled properly. All areas where there could be an exposure to the eye must be equipped with emergency eyewash facilities. Bottles of eyewash fluid are not considered to be adequate. The only exception is for employees collecting samples in the field who do not have access to a permanent eyewash source. In this instance, there must be enough bottles of eyewash fluid to flush the eyes for 15-minutes. If this type of exposure occurs:

- Proceed to the nearest emergency eyewash station.
- Remove glasses, goggles and so forth. Employees who work around chemicals that could be splashed must not wear contact lenses.

  Note: Refer to Sec. 8.2.2 for proper eye protection.
- Flush the affected eye(s) with water for at least 15-minutes. This can be a difficult process and the employee may need to be assisted by fellow employees.
- Seek medical attention.

- Inform the EHSC and the employee's manager or supervisor of the event.
- Complete all required paperwork. *

7.6.4 Exposures Due to Ingestion or Injection

Chemicals can be injected into the body through cuts as well as with a needle. Open cuts need to be covered when working with hazardous materials. If this type of chemical exposure occurs:

- Attempt to find out what was ingested or injected.
- Seek immediate medical attention. If necessary, call paramedics or the nearest poison control center. Follow all instructions given by personnel from these groups.
- Have the employee transported to emergency medical facilities.
- Inform the EHSC and the employee's manager or supervisor of the event.
- Complete all required paperwork. *

* Accident/Illness/Incident Worksheet (form number CW-E-WI-001). Official and final documentation is recorded in the VELOCITYEHS database.

NOTE: The VP-Quality & EHS will be notified of ***all*** chemical exposures.

7.7 Ventilation or Power Failures

All laboratories are equipped with ventilation systems (e.g., fume hoods) for controlling vapors from hazardous materials. Likewise, all facilities can be subject to power failures. If the ventilation system at a facility fails or the power goes out, employees will:

- Secure all work so that systems will not create a problem when the ventilation system or power comes back on (e.g., close chemical containers, shut off power switches, close fume hoods). This is especially important when hazardous materials are being handled.
- Go to an outer office or safe area.
- Contact the person responsible for facility maintenance. After normal working hours, contact someone on the emergency contact list.
- Wait for further instructions. The Facility/Laboratory Director or the EHSC will inform employees when it is safe to return to the work area.

7.8 Spills of Hazardous Materials

It is critical that spills of hazardous materials be handled in a safe manner. Employees may clean up small spills of a hazardous material or spills that involve minimal risk to the employee. Emergency Response Teams (ERT) must clean up large spills of hazardous materials or spills that represent a significant risk to the employees. ERTs are contracted services to an outside agency or vendor. The EHSC (or another person designated by the Facility/Laboratory Director as the primary emergency coordinator) will determine what constitutes a large spill or is a significant risk to the employees.

7.8.1 Small Spills Versus Large Spills

All employees are trained to clean up small spills of hazardous materials that occur in their work area. Based on research and a review of the main materials used at Company operations,

employees should consider spills of 500 mls or less of any material that is spilled outside the hood to be a small spill. Local emergency coordinators may restrict the amounts to lower limits if they feel this is necessary. There are some exceptions for spills of some materials which have extremely noxious materials such as Pyridine and Carbon Disulfide. Spills of 50 mls of these materials should be considered to be a large spill.

Spills of Mercury and Hydrofluoric Acid require special clean-up tools and training. This material may only be cleaned up by employees who have been trained on how to handle the materials and conduct the spill clean up.

7.8.2 Procedures for Responding to Small Spills

Various stock standards used at the environmental laboratories could contain carcinogens at or slightly above 0.1% in concentration. The typical volume of the stock standard used at any one time is 1-mL or less and they are only handled for an extremely short periods of time to prepare working standards. The working standards are all less than 0.1% in concentration and do not contain enough carcinogens to represent an elevated health hazard for employees. Employees need to know how to clean up a spilled stock standard. A release of a stock standard will be indicated by a small spill of liquid in the working area. The employee must be sure to wear appropriate gloves. Additionally, key points are as follows:

- If the material is spilled on an absorbent material such as Benchkote paper, fold the contaminated material up and collect it for disposal.
- If the material is spilled on a surface that is not covered by an absorbent material, clean up the standard with an appropriate absorbent material and collect the absorbent material for disposal.
- Decontaminate the area where the spill was located with the same solvent or acid that the standard was contained in. Absorbent material will be used to clean up the solvent or acid used to decontaminate the exposure surface and the absorbent material will be collected for disposal.

The cleanup materials will be disposed of in an appropriate waste container[1]. Alternately, the employee can contact the EHSC for assistance if they are uncomfortable in this situation.

For other spills that are small and non-threatening, employees will:

- Alert other employees in the immediate area that a material has been spilled.
- Assess the situation to ensure the spill meets the requirements for a small spill.
- Turn off all ignition sources or other equipment that might adversely react with the material.
- Clean up the spilled material. Employees will use appropriate PPE when cleaning up spilled material.
- Notify the area Manager or Supervisor that a material has been spilled. The area Manager or Supervisor will decide if the EHSC should be notified. If the spilled material caused or could have caused injury to employees or damage to property, the EHSC must be notified.
- The EHSC will determine if an incident or near miss report should be completed.

[1] Due to the various waste streams produced at the laboratories, refer to each facilities addendum for details on waste container management.

7.8.3 Procedures for Responding to Large Spills

Some large spills can be handled without taking unusual precautions. For instance, water samples that are spilled can normally be cleaned up without taking any special precautions. However, some large spills require special precautions. If the amount of material spilled is large, employees will:

- Remove everyone from the immediate area. Large spills in hallways of buildings may require evacuation of the entire building, or restricting access to the area of the spill. The decision to evacuate the building when a material is spilled in a hallway will have to be determined based on the size of the spill, the material involved and the location.
- Secure all entrances so people cannot go into the affected area.
- Contact the Facility/Laboratory Director and Primary Emergency Coordinator (if after-hours, refer to the Emergency Contact List). The Primary Emergency Coordinator will assess the situation and determine what response should be taken. Response actions may range from having employees clean up the material, to summoning the ERT or local area response teams. This will be performed from a safe area away from the spilled material. This is to ensure that no employees are injured or exposed to hazardous levels of material.
- Assist the Primary Emergency Coordinator as requested.
- Wait for further instructions. The Primary Emergency Coordinator will decide when it is safe to return to a work area.

7.9 Earthquakes

Some operations are in areas that could experience earthquakes and personnel must be prepared at any time. All equipment, such as gas cylinders, shelving and bookshelves must be secure so they do not fall over in the event an earthquake occurs. This practice is also recommended for operations which are not in earthquake zones. Bottles of chemicals must not be left close to the edge of tables, benches, etc. Restraints, such as wires and/or lips, must be attached to shelves to prevent materials from falling off. These operations should have a seismic shutoff valve installed on the natural gas main for the building.

When an earthquake occurs, follow the procedures listed below:

- **DO NOT PANIC.** Remain calm.
- **Indoors** — Get underneath something sturdy, e.g., desk or table. (If unavailable, move against an interior wall, not an exterior wall.) Hold onto the legs as the desk/table may move. Protect your head and neck at all times. **DO NOT** stand in a doorway. During large earthquakes, the door may slam shut and cause serious injury. Move away from windows and objects that may fall. Stay put until the shaking stops.
- **Outdoors** - Move away from buildings and utility poles. Avoid all downed wires.
- **In a Vehicle** - Stop in a location away from power lines, overpasses, or buildings. Stay in your vehicle.
- Be prepared for immediate aftershocks.
- Do not use the telephone unless making a call for emergency assistance (fire, injuries). Remember, the only active phone lines may be those going to the fax machines or a mobile phone.

- While the earthquake is going on, do not leave the building unless there is a reason - heavy damage, fire, gas leaks, complete loss of electrical power, etc. Once the shaking has stopped and the potential for falling objects has minimized, leave the building.
- Assist any injured or handicapped person to leave the facility.
- Assemble in one location away from the buildings, power lines, and other overhead wires and utility poles. Standard procedures at each location for accounting of employees should be followed.
- Report any suspicious findings to your manager or supervisor and the EHSC.

For minor earthquakes, when there appears to be little or no damage:
- Check for spills, gas or water leaks, or damaged sewer lines.
- If there are no leaks, check for broken electrical wiring.
- Report any suspicious findings to your manager or supervisor and the EHSC.

7.10 Severe Weather

There are several types of severe weather that could affect Company operations. The types of weather range from severe snowstorms to hurricanes. Some conditions may simply interrupt work whereas others may cause serious damage and are a major threat to employees. Employees should keep in mind; a "watch" is less severe than a "warning." As a general rule, a "warning" means the type of severe weather has a high likelihood of occurring.

7.10.1 Severe Thunderstorms and Flash Floods

If a severe thunderstorm or flash flood watch is issued, employees will:
- Back up files and data.
- Ensure that equipment can be secured and shelter is available.

If the watch is upgraded to a warning, employees should:
- Get plastic sheeting ready to cover sensitive equipment in case there is a leak.
- Monitor the weather for sudden changes. The Facility/Laboratory Director may allow employees with special transportation or special dependent care needs to leave work.
- Check all emergency lights to ensure that they are functioning properly.

If a severe thunderstorm strikes, the EHSC will monitor the progress of the storm. Employees must be aware of the possibility of power outages. If the roof leaks and the leak cannot be controlled, sensitive equipment will be shut down and covered. If flash floods occur, all employees should stay at the work site until the water reaches safe levels.

7.10.2 Tornado

A tornado will be handled in the same manner as a thunderstorm watch. If the tornado watch is upgraded to a warning, an employee will be assigned to monitor the sky for formation of funnel clouds. If a tornado forms within 1-mile of a facility, employees will be warned to take cover away from doors and windows. Employees will remain there until the tornado has passed. If the tornado strikes a building, employees will take cover under solid objects and remain there until the tornado has passed. When the tornado has passed, employees will survey the area for anyone hurt or trapped. If there is noticeable structural instability or related conditions (e.g., missing roof sections), they will evacuate the building. If outdoors, move away from utility poles.

ALWAYS AVOID DOWNED POWER OR UTILITY LINES, AS THEY MAY BE ENERGIZED. Report damaged facilities to 9-1-1.

7.10.3 Tropical Storms

Tropical storms will be handled in the same way as severe thunderstorms. The Facility/Laboratory Director will decide whether to send employees home early, or have them stay home for the duration of the storm.

7.10.4 Hurricanes

Facilities that are in areas where a hurricane may occur must include detailed procedures for employees to follow in the facility contingency plan. Hurricane watches will be handled the same as severe thunderstorm warnings. If a hurricane comes within 300-miles of a facility and the facility is in the projected path of the hurricane, employees will take the following steps.

- A team of key employees will be assembled to secure all equipment. Anything that can move will be placed inside or secured so it will not blow away.
- Non-essential employees will be sent home. These individuals will check in with their Manager or Supervisor to determine when they are to return to work. Only essential employees will remain at the work site.

  NOTE: If an evacuation order is issued for the area, all employees will leave.
- All nonessential equipment will be shut down and covered with plastic sheeting. Compressed gases will be shut off.

7.10.5 Severe Snow Conditions

If a severe snowstorm occurs, the Facility/Laboratory Director will monitor the situation. The Facility/Laboratory Director will determine if employees should leave early or stay home for the duration of the storm.

7.11 Violence and Disturbances in the Work Place

All disturbances must be reported to the Facility/Laboratory Director, the EHSC and Human Resources. If individuals create a disturbance outside the building, lock the doors and call the police. If they are inside the building, call the Facility/Laboratory Director and EHSC. Tell them you have a special personnel problem. Try to avoid antagonizing the individual. If it looks like the person may become violent, get out and call police. Do not try to stop, or get in the way of the person.

7.12 Terrorist Threats

Periodically, the federal government will issue warnings of a potential for terrorist activities. If a specific threat for the area is issued, the following steps should be taken.

- Meet with employees to discuss the situation. Remind the employees to immediately report any suspicious activity.
- Check outside areas where ventilation intakes are located to ensure access is secured and not open to the public.

- Ensure all entrances are properly secured and that employees understand that they are not to be left unsecured.
- Have someone monitor the radio for warnings on the Emergency Broadcast System (EBS). This system is used to broadcast warnings of actual terrorist activities or other emergency situations.
- If a warning is issued on the EBS, gather all employees in a central area.
- Follow the instructions given on the EBS.

7.13 Bomb Threats

In the event a bomb threat is received, decisive action is essential. Bomb threats are delivered in a variety of ways. The majority of threats are called to the target. Occasionally, the call is through a third party or communicated in writing. In the event a threat is received in writing, it must be brought to the immediate attention of the Facility/Laboratory Director and EHSC. These individuals will immediately contact the local authorities and evacuate the building.

If the threat is received by phone, the person answering the phone should attempt to keep the caller on the phone to obtain as much information as possible. A covert signal should be immediately sent to the Facility/Laboratory Director and EHSC so they can contact the authorities and evacuate the building.

While the building is being evacuated, the person who answered the phone should attempt to gather information from the caller. It is advised for more than one person to listen to the call if possible. This will have to be done using a pre-arranged signal which is intended to get the attention of another employee who can listen to the call. A calm response to the caller could result in obtaining critical information. This is especially true if the caller wishes to avoid injuries. Steps to be followed by the person who answers the phone are as follows:

- Keep the caller on the line as long as possible. Ask them to repeat the message. Record every word spoken by the caller if possible.
- If the caller does not indicate the location of the bomb or the time of possible detonation, ask them for this information.
- Inform the caller that the building is occupied and detonation of the bomb could result in injury to innocent people.
- Pay particular attention to background noises, such as motors running, music playing, and any other noise which may provide a clue to the location of the caller.
- Listen closely to the voice of the caller to determine if they are male or female and the voice quality to determine if they are calm or slightly agitated.
- Immediately after the caller hangs up, ensure that the Facility/Laboratory Director and EHSC are notified if this has not already been done.

When a written message is received, save all materials including envelopes or containers. Avoid handling the materials after it is discovered that a threat has been received.

7.14 Hostage Situations

In the event someone enters the building and takes anyone hostage, the following steps will be taken by the Facility/Laboratory Director or their designee.

- All employees, who can, will be evacuated.
- Contact local authorities and provide them details of the situation including, if possible, the number of personnel involved and type of weapons involved.
- Direct local authorities to where the hostages are being kept and assist them as requested.

7.15 Gas Leaks

When natural gas escapes into the atmosphere, it can create an immediate danger of fire and explosion. Natural gas, which is normally odorless, has had chemicals added to allow personnel to be able to smell when there may be a leak. If employees notice an odor that might indicate a leak, the following steps will be taken:

- Eliminate all open flames. Do not turn any electrical switches on or off since this can create a spark.
- Where possible, open windows to allow for ventilation of the area.
- Turn off all gas valves.
- Evacuate the immediate area.
- Contact the gas company to have them conduct an inspection of the work area.
- Wait for instructions from the gas company representative.
- Do not use cellular telephones in an area with a suspected gas leak.

SECTION 8

8.0 PERSONAL PROTECTIVE EQUIPMENT (PPE) AND APPAREL

8.1 General

It is Company policy that employees and visitors will wear PPE and personal apparel that is appropriate for the procedure that is being carried out. The PPE standard (29 CFR Part 1910.132) requires the employer to prepare an assessment of the PPE needs for the Company's facility. PPE is used in several different ways. In all cases, the equipment is designed to help protect the employee from an adverse exposure to chemicals or hazardous materials that are used.

NOTE: Employees who work at field sites will adhere to the PPE requirements in the site specific safety plans for the facilities where the work is performed.

8.2 Types of PPE and Apparel Required at Company Facilities

8.2.1 Clothing

Laboratory employees routinely work with small quantities of hazardous materials and samples. During the work process, employees could splash, or otherwise contaminate clothes and skin with the materials being handled. Unless an area has been exempt from lab coat use, all individuals entering laboratory or sample receiving areas will wear buttoned lab coats. If the potential for a chemical splash has been eliminated, an area may be exempted from this requirement. Employees will refer to their facility's addendum for any exempt areas.

Lab coats must not be taken into office areas or other areas where food and drinks are allowed. The only exception is if visitors and administrative staff are given lab coats that are distinctly different (e.g., a different color) from the coats used by the laboratory personnel. If this is the case, the coats can be hung on hooks in administrative areas as long as there was no material splashed on the coat while the personnel were in the required areas.

Employees must periodically submit the lab coats to be cleaned. Lab coats are never to be taken home and cleaned. Each operation will arrange to have the coats laundered by a private vendor. If large quantities of material are spilled on a lab coat, it is to be immediately changed.

Employees who work with hazardous materials and samples must wear closed toe shoes or boots. Cloth sneakers are not recommended since the chemicals can quickly permeate some cloth materials. Sandals and open toe shoes are not allowed in facility areas designated as a full PPE area. Open-toed shoes may be allowed on a local (facility) basis in specified transition and exclusion zones (check with the site EHSC or Facility/Laboratory Director). It is critical that all potentially exposed skin be protected. For this reason, shorts, dresses, skirts and other clothing that might leave skin exposed will not be worn when working with hazardous materials at Company facilities. When a splash apron is worn in lieu of a lab coat, a long sleeve shirt must be worn to protect the arms.

8.2.2 Eye Protection

The use of eye protection at laboratories has been a long-standing industry standard. It is standard practice to require some form of eye protection for all individuals who enter individual laboratory rooms where hazardous materials are handled. The Company also applies this practice to visitors, where applicable. At the same time, the ANSI has determined that safety glasses do not adequately protect the employee when a material is splashed, squirted, or sprayed. With these factors in mind, the Company has established the following policy:

All personnel who enter laboratory or sample receiving areas will wear eye protection with side shields. If there is a potential for an impact hazard, safety glasses are required and must meet the ANSI Z87.1 requirements for safety glasses. The only exception is if the area has been exempt from the requirement for use of eye protection as based on their facility addendum.

The type of eye protection required will depend on the area and the type of work being conducted.

Employees who handle hazardous chemicals or samples are not allowed to wear contact lenses. Hazardous materials can become trapped under a contact lens causing serious damage to the eye. The only exception to this rule is for visitors or employees whose vision cannot be corrected with prescription glasses. Employees who must wear contact lenses to correct their vision must provide a written opinion to the EHSC from their eye doctor stating that their vision cannot be corrected with the use of prescription glasses. Visitors who wear contacts must wear safety glasses and must not be allowed to be near chemicals that are being used. Employees who must wear contacts will wear goggles at all times when in the areas mentioned above.

Employees who work in laboratories have a potential for exposure of the eyes to chemicals that may be splashed, squirted, or sprayed. Most of the time, employees work with extremely small quantities of hazardous materials (e.g., 100 mls or less), and the potential for such an exposure is extremely small. Employees will occasionally work with larger quantities of hazardous materials, or in situations where the potential for such an exposure is increased. A small number of employees may perform work that would generate flying debris or other such hazards.

In some instances, employees will have to wear additional eye protection. The type of eye protection that will be used must be included in the SOP for the work being carried out.

When there is potential for a material to be splashed, sprayed or squirted, employees will wear ANSI-approved face shields and/or goggles. Typical work that requires an employee to wear a face shield and/or goggles includes, but is not limited, to:

- Pouring large amounts of liquids (What constitutes a "large amount" depends on the type and level of hazard associated with the material.)
- Dispensing solvents or other reagents using a squirt bottle or pipettes other than micropipettes with disposable tips.
- Bulking or pouring hazardous waste into larger containers.
- Putting materials into, or taking materials out of acid or other cleaning baths.
- Using glass separatory funnels or venting any separatory funnel.

- Rinsing glassware or large pieces of equipment using solvents in squirt bottles or under pressure.
- Changing compressed or liquid gas cylinders.

Employees who perform work that might produce flying object hazards must wear ANSI-approved safety glasses with side shields. Operations that would fit this category include, but are not limited to, using:

- grinding wheels
- drills
- powered sanders or chippers
- powered saws
- Systems or equipment under pressure or a vacuum when the material or equipment cannot be wrapped, shielded or otherwise contained.
- Crushing or breaking glass or using a shredder to destroy sample containers.

Most operating companies require the use of ANSI-approved safety glasses with side shields for all personnel who enter their facilities. Drivers who pick-up or collect samples from operating company sites will wear safety glasses with side shields.

8.2.3 Head Protection

Some facilities have warehouse areas where materials are stacked on shelves. If the shelves in the warehouse areas are higher than 8-feet, ANSI-approved hard hats will be worn by employees when materials are placed on or taken off the shelves. It should be noted that materials on shelves over 8-feet will not be allowed to overhang the shelf. They must be secured in a manner that will ensure they cannot fall off the shelf.

8.2.4 Foot Protection

Employees who work in field sites to collect samples will wear ANSI-approved safety shoes or boots. Employees who move 55-gallon drums or Dewar flasks containing Cryogenic gases will wear steel toe caps over their shoes, safety shoes or boots.

8.2.5 Hearing Protection

Each facility will conduct noise studies in areas where equipment that could exceed the limits in the OSHA standard (29 CFR 1910.95) is used. If potential level of exposure could exceed 50% of the allowable daily dose, employees will wear ANSI-approved hearing protection devices. If such situations exist, employees will be given an annual hearing exam. The facility must also prepare a written hearing protection program that may be incorporated into the procedures for the equipment or maintained as a stand-alone document. Employees who might be exposed to such noise levels will receive annual training. The training must include, but is not limited to, the following.

- A list of the equipment that they use that could cause them to exceed 50% of the allowable daily dose.
- The type of hearing protection they must use to protect their hearing.

- The proper means of using the hearing protection and the potential consequences of not using the equipment.

A copy of the cited OSHA standard can be made available to the employees during the training.

8.2.6 Hand Protection

Employees may be exposed to hazards that would require the use of hand protection. Sample collectors and laboratory workers routinely handle hazardous materials and samples, hot or cold materials, and materials that can cut or abrade the hands. For this reason, employees will wear gloves that are designed to protect the employee from the hazard(s) that are present.

The Company has implemented a behavior-based cut-prevention program. Employees receive annual training pertaining to cut-prevention. The program is designed to assess which tasks and procedures require cut-prevention PPE or equipment. The program is monitored through visual inspection of proper cut-prevention practices by EH&S and management personnel, and also through measurement of cut mitigation safety metrics.

NOTE: Employees must wear cut-resistant gloves (e.g., Ansell Hy-Flex™, Kevlar, and MAPA Blue Grip) when, at a minimum, the following activities are carried out:

- Separating stuck glass or other joints or broken joints.
- Connecting or disconnecting glass or Teflon joints (e.g., KD flasks and receivers or separatory funnels).
- Washing glassware.
- Opening and sealing VOA vials.
- Vortex mixing of VOA vials.
- Initially inspecting coolers that are received.
- Cleaning coolers for re-use.
- Opening glass sample containers to dispose of excess samples.
- Opening, cutting, breaking down, cleaning up materials (e.g., boxes, tubing, rope, etc.)

Where practical, the glass can be wrapped in a protective material as an alternative.

Note: Kevlar gloves are made of a woven fiber, which provides protection against slicing and slashing, but does NOT provide protection against stabbing or puncture type hazards. The point may go through the weave against the skin and cause injury. As such, they are not recommended for use in tasks where that is a possibility, such as working with or washing glassware.

Chemical protective gloves have several limitations. Chemical resistant gloves begin to break down the minute they come in contact with a hazardous material. Because each type of glove has limitations, employees must adhere to the following rules.

NOTE: Due to potential allergic reactions, use of Latex should be minimized.

- Select gloves that are appropriate for the work to be performed or the material to be handled.
  - Wear Nitrile™ gloves when organic solvents are being handled.

  - Wear insulated gloves when handling extremely hot or cold materials such as pans containing heated sodium sulfate or cryogenic liquids.
  - Wear puncture resistant gloves when handling materials with sharp, jagged edges (few instances).
  - Wear padded gloves when handling materials that could pinch or crush fingers (e.g., gas cylinders).
  - Latex or vinyl gloves may not be used when handling solvents unless they are approved by the VP-Quality & EHS.
  - Latex, vinyl or Nitrile gloves may be used when handling acids or handling samples.
  - Some circumstances will require the use of other gloves. For this reason, the type of glove that may be used must be specified. This will be accomplished by either listing the type of gloves in the SOP for the work to be performed or by creating a glove selection table for work that is performed at the facility. If a glove selection table is used, it must be included in the facility addendum.
- Immediately discard thin disposable gloves whenever a spill or a splash of hazardous materials occurs on them. If using thicker reusable gloves, periodically inspect them for degradation or deterioration.
  - Degradation occurs when a glove comes in contact with a material and the glove material begins breaking down. Examples of degradation include cracking, discoloration and unusual hardness or stiffness.
  - Deterioration occurs when the glove material is physically damaged (e.g., it is torn or punctured).
- Never use a pair of gloves worn by someone else.
  - This can cause contamination and diseases to be passed from one employee to another. It is highly recommended that employees list their initials on gloves that are intended to be reused.
- Never touch uncontaminated surfaces with gloves on.
  - When touching an uncontaminated surface with gloves, it is possible to pass the contamination on the glove to the surface. The next person who touches the surface will unknowingly transfer the contamination to their hands.
  - Keyboards will not be used with gloves on unless the keyboard is labeled "to be used with gloves only" and is considered a contaminated surface.
- When washing laboratory equipment, ensure to not allow the top of the glove go below the waterline.

8.2.7 Respiratory Protection

Employees are not allowed to order, purchase, or wear respirators without the explicit approval of the facility EHSC. There are several reasons for this requirement. Employees who must wear respirators must receive an annual medical evaluation. Employees who are not properly trained may use the wrong equipment or may not know how to properly maintain the equipment. Employees who use a respirator improperly, or who use a respirator that does not properly fit could be injured. Each operation will determine if respirators are required for work performed.

If respiratory protection is required, the EHSC will ensure that a written respiratory protection program is prepared that complies with OSHA standard (29 CFR 1910.134). Employees may be allowed to use respirators on a voluntary basis as long the following criteria are met:

- EHSC can demonstrate that the employee will not be exposed to materials at levels that will exceed any exposure limits.
- Employees complete the medical requirements listed in the OSHA standard (29 CFR 1910.134). The only exception is the use of dust masks.
- Employees are given a copy of the information in Appendix D of the cited OSHA standard.

8.3 Rules for Use of PPE

Unless otherwise specified, all PPE used by employees must meet or exceed test criteria set by either ANSI or NIOSH and will be purchased from approved vendors. The EHSC is responsible for ensuring that the PPE used at their facility meet the required standards. If individuals purchase any safety equipment, they must submit the equipment, or a certification for the equipment to the EHSC. The EHSC will review this information with the VP-Quality & EHS to determine if the equipment meets regulatory requirements. The Company will not reimburse employees for personally owned equipment that does not meet approved standard or is not approved by the VP-Quality & EHS.

All PPE will be properly fitted to the employee who must wear the equipment. Employees will maintain their PPE in a sanitary and reliable condition. Emergency equipment such as emergency escape masks must be inspected at least once a month. Defective or damaged equipment will not be used. It must be discarded or repaired. If a repair cannot be made right away, the material will be taken out of service. A tag reading "OUT OF SERVICE/DO NOT USE" will be placed on the unit until it can be repaired.

8.4 Training

Employees who wear PPE will be trained before they are allowed to use the equipment and before they are allowed to work in their assigned areas. The EHSC or designee will conduct this training. In some cases, portions of the training may have to be conducted by outside vendors. Refer to Section 4.9 for new employee orientation training documentation.

Training shall include:
- What PPE is necessary for each job to be performed?
- Why PPE is necessary.
- When PPE is necessary.
- How to put on, remove, adjust and wear the PPE.
- The limitations of the PPE.
- The potential consequences of not using or improperly using the PPE.
- How to properly maintain and care for the PPE.
- The useful life span of the PPE and when and how to dispose of it.

Refresher training will be conducted:
- At least once each year.
- When there are changes in the workplace that make the current training obsolete.
- When the employee fails to wear or improperly wears the required PPE.
- When any type of PPE changes in a manner that affects the safety of the employees.
- When an employee demonstrates improper skills or understanding of the PPE.

All training must be documented. This may be performed using a training sign-in form, a training questionnaire, and/or vendor's certificates of training or testing. Whatever format is used, it must include:

- The name of the employee.
- The date(s) of the training.
- A description of the subject matter covered.
- The name of the trainer.
- The signature of the trainer.

SECTION 9

9.0 BASIC RULES AND PROCEDURES

9.1 General

The following general rules apply to all facilities.

- All accidents, incidents, injuries, work-related illnesses and chemical releases will be reported to the employee's Manager or Supervisor and to the EHSC.
- The verbal reporting will be performed immediately following the event, or as soon as possible. Accidents will be reported within 24-hours of the incident.
- Accidents and near misses will then be reported by the EHSC on-line through the Company's defined incident reporting database, which is administered through a third-party vendor, VELOCITY EHS. An Accident/Illness/Incident Worksheet (form number CW-E-WI-001) can be used to collect information; however, the official & final documentation is recorded in the VELOCITY EHS database.

  NOTE: Refer to Section 7 for details on procedures and time-frames for management notifications.
- Be alert to unsafe conditions and ensure that these are corrected when identified or reported. Management and the EHSC will be immediately notified of any unsafe condition or broken or damaged safety equipment.
- Apparatus that may discharge toxic chemicals (vacuum pumps, distillation columns, ovens used to dry potentially contaminated samples or solvent rinsed dry chemicals, etc.) will be vented into local exhaust devices or through filters that will trap the hazardous materials.
- Trash and waste containers will be emptied before becoming overly-full or are allowed to spill out of the container.
- Do not engage in practical jokes, horse-play, rough-housing or other behavior that might confuse, startle or distract another employee.
- Confine long hair and loose clothing before working with chemicals or moving equipment.
- Provide sufficient lighting to view the operation from the hall or other observation area. Place appropriate signs on the door, and provide for containment of toxic substances when hazardous operations will be left unattended.
- Use fume hoods or other appropriate ventilation devices for any operation that might result in release of toxic chemical vapors or dust.
- Maintain the sashes on fume hoods as low as reasonably possible when in use. Constant velocity fume hoods should be closed when not in use. Variable velocity fume hoods may be maintained at the designated working level when not in use. Do not allow equipment or materials to block vents or airflow.
- Maintain fume hoods 'on' when not being used if toxic substances are stored in cabinets under the hood or the fume hood itself.
- Avoid working alone. An employee is said to be working alone when they cannot be seen or heard by another person. When working with hazardous materials it is Company policy that two employees be present in the building when work is being conducted. Certain types of work (e.g., organic extractions, wet chemistry and metals digestions) will require two people to be present in the immediate area. Under certain circumstances, it may not be possible to have a second person in the same room or area when hazardous levels of chemicals are being used. If this occurs, there will still be two employees in the building. However, the

two employees may be given Walkie-Talkies or other means of communication that can be used to communicate with one another in the event an emergency occurs and assistance is needed. If appropriate monitoring systems are being used in the facility, then although the employee is (physically) alone, they are not considered inaccessible. The area manager or supervisor, with the EHSC's approval, will decide when operations are hazardous enough to require two people.

The only exceptions to this rule are as follows:

- When an employee briefly stops at the laboratory to check on work in progress.
- An employee is only working on administrative functions and arrangements have been made to periodically check on the employee while the work is being performed.
- An employee is working in a mobile lab or carrying out fieldwork.

- Protect work surfaces from contamination by the use of plastic-backed paper liner.
- Only smoke in areas designated by the Facility/Laboratory Director. Smoking is not allowed in Company buildings or vehicles.
- All personal equipment or devices (e.g., fans or space heaters) brought from home will be UL rated (or equivalent) and submitted for approval by the EHSC and the Facility/Laboratory Director to ensure the equipment or device are in safe operating condition. Use of personal equipment is discouraged.
- The volume of all radios and other audio devices will be kept low enough for the employees to hear all emergency messages and alarms.
  - Use of one ear piece for audio devices is allowed in Company work places. Double headphones are prohibited since these devices may interfere with an employee's ability to hear emergency announcements or alarms.

9.2 Housekeeping

Good housekeeping is of paramount importance. OSHA can and will cite facilities for poor housekeeping practices. Employees will keep floors and working surfaces clean and free from clutter given that cleaning crews are not trained in sample and chemical handling procedures. Small spills will be cleaned up immediately. Glassware and other equipment will be stored in designated areas when not in use.

There is a definite relationship between safety performance and orderliness. When housekeeping standards fall behind expectations, safety performance as well as productivity, inevitably deteriorates. Hazardous materials are often present in work and storage areas. It is of vital importance that good housekeeping practices be implemented and sustained to prevent unnecessary exposure or injury.

- Chemicals will be clearly and properly labeled.
- Equipment/materials will be stored in a defined and proper location.
- Aisles will be clear of items that might cause trips or block an entry/exit from the area.
- Floors will be cleaned regularly as accumulated dust, chromatography adsorbents, and other assorted chemicals can pose a respiratory and slipping hazard.
- Trash will be placed in the appropriate containers; it will not be left on the floor, on the benches, etc.
- Work areas will be cleaned and organized at the end of the operation, or the end of the day. This includes returning chemicals to their defined and proper storage location.
- Spilled chemicals will be cleaned up promptly using the appropriate spill control procedures.

The material will be disposed of properly. (Refer to Section 7.)

- All safety equipment will be readily accessible. Access to exits, emergency equipment, electrical control panels, etc., will be kept clear at all times. It is recommended that the floor area be marked with color-coded tape.
- Electrical cords, cables, etc., will not present a tripping hazard. They will be kept tidy, preferably off the floor in conduit trays.
- Use of stairs, hallways, open areas under stairs, and cubicles for storage should be avoided. Under no circumstances are combustible materials to be stored under stairs or in hallways unless they are equipped with an appropriate sprinkler system in those areas.
- Unlabeled containers and chemical wastes will be disposed of promptly using appropriate procedures.
- Materials and chemicals that are no longer needed will not be allowed to accumulate. They will be returned to the chemical stockroom or waste room, as appropriate.

9.3 Transition Areas and Exclusion Areas

A transition area is an area that is partially exempted from a requirement in this document. For example, employees may need to take closed food containers through areas where hazardous materials are used to areas where they are not used. The EHSC and Facility/Laboratory Director might choose to designate a certain portion of the lab (e.g., hallways) as a transition area and allow employee to take these items to the non-lab area. Likewise, the EHSC and Facility/Laboratory Director may choose to allow employees to wear lab coats through transition areas in non-lab areas to get to other lab areas.

An exclusion area is an area in a facility that is completely exempt from certain requirements of this manual. For example, a laboratory room may contain a fume hood where standards are prepared for use. The remaining area in the room may only contain instruments and other equipment such as computers that do not present a risk to the employee. The EHSC and Facility/Laboratory Director could exempt employees from wearing eye protection in the areas of the room where there is no risk.

The EHSC and Facility/Laboratory Director for each facility will decide whether transition or exclusion areas are appropriate for that facility. In both cases, they will justify the following:

- Employees in the transition or exclusion areas are not at risk. For example, if an area is exempt from the requirement for eye protection, there is no risk that chemicals could be splashed into the employees' eyes.
- The areas have been adequately marked or defined so employees clearly understand where the areas begin and end.
- Employees are clearly informed of the limitations of the exemption or exemptions that are allowed in the areas.
- The limitations of the areas are enforced.

It should be noted that the EHSC's and Facility/Laboratory Directors are not required to use transition or exclusion areas. They may decide that the exemptions cannot be adequately enforced and simply not to use this provision. It should also be noted that the VP-Quality & EHS has the final decision on when a transition area or exclusion area may be used at a facility.

9.4 Electrically Powered Apparatus

Only qualified persons are permitted to work on electrical equipment and systems (e.g., electrical wiring, control panels, etc.). All Company employees who are authorized to work on electrical equipment will attend an electrical safety class that meets OSHA Standard, "Electrical" Title 29 CFR 1910.301.

Employees should power down any unessential equipment during non-business hours to conserve power and avoid potential electrical short circuits that could occur.

9.4.1 Outlets

Electrical outlets will have a grounding connection (3-pronged plug).

If possible, outlets will be located so as to minimize the possibility of water or chemicals being accidentally spilled on them. Outlets within 6-feet of a water source will be equipped with a Ground-Fault Interrupter Circuit (GFIC). GFICs will be used in cold rooms or coolers since outlets and equipment may experience condensation and promote electrical shock.

Fume hood electrical outlets will be located outside the hood to prevent the production of sparks inside the hood when a device is plugged in. This location also permits the employee to disconnect electrical devices from outside the hood.

All electrical equipment (e.g., drills, skill saws, etc.) that is used outside will be equipped with or plugged into portable GFICs.

9.4.2 Wiring

The condition of wiring and cords attached to equipment will be frequently inspected. This inspection does not have to be documented unless specifically required by the VP-Quality & EHS. All wiring that is worn or frayed will be taken out of service and either repaired or eliminated. This includes if there are any exposed inside wires that can be seen through the outer insulation regardless of whether the insulation on the inside wiring is intact.

Extension cords are not to be used in place of permanent wiring. The only exception to this rule is use of surge protectors when protection is necessary for the equipment. Extension cords should be considered to be a temporary solution for lack of power at a location within a facility. The use of such items will be limited and the installation of a permanent solution, such as additional electric circuits, will be implemented as soon as practical. When extension cords are used, they will be of sufficient gauge for the anticipated load, will be secured to prevent a tripping hazard, and will not be run through walls or across ceilings.

Only 3-prong extension cords that meet UL test requirements may be used at Company facilities. Extension cords that are brought in from the home or are purchased by employees must be approved by the EHSC.

9.4.3 Electrical Control Panels

Control panel and circuits should identify outlets so they can quickly be turned off from outside the work area. Electrical control panels will not be obstructed. OSHA regulations and the National Electrical Code require a clearance of at least 36-inches in front and 18-inches on each side of the control panel be maintained at all times.

9.4.4 Portable Heaters

Use of portable heaters is discouraged and restricted by location to prevent overheating and overloading electric circuits. Portable heaters are not permitted in areas where flammable materials are stored or used.

Portable heaters may only be used when the building systems cannot provide adequate heating in an area, will be UL listed and will be approved by the EHSC or Facility/Laboratory Director before use. Portable heaters also may not be plugged into extension cords or power strips due to fire risk.

Local management may authorize or prohibit the user of personal space heaters, based on local conditions. If authorized and used, the following must be adhered to:

- Space heaters use a significant amount of electricity. Ensure that whatever electrical circuit they are added to is capable of supporting the load, in addition to whatever other electrical demands already exist.
- When choosing a space heater, ensure that there are no exposed heating elements that can come into contact with a person or other objects/the surroundings.
- When choosing a space heater, ensure that it has shutoff protection for both tip-over and overheat.
- Space heaters may only be plugged directly into a wall outlet, never into an extension cord or power strip.
- Space heaters must be unplugged from the wall outlet when the user leaves at the end of their shift or at the end of day.

Timers may not be used to either turn the space heater on before the user arrives, or turn it off after they leave.

9.4.5 Static Electricity

Static electricity is promoted by protective clothing made of plastic or synthetic materials and low absolute humidity (e.g., cold weather). It can also be caused during the transfer of flammable solvents. Containers of flammable solvents will be properly grounded and bonded when liquids are being poured into them because static electricity could create a spark, fire or explosion.

9.4.6 Motors

Non-sparking induction motors will be used where volatile flammable materials may be present. Induction motors cannot be controlled by variable autotransformers because the motor may overheat and cause a fire. Series-wound motors (kitchen appliances including mixers, blenders, vacuums, and drills) will not be used where flammable materials may be present.

9.5 Lockout and Tagout (LOTO) of Energized Sources

The primary purpose of a LOTO Program is to prevent equipment that is powered by hazardous energy sources from being accidentally turned on when maintenance is being performed. Each facility will assess the need for a LOTO program.

If the facility has equipment that requires LOTO devices and the equipment is serviced by

outside vendors, the contractor will be required to have a LOTO program that complies with Federal and State programs. If facility employees service the equipment, the facility will develop a program that complies with the OSHA Standard, "Electrical" Title 29 CFR 1910.301.

All Company employees who service equipment, which requires the use of LOTO devices, will receive annual training on the facility's LOTO program. Other employees at the facility who could normally access areas where the equipment is located will be given general awareness training. This training will include:

- General purpose of the standard.
- How to recognize when a LOTO device has been applied.
- Statement that the LOTO device may only be removed by the person who applied the device.

9.6 Equipment Guarding

All mechanical equipment will be equipped with guards that prevent access to moving parts (such as the belts and pulleys) or energized equipment. Equipment guards will not be removed or bypassed when work is being carried out. Employees will inspect equipment before use to ensure that the guards are in place and functioning.

Equipment with cover panels (such as Gas Chromatograph units and computers) will not be energized or operated with covers removed. Equipment may be energized or operated with the cover removed for testing provided a control measure is in place to prevent inadvertent contact with energized circuit boards, heat sources, and power supplies.

9.7 Glassware

Accidents involving glassware are a leading cause of all laboratory injuries. The following are guidelines for use of glassware in the laboratory.

- Glassware will be carefully inspected prior to use. Chipped or broken glassware will be removed from service and either repaired or disposed of.
- Careful handling and storage procedures will be used to avoid damaging glassware.
- Adequate hand protection will be used when inserting glass tubing into rubber stoppers or corks, or when placing rubber or plastic tubing on glass hose connections. Glass tubing should be fire polished or rounded and will be lubricated. Hands should be held close together to limit movement of glass if fracture occurs. The use of plastic or metal connectors should be considered.
- Heavy gloves or other hand protection will be used when collecting broken glass. Tongs or large tweezers may be used to pick up large pieces of glass. Small pieces will be swept into a dustpan with a brush.
- Employees who attempt to separate stuck or broken glass joints will wear cut resistant gloves (e.g., Ansell HyFlex™ or MAPA Blue Grip gloves) or use another equivalent method of protecting their hands. (Refer to Section 8 for PPE.)
- Employees who wash glassware will wear cut resistant gloves (e.g., Ansell HyFlex™ or MAPA Blue Grip gloves).
- Employees will wear cut resistant gloves (e.g., Ansell HyFlex™ or MAPA Blue Grip gloves) or will wrap the vials in a protective material when opening and closing VOA vials.
- Employees will wear cut resistant gloves (e.g., Ansell HyFlex™ or MAPA Blue Grip gloves)

when vortex mixing of VOA vials.

- Proper instructions will be provided for first-time users of glass equipment designed for specialized tasks that may represent unusual risks. For example, separatory funnels containing volatile solvents can develop considerable pressure during use; these will be vented frequently into the hood.
- Vacuum glassware will be taped, shielded or otherwise protected to prevent shattering.
- Always grab large glass containers (e.g., greater than 1-liter) with one hand around the container and one hand under the container. Never attempt to pick up glass bottles by the handles. The handles on glass bottles have been known to break. This can cause a major spill and/or injury.

9.8 Shielding

In general, safety shielding will be used for any operation that has the potential for explosion or implosion. The following precautions will be taken.

- Whenever a reaction/procedure is attempted for the first time, use small quantities of reactants to minimize hazards.
- Place the shields so that all personnel in the area are protected from the hazards.
- Ensure all employees are aware that an explosion or implosion hazard is present.
- Blenders that are used to homogenize soil should be made of an unbreakable material (e.g., plastic or metal) to prevent breakage from solid materials in the samples.

9.9 Review of New Projects and Use of New Equipment

Special projects will be reviewed and approved by the Facility/Laboratory Director and the EHSC. This includes research projects or when new methods are being developed at an operation. Development of the methods will not be allowed until the form has been completed. Hazards and potential hazards will be addressed and resolved during the review process. If the operation cannot be performed safely, it will not be started.

Before any new equipment is introduced into an operation, the EHSC will determine if there are any unusual hazards that need to be communicated to employees working in the area. If it is determined that there are hazards that the employees are not already aware of, a training session will be held to communicate the information to the employees.

9.10 Ladder Safety

NOTE: Employees are forbidden to work on raised surfaces (e.g., scaffolds or man lifts) other than ladders above 6-feet unless there is a protective railing that will ensure they cannot fall.

9.10.1 General

Ladders are used in almost every area of the work place (e.g., offices as well as shops, laboratories and field operations). Whenever materials are to be lifted or work performed above chest height, a ladder or in some instances a step stool may need to be used. This is especially important when lifting or handling heavy or bulky materials.

Various types of ladders used include fixed ladders which are attached to equipment or buildings, extension ladders that extend up to 60-feet, straight ladders which are used to reach

up to 30-feet, and step ladders that range from 3- to 15-feet. Used correctly, ladders are valuable tools. Used incorrectly, ladders can become dangerous devices and may lead to serious injuries. The following are guidelines to be followed when using ladders.

9.10.2 Basic Rules

- All ladders will be kept in good condition. Employees using ladders will be responsible for inspecting them prior to use and will immediately report any defective ladders to the EHSC or facilities staff for repair or disposal.
- Watch out for overhead obstructions when setting up ladders.
- Do not place ladders close to electric wiring or against piping (e.g., acid lines, chemical lines, and sprinkler systems) where damage could be done.
- Fiberglass or wooden ladders will be used whenever work is conducted near electrical equipment.
- Ladders will not be used in a horizontal position as platforms, runways or scaffolds.
- Ladders should never be placed in front of doors unless the door has been locked, roped off or otherwise guarded.
- Always face the ladder when ascending or descending.
- Never slide down a ladder.
- Hands will be free of materials when climbing ladders. Hand lines or tool pouches should be used to raise or lower materials. Small tools may be carried on a tool belt.
- Never reach or lean too far to the side. Maintain balance by keeping ones' body between the side rails.
- Keep the area around the base of the ladder free of clutter.
- Keep ladder rungs free of grease, oil, dirt or other foreign objects.
- Check shoes for grease, oil, mud or other slippery materials. Be especially careful if shoes have been exposed to slippery materials, when ascending or descending a ladder.
- Rubber ladder shoes should not be used on oily or wet surfaces.
- No ladder will be used to support more than one individual at a time unless the ladder is specifically designed for that purpose.

9.10.3 Step Ladders

- Legs on step-ladders will be fully extended, and the spreaders locked before the ladder is used.
- Do not use a step-ladder as a straight ladder.
- Step ladders over 8-foot should be secured by a second person so they can not shift.
- Never use the top of a step-ladder as a step unless the ladder has a protective railing around the top step.

9.10.4 Straight and Extension Ladders

- When using a straight ladder to climb to a roof or platform, the top of the ladder should extend at least 3-feet above the top of the roof or platform.
- All straight ladders will be placed so as to prevent slipping. If this is not possible, the top portion of the ladder will be secured before it is used. When this is necessary, a second employee will hold the ladder while the top is secured.

- The top two rungs of an extension or straight ladder are never to be used for support.
- Both hooks on an extension ladder will be secured over a rung before the ladder is used.
- When setting up a ladder, the base of the ladder should be set approximately 1-foot for every 4-feet of rise.

9.11 Use of Fork Lifts and other Lift Devices

When forklifts or other large lift devices are used, it is imperative that the device be used in a safe effective manner. Forklifts may only be used by employees who have completed training as specified under the OSHA Standard "Powered Industrial Trucks (Forklift), 49 CFR 1910.178. When using a forklift or lift device, the following rules will be followed.

- Conduct an assessment prior to using the lift device to verify that it is necessary and to eliminate or adequately control risks to health and safety.
- Ensure loads are not lifted that exceed the load rating of the device.
- Ensure all loads such as pallets are suitable and fit for purpose.
- Ensure that the lifting equipment is positioned in a manner to prevent the risk of injury, e.g., from the equipment or the load falling or striking people.
- Do not use equipment such as slings or other devices unless it is rated for that purpose and the load rating is clearly posted on the equipment.
- Only use equipment for lifting people that is designed and safe for such a purpose and clearly marked with any appropriate information such as safe working load and details of the number of persons it can lift.
- Plan the operation so that risks are adequately identified and controlled
- Check the forklift before it is used. The forklift will be inspected at least once each day prior to use. The inspection will be documented.
- If the examination or inspection of the forklift indicates a safety problem, do not use it.

9.12 Use of Hand & Power Tools

It is critical that hand and power tools (e.g., hammers, pliers, cordless-drill) be used and maintained in a safe condition. The use of power tools must be approved by the EHSC prior to their use. Employees who use hand and power tools are expected to visually inspect the tools prior to use. If defects are detected that could represent a safety hazard, the employee will stop work. The defect will be reported to the EHSC who will take the tool out of service. The tool will not be used again until it can be repaired or replaced. Hand and power tools will be kept in a location where the EHSC can inspect them. Employees are allowed to use safety knives and are not permitted to use non-safety knives such as box cutters. This limitation does not apply when specialty knives such as Exacto Knives are necessary for the work being conducted.

9.13 Use of Minor Lift Equipment

Minor lift equipment includes, but is not limited to, small scissor lifts or other devices that are used to lift equipment or materials from the floor to bench tops or appropriate work heights. This equipment will be used safely.

Safety precautions will be written into any procedures that might require use of the equipment (e.g., receipt of sample coolers). A list of employees who are trained on the procedure will be

maintained. The employees will inspect the equipment prior to use to ensure that it is operating properly and in safe condition.

9.14 Parking Lot Safety

Employees will be aware of their surroundings and the environmental circumstances. Employees need to be aware of moving vehicles when they are in parking lots or crossing streets to operations since moving vehicles can cause serious injuries. In addition, employees need to be aware that in certain circumstances, such as inclement weather, parking lot surfaces may be slick or icy and can cause employees to fall and injure themselves. If there are any suspicious individuals, immediately leave the parking lot and go to a safe and secure location.

SECTION 10

10.0 USE OF HAZARDOUS MATERIALS

10.1 Procurement of Chemicals

The EHSC does not have to review and approve the purchase of chemicals that are routinely used at the facility. However, each operation should ensure that excess amounts of chemicals are not ordered due to the expense incurred to dispose of any excess quantities that are not consumed. Disposal costs routinely exceed the cost of the chemicals themselves. This can be further complicated by the fact that some chemicals are extremely difficult and expensive to dispose of.

The Facility/Laboratory Director or their designee and the EHSC will review and approve the orders for chemicals that have not been previously purchased. No chemical will be released for use until the SDS is available. A chemical that has been purchased without authorization, free samples and trial materials will not be released for use until the hazards have been reviewed and a SDS has been received and evaluated by the EHSC.

No container will be accepted without an adequate identifying label. All substances should be received in a central location.

10.2 General Rules for Use of Hazardous Materials

The following rules apply to all chemicals that might be used.

- Read all SDSs before working with materials for the first time. Review them again when questions arise about the material. This rule cannot be stressed enough. Knowing information in SDSs can make the difference between whether accidents occur, and how severe the accidents are.
- If the information in a SDS does not adequately address the employee's questions, or is unsure how the information relates to the work, contact the EHSC.
- Wear all PPE as required.
- When there is the potential for a splash hazard, use goggles and/or a face shield.
- If an employee has an abrasion or open cut, protect the wound from potential exposure with bandage. Always inform the supervisor of an open cut or abrasion that could be exposed to the materials that are to be handled.
- Work with chemicals in a fume hood or in a well ventilated area.
- Take whatever steps are necessary to minimize the potential exposure to all chemicals, including those that are a minor hazard.
- With the exception of small containers of standards, write the date the material was received and expiration date on the container. This is exceptionally important for containers that hold materials that are unstable, or may become unstable over time.
- Ensure labels on original containers have not been removed or defaced. Secondary containers, such as squirt bottles, are labeled as per Section 5.7.2.

- Keep all glass containers that hold liquids in secondary spill trays, or secured in a manner that will ensure they cannot be tipped over, leak, or be broken. This will help minimize the impact on production if a container does break or leak.
- Keep all RCRA hazardous waste (defined under Sec. 13.5.2) as well as PCB waste in secondary containers.

  NOTE: The storage area inside flammable storage cabinets is designed to adequately contain any spilled or leaking materials. The storage area inside corrosive cabinets is not.
- Never leave uncovered or unlabeled containers unattended.
- Report any unknown materials so they can be properly identified and disposed of.
- Promptly react to all spills (refer to Section 7).
- Always return materials to their proper storage area. No chemical or sample is to be left out overnight.
- Always wash hands, forearms and other areas of the body that might have been in contact with chemicals, hazardous materials and/or samples before eating, drinking, smoking, or applying cosmetics or lotions. Never store, handle or consume food and/or medication in areas that contain hazardous chemicals or samples.

  NOTE: Food or other consumable items can be transported through transition areas to move from one area where chemicals are not used to another area where chemicals are not used. If food or other consumable items are to be taken through transition areas, it will be in closed containers that will prevent the potential contamination of the consumable material. Food, drink, medication, chewing gum, cigarettes, and lotions may never be stored in transition areas. Areas where food is permitted will be prominently posted (for example, EATING AREA - NO CHEMICALS OR LAB COATS ALLOWED).
- Never take lab coats, hazardous materials or samples into areas where food and other consumable items are consumed or stored.

  NOTE: Offices adjacent to laboratories are not considered to comply with this requirement if employees access the office through the laboratory, and/or if the walls do not go from the floor to ceiling. Areas where closed food and drink containers may be taken will be defined in the facility addendum.
- Never use glassware or utensils that could be used for laboratory operations to prepare or contain food or beverages.
- Do not store food and other consumable items in laboratory refrigerators/freezers, ice chests, cold rooms, and areas where samples or hazardous materials are stored. Laboratory refrigerators and freezers will be marked "NO FOOD ALLOWED."
- Never pipette by mouth.
- Never smell or taste chemicals or samples.

10.3 Flammable and Combustible Materials

A flammable liquid is any liquid with a flash point of less than 100°F.

A combustible liquid is any liquid with a flash point between 100°F and 200°F.

The term flash point means the minimum temperature at which a material will burn when properly mixed with air. These types of materials are hazardous because they readily burn and can be ignited by simple spark sources. Extreme care needs to be taken when handling these types of materials. This is especially important when handling materials with flash points below

normal room temperature and/or materials whose vapors are heavier than air. Flammable liquids typically handled at facilities include, but are not limited to:

Ethyl Ether	Acetone	Toluene	Diesel Fuel
Tetrahydrofuran	Hexane	Xylene	
Methanol	Acetonitrile	Gasoline	

, In addition, many samples handled are highly flammable. Rules that apply to the use and storage of flammable or combustible liquids are:

- Store flammable or combustible liquids in appropriate containers (e.g., no more than 1-gallon may be stored in glass containers). They may only be dispensed into, and used in open containers if they are intended for immediate use. All containers will be returned to their designated storage area when they are not in immediate use.
- Keep minimum amounts of materials out and in use.
- Do not exceed storage limits. Refer to Section 6.5.2, Table 6.3 for storage limits.
- Never store flammable or combustible liquids with oxidizers or other corrosive materials. These materials may react violently, or spontaneously combust when mixed.
- Never heat flammable and combustible liquids on an open flame or a heat source with exposed spark sources. Allowable heat sources include steams baths, water baths, heating mantles, hot plates with sealed heat sources, and hot air baths.
- Keep flammable and combustible materials away from all potential ignitions or spark sources. This is especially important for ethyl ether and other liquids with vapors that are heavier than air. Vapors from these types of materials can flow along the ground and be ignited by spark sources some distance away.
- Handle quantities greater than 50 mLs in a fume hood or well-ventilated area.

10.4 Peroxide Forming Compounds

Peroxides are highly reactive and/or explosive compounds. Some organic solvents may form peroxides when stored or evaporated to dryness. This has resulted in many laboratory accidents and explosions. Once peroxide has been formed, it can be detonated by simply moving the container. This coupled with the fact that most organic solvents that may form peroxides are also highly flammable is a formula for disaster.

Two such solvents that are sometimes used in procedures are ethyl ether and tetrahydrofuran. Employees who handle these materials will be aware of this problem. Employees will be aware when to submit the materials for disposal, how to check for peroxides, and what to do if peroxides are developed. Rules for handling peroxide forming compounds are as follows.

- Write the date the container is received and expiration date on the label. The materials in the container will be submitted for disposal by the manufacturer's expiration date on the container.
- Whenever possible, purchase these materials in the smallest available containers.
- Cap all containers tightly and store in a dark area away from heat sources. If possible, purge the container with nitrogen before putting the cap on.
- Keep all materials that may form peroxides out of regular refrigerators. If they are to be refrigerated, place them in explosion proof or flammable refrigerators or freezers.

- Collect and preserve all waste that might form peroxides with alcohol or other anti-oxidizers.
- Avoid evaporating these types of materials to dryness. If you have to evaporate the materials to near dryness, use a stream of nitrogen. If possible, contain the apparatus behind an explosion shield.
- If the shelf life of a container of one of these materials is exceeded, a container has been open for more than 6-months, or there is evidence of peroxide formation, contact the EHSC. **DO NOT ATTEMPT TO OPEN OR MOVE THE CONTAINER.** This could cause the peroxide to detonate. Visible evidence of potential peroxide formation includes formation of crystals around the cap, formation of a viscous layer at the bottom of the container, or rust around the surface of the can.

10.5 Other Potentially Unstable Compounds

Unstable compounds include all compounds that may react violently when exposed to mechanical shock, friction, elevated temperatures, chemical interactions or exposure to air or water. Examples include elemental Phosphorus, Sodium, Lithium as well as di- and tri-Nitrotoluene and Phenols. These include explosive materials regulated by the federal government, air reactive materials, water reactive materials, shock sensitive materials, and so forth. Unstable compounds can cause serious damage. For this reason, no unstable compound may be used at a facility without the express permission of the VP-Quality & EHS. The facility will prepare specific procedures if these types of materials are to be used.

One unstable compound that is routinely used at an operation is diazomethane. This material is used while preparing sample extracts for analysis of herbicides. In addition to being unstable, this material is prepared in a solution of ethyl ether, which is highly flammable, and is a peroxide forming compound. Employees manufacture this material in small quantities in glassware with specially polished "clear seal" joints. When handling this or other unstable compounds, employees are to remember the following:

- Use proper safety equipment such as face shields, explosion shields and so forth.
- Segregate the materials from other items that might adversely react with them.
- Keep reaction quantities small. Use only the minimum amount necessary to conduct the procedure.
- Post signs warning other employees of the potential hazards.
- After the work has been completed, deactivate any remaining unstable materials, and turn the material in for proper disposal.

All employees who handle either diazomethane or TMSD (trimethylsilyldiazomethane) are required to complete the training course on the safe handling of these materials (refer to training documents available on Oasis / EH&S). Additionally, employees who work in the same room where diazomethane or TMSD is used are required to complete the training on safe use of these materials. Only hoods that are vented to outdoors via vertical flow ducting are to be used to handle diazomethane or TMSD. Self-contained, re-circulating type hoods cannot be used to handle either reagent.

10.6 Corrosive Materials

There are four classes of corrosive materials: strong acids, strong bases, dehydrating agents, and oxidizers. Some corrosive materials fall into more than one of these classes. For example, sulfuric acid is a strong acid, a strong dehydrating agent, and an oxidizer. Each of these classes is discussed below.

Corrosive materials are destructive to human skin. Many are also destructive to metal compounds or containers. Local effects of exposure range from minor irritation of the skin or affected area, to severe tissue damage. Some corrosive materials require repeated exposures over some time before symptoms develop; and some may react and cause severe damage after only short-term exposures. Others may have a delayed effect that may not be manifested for several hours after the exposure has occurred.

Employees will use extreme caution when handling corrosive materials that could become airborne. If corrosive materials are inhaled, they may cause severe internal damage. If there is a potential for a corrosive material to become airborne, it will be used in a fume hood, or by someone who is authorized to wear a respirator mask.

10.6.1 Strong Acids

Strong acids commonly used include, but are not limited to, nitric acid, sulfuric acid, and hydrochloric acid. Concentrated acids will cause severe damage to the skin and mucous membrane which will occur after only one exposure.

Hydrofluoric Acid is exceptionally dangerous. It will initially pass through the skin, with no visible injury for up to 24-hours, and will not begin reacting until it reaches the bone. This material reacts with the calcium in the bone and if given time to react, it will cause severe damage and extreme pain. The only effective treatment once it has reached the bone is to conduct surgery and inject neutralizing agent into the bone.

Employees are not allowed to work with Hydrofluoric Acid unless they have calcium gluconate neutralizing gel immediately available. If skin exposure occurs, the employee is to immediately wash the affected area for 5-minutes with water. After rinsing with water, apply a calcium gluconate gel to the affected area, and massage into the skin. Re-apply the gluconate neutralizing gel every 15-minutes. Medical attention will be sought as soon as possible. If contact is to eyes, rinse for 30-minutes and use an ice pack until medical treatment is available. Refer to the SDS for additional information.

10.6.2 Strong Bases

Bases are corrosive substances based on having a pH >7.0. The three most common strong bases used are potassium hydroxide, sodium hydroxide, and ammonium hydroxide. Ammonium hydroxide is an extreme respiratory irritant and must be used in a fume hood or outside in a well-ventilated area. These types of materials are exceptionally damaging to the eyes and mucous membrane, and can cause severe burns.

Vapors and fumes generated from bases can cause irritation to the eyes, skin, and respiratory tract. Chemical burns can occur if bases are allowed to contact skin or eyes. Bases can cause irreversible damage to the eyes; even in dilute concentrations.

In the event that a base comes in contact with your skin or eyes, flush the affected area with copious amounts of water for at least 15- minutes. If contact was with the eye, pull the eyelid up and out, exposing the cornea. Seek medical attention as soon as possible.

10.6.3 Dehydrating Agents

Common dehydrating agents that are used include sulfuric acid, sodium hydroxide, phosphorus pentoxide, and calcium oxide. These materials react vigorously when mixed with water. This reaction results in the release of large amounts of heat (exothermic reaction). These materials have such an affinity for water that they can cause severe burns on contact with skin or other tissue. If combined with water in the wrong manner, the reaction can be very violent. To minimize the potential for a violent reaction, employees will always add the dehydrating agent to the water, and not the water to the agent.

10.6.4 Oxidizers

Oxidizers include materials such as chlorine, fluorine, bromine, iodine, perchloric acid, sulfuric acid, nitric acid, sodium nitrate, potassium nitrate, chromic acid and so forth. Any material with oxygen in its molecular structure may potentially be an oxidizer. Oxidizers spontaneously evolve oxygen and, therefore, may create a fire or explosion hazard in some environments.
In addition to having corrosive properties, these materials can form highly flammable or explosive mixtures when mixed with organic materials. For example, perchloric acid may form highly unstable compounds that can detonate on contact. Potassium permanganate may spontaneously combust after just a few drops of glycerol are added. Always store strong oxidizing agents in glass or some other inert container. Never use corks or rubber stoppers to seal or close the containers. They may react with the oxidizer to form unstable compounds.

This type of material can cause extreme irritation and sometimes burns to the skin. Flush affected area with copious amounts of water for 15-minutes. Seek medical attention as soon as possible.

10.7 Carcinogens, Reproductive Toxins, and Substances that are Highly Toxic

Carcinogens are substances which are known to cause cancer in humans or animals and are:

- Regulated by OSHA.
- On the National Toxicology Program (NTP) list of "known carcinogens."
- On the International Agency for Research on Cancer (IARC) Group I list of materials that are carcinogenic to humans.
- On the IARC Group 2A or 2B list, or the NTP list of materials that are "reasonably anticipated to be carcinogens."

Reproductive toxins are chemicals that have been shown to cause reproductive affects in animals at some level. They include mutagens, which cause chromosomal damage and teratogens that affect the fetus during development.

Substances with a high acute toxicity are materials that can cause symptoms of exposure or damage at extremely low levels. Appendix V contains a discussion on the levels of toxicity.

Each of the materials listed above will be handled with extreme care. Signs will be posted in areas where carcinogenic materials are handled. It is critical for each employee to know if the materials they are using fall into one or more of these categories. A list of carcinogenic materials contained in the various standards used at any facility has been prepared and added to Appendix XII. The list will be reviewed with the employees who work in the laboratories at least once each calendar year. However, the only practical way to know if a carcinogenic material is being used is to read the SDS for each material before working with it. This is the reason why each employee is required to review the list of materials used in the SOPs they perform, read the SDSs for the standards and compounds used against the list in Appendix XII. When employees handle these types of materials, they will:

- Always use the materials in a fume hood or extremely well ventilated area. Never use these types of materials on bench tops, or other areas that are not in fume hoods.
- Avoid all skin contact by wearing gloves and other appropriate PPE.
- Immediately wash any body parts that come into contact with the materials.

10.8 Cryogenic Liquids and Solid Carbon Dioxide

Cryogenic materials are substances that are kept at very low temperatures (< -100°F) and may be liquids or solids. Atmospheric gases, such as nitrogen, oxygen, or hydrogen, that are cooled to temperatures < -150°F, become liquefied and are examples of cryogenic materials.

The primary cryogenic liquids used in operations are liquid argon and liquid nitrogen. Another material that represents an extreme hazard if mishandled is solid carbon dioxide (a.k.a., dry ice). All of these materials can cause severe burns and sometimes permanent damage if they come into contact with the skin.

Materials that have been submerged in cryogenic liquids become extremely hard and brittle. Immediately after they have been removed from the liquid, they can be shattered by simply bumping the object against a hard surface. This includes fingers and other appendages. Employees who dispense cryogenic liquids into secondary containers or Dewar flasks will wear insulated gloves and a face shield.

10.9 Compressed Gases

Compressed gases are covered in Section 11.0

10.10 Samples

In many cases, the hazard level of each sample is unknown. Employees will consider all samples to be hazardous and samples and sample containers will always be handled with gloves. Employees who handle samples will wear buttoned lab coats. Upon receipt, sample containers should be inspected for breakage or leakage. This will be performed in a fume hood or other appropriately ventilated area. If a container is broken, it should be reported to the EHSC or the area manager or supervisor. This individual will decide what action will be taken. Always open sample containers in a fume hood or other well-ventilated area. This is especially important when the sample might give off noxious odors.

Employees are to consult with their immediate manager or supervisor and/or any data provided by the receiving department or project manager to determine if there are any additional precautions that need to be followed for unusual samples. All samples determined to be

hazardous by analysis are to be disposed of in accordance with appropriate regulations and good laboratory practices. When reasonable, the samples should be returned to the client for disposal. Each operation will have a system in place to identify samples which need special disposal considerations or are a RCRA hazardous waste. Employees will be trained on procedures for flagging samples for special disposal. Flagging the samples may be the responsibility of area managers or supervisors, analysts or sample receiving personnel depending on where it is determined that special disposal requirements are necessary. Procedures for flagging or identifying special samples should be included in each facilities waste management or sample management SOP.

Unless a facility has a radioactive materials license, samples which exceed safe release criteria to the general public (as specified in the government regulations) will not be accepted. If there is any uncertainty as to whether samples may be accepted, the Division RSO will be contacted or the samples should not be accepted.

10.11 Biological Hazards

Biological hazards resulting from laboratory-related infections are generally less readily recognized than acute health effects resulting from exposure to chemicals. Each facility that handles, or might handle human blood, human body fluid or human tissue samples of any type will develop an Exposure Control Plan that complies with the Bloodborne Pathogen Standard, 29 CFR 1910.1030, Bloodborne Pathogens. Employees who might be exposed to bloodborne pathogens will receive training on the plan at least once each year. This plan will be reviewed and approved by the VP-Quality & EHS.

10.12 Chemical Warfare Agents and Degredate Testing

The testing of environmental samples from military installations in the United States for the presence of chemical warfare agents is an entirely different type of testing from a safety standpoint than any other work performed. This work also presents an entirely new set of potential hazards in the operation. There are numerous issues that will be thoroughly evaluated and addressed before agreeing to perform work in this arena, or even to accept samples for other analyses from locations associated with chemical weapons storage, testing or destruction. In some cases, the degredates are as hazardous as the chemical warfare agents themselves.

The testing of any type of sample for the presence of actual chemical warfare agents is not a suitable task for any of our current facilities. This type of work requires more extensive training and safety procedures than are available at our facilities. Additionally, the environmental protection, engineering controls, emergency response and first aid, security and surety requirements associated with the presence of these agents and standards are prohibitive.

No facility may agree to accept samples that once contained Chemical Warfare Agents without the express permission of the VP-Quality & EHS. Before samples may be received, the facility will prepare detailed procedures for handling and disposal of the materials. A partial list of concerns to be addressed in the planning phase for any project involving chemical warfare degredates or related samples is included below. This is by no means an exhaustive list, and each laboratory will conduct a thorough assessment of the hazards involved. Some Company laboratories have been involved with these types of samples for several years, and may be a valuable resource for practical information.

- Exactly what types of sample are involved, and what are the target compounds?
- How will the Company ensure that the samples have been screened in the field for the presence of chemical warfare agents, and that employees have this verification before opening any sample shipping containers?
- What are the hazards associated with the target compounds, or other chemicals that may be present? What are emergency response procedures, including decontamination of people and equipment, first aid, and clean up of spills?
- How will disposal of unused samples be performed? If any samples arrive contaminated with actual chemical warfare agent, how will disposal be performed?
- How will community and local notifications be addressed, which will be managed, including EMS, the fire department, HAZMAT teams and hospital emergency rooms?
- Are there any facilities modifications that need to be made to support this project?
- Who will provide training in specialized emergency response, first aid and decontamination procedures?
- How will the Company raise the general awareness level of staff members concerning these programs? How will the Company address the increased levels of concern about dealing with these types of samples?
- How will the Company deal with a broken sample container in a shipping container?

Facilities will only accept samples that may have contained chemical warfare agents after those samples have been screened in the field by a suitable laboratory. The screens will show that any actual chemical warfare agent present is at or below the limits listed in Table 10.1. These screening results need to be in hand prior to opening any shipping containers (ice chests). They need to be either attached to the outside of the shipping container or faxed/e-mailed to the Project Manager. The screening data needs to specifically identify the samples that are included in the shipment, and the detected levels of chemical warfare agents. General statements such as "All samples in this ice chest are certified to be at or below drinking water standards" are not acceptable. Samples received without these screening results will remain in the sealed ice chest until the screening results are received. Only the VP-Quality & EHS may grant exceptions to this policy. These exceptions will be in writing and only in unusual circumstances. The mere fact that holding times may be expiring shall not be cause for an exception to this policy. It is incumbent upon the client to sample, screen, and ship and forward all necessary information in a timely manner to meet holding time requirements.

Table 10.1

Pathway/Limits	Mustard (HD)	VX	Sarin (GB)	Tabun (GA)	Soman (GD)	Lewisite (L)
Water (ug/L)	0.09*	2.5**	4.6**	22.5**	2.0**	3.7*
Industrial Soil (mg/Kg)	0.27*	0.085*	26*	43*	5.2*	170*

* Source: Derivation of Health-Based Environmental Screening Levels (HBESL's) for Chemical Warfare Agents, final draft dated April 1998, published by the Oak Ridge National Laboratory in conjunction with the U.S. Army.

** Source: Guidelines for Chemical Warfare Agents in Military Drinking Water (1995), Commission on Life Sciences.

10.13 Transportation and Transferring Materials

Many accidents have occurred when materials are being transported to facilities or transferred to storage areas. Chemicals and samples will be transported in appropriate secondary spill containers. These type of devices help contain the materials, and simplify clean up procedures when a container breaks or leaks. **Wire baskets and flat top carts are not an alternative to a spill container. However, tub carts may be used.** Always use an appropriate gas cylinder cart to transport gas cylinders.

Take care when transferring containers between locations in individual laboratory rooms. Always grasp the container with one hand around the neck or a finger in the handle, and one hand under the bottom of the container. **NEVER LIFT OR MOVE GLASS CONTAINERS BY ONLY HOLDING THE HANDLE ON THE CONTAINER.** These handles are not designed to support the weight of the material in the containers. If you move a glass bottle by grabbing the handle it might snap off, allowing the container to fall to the floor and break.

10.14 Storage of Hazardous Materials

All hazardous materials will be assigned a designated storage area. This may be a location in a store room, a cabinet in a room, a tray on a bench area, a refrigerator, an area in the waste room, and so forth. Under no circumstance are fume hoods to be used as designated storage areas.

The following sections cover general rules for storage of materials in stockrooms and laboratory areas. There are also storage requirements contained in the SOPs and Quality Assurance Manual that will be adhered to. Regardless of location, the first rule of storage is to only store compatible materials together. Incompatible materials will be separated by a barrier (e.g., spill tub or cabinet walls) or distance. A specific list of Incompatibility Chemical groups is available in Appendix VI.

10.14.1 Stockroom or Bulk Storage of Materials

The following rules apply to storage of hazardous materials in stockrooms or bulk storage areas.

- Store all materials based on compatibility and reactivity.
- When possible, store materials in the original shipping containers. If this is not possible, use secondary spill trays.
- If there are more than 60-gallons of flammable liquid in the room or area, use a flammable storage cabinet. No more than 120-gallons of flammable liquid may be stored in any one inside area even with flammable storage cabinets. This rule also applies to storage of flammable or combustible liquids in laboratory areas.
- If there is more than 500-pounds of other hazardous material (not including flammable gases), store the materials in approved storage cabinets. No more than 1000-pounds of other hazardous materials may be stored in any area even with approved storage cabinets.
- Store no more than 2 cylinders of highly compressed flammable gases in any area.
- Only store compressed gases in areas designated for that type of storage.
- When possible, avoid using stockroom areas for preparing hazardous materials for shipping.
- Store water reactive materials in a flammable liquid cabinet or metal storage cabinet. Mark the cabinet "Water Reactive Materials."

10.14.2 Laboratory Area Storage

The following rules apply to storage of hazardous materials in laboratories.

- Store all materials based on compatibility and reactivity. Use barriers such as spill trays or cabinets to separate incompatible materials.
- When possible, store all glass containers that hold liquids in secondary spill trays, or cabinets that will hold all the material if a container breaks or leaks. If materials need to be stored in a refrigerator or freezer, racks or other devices that will prevent the containers from tipping over need to be used in place of spill trays.
- Assign storage locations for all materials. As a general rule, fume hoods are not to be used as storage locations. Flow through the fume hood will not be blocked.
- Store all carcinogens and highly toxic materials in limited access areas.
- Label all storage cabinets with appropriate warning labels.
- If flammable or combustible liquids will be stored in a refrigerator or freezer, use explosion proof or flammable devices.
- Store water reactive materials in a desiccator with an appropriate desiccant such as Drierite™.
- Ensure all containers are labeled as per the requirements in Section 5. This includes secondary containers such as squirt bottles and containers with non-hazardous material such as water.
- Whenever an employee no longer works for the operation, ensure that all materials they used are properly collected and disposed of.

10.15 Disposal of Materials

Specific requirements for disposal of hazardous materials are covered in Section 13.0. It is Company policy that no material to be discharged down the sewer system, placed in the trash, or otherwise be released to the environment without the approval of the EHSC. Consult with this individual or your waste coordinator if you have any questions.

10.16 Unattended Operations

Frequently, operations are carried out continuously or overnight. It is essential to plan for interruptions in utility services such as electricity, water, and inert gas. When operations are left unattended, the following precautions will be observed.

- Tubing will be secured to faucets, condensers, or Coolflow units. Hoses leading to a sink will be secured to prevent it from "snaking" on the bench top as the result of an increase in water pressure.
- Operations will be designed to be safe, and plans made to avoid hazards in case of failure. Where possible, arrangements for routine inspection of the operation will be made.
- Adequate lighting to inspect the process in an emergency will be left on.
- Appropriate signs containing telephone numbers for emergency contacts will be posted.

One particular hazard frequently encountered is failure of cooling water supplies. Devices will be installed to automatically turn off operations if there is a failure in the water supply or electricity. Alternately, cooling water system may have a water-sensing alarm that is continuously monitored by an alarm service.

SECTION 11

11.0 SYSTEMS UNDER PRESSURE OR VACUUM

Systems under pressure or vacuum are extremely hazardous. Misuse of such systems has been known to have deadly consequences. This section contains rules to be followed by employees who use pressurized equipment, or systems that use a vacuum. Before an employee handles gas cylinders and systems under pressure or vacuum they must receive Gas Cylinder/SUVP training.

The areas of concern have been broken down into three areas: compressed gases, other systems that are operated under pressure, and systems that are operated under a vacuum.

11.1 Compressed Gases

11.1.1 General Rules

Compressed gas cylinders are often heavy and hard to handle. If not properly secured, they can be knocked over. This can cause the cylinder valve or neck to break off. Since the material in the cylinder is under pressure, the cylinder can become a missile. Cylinders that have had their necks broken off have been known to penetrate the steel hulls of ships and thick concrete walls. They have also been known to kill people. Never store compressed gasses in exits or near entrance routes. All cylinders must be stored in a designated storage facility and labeled for full and empty cylinders.
Most cylinders used at the facilities contain materials that are hazardous because of their chemical composition. Compressed oxygen can enable some materials that do not normally burn to readily ignite. Flammable gas such as acetylene, hydrogen, and methane are an extreme fire hazard. Carbon dioxide can cause frost burns.

The pressure inside a cylinder will vary greatly, depending on the size of the cylinder, the pressure rating of the cylinder, and the procedure the material is to be used for. Low-pressure cylinders can be just as dangerous as high-pressure cylinders. The identity of the materials in each cylinder will be marked on the cylinder, or on a tag that is attached to the cylinder.

The following rules apply to use of compressed gases.

- Ensure that all cylinders have been tested within the required times. The vendor is responsible for hydrostatically testing all cylinders they send to the laboratories. However, laboratories occasionally accumulate old cylinders that cannot be returned to the original vendor.
  - If these cylinders have not been tested within the last six years, the laboratory must remove the cylinders or tag "Out-of-Service".
  - If the cylinder contains a RCRA hazardous waste, it will be sent to a disposal facility.
  - If it contains a non-hazardous waste, the contents may be vented.

    - Continue to vent these cylinders until the pressure reaches atmospheric conditions. Leave the valve open so that the pressure cannot build up.
- Inspect all cylinders for rusting or damage. If rust or damage is detected, return them to the vendor or arrange to have them disposed of or taken out of service.
- Read all labels before using any compressed gas. Do not depend on color coding to identify the contents. Caps can be switched and not all manufacturers use the same color coding to identify the contents.

- Wear appropriate gloves and use a face shield when changing cylinders. The gloves will minimize the potential for smashing fingers between the cylinder and other objects. The face shield is necessary because compressed gases can inject material into the blood stream directly through the skin and direct contact of the face or eyes can be extremely dangerous.
- Unless a cylinder is being moved, secure it in place. Never remove the safety cap unless the cylinder is secured. A chain may be used to secure up to 2 cylinders. A solid strap or other securing device will be used when securing more than 2 cylinders together. The securing device must be tight enough to prevent any of the cylinders from moving or accidentally tipping over. Never place a gas cylinder into service while still on the transport cart.
- Double-check the identity of the material in the cylinder before connecting it to a regulator.
- Select a regulator that is designed for the cylinder you are using. Never use parts from one type of regulator to fix another type of regulator. Inspect regulator for rust or damage and replace as necessary.
- Never lubricate regulators, or use rubber tubing with regulators that are used on oxygen cylinders. This can create an explosive situation.
- Never use plastic tubing with Helium, Nitrogen or Oxygen.
- Never tamper with the cylinder safety nut or valve.
- Close all cylinder valves and "back off" the regulator control valve when the cylinder is not is use. Regulators depend on a diaphragm to control pressure. If the regulator control valve is not "backed off", the diaphragm can become permanently distorted and will eventually fail.
- Always use tubing that is rated for the pressure to be released by the regulator.

11.1.2 Transportation of Cylinders

The following rules will followed when transporting compressed gas cylinders:

- Ensure that the safety cap is in place. Never move a cylinder designed for laboratory use with a regulator attached.
- Use an approved cylinder cart when moving a cylinder more than 10-feet.
- Use the security chain or device on the cylinder cart.

11.1.3 Changing Regulators

The following procedures will be used when changing regulators, or moving one regulator from one cylinder to another:

- Position yourself behind the outlet valve and regulator. Ensure that no other employees are in the immediate area in front of the outlet valve and regulator.
- If the regulator is already on the cylinder, ensure that the control valve on the regulator and the cylinder valve are turned off.
- Release or "bleed" all pressure in the line.
- Loosen the brass fitting that connects the regulator to the cylinder. Ensure that you use an appropriate sized wrench. Do not use pliers. They can cause damage to the brass fitting.
- Remove the regulator and set it aside.
- Place the safety cap on the cylinder. Although the majority of the gas may have been used, there can still be enough material and pressure to injure employees.

- Position the replacement cylinder in the appropriate location.
- Secure the cylinder with a chain or strap.
- Remove the safety cap. When a cylinder cap cannot be removed by hand, cylinder shall be tagged "Do Not Use" and returned to the designated storage area for return to vendor. Use a strap wrench to remove stuck safety caps. Never insert items such as screw drivers and wrenches into the openings on gas cylinder caps to assist in removing them if they are stuck.
- If the cylinder has a dust cap on the discharge spout, remove it.
- If the cylinder does not have a dust cap on the discharge spout, point the discharge spout away from you. **Put on a face shield.** Quickly open and shut the cylinder valve. This is necessary to remove any dust or contaminants in the spout that might cause damage to equipment
- Check all threads and mating surfaces on the regulator and cylinder to ensure that they are clean and free of defects.
- Place the regulator on the cylinder. Hand-tighten the brass fitting. Do not force the fitting. This could strip the threads and cause damage to the regulator.
- Tighten the brass fitting with an appropriately sized wrench.
- Open the valve on the cylinder.
- Check the system for leaks.

NOTE: Teflon™ plumber's tape is never to be used on compressed gas cylinders and regulators with Compressed Gas Association (CGA) fittings. These devices are designed to seal when they are tightened. If a CGA fitting leaks, it is damaged and needs to be replaced and/or repaired.

- Adjust the control valve on the regulator.

11.1.4 Empty Cylinders

"Empty cylinders" are not necessarily empty of materials. They simply do not have enough material or pressure to adequately carry out the required task. Up to 500-pounds of pressure may be left in a cylinder. For this reason, consider all cylinders to be potentially dangerous. The following rules apply when handling empty cylinders:

- When possible, leave some material in the cylinder to prevent contamination and damage of equipment.
- Always ensure that the cylinder valve is closed.
- Ensure that the safety cap is on the cylinder.
- Place an "empty" tag or some other device that indicates the cylinder is empty on the cylinder. Never use the black and white square DOT "EMPTY" labels. This is a violation of DOT regulations.
- Transport the cylinders to the designated storage area using a cylinder cart.
- Secure the cylinders with chains or straps as appropriate. Do not use chains to secure more than 2 cylinders together.

11.2 Other Systems under Pressure

Working with any materials under pressure requires special planning and precautions. This includes work that is performed at relatively low pressures. Many procedures that are carried

out under pressure are also carried out at elevated temperatures. This increases the hazard level.

Care will be taken to select equipment that is rated or designed to adequately withstand the expected pressures and temperatures. Employees are to be protected with special devices such as explosion shields, or by proper preparation of equipment. When elevated temperatures are also involved, the heating device should be equipped with a temperature control mechanism that will ensure the device does not exceed the desired operating temperature.

11.2.1 Testing and Inspections

All pressure equipment will be tested or inspected on a periodic basis. Employees utilize several types of metal containers that should be periodically hydrostatically tested, e.g., bomb calorimeter vessel. This procedure will be performed every 10-years if required or whenever significant repairs or modifications are made. Gas cylinders need to be hydrostatically tested every 6-years. These data will be stamped on to the metal casing of the container. Test periods are to never exceed the manufacturer's recommendations. Hydrostatic tests will be performed by the manufacturer or owner of the device.

A visual inspection will be performed each time the equipment is used. All hoses and/or connections must be inspected prior to use. Corrosion or other physical damage indicates that additional stress tests need to be performed. Once equipment has been assembled it should be checked for leaks.

11.2.2 Assembly and Operation

The following rules apply when assembling or operating pressure equipment:

- Only use equipment that is rated for the pressure and temperature required.
- Never hang or support equipment from piping. Use racks that are designed to support the weight of the equipment.
- Do not force threaded parts. Thread connections are to match: tapered pipe threads cannot be joined with parallel machine threads. Thread lubricants are never to be used on equipment that is used with oxygen. This could cause an explosion. Parts that are damaged or have partially stripped threads are to be rejected.
- Avoid sharp bends when assembling copper tubing. Copper tubing will crack and break if bent repeatedly. It needs to be periodically inspected for cracks and leaks.
- Do not use closed systems under pressure without approval from the local EHSC or VP-Quality & EHS.
- Provide adequate shielding for all reactions under pressure.
- Never fill pressure reaction vessels more than half-way with liquids. Otherwise, liquids will not have adequate room for expansion when heated.
- Always depressurize equipment when making corrections or adjustments to the apparatus.
- Disconnect all low-pressure equipment that is connected to a high-pressure source after work is completed.
- Do not use acetylene or ammonia with pressure vessels made partly or entirely with silver, copper, or alloys of more than 50% copper.
- Do not use mercury or mercury compounds with pressure vessels made with copper, brass, zinc, tin, silver, lead, or gold. This includes equipment that is soldered with materials

containing these compounds.

11.2.3 Pressure-Relief Devices

All systems that may be subject to operation under pressure or vacuum should be protected by using pressure-relief devices. Procedures that involve highly reactive materials may require highly specialized pressure-relief devices. Examples of pressure-relief devices that are typically used include rupture disks used on closed-system vessels, and spring-loaded relief valves used on liquid gas vessels. The following rules apply to the use of pressure-relief devices:

- Never use a pressure-relief device that is set or rated for a pressure that is higher than the rating on the vessel or system. Proper operating pressures for spring loaded valves should be 5-25% less than the maximum rated pressure of the vessel. The maximum operating pressure for rupture disks should be 2/3 of the maximum rated pressure of the system.
- Ensure systems that might release toxic, corrosive, flammable, or other hazardous materials are set up in a well ventilated area.
- Do not install shutoff valves between pressure-relief devices and the equipment they are to protect.
- Only allow qualified personnel to perform maintenance on pressure relief devices.
- Periodically inspect pressure-relief devices for corrosion or damage.

11.2.4 Pressure Gauge

Many procedures that are performed under pressure or vacuum require the use of pressure gauge. The type of pressure gauge to be used depends on the level of pressure, the materials to be handled, and the type of pressure equipment. The pressure gauge is always a weak point in any system, and will be used in conjunction with a pressure-relief device.

11.2.5 Glass Equipment

The use of glass at extreme pressures should be avoided whenever possible. Glass under pressure is subject to unexpected failure. This is due to factors such as mechanical impact, assembly problems, and tightening stresses. Glass can develop nearly invisible flaws, and under stress or pressure can shatter. The following rules apply to use of glass under pressure or vacuum:

- Always use thick-walled glassware that is designed for use under pressure.
- When possible, wrap the glassware with friction (protective) tape. This will help contain the glass if the glassware explodes.
- Use shielding to protect the user.
- Never use corks, rubber stoppers, or rubber and/or plastic tubing as a pressure-relief device.

11.2.6 Plastic Equipment

As a general rule, most plastic equipment is not designed to be used under pressure or vacuum. Some Tygon™ and plastic tubing is designed for use at limited pressure and vacuum. However, the working range is not very large. This type of material is typically used with natural gas, hydrocarbons, or aqueous solutions at moderate pressures. Before using any plastic equipment, obtain the operating limits from the manufacturer.

Plastic equipment often has large coefficients of thermal expansion, and will tend to expand a great deal when heated. If a plastic valve or joint is tightened when an apparatus is cold, it can expand and completely close the system after it is heated. This, combined with the increased pressure, can create an extremely dangerous situation.

11.2.7 Piping, Tubing and Fittings

Brass or stainless steel fittings should always be used in conjunction with copper, brass, steel, or stainless steel tubing. It is extremely important to properly install all fittings. It is not advisable to mix different types of fittings on the same apparatus.

11.3 Vacuum Work

In an evacuated system, the pressure on the outside is higher than the pressure on the inside. This can lead to an implosion of the system, resulting in flying glass, chemicals being splattered over large areas, and in some cases, fires. A moderate vacuum can be achieved by simply using a water aspirator. This type of vacuum can be just as dangerous as a high-level vacuum. Whenever possible, a trap of some form should be used between the vacuum source and the equipment. This will prevent materials from getting into sensitive systems and causing serious damage.

11.3.1 Glass Vessels

Unlike systems under pressure, systems under vacuum often require the use of glass vessels. The problem is if the vessel is cracked, weakened, or subjected to a violent blow, it may violently collapse. This can result in serious injuries.

- Only use round bottom, or thick walled flat bottom flasks that are designed for use under a vacuum.
- Check all glassware for flaws such as star cracks, scratches, or etching marks each time the item is used.
- If possible, wrap the glassware with friction (protective) tape. This will minimize the potential for flying glass if an implosion occurs.
- Use shielding to protect the user.

11.3.2 Dewar Flasks

Dewar flasks are devices made of 2 thin walls of glass with a vacuum in between. These devices can easily implode. Employees will be protected by wrapping the Dewar flasks in a layer of friction tape, or by placing them in a wooden, metal or plastic container.

11.3.3 Desiccators

Glass vacuum desiccators need to be made of Pyrex™ or equivalent glass. They should be completely enclosed in a shielding device or wrapped with friction tape. If tape is used, it should be applied in a grid pattern that leaves the contents visible, but still guards against flying glass in the event the vessel collapses. There are various plastic desiccators on the market, which drastically reduce the risk for implosion. These should be used when possible.

11.3.4 Cold Traps

One type of trap that is used to protect vacuum systems is a cold trap. These types of traps are used to condense vapors from volatile materials that might damage equipment. They are primarily used when handling organic solvents. They are to be of a sufficient size and temperature to collect all condensable vapors that might affect the system.

One common type of cold trap uses isopropanol and dry ice. Employees should avoid using a cold trap with acetone and dry ice. Isopropanol is less toxic, less flammable, less expensive, and is not as prone to react adversely as acetone when dry ice is added. Dry ice and liquefied gases used in cold traps should always be open to the atmosphere. They should never be used in a closed system where they could develop uncontrolled, dangerously high pressures.

After work is completed on operations using a cold trap, the system needs to be ventilated. This is important because volatile substances that are collected in the trap might vaporize when the coolant is evaporated. This in turn could cause a pressure build up that might blow the apparatus apart. This could also cause the oil from vacuum pumps to be sucked into the operating system.

11.3.5 Assembly of Vacuum Apparatus

Vacuum apparatus must be assembled so as to avoid strain. Joints need to be assembled in a manner that allows the various sections of the apparatus to be moved without transmitting stress to the necks of flasks and other pieces. Heavy pieces should be supported from below as well as by their necks. The apparatus needs to be set up where people, doors, and so forth, cannot accidentally strike it.

SECTION 12

12.0 INSPECTIONS AND EQUIPMENT TESTS

12.1 General

This section covers procedures to be followed when conducting internal inspections and tests of certain equipment. It also contains procedures to be followed when facilities are contacted by regulatory agencies.

The purpose of conducting periodic equipment test and safety inspections is to ensure that equipment is working properly, and employees are in compliance with Company policies and government regulations. If periodic tests on emergency equipment are not conducted (Sec. 6), there is no way to know if the equipment will function properly in an emergency. All emergency equipment breaks down over time and need to be maintained, repaired and in some cases replaced.

Safety inspections are a key indicator for the safety performance of a facility and the employees that work at the facility. Collected data can provide valuable information about hazards, before they result in injuries, illnesses, or near misses.

12.2 Types of Inspections that may be Conducted

There are 5 types of inspections that will be conducted at facilities.

- Formal Inspection by Clients or Regulators
- Internal and Informal Walk-through
- Internal Formal Inspection
- Optional Brief Safety Walk-through
- Division Compliance Audit

12.2.1 Formal Inspection by Clients or Regulators

These inspections are not always announced and can have a serious impact on the Company. All planned or unplanned visits or audits will be reported to the VP-Quality & EHS. Anytime a regulatory auditor contacts a facility, the employees will follow the steps outlined in Section 12.3.

12.2.2 Internal and Informal Work-through

The Facility/Laboratory Director, Department Manager or Supervisor, the EHSC, the EH&S Manager, VP-Quality & EHS or other key employees (e.g., safety committee) may conduct this type of inspection on a random basis. There are no specific time frames or frequencies for conducting the inspection and the results do not have to be formally documented. However, the results will be used to implement operating changes or prescribe retraining needs where identified. Employees conducting the informal inspections need to look for obvious problems or violations. If the problems noted could result in immediate and/or severe injury to employees or damage to property, work needs to be stopped until the problem is resolved.

NOTE: Unless the situation represents an immediate risk of serious injury, the Facility/Laboratory Director and EHSC should be consulted before any operations are stopped.

Employees are the best source of information regarding related hazards. Interview them about the work being conducted and ascertain if training programs are effective.

12.2.3 Internal Formal Inspection

Formal inspections are conducted at least once each quarter. These are performed by the EHSC who focuses on problems in the individual areas. Findings from these inspections are formally documented. The EHSC may conduct these inspections more frequently based on the facility's safety record, findings noted during previous inspections, or to review sustainability of corrective actions.

12.2.4 Optional Brief Safety Walk-through

The optional brief safety walkthrough is conducted by members of the management team during visits. This includes General Managers who visit sites.

12.2.5 Division Compliance Audit

These inspections will be conducted by the EH&S Manager, EHSC, VP-Quality & EHS or an individual designated by the VP-Quality & EHS. The focus of this type of audit is to determine if there are any compliance and/or safety issues that relate to the facility as a whole. The EH&S Manager or designee will prepare a detailed report listing any findings. Where possible, the report will include recommendations for resolving issues. A copy of findings from the audit and action items that will be addressed will be given to the VP-Quality & EHS (if prepared by a designee), Vice President of Operations, VP of Quality, Technical and Operations Support, the Facility/Laboratory Director, and the EHSC. The EH&S Manager or designee will tabulate the number of findings that are open and closed in a monthly report to executive management. The EHSC will review the annual audit findings with the employees within 30 days of receipt of the final audit report (refer to Section 4.7). The EHSC will work with the Facility/Laboratory Director to prepare responses to all findings. The responses will include steps that are to be taken to resolve the findings, the time frame for completing the steps and the person or persons who will be responsible for ensuring that the steps are taken. Once the response plan has been approved, the EHSC and Facility/Laboratory Director will ensure that the corrective actions are understood by employees & implemented.

12.3 Procedures for Visits or Calls from Regulatory Agencies

From time-to-time, representatives from regulatory agencies may contact facilities. Agencies that may send representatives to our facilities may include the DOT, USEPA, OSHA, local health department, local fire department, and so forth. It is important that these visits be properly coordinated. The steps below will be followed whenever a representative from an outside agency calls or visits one of the Company's facilities.

12.3.1 Procedures for when an Agency Representative Calls on the Telephone

The receptionist will connect the regulatory agent with the EHSC and/or the Facility/Laboratory Director. These individuals will ascertain whether the individual is a legitimate representative of a regulatory agency and determine the purpose of the visit. If the individual makes a request for

information, they will be informed that the request will be submitted in writing prior to granting any requests. If the call is not routine or could have a significant impact on the Company, a summary of the conversation will be prepared and forwarded to the VP-Quality & EHS for review as soon as possible. The VP-Quality & EHS will ensure that executive management is notified of any information that may have a negative impact on operations.

12.3.2 Procedures for when an Agency Representative Visits a Facility

It is Company policy that employees cooperate with agents from regulatory agencies. However, it is also important to remember that Company interests will be protected.
The receptionist will have the regulatory agent wait in the reception area. **Under no circumstance shall the individual be allowed to enter the facility without an escort.** Regulators who show up at other work entrances will be escorted to the reception area. They are not to be taken through the facility. The receptionist will have the individual sign in and they will contact the EHSC and/or Facility/Laboratory Director. These individuals will be responsible for contacting the VP-Quality & EHS. When possible, this should be performed before the agency representative arrives or before the meeting occurs. The EHSC and/or Facility/Laboratory Director will:

- Escort the agency representative (rep) to a private location. Ask the agency representative the purpose of the visit (e.g., routine visit, employee complaint, inspection, etc.). Ask if a warrant is involved. The Company does not require a warrant for the agency rep to enter or inspect a facility. However, a warrant will limit the scope of the visit and provide clear guidelines on what questions need to be answered.
- If necessary, escort the agency rep through the facility. Limit the tour to the specific areas in question. Omit areas that are not related to the visit.
- Answer any questions asked. Let the agency representative speak to and ask questions of any staff members they want to see. Answers should be limited to the scope of the questions. Do not agree or disagree with observations made by the agency rep. OSHA especially, is quick to use such "admissions" by employer representatives against the employer during a citation process. If you do not know the answer to the question, refer the individual to a person who does know, or tell them you will get back with them. Attempting to answer questions with insufficient knowledge may make it appear you are trying to mislead or deceive them. Do not elaborate or volunteer additional information. Doing this can lead to confusion and in some cases, may create unnecessary problems for the Company.

NOTE: It is a good idea to have a still or video camera available to record observations made by the agency rep. If any air, water, wipe, or other samples are requested or required, facility personnel should attempt to obtain a split sample, or perform parallel sampling for independent analysis.

- After the meeting is complete, escort the agency rep from the premises.
- Prepare a summary detailing what was covered during the visit. This summary will include a copy of any findings, citations, etc. A copy of this summary report is to be forwarded to the VP-Quality & EHS as soon as possible. The VP-Quality & EHS will ensure that executive management is notified of any information that may have a negative impact on operations.

12.3.3 Response to Regulatory Citations

The EHSC will notify the VP-Quality & EHS whenever a facility receives any notification of a violation or alleged violation of a government regulation. Copies of all written correspondence relating to the violation will be immediately sent to the VP-Quality & EHS. . The VP-Quality & EHS will notify executive management of the nature of the notification and the potential impact. All responses to regulatory citations, violations, or employee complaints that are received by regulatory agencies will be reviewed and approved by the VP-Quality & EHS before being sent to the agency. The VP-Quality & EHS may also assist in preparing the responses.

12.4 Periodic Tests of Equipment

Certain equipment will be tested on a periodic basis. This includes, but is not limited to, emergency equipment, PPE, engineering controls (e.g., fume hoods), self-contained eyewash systems, Gas Chromatographs (GCs) with Electron Capture Detectors (ECDs), and radioactive devices such as X-ray Fluorescent machines. The frequency of the test depends on the type of equipment and its use. Test schedules for equipment used at facilities are covered in the following sections. The EHSC is responsible for ensuring that the equipment is tested. However, employees who are designated by the EHSC or Facility/Laboratory Director may perform the actual physical testing. All test records will be turned over to the EHSC so they can be properly archived.

12.4.1 Equipment to be Tested or Inspected Monthly

Employees will perform monthly tests. The following equipment will be tested at least once every month:

- Fire Extinguishers: Fire extinguishers will be checked monthly to verify that the seal for the safety pin is intact and there is adequate pressure in the unit. (Refer to OSHA 29 CFR 1910.157.)
- Emergency Lights and Illuminated Exit Signs: These devices will be tested to ensure that the bulbs are not burned out and the back-up battery is in good condition. **NOTE**: If the hall lights are set up to act as emergency lights and there is more than one emergency light in the hall, the units may be tested twice a year instead of monthly. (Refer to OSHA 29 CFR 1910.37.)
- Ground Fault Interrupt Circuits (GFICs): GFICs will be tested by depressing the test, and reset switches.
- Respirators: Any respirator that might be used in an emergency will be inspected at least once each month. Respirators not used for emergencies will be tested prior to each use. Each Emergency Life Support Apparatus (ELSA) will be inspected each time they are taken on a site where they might be needed. This will be performed before the employee enters the work site.
- X-ray Fluorescent Machines: These devices will be monitored for leaks. This is performed by placing a TLD badge in front of, or over the machine and having the badge analyzed for exposure.
- Emergency Spill Equipment: Spill equipment will be checked to determine if any supplies need to be restocked.

12.4.2 Equipment to be Tested Weekly

Employees will activate the following emergency equipment weekly, no more than 7 days apart:

- Emergency eyewashes that are connected to the plumbing system.
- Emergency showers that are connected to the plumbing system.

The requirement to test these units on a weekly basis is available in the ANSI Z358.1 Standard which is referenced by OSHA.

12.4.3 GCs with ECDs

GCs with ECDs contain a radioactive source of Nickel 63. These devices are to be wipe-tested on a periodic basis and the samples analyzed at a certified radiochemistry laboratory. Normally, laboratories use these devices under the general license of the manufacturer. Each manufacturer's general license specifies the time frame within which the wipe tests need to be conducted.

GCs with ECDs from Agilent, Hewlett-Packard, or Perkin-Elmer will be wipe tested once every 6-months. GCs with ECDs from Varian will be wipe-tested at least once every 3-years. If the facility has an ECD from another manufacturer, they need to consult the manufacturer as to the required test frequency.

12.5 General Items for Inspection[2]

There are several issues that managers or supervisors, the EHSC, or other employees need to should look for when conducting inspections of their work areas. It is understood that this section is not intended to be all-inclusive and there may be additional issues that could be discovered during an inspection. Not all the items listed are applicable to every work area.

Employees will use common sense when inspecting work areas and decide the relative level of danger that might be present. If a potential hazard constitutes an immediate and imminent danger to employees or property, employees need to ensure that immediate action is taken. The Facility/Laboratory Director will be consulted on all such issues to ascertain the appropriate response time.

It is recommended that two-person teams perform these general inspections. An alternate perspective eyes can often identify items or situations that may otherwise be missed. It is critical to talk to the employees actually conducting the work because they are able to provide valuable insight into unseen or non-obvious safety hazards. They may also be able to demonstrate that an identified potential issue is not a safety hazard.

12.5.1 General Work Practices

- Was proper housekeeping observed?
- Was any horseplay observed?
- Were all required OSHA/Worker's Compensation workplace posters in place?
- Has the OSHA 300 log been posted as required?

[2] Refers to Internal audits; informal walk-throughs and Division compliance audits.

- Has the safety committee met on the prescribed bi-monthly basis? Are all employees properly trained?
- All employees know what to do in an emergency?
- Emergency telephone numbers posted?
- Have all equipment tests been performed in the time frame required?
- Did employees smoke in non-smoking areas?
- Were all ladders and step stools properly maintained and used?
- Were fenced areas in adequate condition?

12.5.2 Personal Protective Equipment (PPE)

- Safety glasses, face shields, goggles or other eye protection used when required?
- Safety shoes worn when required?
- Appropriate type of gloves worn for the defined work?
- Hard hats worn when required?
- Employees using respirators?
- Are all respirator masks inspected as required?
- Employees who are assigned respirator masks been given a medical exam within the last year, trained on how to use the equipment, and been properly fit tested as required?

12.5.3 Material Handling and Storage (App. VIII)

- Non-hazardous materials properly stored?
- Flammable materials properly stored in flammable rated cabinets, refrigerators and freezers?

  Note: Flammable materials in vials or ampules should be stored upright in sealed secondary containment, e.g. a snap-top plastic tote.
- Food stored where chemicals or samples are handled?
- Any chemicals or samples stored in refrigerators designated for food?
- Employees aware of the SDS contents for materials they handle?
- Any regulatory storage limits exceeded?
- Proper storage cabinets used when required?
- Any incompatible chemicals stored together?
- Materials used in a fume hood or with other adequate ventilation when required?
- Containers properly labeled?
- Secondary spill containers or racks used to secure glass containers, which hold liquids?
- Equipment such as carts, dollies and so forth used to move materials in good condition and free of defects?
- Load limits posted on shelves or upper storage areas in warehouses?

12.5.4 Systems Under Vacuum or Pressure

- Compressor lines in good condition and properly used?
- Compressed gas cylinders properly secured?
- Safety caps on all compressed gas cylinders that are not in immediate use?
- Flammable gases stored separately from cylinders with oxidizers?

  Note: Only allowed to be stored together when they are directly attached to a unit and in

immediate use.

- Compressed gas cylinders properly transported (if witnessed)?
- Systems under vacuum or pressure wrapped with friction (protective) tape or shielded when possible?

12.5.5 Fume Hoods

- Properly used?
- Used to store chemicals?

  Note: Fume hoods are work areas and are not to be used for storage.
- Properly certified?

  Note: This will be done at least once every 6-months.
- Was there adequate ventilation for employees working with hazardous materials in areas where there are no fume hoods?

12.5.6 Machinery and Tools

- Machine guards in place and properly working?
- Equipment properly maintained?
- Electrical cords plugged into an electrical outlet in good condition?
- GFICs available for all portable power tools that are to be used outside or in cold/wet areas?
- Outlets within 6-feet of a water source equipped with a GFIC?
- Extension cords not used in place of permanent wiring?
- Two-prong extension cords used?
- Extension cords strung through doorways, windows, or over ceiling tiles, etc.?
- Electrical cords and extension cords in good condition?
- Hand tools in the area in good condition and were there any defects that might affect safety of individuals who might use the tools?
- Tools put away after use and properly stored (off of the floor)?

12.5.7 Exits and Access Ways

- Illuminated?
- Exit signs clearly posted?
- Exits and aisles free of obstructions and trip hazards?
- Access to emergency equipment unobstructed?

12.5.8 Fire Protection and Emergency Equipment

- Emergency equipment tested as required (e.g., emergency lights, fire extinguishers, fire suppression systems, fire alarms, etc.)?
- Combustible materials such as empty boxes removed from the work place each day?
- Employees aware of the steps to take in the event of a fire?
- Employees trained in the use of fire extinguishers within the last 12-months?
- Employees not trained in the use of fire extinguishers informed that they are not to use them if a fire breaks out?
- Location of every fire extinguisher clearly visible?
- If not, were the locations clearly marked with signs?

12.5.9 Waste

- Collected in appropriate, compatible containers?
- Sharp or broken items (e.g., glass) wrapped or otherwise protected and placed in regular trash cans? If so, they will be emptied by employees.
- Hazardous waste containers properly labeled?
- Adequate data to identify and track hazardous waste?
- Hazardous waste containers kept closed or covered whenever the waste is not being added or removed?
- Hazardous waste containers kept in a secondary container to avoid spill over?
- Employees properly training to handle hazardous waste or recyclable oil products?
- Hazardous and non-hazardous waste mixed? If so, the entire mixture will be treated as hazardous waste.

SECTION 13

13.0 WASTE MANAGEMENT & POLLUTION PREVENTION

13.1 General

There are various federal, state and local regulations that govern the management of waste materials. These regulations provide guidelines for the management of most wastes types. Waste generated at all operations will be disposed of in a manner that protects the environment. As defined in 29 CFR 1910.120, the term "hazardous waste" describes a material on a particular list or that has certain characteristics as defined by the regulation. Most hazardous waste will have some hazard associated with it.
While taking all reasonable steps necessary, it is the Company's policy to manage generated waste in a manner that will protect the employees and the environment. Besides the information within this section, each facility will have a waste management procedure that details how their waste is specifically managed at that facility.

Facilities that are Large Quantity Generators (LQG) of hazardous waste will additionally prepare a waste minimization plan, unless exempted in writing by the controlling regulatory agency. This plan will be reviewed on an annual basis or on a frequency in accordance with Federal and State regulations.

The Clean Air Act is a United States federal law designed to protect human health and the environment from the effects of air pollution and addresses emissions of hazardous air pollutants (HAP's). The Clean Air Act requires issuance of technology-based standards for major sources. "Major sources" are facilities that emit or have the potential to emit 10 tons per year or more of a hazardous air pollutant or 25 tons per year or more of a combination of hazardous air pollutants by a facility. The HAP's include Acetonitrile, Hexane, Hydrochloric Acid, Methanol, and Methylene chloride (Dichloromethane). Acetonitrile, Hexane, Hydrochloric Acid and Methanol are not used in significant volumes by our facilities as shown in an EPA tier 2 report and will show these chemicals are not used in significant quantities to approach the HAP threshold. Methylene chloride is used in significant quantities at laboratory locations that perform organic solvent extractions. It is company policy to monitor the amount of methylene chloride to ensure compliance of the 10 ton HAP requirement. The amount of methylene chloride emitted by a facility on a monthly basis is recorded and monitored in the EHS monthly report.
The Clean Air Act also directed all States to develop an implementation plan in order to achieve these air standards. It is the responsibility of the EHSC to know their State air emission standards to ensure they are following state specific guidelines. The EHSC will include the air emission limits for their State in the EHS monthly report if their State standard differs from the federal standard to ensure the State air emission limits are not exceeded.

Pollution prevention is the minimization and/or elimination of materials that are emitted to the environment. It is Company policy that, where reasonably possible, steps will be taken to minimize the amount of hazardous material that is used and/or released to the environment. Each facility is responsible for ensuring that the following practices are inherent within their operations:

- Chemical inventories are monitored and stocks are rotated to ensure that minimum amounts of expired materials are sent for disposal.
- Old and expired materials are routinely removed and segregated for disposal by the EHSC.

- Materials are stored and handled in a manner that prevents accidental loss, evaporation, contamination, degradation, and spillage.
- Where reasonably feasible, alternative technologies which use less toxic materials or smaller quantities of hazardous materials are used.
- Procedures are implemented to minimize the amount of generated waste. These procedures would be outlined in the technical/method SOP where appropriate.

NOTE: These sections are compliant with the FAR Clauses 52.223-3; 52.223-5; and 52.223-10 in regards to Pollution Prevention and Right-to-Know Information; Hazardous Material Identification and Material Safety Data; and the Waste Reduction Program.

13.2 Discharge of Waste Materials via the Sanitary Sewer

It is Company policy that no samples or waste material generated at laboratory operations will be discharged via the sanitary sewer system that exceed the local municipality permit requirements, without the express permission of the EHSC. Neutralization is allowed as long as it falls under the express guidelines of the municipality where business is being conducted. Contact your EHSC or EHS Manager if more information is needed.

13.3 Waste Generator Status

Under federal regulations (49 CFR 261), there are 4 categories of waste generators. Each facility will fall into one or more of these categories.

- Large Quantity Generator (LQG) - Generates 1000-kilograms or more of hazardous waste and 1-kilogram or more of acutely toxic waste each month. In some states, this may be in any 1-month period during a calendar year. A LQG must ship hazardous waste within 90-days of when it is removed from the satellite storage areas.
- Small Quantity Generator (SQG) - Generates more than 100-kilograms but less than 1000-kilograms of hazardous waste and less than 1-kilogram of acutely toxic waste each month. Allowed to store hazardous waste for up to 180-days (270-days if the disposal facility is more than 200 miles away).
- Very Small Quantity Generator (VSQG) - Generates less than 100-kilograms of hazardous waste and less than 1-kilogram of acutely toxic waste each month. Allowed to accumulate and store hazardous waste until they accumulate 1000-kilograms of the material. Once they reach this limit, they are required to ship the waste to an approved waste disposal facility within 180-days.
- Generators of PCB waste - Any material that contained 50-ppm or more of PCBs at the point it entered or was brought on the site.

A facility's generator status is defined by site since there are different regulations, or reliefs under the regulations that apply to each class of generator. For example, a LQG or SQG are required to have key employees or an ERT on call that can safely clean up spills of hazardous material that cannot be safely handled by employees on a day-to-day basis. A VSQG does not have this requirement. All generators are required to label and dispose of Universal Waste within 1-year of accumulation.

- Other differences include requirements for Emergency Preparedness, Training, and Record Keeping & Reporting.

13.4 Waste Job Descriptions

In accordance with 40 CFR 262, employers are required to prepare "job descriptions" for employees who work at hazardous waste generation sites. These descriptions must include the functions the individual is responsible for carrying out and the level of training the individual is required to receive in order properly carry out the work. Each facility will prepare a list of the individuals who fall into each category. Waste management initial training will be given to the employees within 6-months of assignment to the position. Waste management refresher training will be conducted for the employee at least once each year.

13.4.1 Waste Coordinators

Each Facility/Laboratory Director will appoint a Waste Coordinator to oversee the day-to-day waste operations at the facility. This individual may or may not be the EHSC. The Waste Coordinator is responsible for overseeing the waste program and for ensuring that employees who work at the facility receive waste management training in their respective areas. The Waste Coordinator must receive training on waste management regulations that apply to the state where their facility is located (refer to each facilities waste minimization plan). This training may be obtained from an outside vendor or be conducted in-house. They will also receive all the training listed in Sections 13.4.2 to 13.4.4.

13.4.2 Waste Processor

Waste processors are individuals who are authorized to prepare waste for disposal or to be shipped for disposal. They are responsible for ensuring that all waste is treated, stored or otherwise processed in accordance with government regulations and Company policies.

Waste processors will be trained on their facilities waste minimization plan. They will also receive training on how to properly manage the generated waste. Training materials will include, but are not limited to:

- Identification of waste streams.
- How to accept waste from satellite accumulation areas.
- Proper storage of waste materials.
- Waste management policies and procedures that are applicable to the facility; ex: Hazardous Waste SOP
- Proper packaging of waste materials.
- Proper treatment of waste materials that are treated on site.
- Procedures for preparation of waste for transportation to disposal facilities.

13.4.3 Waste Generators

A waste generator is anyone who may, through the normal course of their work, generate a RCRA Hazardous Waste at one or more locations in a facility or who may oversee someone who does so. Waste generators will include, but are not limited to, Waste Processers, Laboratory Supervisors, Laboratory Technicians, Shipping and Receiving Personnel, and Maintenance Personnel. Waste generators will be trained on the material in this section. Training will include proper steps for accumulation and storage of waste at satellite accumulation areas.

13.4.4 Non-waste Generators

Non-waste generators are all employees who do not generate RCRA hazardous waste while carrying out their work functions. These employees will receive training on procedures to be followed in the event an emergency occurs.

13.4.5 Emergency Responders

Refer to Section 4.4.3 for the training requirements of Emergency Responders.

13.5 Waste Categories

There are 8 categories of waste that may be generated at laboratory operations. They are:

- RCRA Hazardous Waste
- PCB Waste
- Non-RCRA Hazardous Waste
- Non-hazardous Waste
- Biohazard Waste
- Universal Waste
- Radioactive Waste
- Asbestos Waste

13.5.1 RCRA Hazardous Waste

Under RCRA regulations, certain types of waste are defined as Hazardous Waste. The fact that a material is defined as hazardous waste does not necessarily mean the material is dangerous; it means the material is on a specific list or has certain characteristics. RCRA regulations require that a waste which meets the definition of a hazardous waste must be managed and treated in a specific manner. The type of treatment that is required can be extremely costly.

Any waste that is mixed with a RCRA hazardous waste will be treated as a RCRA hazardous waste. This can greatly increase the cost to properly dispose of a material. Any waste that does not meet the definition of a RCRA hazardous waste will be segregated whenever possible.

13.5.2 PCB Waste

PCB waste is any material that contained 50-ppm or more of PCBs at the point it entered or was brought on the site. This includes diluted standards, high-level PCB samples, and extracted samples that contained 50-ppm or more PCBs. Waste that is mixed with PCB waste will be treated as PCB waste. Under most cases, any material that starts at more than 50-ppm of PCBs is still considered a PCB material even if the end concentration is below 50-ppm. However, there is an exemption for samples that are analyzed at laboratories. Materials generated from the analysis of PCB materials may be classified based on the level of the final waste. Thus, most waste from the analysis of samples for PCBs will not be considered a PCB waste.

PCB waste must be destroyed within 1-year of the first day waste is placed in the container. The cost to dispose of such waste is 2 to 4 times the cost to dispose RCRA hazardous waste. The reason is that PCB waste is required to be disposed of by a specially permitted PCB incinerator. All of these factors can have an impact on the cost of operation. It is critical that PCB waste be kept separate from other waste categories whenever possible.

It is recommended that all PCB standards be purchased at concentrations below 50-ppm.

13.5.3 Non-RCRA Hazardous Waste

As mentioned earlier, a waste may still be dangerous even though it does not meet the definition of a RCRA hazardous waste or a PCB waste. For example, sodium hydroxide pellets are neither a RCRA hazardous waste nor a PCB waste. However, they will cause severe burns to the skin and other tissue they come in contact with. Non-RCRA Hazardous Waste includes:

- Waste that is dangerous to employees or the environment but is not listed in 40 CFR 261.
- Materials that are a high liability to the Company if disposed of via the sanitary sewer system or regular trash.
- Waste that is regulated by individual states (e.g., discarded soil samples are classified as a Class 1 Waste in Texas).

13.5.5 Non-Hazardous Waste

Non-hazardous waste is any waste material that does not pose a hazard to employees and the environment, and is not covered in Sections 13.5.1 to 13.5.4. When properly treated, some waste described in the previous sections may become non-hazardous waste. For example, many acids and bases are no longer a RCRA hazardous waste after they have been properly neutralized. These types of wastes may be discharged via the sanitary sewer system, or placed in a trash dumpster as appropriate.

13.5.6 Biohazard Waste

Biological or Biohazard waste produced at facilities normally consists of sample media from testing environmental samples. The waste is a non-DOT regulated waste; should be labeled with a biohazard label; cannot be shipped as a DOT regulated material; and DOT shipping descriptions are not included on the outside of the shipping containers.

13.5.7 Universal Waste

Universal waste handled at facilities includes batteries, mercury-bearing equipment and lamps or light bulbs that would normally meet the definition of a hazardous waste. These wastes must be collected in an appropriate container that can be closed when not in use and disposed of as universal waste instead of hazardous waste. The waste must be labeled "Universal Waste" with a description of the waste, can only be held for 1-year on-site and will be sent to an appropriate recycler for processing.

13.5.8 Radioactive Waste

Operations that have a radioactive materials license may generate radioactive waste. Each operation which generates such waste is required to have a written plan for handling the waste produced. Consult the RSO for assistance.

13.5.9 Asbestos Waste

Some operations analyze samples which may contain Asbestos. Samples known or suspected to contain Asbestos must be double-bagged in plastic bags and collected for disposal at an appropriate land fill. The bags will be marked with the DOT shipping description for Asbestos. The letters 'RQ' are not to be included unless there is a pound or more of friable Asbestos in the

bag. The material will be shipped as a DOT regulated material. Prior to shipping, verify that the sample does not meet one of the special provisions under column 7 of the Hazardous Materials Table found in 49 CFR 172.101 of the Hazardous Materials Regulations. Asbestos that is *immersed* or *fixed* in a natural or artificial binder material, such as cement, plastic, asphalt, resins or mineral ore, or *contained* in manufactured products is not subject to the requirements of the Hazardous Materials Regulations.

13.5.10 Samples

Samples may fall into one or more of the above categories. This will depend on the nature of the sample, whether the material is preserved (e.g., with acid), and/or test results. Samples are exempt from RCRA waste regulations as long as:

- The sample is being transported to a laboratory for the purpose of testing.
- The sample is being transported back to the sample collector after testing.
- The sample collector, before transportation to a laboratory for testing, is storing the sample.
- The sample is being stored in a laboratory before testing.
- The sample is being stored in a laboratory after testing but before it is returned to the sample collector.
- The sample is being stored temporarily in the laboratory after testing for a specific purpose.

Samples are not exempt from DOT regulations. If they are a DOT "Hazardous Material," they must be shipped accordingly. If a common courier (e.g., Federal Express or UPS) transports samples, the following rules apply:

- Sample kits are to be shipped under the provisions of DOT 49 CFR 173.4 or Section 2.7 of the IATA Dangerous Goods Regulations (DGR) regarding small quantities.
- The amount of acid or base that is added to each sample container will not exceed the proportional amounts listed in Table 13.2.
- Samples that are known to be a DOT hazard (e.g., flammable liquid) will be transported as a DOT hazardous material.
- Samples kits preserved with methanol will be shipped under the provisions of DOT 49 CFR 173.4 or Section 2.7 of the IATA DGR regarding small quantities.
- Samples kits preserved with Sodium Bisulfite will be shipped under the provisions of DOT 49 CFR 173.4 or Section 2.7 of the IATA DGR in excepted quantities if there is no more than 30-mLs of sample in each inside container.
- Samples kits preserved with sodium bisulfite will be shipped as DOT corrosive materials if there is more than 30-mLs of sample in the container.
- All other preserved samples may be shipped as non-hazardous materials.

If employees, a client, or a private courier transport the samples, the following rules apply:

- The sample coolers should be secured so they cannot accidentally shift during transportation or contained in a security cage.
- The coolers or shipping containers will be marked with the words "Samples for Analysis" or a similar descriptive name.
- The total amount of sample material that is shipped will not exceed 400-pounds per vehicle.

These samples fall under materials of trade and are therefore exempt from the regulations. Refer to 49 CFR 173.6 for more information on materials of trade.

Some soil samples are covered under U.S. Department of Agriculture (USDA) regulations. All samples received from outside the mainland United States are required to be heat treated before they are disposed of. The USDA has also established several domestic quarantine areas within the mainland of the United States. Laboratories outside a specified quarantine area must heat treat all soil samples that are received from the specified quarantine area. The facility is required to have a permit to import samples from any quarantine area. The samples may only be shipped off site for treatment if they are sent to a facility that has a permit to treat soils from quarantine areas. All EPA permitted disposal facilities that incinerate waste must meet these criteria.

When samples no longer meet the criteria listed above, they will be treated as waste. It is Company policy that no sample is to be disposed of without approval of the Waste Coordinator or EHSC. Some samples may require pre-treatment prior to their disposal in order to meet local municipal or state regulations. Otherwise, the facility may violate various regulations. Some contracts stipulate that the Company deface or destroy all labels on sample containers before the containers are discarded. All of these requirements present certain challenges that the Company will meet. In order to ensure that all requirements for disposal of samples are met, samples will be turned over to the Waste Coordinator, or an individual designated by the Waste Coordinator for disposal.

13.6 Typical Waste Streams Produced At Laboratories

There are various waste streams that may be produced and their corresponding waste categories are listed in the Table 13.1.

In order to comply with the various regulations and/or Company policies, each waste stream will be managed in a specific manner. Unless otherwise noted, the waste streams are not to be mixed. Employees will consult with their Waste Coordinator and/or the EHSC if they generate any material not covered on one of these tables.

13.7 Waste Accumulation Procedures for Satellite Accumulation Areas

A material is a waste when it no longer has a useful purpose and is destined for disposal. Certain steps are then taken to ensure the waste is managed in an environmentally safe manner and all regulations are properly complied with. Otherwise, the Company could be placed at risk. There are 5 basic steps that employees need to follow when managing waste:

- Identify and categorize the waste. Refer to Table 13.1.
- Select an appropriate container.
- Prepare the container.
- Accumulate the waste.
- Turn the waste in for disposal.

The first 3 steps must be completed before any waste is collected in the container. Otherwise, employees may inadvertently violate various regulations. Each of these steps may be carried out with minimal, if any, impact on operations. Individual steps are discussed in detail below.

13.7.1 Identification and Categorization of Waste Materials

Table 13.1 provides guidance to determine what waste materials are produced during a procedure. A procedure may produce more than one type of waste. For example, extraction procedures produce solid waste contaminated with solvents (e.g., sodium sulfate and filter paper), acid solutions from cleaning glassware, solvents from rinsing glassware, and water contaminated with solvents from the extraction process. Each type of waste will need to be kept separate for proper treatment or disposal.

After the waste has been identified, it must be categorized. Is it a RCRA hazardous waste? A PCB waste? A Non-RCRA hazardous waste? a sample?; or a non-hazardous waste? This information is necessary for the Waste Coordinator to properly classify the waste for regulatory purposes. It is also necessary to ensure that incompatible materials are not combined.

13.7.2 Choosing an Appropriate Container

After the waste has been properly identified, an appropriate container must be chosen to store the material. The first rule when choosing a container is to select a container that is compatible with the waste. For example, acid or base solutions would not be placed in a metal container; and methylene chloride would not be placed in a plastic Cubitainer™. These types of waste would create holes in the containers. Use of glass containers should be avoided when possible as they can break causing material to spill or leak.

The second rule is to choose a container of an appropriate size. Unless the Waste Coordinator has made special arrangements in a laboratory, the following rules apply to satellite waste container sizes:

- Glass containers may not exceed 1-gallon in size.
- Metal and plastic containers may not exceed 5-gallons in size.
- Choose a container that is appropriate for the amount of waste normally generated. If generating 1-liter of a particular waste in 1-year, a 5-gallon (20-liter) container would be too large of a container to select.
- Waste glass and pipettes will be collected in containers with hard side.

The Waste Coordinator may make exceptions to these rules. The waste coordinator may also determine that it is acceptable to place a single 55-gallon drum in some satellite accumulation areas to facilitate efficient collection of some waste materials. However, the decision to do so will be made by the Waste Coordinator since certain regulations may be violated if this is not performed properly.

13.7.3 Preparation of Waste Containers

Before waste may be added to the container, it will be properly prepared. Properly label the container based on the category of waste to be contained. Labeling requirements are as follows:

- RCRA Hazardous Waste
  - Place a "Hazardous Waste" label on the container, write the words "Hazardous Waste" on the container, and also write the name of the material on the container.

    NOTE: **Under Federal Regulations, any portable device that is used to store RCRA**

Hazardous Waste is classified as a container and must be labeled with the words "Hazardous Waste" or the name of the material in the container.

- When using a "Hazardous Waste" label, write an abbreviated description of the material (e.g., flammable solvents, acid solutions, etc.) on the label or the container. The description of the hazard must include an indication of the hazards of the contents. The five main ways to do this include:
  - Identifying the applicable hazardous waste characteristic (i.e., ignitability, corrosivity, reactivity, and toxicity);
  - Using a hazard statement or pictogram consistent with OSHA's Hazard Communication Standard at 29 CFR 1910.1200;
  - Using standard DOT markings for labeling or placarding at 49 CFR Part 172, Subparts E and F;
  - Using an NFPA chemical hazard label;
  - Using another widely understood industry marking.
- When using a "Hazardous Waste" label, leave the accumulation start date section blank (unless State EPA requires date). With the exception of PCB waste, this date is the day the waste is turned in to the Waste Coordinator for disposal.

- PCB Waste
  - Place a black and yellow PCB warning label on the container.
  - If the material is only PCB waste, write the word "waste" on the container. A "Hazardous Waste" label can also be used to meet this requirement.
  - If the material is also an RCRA hazardous waste, follow the labeling requirements for RCRA hazardous waste.
  - Write the day the first waste was collected on the container. The accumulation start date, or out-of-service date for PCB waste, is the first day any waste is added to the container.

- Non-RCRA Hazardous Waste
  - Place a "Non-RCRA Regulated" label on the container or write the words "Non-RCRA Hazardous Waste" on the container.
  - Write an abbreviated description of the waste (e.g., wastewater) on the container.

- Samples
  Samples should be turned in for disposal in their original containers with all original labels. The Waste Coordinators will ensure that any additional labels that are required are added to individual sample containers or the tubs holding the samples.

- Non-hazardous Waste
  There are no special requirements for preparation of non-hazardous waste containers. However, for ease of identification and to minimize the potential for questions from touring clients, auditors, and regulators, these containers should be labeled simply "Non-Hazardous Waste".

- Asbestos Waste
  Label the satellite containers asbestos waste.

13.7.4 Accumulation of Waste

After the first 3 steps have been completed, satellite accumulation may begin according to the following guidelines:

- If the concentration of materials normally added to a container varies, track the approximate amount and type of material that is added to the container each time. An example of when this would be necessary would be when methylene chloride or other different flammable solvents from various procedures are added to a single waste container. This information will be recorded on a waste tracking form for the container or drum the material is collected in. This requirement applies to acid wastes from acid rinsing glassware. If a corrosive liquid is not elementally neutralized and disposed of in accordance with the facility waste SOP by the end of each shift and instead is placed in a satellite waste container, then that liquid must be counted as waste per the regulations in 40 CFR 261.5.
- Ensure that different waste streams are segregated by compatibility group. Refer to Table 13.1 for examples of waste streams. If unsure of the classification of the waste stream being generated, contact the Waste Coordinator or EHSC.
- **Keep the waste container closed unless waste is being added or removed from the container.** This is a mandatory requirement for RCRA hazardous waste and PCB waste. Failure to do so is a violation of federal and state regulations.
- Keep all RCRA hazardous waste and PCB waste containers in secondary spill containers such as tubs. This is especially important for glass waste containers.
- Leave at least 5% headspace at the top of the container. Inadequate headspace can be hazardous and create problems.
- If the opening to the container is small or restricted, use a funnel to add waste to the container. This will prevent contamination of the outside of the container. Always remove funnel and close container when not in use.
- After the waste has been added to the container, return it to its designated storage area. Unless specifically approved by the EHSC, fume hoods are not to be used to store waste containers.
- Satellite containers with permanent tubing must be inserted into an appropriate cap so there is a tight fit of the tubing through the cap opening.

13.7.5 Turning Waste in for Disposal

Each facility will have one or more employees who are designated to receive waste from the various laboratory areas. These individuals will ensure that the waste is properly treated and/or prepared for disposal. Employees may accumulate up to 55-gallons of waste material from a process at or near the process. When this limit has been reached, or the storage capacity of the area has been met, the waste will be turned in for disposal.

Each facility is responsible for implementing specific procedures for turning waste in for disposal. Some facilities may have their Waste Coordinator make routine rounds to pick up waste from the various waste generation areas. Other facilities may want the individual employees to take their waste to the Waste Coordinator. The procedure for each facility should be designed to meet the needs of the local operation and should be specified in the facility's disposal SOP.

13.8 Preparation or Treatment of Waste for Disposal at Main Accumulation Areas

Once waste is removed from the satellite accumulation areas, it is either treated or packaged for disposal. This will be performed within the time frames specified for each type of generator. Hazardous waste from one generator may not be transported to another generator's site. Generators are defined by site and not by company name or ownership. The only exception to this rule is for VSQGs. These facilities may transport their waste to a LQG or SQG site for pick-up as long as the waste is picked up and transported to a permitted Treatment Storage and Disposal Facility within the time frame specified in the state or region where the facility was located. In most cases, this period will be 10-days or less. However, in some states this period is less.

Waste that is taken to the waste accumulation area will be tracked. Each facility will decide what type of log that they will use to track the waste. The log will include:

- The date the container or containers were removed from the satellite accumulation area.
- The date the container was treated or shipped for disposal.
- A description of the waste. The description will include all information necessary to track the waste to the appropriate waste profile. If the quantity and type of material that is placed into the drum may vary, the rough type and quantity of each waste that is added must be kept track of.

The Waste Coordinator will ensure that the waste containers taken to the main waste accumulation areas are in good condition and are properly labeled. When hazardous waste is taken to the waste accumulation area, the following information will be included on the container:

- The words "Hazardous Waste" and a description of the hazard.
- The date the waste was taken to the main accumulation area - If waste from several containers is poured into a larger drum, the date of the oldest container will be written on the drum.
- The Waste Manifest Number - This number is made up of the 12-digits from the facility's EPA generator number plus 5-unique numbers that are assigned by the generator. This number must never be repeated and must be assigned by the generator and not the vendor who disposes of the waste.
- The phrase "HAZARDOUS WASTE -- Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency." Some states have alternative phrases that must be used.
- The description of the hazard which must include an indication of the hazards of the contents. The five main ways to do this include:
  - Identifying the applicable hazardous waste characteristic (i.e., ignitability, corrosivity, reactivity, and toxicity);
  - Using a hazard statement or pictogram consistent with OSHA's Hazard Communication Standard at 29 CFR 1910.1200;
  - Using standard DOT markings for labeling or placarding at 49 CFR Part 172, Subparts E and F;
  - Using an NFPA chemical hazard label;
  - Using another widely understood industry marking.

- The facility's name and address.

Waste that is to be shipped off-site for disposal will be packaged in shipping containers that meet DOT requirements. The waste may be placed in the drums by employees or by a representative of the vendor who will dispose of the waste. If an outside vendor packages the waste, a Company employee will always supervise them.

Once containers have been properly packaged, they may be shipped for disposal. All containers of hazardous waste will be sent using a "Uniform Hazardous Waste Manifest." The vendor, who is disposing of the waste, usually provides the manifests. However, it is the facility's responsibility to ensure that the proper manifest is used.

- In September 2006, the DOT required all states to use the DOT approved manifest. These will be provided by your waste vendor.
- Some states require the use of state-specific waste codes on DOT generated manifests, and these manifests may be required to be sent to the appropriate state agency. Please contact your state regulatory agency for more direction.

The vendor normally prepares the manifest for Company facilities. However, it is the responsibility of the facility to ensure that the manifests are properly completed. For that reason, only a Company employee will sign all manifests. The company employee (e.g., Waste Coordinator) will be trained in how to prepare hazardous waste manifests and ship hazardous materials (refer to Section 4). The person who signs the manifests must:

- Be DOT certified to ensure that all information required under DOT, the EPA and state regulations have been included.
- Sign the manifest certification by hand.
- Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest.
- Retain a copy of the manifest.
- Send a copy of the manifest to the state regulatory agency in the state where the waste was generated (if required).
- Give the transporter the remaining copies of the manifest.

The Disposal Company will return a copy of the manifest when the waste has been received. A copy of the returned manifest will be kept with the files for the waste shipment.

NOTE: Some states require the generator to also send a copy of the returned manifest to the state regulatory agency.

A Land Disposal Restriction (LDR) notification will be prepared for all shipments that contain hazardous waste. The vendor may prepare the notification which does not require a standard format. Since the facility is responsible for ensuring that the information on the notification is accurate, a Company employee will sign the LDR notification. One copy of the LDR notification will be sent with the transporter; a second copy will be kept at the facility.

In most cases, hazardous waste must be shipped to an EPA-approved waste disposal facility. However, there are some exceptions to this rule. Solvents may be recycled on site; and corrosive waste may be neutralized as long as the only waste code associated with the waste is D002. In most cases, neither of these types of treatments requires the facility to have a permit or to file a treatment plan. In many states, other waste may be treated on site as long as the generator meets the following criteria:

- The waste can be treated in a manner that does not endanger the employees or the environment.
- The waste is treated within the required holding time (90-days for LQGs and 180-days for SQGs).
- The facility has filed a treatment plan with the state, per 40 CFR 268, that is filed with the state at least 30-days before any treatment is ever carried out. The treatment plan must demonstrate that the subsequent material produced by the treatment process is no longer considered a hazardous waste.

The VP-Quality & EHS will be consulted when treatment plans are to be submitted to state or federal regulatory agencies.

13.9 Record Keeping

It is Company policy to retain all data, waste records and EH&S records for at least 5-years. Some state regulations require this information to be maintained for longer periods of time. In such an event, the record keeping requirements of the state will take precedence. Data that must be kept includes:

- All data or records of process knowledge that were used to determine the waste profile for the material that is sent.
- A copy of the original manifest for the shipment.
- A copy of the LDR notification for the waste shipment.
- A copy of the manifest that was returned from the disposal facility.
- A copy of all biennial or annual reports as required by the state where the facility is located. Refer to http://www.epa.gov/epaoswer/hazwaste/data/biennialreport/ for more information on required reports.

13.10 Waste Inspections

Regardless of waste generator status, all facilities (including micro labs, and service centers if they produce hazardous waste), will conduct and document weekly inspections of their main waste collection areas. Minimum checks in these areas will include:

- The date and time of the inspection, and the name of the inspector. Large Quantity Generators must conduct inspections with no more than 7 days between inspections. If day 7 falls on a holiday or weekend, the inspection must be conducted earlier; this creates a new 7 day window. Small and Very Small Quantity Generators must conduct an inspection once each calendar week.
- Appropriate labels on all primary and secondary waste containers
- Collection start dates on all main waste containers (LQG and SQG only)
- Confirming that main waste containers have not been accruing waste for longer than 90 days (LQG) or 180/270 days (SQG).
- VSQG on-site waste does not exceed the weight limits allowed.
- Collection start dates on satellite collection containers (in those states where required), are less than one year old.
- Waste containers are closed when waste not being added, including drum funnels and instrument carboys.
- Appropriate secondary containment for liquid waste containers

- Secondary containers dry and empty of anything except the primary container
- All waste containers in good condition without holes, leaks, cracks, etc.

Table 13.1

Common Waste Streams

Waste Stream Description	Category (Preferred Treatment)
❖ Methylene Chloride	RCRA Hazardous Waste (Incineration or recycling)
❖ Methylene Chloride/Flammable Solvent Mixture	RCRA Hazardous Waste (Incineration)
❖ Flammable Solvents (ethyl ether, hexane, acetone, methanol, pentane, acetonitrile, etc.) **NOTE: Ethyl ether must be mixed with an alcohol or other antioxidant to prevent peroxide formation when it is collected for disposal)**	RCRA Hazardous Waste (Incineration or Fuel Blending)
COD/CLD Waste (mercury, silver, chromium, sulfuric acid and water)	RCRA Hazardous Waste (Treatment to neutralize the acid and recover the Mercury and other metals)
Phenols Extraction Waste (chloroform)	RCRA Hazardous Waste (Incineration)
➢ Cyanide Extraction Waste (1.5% pyridine in water)	RCRA Hazardous Waste (Incineration/this waste is extremely odorous and must be kept separate from all other materials)
➢ Caustic waste from Cyanide Extractions	RCRA Hazardous Waste (Neutralization)
Acid Digests and Rinses	RCRA Hazardous Waste (Neutralization. Once this material has been neutralized it may treated in various ways.)
Solvent Extracts in Vials (may contain methylene chloride, hexane, acetone, Methanol, etc.)	RCRA Hazardous Waste (Incineration)
PCB Waste/Including PCB waste that meets the definition of a RCRA Hazardous Waste.	PCB Waste/RCRA Hazardous Waste (Incineration at a PCB Facility)

Table 13.1

Common Waste Streams

Waste Stream Description	Category (Preferred Treatment)
Water Samples That Have Been Extracted with Organic Solvents	Non-RCRA Hazardous Waste (Varies. This material must be neutralized in the extraction vessels before it is placed in the main collection containers. Otherwise the material must be treated as a RCRA Hazardous Waste and incinerated)
❖ Used Oil and Oil Samples	Non-RCRA Hazardous Waste if collected as used oil. This material must be sent for to a used oil recovery facility. RCRA Hazardous Waste if mixed with flammable solvents
Water Samples Preserved with Acids or Bases	RCRA Hazardous Waste (Neutralization)
Water Samples not Preserved with Acids or Bases	Non-RCRA Hazardous Waste (Treatment will vary by facility)
Soil Samples That are not a RCRA Hazardous Waste and are not regulated by the DOA.	Non-RCRA Hazardous Waste (Treatment will vary by facility)
Soil Samples That are not a RCRA Hazardous Waste and are regulated by the DOA.	Heat Treated (Treatment will vary by facility)
Soil Samples (with toxicity characteristics)	RCRA Hazardous Waste (Incineration)
Solid Materials Contaminated with Organic Solvents When Extracting Samples (filter paper, sodium sulfate, extracted samples)	Non-RCRA Hazardous Waste (Treatment varies depending on the state)
Fluorescent Light Bulbs that Contain RCRA levels of Mercury **NOTE: Phillips and GE produce a light bulb that does not contain RCRA levels of Mercury. These light bulbs should be used wherever possible.**	Mercury Recovery or Recycling Under the Universal Waste Regulations.
Batteries (Some batteries contain Lead, Cadmium or Lithium).	Method of Treatment Will Vary
Broken Mercury Thermometers or Spilled Mercury	RCRA Hazardous Waste (Incineration at a Mercury Recovery Facility)

Table 13.1

Common Waste Streams

Waste Stream Description	Category (Preferred Treatment)
Unused Standards	Varies. Unused standards containing unused dioxin or dioxin precursor material must be kept separate from other material. PCB standards and standards that have a P-listed waste code must also be kept separate.
Samples containing or suspected to contain asbestos.	Land filled in double plastic bags.

❖ These waste streams may be combined if necessary.
➢ These waste streams may be combined if necessary.

Table 13.2

Maximum Amount of Preservatives per Sample Container

Preservative	Sample Container Size	Maximum Volume
Sulfuric Acid (1:1 concentrated acid in water)	1 Liter	8 mL
Nitric Acid (1:4 concentrated acid in water)	1 Liter	10 mL
Hydrochloric Acid (1:1 concentrated acid in water)	40 mL VOA	0.25 mL
Sodium Hydroxide (50% by weight in water/~10N)	500 mL	3 mL
Hexane	40 mL VOA vial	30 mL
Methanol	40 mL VOA vial	30 mL

SECTION 14

14.0 TRANSPORTATION AND FLEET SAFETY PROGRAM

Nationally, traffic accidents result in 1 death every 12-minutes and an injury every 9-seconds. In addition to the physical and emotional damage caused by these accidents, there are financial costs. Depending upon the circumstances, these costs can be staggering. If not controlled, vehicle accident costs can become one of the largest dollar losses for the Company.

The Company maintains that the cost associated with vehicle accidents can be controlled through a strong transportation safety program. The goal of the Company's transportation and fleet safety program is to protect the employee, both on and off the job. By doing so, physical and economic losses can be reduced to both employees and the Company. Our goal is zero preventable accidents.

The Company maintains that this goal can be achieved as long as the Company and employees put forth a strong concerted effort, and the Company recognizes that its employees have a tremendous impact on achieving this goal. In the following sections, information is provided that covers the Company's vehicle policies, procedures to be followed, and tips for safe driving. Employees need to read, understand, and utilize the information provided.

14.1 General

Certain employees are required to drive Company vehicles or their personal vehicles on Company business.

All employees who drive on Company business are required to have a valid driver's license in the state where they reside and to obey all traffic laws. Motor Vehicle Records (MVRs) will be verified in accordance with Company policy by Human Resources. Refer to the SOP "Driver Evaluation and Qualification Policy", document number CW-H-P-001, for more information on driver requirements. The information will be used to determine an employee's eligibility to drive.

Training on safe and defensive driving practices is available on the Oasis / Human Resources website. This training will be completed when the employee is appointed to a position which requires them to drive a Company-owned vehicle. The employee will attend refresher training once every 3-years. The employee may also be required to attend refresher training when they are involved in an accident where it is determined that the employee was "at fault."

The following section details rules to be followed by employees who drive vehicles on Company business and Company policies for shipping DOT hazardous materials including the security plan required under DOT regulations.

14.2 Fleet Safety Program

Employees are expected to operate Company-owned, leased or rented vehicles safely to prevent accidents, which may result in injuries and property loss. It is the Company's policy (all Company properties) to provide and maintain a safe working environment to protect our employees and the citizens of the community from injury and property loss. This program requires the full cooperation of each driver to operate their vehicle safely and to adhere to the responsibilities outlined in the Fleet Safety Program. Elements of this program include:

- Assigning responsibilities at all levels of employment.

- Vehicle use and insurance requirements.
- Employee driver's license checks and identification of high risk drivers.
- Accident reporting and investigation.
- Vehicle selection and maintenance.
- Training standards.
- Safety regulations.

14.3 Organization and Responsibilities

14.3.1 Facility / Laboratory Directors

The Facility/Laboratory Director, along with the designated EHSC, is responsible for directing an aggressive vehicle safety program.

14.3.2 Management

- Implement the Fleet Safety Program in their areas of responsibility.
- Establish measurement objectives to ensure compliance with the program.
- Provide assistance and the resources necessary to implement and maintain the program.

14.3.3 Managers and Supervisors

- Investigate and report all accidents involving a motor vehicle used in performing Company business. Refer to the Vehicle Accident Supplemental Form (Form No. CW-E-WI-003) that will be used to upload the accident information into the VELOCITYEHS database.
- Be responsible for taking appropriate action to manage high-risk drivers as defined by this program.
- Provide additional driver training either internally or through external means for high-risk drivers.

14.3.4 Fleet Manager

- Issue periodic reports of losses for the CEO's review.
- Review motor vehicle accident reports as part of the Company Accident Review Board.
- Revise and distribute changes to the Fleet Safety Program to managers, supervisors, coordinators and drivers as necessary.
- Maintain appropriate records.

14.3.5 Fleet Coordinator

- Monitor and ensure that Vehicle Check-out and Check-in procedures are followed.
- Assure that all Company owned vehicles have a "How's My Driving" bumper sticker applied to the rear of the vehicle. The sticker is to be placed in plain sight, not to be removed or obscured by other markings, and may be placed on the rear tailgate or bumper of a truck, or rear door of a van.
- Install and report issues recorded on a fleet vehicle dash camera.
    - Assist fleet drivers with understanding the operation of the dash camera and assure compliance with the Dash Camera Acknowledgment Form.
    - Assure that fleet drivers complete the Pre-Trip Vehicle Inspection Form before operating a motor vehicle each day. Schedule repairs as reflected on the form as needed.

- Install and monitor daily feedback and reports issued by onboard telematics devices for the fleet vehicles.
    - Assist fleet drivers to curb driving behavior that is recognized as unsafe by the onboard telematics device. For instance, driving above the posted speed limit, harsh braking, and excessive acceleration are some of the examples of driving characteristics reported by the telematics device.
- Arrange for sample transport, if needed.
- Schedule maintenance to be conducted at the manufacturer's recommended intervals:
    - Change motor oil and chassis lubricated every 6,000 miles or at least annually.
    - Rotate tires according to the manufacturer's recommendations, every 10,000 miles, or when excessive wear is noted.
    - Service the vehicle as suggested by the manufacturer as outlined in the owner's manual or on an as-needed basis.

14.3.6 Drivers

- Always operate a motor vehicle in a safe manner as explained under the Section 14.7, Basic Safety Considerations.
- Maintain a valid driver's license which lists classification of vehicles that may be driven and minimum insurance requirements on personal vehicles used in Company business.

  NOTE: Human Resources maintain a copy of valid driver's licenses on file.
- Maintain assigned vehicles according to established maintenance standards.
- Follow additional procedures explained in Section 6.4 of SOP No. CW-F-S-028 (*Vehicle Operation Procedure)*, most current revision. This procedure covers important information, such as:
    - Vehicle Check-Out and Check In
    - Ice Transaction Procedure
    - Vehicle Maintenance Procedures
    - Operator Maintenance Checks
    - Preventive Maintenance Procedure
    - Breakdown and Repair Procedure
    - Fuel Card Procedures
    - Allowable Purchases

14.4 Vehicle Use

14.4.1 Company-Owned Vehicles

- Employees may not use a Company vehicle for personal use. Employees may be authorized by their Laboratory/Facility Director, Vice-President of Operations, and Division Safety Manager to transport a Company vehicle home for safe storage or use during an upcoming shift. Only the employee will be allowed to operate the vehicle. No one under the age of 18 will be permitted to operate the vehicle. This authorization will be for periods of 6 months to one year. Use Fleet Vehicle Take Home Authorization Form, Number CW-E-WI-039, current revision, to identify why this is necessary and to obtain approvals before allowing employees to take company a company vehicle home.
- Vehicles used to transport materials will be equipped with systems to secure the loads in the vehicles. Loads in open-bed vehicles should be secured so they cannot blow or bounce out

of the bed while the vehicle is in motion. Vans will be equipped with a security cage or other system to ensure that materials cannot shift and strike the driver or passengers. All vehicles will be of the correct design and size for its attended use.

- Company-owned vehicles will be equipped with emergency road side equipment such as flares or road triangles.
- Company-owned vehicles will be equipped with a "How's My Driving" bumper sticker on the rear of the vehicle. This sticker is to inform other drivers that this company employs professional, courteous drivers and includes a toll free phone number for them to report particular driving behavior or vehicle condition. The sticker also employs a specific ID # unique to each vehicle.
- Some fleet vehicles are equipped with onboard telematics devices and/or dash cameras. If a company employee operates a fleet vehicle with a dash camera they must first assure that the equipment is turned on and in record mode. The dash camera must remain on and in the record mode at all times during operation. Refer to work instruction CA-E-WI-005 for instructions and usage of dash cameras.

14.4.2 Personal Vehicles with Car Allowance on Company Business

Employees who drive their personal vehicles on Company business and are compensated by the Company by car allowances are subject to the requirements of this program including:

- Maintaining auto liability insurance with minimum limits of $100,000/$300,000 for bodily injury and $50,000 for property damage with a combined single limit of $50,000 unless state minimums require higher coverage. The Company will require proof of insurance.
- Maintain current state vehicle inspections when required.
- Maintain the vehicle in a safe operating condition when driving on Company business. (Refer to SOP No. CW-H-P-001 for further information.)

14.4.3 Rental Vehicles

Rental vehicles will be leased from an authorized nationally-recognized company. Employees are to decline additional coverage when renting a vehicle. The Company insurance will cover accidents unless previous limitations have been sent. All employees that rent a vehicle for work purposes shall be added to the rolling MVR check. See Section 14.5.1.

14.4.4 Unauthorized Use of Company Vehicles

Assigned drivers and other authorized employees will not allow an unauthorized individual to operate a Company vehicle. There are no exceptions to this policy! This includes relatives and friends. Disciplinary action up to and including termination may be taken.

NOTE: If a Company employee allows an unauthorized person to use a Company vehicle and the vehicle is involved in a vehicle accident where they are deemed at fault, the responsible employee will be required to make restitution for any and all damages which result.

14.4.5 Contractors and Temporary Employees

Contractors and temporary employees will not be eligible to drive Company vehicles. In special circumstances, contractors or temporary employees may be granted permission by the VP of

Operations or VP-Quality & EHS and will be treated as Company employees and will comply with all requirements of this program. Failure to meet all requirements will result in the immediate loss of driving privileges.

14.5 Driver Selection

The purpose of driver selection process is to identify and hire the most qualified candidate in efforts to promote safety and reduce fleet accidents. The selection process is a series of screening exercises. Items that should be considered and evaluated include the candidate's past driving experience with similar vehicles. The driver selection process applies not only to full-time drivers but also to incidental drivers; meaning personnel who drive occasionally or in-addition to other job duties.

14.5.1 Driver Performance

A review of the driver's over-the-road performance is a critical component of the Fleet Safety Program. Performance will be monitored during the selection process as well as at periodic intervals throughout the driver's employment using information obtained from motor vehicle records, onboard telematics device data, and accident file data.

All drivers, including those employees that rent a motor vehicle for business purposes, will have a background screening performed by a Motor Vehicle Records check on a 3 year rolling schedule. The screening will be completed by Human Resources and will determine whether remedial driver training or suspension of driving privilege is warranted. The review will become part of his/her file.

Refer to SOP number CW-H-P-001, Driver Evaluation and Qualification Policy, for further information on driver performance requirements.

The "How's My Driving" Program allows the general public to inform the Company of driver performance that could be detrimental to the Company's image, to public or private property, or to the vehicle itself. The phone number and unique ID number included on the bumper sticker allows for reporting of complaints 24/7. During normal business hours, the caller may speak to someone directly to make their report. During off-peak hours, the caller is prompted to leave a message.

Upon receiving a complaint, the Division Fleet Manager is notified of the details. Complaint information is entered into a data system that is designed to track the number of complaints per vehicle, per driver, per facility, etc. Although the Company evaluates each complaint, it also understands that complaints of this type may have many factors that may be out of the control of the driver. The individual mood of the caller, the potential that others drivers have caused or even created the situation, etc., may lead to another driver calling to lodge a complaint. This program is designed to evaluate trends rather than being over-sensitive to one particular call. Once a complaint has been recorded, the Division Fleet Manager contacts that facility's Fleet Coordinator for the driver's input to the situation and for a statement from the Fleet Coordinator and/or the Facility Director.

14.6 Use of Mobile Phones

- Employees are not to use mobile phones while driving unless their phone is equipped with a hands-free system. Even if the phone is equipped with a hands-free system, the employee

should minimize use of the cell phone. In high traffic areas, employees are to avoid answering the phone and are not to place calls. Even in lower traffic areas, the employees should avoid placing outgoing calls.

- Where possible, employees should switch the phone off while driving and have callers leave messages on their voice mail.
- Where switching the phone off is not an option, employees are advised to exit the road to make or take phone calls.
- Employees are not allowed to text or read email on phone systems while operating a vehicle. There are many states that prohibit these actions and our federal contracts also require us to prohibit texting while driving.
- Some clients have additional requirements such as not using cell phones when on-site at the client's facility. When at a client's site, employees should confirm with a client representative that cell phone use at that location is permitted.

14.7 Basic Safety Considerations

- Determine if the trip can be avoided.

  Consideration should be given to avoiding trips when reasonably possible. It may be possible to conduct the business by telephone, video or telephone conferencing, electronic mail or fax.
- Determine if there are alternative modes of travel that would be safer.
- Allow adequate time for the travel.

  When travelling by road, allow enough time to reach the destination(s) without exceeding speed limits. The intended journey should follow the safest available route, which may not necessarily be the shortest or quickest. Driving time is part of the working day. Very long days are to be avoided, particularly in winter. Overnight stops may be necessary to avoid very long days.
- Drivers are to take regular breaks before beginning to feel fatigued.

  Where more than one employee is travelling, consideration should be given to sharing the driving.
- Consider weather conditions.

  In severe cases, trips may have to be postponed or cancelled.
- Ensure that employees understand that they are to consider the condition of the vehicles they are to drive.

  This includes Company-owned vehicles, leased vehicles and vehicles rented on short trips. All vehicles are to be in road-worthy condition. If the driver considers that the vehicle provided is not in a road-worthy condition, the journey will not be undertaken, and the matter will be reported. Where an employee drives their own vehicle on Company business, the employee has a responsibility to ensure that it is in a road-worthy condition and that it is insured.
- Assess risks for driving abroad.

  The risks involved in driving abroad will be assessed before the journey is undertaken. The degree of risk will depend on the country involved. It may be appropriate to consider the use of a local driver or taxi in preference to the employee driving.

Employees who drive on Company business will comply with the following safety rules.

- All employees who operate vehicles on Company business are expected to know and follow all vehicle regulations for the areas where they will operate the vehicle.

- Drive courteously.
- Avoid driving when tired.

  Employees should inform their supervisor if they are experiencing fatigue or there are factors that could lead to fatigue. Drivers are to take frequent breaks when driving extended distances where fatigue could be a factor.
- Pay attention to your surroundings.

  Many accidents are caused by inattentiveness on the part of one or more drivers. By being alert, you might avoid accidents that would result from the inattentiveness of other drivers.
- Drive defensively.

  Drivers can seldom control the actions of other drivers. However, attempt to control the outcome of some of these actions, and it may be possible to avoid accidents that they might cause.
- Avoid backing up when possible.

  Many accidents involve one or more vehicles backing up. If necessary, have someone assist you by giving you directions. Large vehicles should have a back-up beeper.
- Avoid following too close.

  Use the two-second rule. This rule states that after the rear of the vehicle in front of you passes a point on the road, it should take at least 2-seconds for the front of your vehicle to pass the same point. Otherwise, you are following too close.
- Avoid quick sudden stops that might cause the brakes to lock. If it's necessary to stop quickly and apply a constant steady pressure. Slamming the brake pedal down causes the brakes to lock and increases the stopping distance.
- Avoid open containers of food and drinks in the vehicle to avoid spillage.

  Avoid eating meals while in motion. Plan time to stop and eat meals during travel.
- Use turn signals as appropriate.
- Use headlights in poor weather conditions, a half-hour after sunrise, and a half-hour before sunset. If you are using your windshield wipers because of weather, you should have your headlights on. In some states this is mandatory.

  Headlights on the bright setting can cause glare in some poor weather conditions, such as fog.
- Secure materials in a manner that will prevent them from moving and creating a safety hazard.

  When possible, keep materials in a trunk, camper shell, or other protected area.
- Watch for pedestrians and motorcycles - they can be very difficult to see.
- Use the safety belt. Ensure that all passengers wear their safety belts. **This is a mandatory Company policy (Sec. 14.8).**
- Pay special attention to adverse (e.g., snow or heavy rain) weather conditions. If such conditions exist, slow down and increase your following distance.
- Do not attempt to cross standing water unless you are sure of the depth and how fast it is moving. It is extremely easy for fast moving water to carry a vehicle away.
- Ensure that all windows are clear of fog, ice, mist or other materials that might obstruct your vision.
- Vehicles parked on inclined surfaces can roll.

  It may be necessary to block wheels to prevent them from rolling.
- Be aware that large vehicles need a larger turning radius.

- Do not remain in the "blind area" of a large truck any longer than you have to.
  They may not be able to see your vehicle when they need to turn or change lanes. If you have to pass a large truck, do so as quickly as reasonably possible.
- Do not let passengers ride in the back of trucks or on vehicles.
- Ensure that the vehicle is properly maintained and inspected.
- Immediately report and/or fix any defects on the vehicle to your Fleet Coordinator.
  If a defect is found on a Company-owned vehicle, complete Form number CW-F-WI-031. This form can be found as Attachment C of SOP number CW-F-S-028, Vehicle Operation Procedure.
- If an exceptionally aggressive driver is encountered, or you are the victim of "road rage," back off and allow the other driver go on his/her way.
- If being followed too close, pull over and allow the other driver to pass.
- Do not pick up hitchhikers.
- Do not accept payment for carrying passengers or materials.
- Do not use any radar detector, laser detector or similar devices in Company vehicles.
- Do not push or pull another vehicle or tow a trailer other than assigned Company equipment.
- Do not transport flammable liquids or gases unless a DOT, UN or UL approved container is used, and only then in limited quantities which complies with all DOT requirements.
- Use of burning flares will be discouraged. The preferred method is the use of reflective triangles.
- Do not assist disabled motorists or accident victims beyond your level of medical expertise.
  If a driver is unable to provide the proper medical care, he/she will restrict his/her assistance to calling the proper authorities. Your safety and well-being is to be protected at all times.
- DOT regulated drivers will be allowed to only drive 11-hours in a 24-hour period. Other employees will be encouraged to drive 8-hours or less in a 24-hour period to avoid driver fatigue.

Impaired Driving: The driver will not operate a vehicle at any time when his/her ability to do so is impaired, affected, influenced by alcohol, illegal drugs, prescribed or over-the-counter medication, illness, fatigue or injury.

Traffic Laws: Drivers will abide by all federal, state and local motor vehicle regulations, laws and ordinances. All traffic violations will be reported. Any driver cited for a traffic violation must contact their immediate manager or supervisor and report the violation.

Vehicle Condition: Drivers are responsible for ensuring the vehicle is maintained in safe driving condition. Drivers of daily rentals should check for obvious defects before leaving the rental office/lot and, if necessary, request another vehicle if the first vehicle is deemed unsafe by the employee. Drivers are encouraged to rent vehicles equipped with air bags and ABS brakes, where available.

Motorcycles: Employees are prohibited from using motorcycles when traveling on Company business.

Personal Planes: Employees are prohibited from using personal planes when traveling on Company business.

Company and Personal Property: Employees are responsible for Company property such as computers, work papers and equipment under their control. The Company will not reimburse the employee for property stolen out of personal or Company vehicles due to employee negligence as determined by supervisor and the VP-Quality & EHS.

14.8 Use of Seat Belts

It is Company policy that all employees who operate vehicles on Company business and employees who ride in vehicles on Company business will wear seat belts. Employees are also encouraged to wear seat belts when not on Company business. The driver is responsible for ensuring passengers wear their safety belts. Children will be secured in an approved child safety seat according to their state's DOT laws. Seat belts protect people, reduce the seriousness of injuries, and cut costs.

14.9 Accidents

All accidents involving employees operating vehicles on Company time will be reported. This is for the protection of the driver, the Company and any other people who may be involved. Follow these steps when an accident occurs:

14.9.1 If possible, immediately stop the vehicle.

- If this is not possible, return to the scene of the accident as soon as possible.
- If the accident occurs on a main lane, ramp, median, or other high traffic area, attempt to move the vehicle to the shoulder or other safe area.
- Do not disturb the scene of the accident any more than is absolutely necessary.

14.9.2 Check on the status of individuals in the vehicles. Render what aid you are trained to provide. If necessary, call for medical assistance.

- If you are seriously injured, have emergency medical employees transport you to the nearest emergency room.
- If you have a non-serious injury, report it to your manager or supervisor and the EHSC.
- Your EHSC and immediate manager or supervisor can assist you in deciding where to go to receive treatment for non-serious injuries.

14.9.3 Contact local authorities.

- For all accidents, no matter how minor they may seem, local law enforcement must be contacted so that a report may be obtained.
- If no one is injured and all vehicles can be safely driven, you may proceed to an accident investigation site.
- If you cannot get to an accident investigation site, wait for the local authorities where you are.

NOTE: If possible, contact authorities and emergency assistance from your vehicle. If you do not have a mobile phone, see if someone can go and call. If no one can go and the situation is stable, walk to the nearest public phone and make a call. If the situation is not stable, wait with your vehicle and the injured individuals.

14.9.4 As soon as reasonably possible, contact your immediate manager or supervisor and

report the accident.

- Your immediate manager or supervisor will contact the EHSC. One of these individuals will attempt to meet you at or near the accident site. However, this may not always be possible.
- Your manager, supervisor or the EHSC will tell you if you are to remain with the vehicle until they arrive, continue with your work or return to the Company facility after local authorities have finished.
- If your immediate manager or supervisor is not available, contact your EHSC or after-hours contact person.

14.9.5 Follow the instructions you were given by your manager, supervisor or EHSC when you first contacted them.

- If you were instructed to wait for them, you may have to arrange to meet them at a designated spot.

14.9.6 For any accident that results in an injury that is likely to be an OSHA recordable incident, the driver will submit to a drug test as soon as practical. Refer to the Drug Free Workplace Policy (CW-H-P-003) available on the Oasis / Human Resources site for further guidance.

14.9.7 If the driver of the other vehicle leaves the scene, make reasonable attempts to obtain the make, model, year and license plate number of their vehicle.

Note the location of damage on their vehicle.

14.9.8 As soon as reasonably possible, begin gathering information to complete the Vehicle Accident Supplement Report Form.

- If the other driver is uncooperative, gets angry, or leaves the scene, wait for the authorities before attempting these actions.
- If the other driver becomes angry or hostile, you should wait inside your vehicle. **Be sure to obtain the following information from the driver of the other vehicle:**
  - Their name and address,
  - The name of their company (for commercial vehicles only, the registration number of their vehicle, the name of their insurance carrier and their policy number, and their driver's license number.
- Ask to see their driver's license. Give them the same information. Give them the Company address and phone number, and tell them any questions should be referred to your EHSC or the VP-Quality & EHS. If they ask to see your driver's license, you will show it to them.
- For all accidents, no matter how minor they may seem, you must take pictures of the vehicles involved in the accident while at the scene. Make sure to take pictures of all vehicles involved from multiple angles if possible.

14.9.9 If the accident involved an unattended vehicle or other property, attempt to contact the owner of the vehicle or property.

- Contact local law enforcement and wait for them to arrive to make a full report.
- If you cannot locate the owner and local law enforcement fails to respond, leave your name, your EHSC's name, the Company's name and the Company phone number in a conspicuous place.

24.0 **Tab A – Bidder Information Questionnaire**

Bidder Information/Business Questionnaire:
Please complete all information requested below and submit with your bid package

"The undersigned affirms that they are duly authorized to execute this contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other person engaged in this type of business prior to the official opening of this request. By submitting this bid the vendor agrees to the City of Laredo specifications and all terms and conditions stipulated in the proposed document. That I, individually and on behalf of the business named in this Business Questionnaire, do by my signature below, certify that the information provided in the questionnaire is true and correct ".

Name of Offeror (Business) Eurofins Xenco, LLC

Signature of person authorized to sign bid _____ Date July 16, 2021

Print Name of person authorized to sign bid Alex Montayo

Title: President

Business Address: 1733 N. Padre Island Drive

City, State, Zip Code: Corpus Christi, TX 78408

Telephone Number: 361-289-2673 Fax Number: N/A

Contact Person Email Address: Mike.Sullivan@Eurofinset.com

Federal Tax ID Number: 84-4494460

Bidders Principal/Corporate Place of Business Address: 4147 Greenbriar Drive, Stafford TX 77477

Indicated Status of Business:

Corporation _____ Partnership _____ Sole Proprietorship _____ Other: X

If other state business status: LLC

State how long under its present business name: 1 year under current name

If applicable, list all other names under which the Business identified above operated in the last five years.

TestAmerica Laboratories, Inc. (Corpus Christi location)

Will bidder/proposer provide a copy of its financial statements for the last two years, if requested by the City of Laredo? (Yes) / No

Has the business, or any officer or partner thereof, failed to complete a contract? Yes (No.)

Is any litigation pending against the Business? Yes (No.)

Is offeror currently for sale or involved in any transaction to expand or to become acquired by another business entity? Yes (No.)
If yes, offer need to explain the expected impact both in organizational and directional terms.

Has the Business ever been declared "not responsive" for the purpose of any governmental agency contract award? Yes (No.)

Has the Business been debarred, suspended, proposed for debarment, suspended, proposed for debarment, declared ineligible, voluntarily excluded, or otherwise disqualified from bidding, proposing, or contracting? Yes (No)

Are there any proceedings, pending relating to the Business responsibility, debarment, suspension, voluntary exclusion, or qualification to receive a public contract? Yes (No.)

Hs the government or other public entity requested or required enforcement of any of its rights under a surety agreement on the basis of default or in lieu of declaring the Business in default? Yes (No)

Is the Business in arrears in any contract or debt? Yes (No)

Has the Business been a defaulter, as a principal, surety, or otherwise? Yes (No)

Have liquidated damages or penalty provisions been assessed against the Business for failure to complete work on time or for any other reason? Yes (No.)

State if company is a certified minority business enterprise:
Historically Underutilized Business (HUB): Yes No Disadvantaged Business Enterprise (DBE): Yes No

Small Disadvantaged Business Enterprise (SDBC) Yes No Other: Please specify _____

This company is not a certified minority busin☐s:

The above minority information is requested for statistical and tracking purposes only and will not influence the amount of expenditure the City will make with any given company

Bidder: Eurofins Xenco, LLC

25.0 Tab B Price Schedule: Alkalinity

25.1 Table AA

Sample Event	Unit Price Table	Number of Samples/yr	Unit Cost	Extended Cost
- Wastewater Sampling Events -				
Sludge Permit	A	16	$ 294..00	$ 4,704.00
Sludge TCLP	B	6	$ 555.00	$ 3,330.00
Sludge Pathogens	C	4	$ 60.00	$ 240.00
Soil	D	18	$ 310.00	$ 5,580.00
W. W. Groundwater Group A	E	32	$ 261.00	$ 8,3520.00
W. W. Groundwater Group B	F	16	$ 218.00	$ 3,488.00
W. W. Metals	G	40	$ 102.00	$ 4,080.00
Root Zone Nutrients	H	12	$ 112.00	$ 1,344.00
Priority Pollutants	I	12	$ 805.00	$ 9,660.00
- Water Sampling Events -				
W. T. Metals Group A	J	12	$ 48.00	$ 576.00
W. T. Metals Group B	K	12	$ 62.00	$ 744.00
W. T. Pesticides / Herbicides	L	12	$ 250.00	$ 3,000.00
T.T.H.M.	M	24	$ 70.00	$ 1,680.00
H.A.A.-5	N	24	$ 200.00	$ 4,800.00
T.O.C.	O	48	$ 25.00	$ 1,200.00
SUVA		48	160.00	7,680.00
Radionuclides Total, α and β	P	2	$ 140.00	$ 280.00
- Miscellaneous Sampling Groups -				
W.W. Permit & Process Control	Q	365	$ 190.00	$ 69,350.00
W.T. Ion Analysis	R	12	$ 162.00	$ 1,944.00
Microbiology	S	32	$ 240.00	$ 7,680.00
Industrial Pretreatment	T	20	$ 270.00	$ 5,400.00
Storm Water Multi-Sector Permit	U	4	$ 110.00	$ 440.00

25.2 Table A - Sludge Permit

Parameter	Detection	Units	Unit Price
Arsenic, Total	Method Low	mg/Kg	$ 8.00
Cadmium, Total	Method Low	mg/Kg	$ 8.00
Chromium, Total	Method Low	mg/Kg	$ 8.00
Copper, Total	Method Low	mg/Kg	$ 8.00
Lead, Total	Method Low	mg/Kg	$ 8.00
Molybdenum, Total	Method Low	mg/Kg	$ 8.00
Nickel, Total	Method Low	mg/Kg	$ 8.00
Selenium, Total	Method Low	mg/Kg	$ 8.00
Silver, Total	Method Low	mg/Kg	$ 8.00
Zinc, Total	Method Low	mg/Kg	$ 8.00
Mercury	Method Low	mg/Kg	$ 22.00
Phosphorus	Method Low	mg/Kg	$ 8.00
Potassium	Method Low	mg/Kg	$ 8.00
Corrosivity (pH – liquids)	Method Low	s.u.	$ 8.00
Specific Gravity	Method Low	25°C	$ 8.00
Total Volatile Solids	Method Low	%	$ 15.00
Total Solids	Method Low	%	$ 15.00
Ammonia Nitrogen (NH3-N)	Method Low	mg/Kg	$ 25.00
Nitrate Nitrogen (NO3-N)	Method Low	mg/Kg	$ 15.00
Total Nitrogen Kjeldahl (TKN)	Method Low	mg/Kg	$ 30.00
Total PCB's	Method Low	mg/Kg	$ 60.00
Extraction, Extract Clean Up, Determination			$ 0

25.3 Table B Sludge TCLP (as per 40 CFR 261 Appendix II & Part 268 Appendix I) (contaminants listed Table I, 40 CFR section 261.24)

Parameter	Detection	Units	Unit Price
Metals	Method Low	mg/L	$ 85.00
Pesticides	Method Low	µg/L	$ 120.00
Herbicides	Method Low	µg/L	$ 130.00
Volatile Organics	Method Low	µg/L	$ 70.00
Semi -Volatile Organics	Method Low	µg/L	$ 150.00
		- Total -	$ 555.00

25.4 Table C - Sludge Pathogens

Parameter	Detection	Units	Unit Price
Fecal Coliforms	1,000	MPN	$ 60.00

Company Name: Eurofins Xenco, LLC

Owner/President Name: Alex Montoya

Company Address: 1733 North Padre Island Drive

City, State, Zip Code: Corpus Christi, TX 78408

Company Authorized Representative's Signature:

Company Representative's Name: Alex Montoya

Signature on this form indicates agreement with "Instructions to Bidder – General Terms and Conditions, pricing and all specifications listed on this document.

25.5 Table D - Soil

Parameter	Method	Units	Unit Price
Cationic Exchange Capacity	EPA SW-846	meq/100g	$ 40.00
Arsenic, Total	EPA SW-846 3050	mg/Kg	$ 8.00
Cadmium, Total	EPA SW-846 3050	mg/Kg	$ 8.00
Chromium, Total	EPA SW-846 3050	mg/Kg	$ 8.00
Copper, Total	EPA SW-846 3050	mg/Kg	$ 8.00
Lead, Total	EPA SW-846 3050	mg/Kg	$ 8.00
Nickel, Total	EPA SW-846 3050	mg/Kg	$ 8.00
Silver, Total	EPA SW-846 3050	mg/Kg	$ 8.00
Zinc, Total	EPA SW-846 3050	mg/Kg	$ 8.00
Mercury	EPA SW-846 7471	mg/Kg	$ 22.00
Phosphorus	EPA SW-846 6010	mg/Kg	$ 8.00
Potassium	EPA SW-846 6010	mg/Kg	$ 8.00
pH	EPA SW-846 9040	s.u.	$ 8.00
Total Volatile Solids	EPA 160.4	%	$ 15.00
Total Solids	EPA 160.3	%	$ 15.00
Ammonia Nitrogen	SM 4500	Mg/Kg	$ 25.00
Nitrate Nitrogen	EPA 300.0	Mg/Kg	$ 15.00
Total Nitrogen Kjeldahl (TKN)	EPA 351.3	Mg/Kg	$ 30.00
Total PCB's	EPA SW-846	Mg/Kg	$ 60.00
Extraction, Extract Clean Up, Determination 3540 / 3550; 3620 / 3640 / 3650; 8080			$ 0
		- Total -	$ 310.00

25.6 Table E - W.W. Groundwater Group A

Parameter	Detection	Units	Method	Unit Price
Fecal Coliforms		CFU/100 ml		$ 60.00
Total Alkalinity	1	mg/L CaCO3	SM 2320 B	$ 15.00
Conductivity	1	µmho/cm	EPA 120.1	$ 8.00
pH	0.1	S. U.	EPA150.1	$ 8.00
Total Dissolved Solids	10	mg/L	EPA 160.1	$ 15.00
Sulfate (SO4)	2	mg/L	EPA 300.0	$ 15.00
Chloride (Cl)	0.5	mg/L	EPA 300.0	$ 15.00
Phosphorus	0.1	mg/L	SM 4500-P	$ 30.00
Total Nitrogen Kjeldahl (TKN)	0.1	mg/L	EPA 351.3	$ 30.00
Ammonia Nitrogen (NH3-N)	0.1	mg/L	EPA 350.3	$ 25.00
Nitrate Nitrogen (NO3-N)	0.1	mg/L	EPA 300.0	$ 15.00
Total Organic Carbon	1	mg/L	SM 5310 - C	$ 25.00

25.7 Table F — WW Groundwater Group B

Parameter	Detection	Method	Units	Unit Price
Cadmium	0.05	EPA SW-846 3610	mg/L	$ 8.00
Copper	0.05	EPA SW-846 6010	mg/L	$ 8.00
Lead	0.05	EPA SW-846 6010	mg/L	$ 8.00
Nickel	0.05	EPA SW-846 6010	mg/L	$ 8.00
Potassium	0.05	EPA SW-846 6010	mg/L	$ 8.00
Zinc	0.05	EPA SW-846 6010	mg/L	$ 8.00
COD	40	Hach HB 6010	mg/L	$ 15.00
Phenolics	0.005	EPA 420.1	mg/L	$ 25.00
TOX	0.15	EPA SW-846 9020	mg/L	$ 70.00
Total PCB's		EPA SW-846	mg/L	$ 60.00
Extraction, Extract Clean Up, Determination: 3540 / 3550; 3620 / 3640 / 3650; 8080				$ 0
			- Total -	$ 218.00

25.8 Table G – W. W. Metals

Parameter	Detection	Method	Units	Unit Price
Antimony, Total	0.06	Meets Detection Limit	mg/L	$ 8.00
Barium, Total	0.06	Meets Detection Limit	mg/L	$ 8.00
Lead, Total	0.06	Meets Detection Limit	mg/L	$ 8.00
Nickel, Total	0.06	Meets Detection Limit	mg/L	$ 8.00
Silicon, Total	0.5	Meets Detection Limit	mg/L	$ 8.00
Chromium, Total	5	Meets Detection Limit	mg/L	$ 8.00
Copper, Total	5	Meets Detection Limit	mg/L	$ 8.00
Mercury, Total	0.002	Meets Detection Limit	mg/L	$ 22.00
Arsenic, Total	1	Meets Detection Limit	mg/L	$ 8.00
Cadmium, Total	1	Meets Detection Limit	mg/L	$ 8.00
Silver, Total	1	Meets Detection Limit	mg/L	$ 8.00
			- Total -	$ 102.00

25.9 Table H – Root Zone Nutrients

Parameter	Detection	Units	Method	Unit Price
pH	0.1	S.U.	EPA SW-846 9045	$ 8.00
Potassium	100	mg/kg	EPA SW-846 9045	$ 8.00
Phosphorus	5	mg/kg	EPA SW-846 9045	$ 8.00
Total Nitrogen	100	mg/kg	EPA SW-846 9045	$ 35.00
Conductivity	1	µmho/cm	EPA SW-846 9045	$ 8.00
Nitrogen, Nitrate Total (as N)	0.1	mg/K	4500-NO3-E	$ 15.00
Nitrogen, Kjeldahl Total (as N)	0.1	mg/K	4500-NH3-F	$ 30.00
			- Total -	$ 112.00

25.10 Table I - W. W. Priority Pollutants

Parameter	Detection	Method	Units	Unit Price
Aluminum, Total	20.0	EPA 200.7	µg/L	$ $8.00
Antimony, Total	1.6	EPA 200.7	µg/L	$ $8.00
Arsenic, Total	1.0	EPA 200.7	µg/L	$ $8.00
Barium, Total	1.0	EPA 200.7	µg/L	$ $8.00
Beryllium, Total	1.0	EPA 200.7	µg/L	$ $8.00
Cadmium, Total	1.0	EPA 200.7	µg/L	$ $8.00
Chromium, Total	1.0	EPA 200.7	µg/L	$ $8.00
Hex Chromium	1.0	EPA 218.4	µg/L	$ $25.00
Copper, Total	5.0	EPA 200.7	µg/L	$ $8.00
Cyanide, Total	0.020	EPA 335.2	µg/L	$ $25.00
Lead, Total	1.0	EPA 200.7	µg/L	$ $8.00
Manganese, Total	20.0	EPA 200.7	µg/L	$ $8.00
Mercury, Total	0.002	EPA 245.1	µg/L	$ $22.00
Molybdenum, Total	5.0	EPA 245.1	µg/L	$ $8.00
Nickel, Total	5.0	EPA 200.7	µg/L	$ $8.00
Phenol, Total Recoverable	3.0	EPA 420.1	µg/L	$ $25.00
Selenium, Total	2.0	EPA 200.7	µg/L	$ $8.00
Silver, Total	1.0	EPA 200.7	µg/L	$ $8.00
Thallium, Total	1.0	EPA 200.7	µg/L	$ $8.00
Zinc, Total	10.0	EPA 200.7	µg/L	$ $8.00
Acid Digestion, Total Metals		EPA 200.7	µg/L	$ 0
Concentrate ICAP Sx 2x Prior to Analysis		EPA 200.7	µg/L	$ 0
Extraction Chlorides Pesticides / PCBs Continuous Liquid – Liquid Extraction		EPA 608	µg/L	$ 0
Extraction Semi-volatile Compounds Continuous Liquid – Liquid Extraction		EPA 625	µg/L	$ 0

Parameter	Method	Detection	Units	Unit Price
Pesticides / PCBs (25 Organochlorine)	EPA 608	0.01	µg/L	$ $140.00
Semi-volatile Organics (56)	EPA 625	0.50	µg/L	$ $150.00
Semi-volatile Organics-Non Standard List 1,2-Diphenylhydrazine as Azobenzene	EPA 625 Modified	0.50	µg/L	$ $150.00
Volatile Organics (27)	EPA 624	2.0	µg/L	$ $70.00
Volatile Organics – Non Standard List (2)	EPA 624 Modified	5.0	µg/L	$ $70.00
			- Total -	$ $805.00

25.11 Table J – W. T. Metals Group A

Parameter	Detection	Units	Method	Unit Price
Arsenic, Total	1	µg/L	Meets Detection Limit	$ $8.00
Barium, Total	0.06	mg/L	Meets Detection Limit	$ $8.00
Cadmium, Total	1	µg/L	Meets Detection Limit	$ $8.00
Chromium, Total	5	µg/L	Meets Detection Limit	$ $8.00
Copper, Total	5	µg/L	Meets Detection Limit	$ $8.00
Iron, Total	0.05	mg/L	Meets Detection Limit	$ $8.00
			- Total -	$ $48.00

25.12 Table K – W. T. Metals Group B

Parameter	Detection	Units	Method	Unit Price
Lead, Total	0.06	mg/L	Meets Detection Limit	$ $8.00
Manganese, Total	0.05	mg/L	Meets Detection Limit	$ $8.00
Mercury, Total	0.002	mg/L	Meets Detection Limit	$ $22.00
Selenium, Total	0.05	mg/L	Meets Detection Limit	$ $8.00
Silver, Total	1	µg/L	Meets Detection Limit	$ $8.00
Zinc, Total	0.05	mg/L	Meets Detection Limit	$ $8.00
			- Total -	$ $62.00

25.13 Table L – W. T. Pesticides / Herbicides

Parameter	Method	Unit Price
Herbicides (Method Full List)	SW – 846 8150	$ $130.00
Pesticides (Method Full List)	EPA 608	$ $120.00
	- Total -	$ $250.00

25.14 Table M – W. T. TTHM

Parameter	Detection	Units	Method	Unit Price
Bromoform	1.0	µg/L	EPA 624	$ **
Chloroform	1.0	µg/L	EPA 624	$ **
Bromodichloromethane	1.0	µg/L	EPA 624	$ **
Dibromochloromethane	1.0	µg/L	EPA 624	$ **
Total Trihalomethanes	1.0	µg/L	EPA 624	$ 70.00
			- Total -	$ 70.00

** Included with price of Total Trihalomethanes

25.15 Table N – W. T. HAA - 5

Parameter	Detection	Units	Method	Unit Price
Chloroacetic acid	1.0	µg/L	SM 6233	$ **
Dichloroacetic acid	1.0	µg/L	SM 6233	$ **
Trichloroacetic acid	1.0	µg/L	SM 6233	$ **
Bromoacetic acid	1.0	µg/L	SM 6233	$ **
Dibromoacetic acid	1.0	µg/L	SM 6233	$ **
Total regulated Haloacetic acids	1.0	µg/L	SM 6233	$ 200.00
Bromochloroacetic acid	1.0	µg/L	SM 6233	$ **
			- Total -	$ 200.00

** Included with price of Total regulated Haloacetic acids

25.16 Table O – W. T. TOC

Parameter	Detection	Units	Method	Unit Price
Total Organic Carbon	0.1	mg/L	SM 9222 D	$ 25.00
			- Total -	$ 25.00

25.17 Table OO– W. T.Distribution- Lead & Copper

Parameter	Detection	Units	Method	Unit Price
Lead, Total	0.00100	mg/L	E200.8,ICP-MS	$ 9.00
Copper, Total	0.00100	mg/L	E200.8,ICP-MS	$ 9.00
			- Total -	$ 18.00

25.18 Table OOO- W.T. SUVA

Parameter	Detection	Units	Method	Unit Price
Specific Ultraviolet Absorption (SUVA)	0.01	L/mg-M	Calculation of results from: SM 5910B (UV254) SM5310D (DOC)	$ 160.00

25.19 Table P – W. T. Radionuclides

Parameter	Detection	Units	Method	Unit Price
Radionuclides, Gross α	1.0	pCi/L	SM 7110	$ **
Radionuclides, Gross β	1.0	pCi/L	SM 7110	$ **
Radionuclides, Total	1.0	pCi/L	SM 7110	$ 140.00
			- Total -	$ 140.00

**Included in price of Radionuclides, Total

25.20 Table Q – W. W. Permit & Process Control

Parameter	Detection	Units	Method	Unit Price
**B.O.D. - 5	1.0	mg/L	SM 5210 B	$ $30.00
C.B.O.D. - 5	1.0	mg/L	SM 5210 A	$ $30.00
***Total Suspended Solids	1.0	mg/L	SM 2540 D	$ $15.00
Volatile Suspended Solids	1.0	mg/L	SM 2540 E	$ $15.00
****Ammonia as Nitrogen	0.01	mg/L	SM 4500 NH3	$ $25.00
Fecal coliform	1.0	Cfu/100 ml	SM 9222	$ $60.00
Chemical Oxygen demand	5.0	mg/L	SM 5220 D	$ $15.00
			- Total -	$ $1 90.00

** BOD5 ANALYSIS PER YEAR 2,120 (some WWTP permits require daily sampling for BOD5)
***TSS ANALYSIS PER YEAR 2,330
**** Ammonia as Nitrogen analysis per year 200

25.21 Table R – W. T. Ion Analysis

Parameter	Detection	Units	Method	Unit Price
Fluoride	Method Low	mg/L	EPA 300.0	$ $15.00
Bromide	Method Low	mg/L	EPA 300.0	$ $15.00
Nitrite	Method Low	mg/L	EPA 300.0	$ $15.00
Nitrate	Method Low	mg/L	EPA 300.0	$ $15.00
Ortho-Phosphate	Method Low	mg/L	EPA 300.0	$ $15.00
Sulfate	Method Low	mg/L	EPA 300.0	$ $15.00
Chloride	Method Low	mg/L	EPA 300.0	$ $15.00
Sodium	Method Low	mg/L	EPA 300.7	$ $8.00
Potassium	Method Low	mg/L	EPA 300.7	$ $8.00
Magnesium	Method Low	mg/L	EPA 300.7	$ $8.00
Ammonium	Method Low	mg/L	EPA 300.7	$ $25.00
Calcium	Method Low	mg/L	EPA 300.7	$ $8.00
			- Total -	$ $162.00

25.22 Table S – Microbiology

Parameter	Method	Unit Price
Total Coliforms	SM 9222 B	$ $60.00
Fecal Coliforms	SM 9222 D	$ $60.00
Chromogenic Substrate Total Coliforms	SM 9223 B (Colilert)	$ $60.00
Fluorogenic Substrate Fecal Coliforms (E. coli)	SM 9223 B (Colilert)	$ $60.00
	- Total-	$ $240.00

25.23 Table T – Industrial Pretreatment

Parameter	Method	Unit Price
Fats, Oils & Grease (FOG)	SM 9222 B	$ 50.00
TOC (Total Organic Carbon)	SM 9222 D	$ 25.00
TOX (Total Organic Halides)	SM 9223 B	$ 70.00
B-TEX	EPA 602	$ 35.00
TPH (Total Petroleum Hydrocarbons)	SM 9223 B	$ 40.00
Cyanide	EPA 335.2	$ 25.00
Phenols	EPA 420.1	$ 25.00
- Total -		$ 270.00

25.24 Table U – Storm Water Multi-sector General Permit

Parameter	Detection	Units	Method	Unit Price
Arsenic	0.05	mg/L	EPA SW-846 6010	$ 8.00
Barium	0.05	mg/L	EPA SW-846 6010	$ 8.00
Cadmium	0.05	mg/L	EPA SW-846 6010	$ 8.00
Chromium	0.05	mg/L	EPA SW-846 6010	$ 8.00
Copper	0.05	mg/L	EPA SW-846 6010	$ 8.00
Lead	0.05	mg/L	EPA SW-846 6010	$ 8.00
Manganese	0.05	mg/L	EPA SW-846 6010	$ 8.00
Mercury	0.002	mg/L	EPA SW-846 6010	$ 22.00
Nickel	0.05	mg/L	EPA SW-846 6010	$ 8.00
Selenium	0.05	mg/L	EPA SW-846 6010	$ 8.00
Silver	0.05	mg/L	EPA SW-846 6010	$ 8.00
Zinc	0.05	mg/L	EPA SW-846 6010	$ 8.00
			- Total -	$ 110.00

26.0 Tab C- Conflict of Interest Disclosure

A form disclosing potential conflicts of interest involving counties, cities, and other local government entities may be required to be filed after January 1, 2006, by vendors or potential vendors to local government entities. The new requirements are set forth in Chapter 176 of the Texas Local Government Code added by H.B. No. 914 of the last Texas Legislature.

Companies and individuals who contract, or seek to contract, with the City of Laredo and its agents may be required to file with the **City Secretary's Office, 1110 Houston Street, Laredo, Texas 78040,** a Conflict of Interest Questionnaire that describes affiliations or business relationships with the City of Laredo officers, or certain family members or business relationships of the City of Laredo officer, with which such persons do business, or any gifts in an amount of $250.00 or more to the listed City of Laredo officer (s) or certain family members.

The new requirements are in addition to any other disclosures required by law. The dates for filing disclosure statements begin on January 1, 2006. A violation of the filing requirements is *a* Class C misdemeanor.

The Conflict of Interest Questionnaire (Form CIQ) may be downloaded from http://www.ethics.state.tx.us/whatsnew/conflict_forms.htm.

The City of Laredo officials who come within Chapter 176 of the Local Government Code relating to filing of **Conflicts of Interest Questionnaire (Form CIQ)** include:

1. **Mayor**
2. **Council Members**
3. **City Manager**
4. **Members of the Fire Fighters and Police Officers Civil Service Commission.**
5. **Members of the Planning and Zoning Commission.**
6. **Members of the Board of Adjustments**
7. **Members of the Building Standards Board**
8. **Parks & Leisure Advisory Committee Member,**
9. **Historic District Land Board Member,**
10. **Ethics Commission Board Member,**
11. **The Board of Commissioners of the Laredo Housing Authority**
12. **The Executive Director of the Laredo Housing Authority**
13. **Any other City of Laredo decision making board member**

If additional information is needed please contact Miguel A. Pescador, Purchasing Agent at 956-794-1731

CITY OF LAREDO
PURCHASING DIVISION

☒ I HAVE READ THIS FORM AND ATTEST THAT THERE IS NO CONFLICT OF INTEREST THUS NO VIOLATION OF SECTION 176.006, LOCAL GOVERNMENT CODE EXISTS.

Alex Montoya — Name
Signature
July 16, 2021 — Date

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor or other person doing business with local governmental entity

FORM CIQ

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. *See* Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY
Date Received

1 **Name of person who has a business relationship with local governmental entity.**

N/A

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 **Name of local government officer with whom filer has employment or business relationship.**

Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, income, other than investment income, from the filer of the questionnaire? ☐ Yes ☐ No

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity? ☐ Yes ☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves an officer or director, or holds an ownership of 10 percent or more? ☐ Yes ☐ No

D. Describe each employment or business relationship with the local government officer named in this section.

N/A

Signature of person doing business with the governmental entity

July 6, 2021
Date

CITY OF LAREDO
PURCHASING DIVISION

27.0 Tab D

AFFIDAVIT

Project: FY21-082, Analytical lab Services

Form of Non-Collusive Affidavit

AFFIDAVIT

STATE OF TEXAS {}
COUNTY OF WEBB {}

Being first duly sworn, deposes and says:

That he/she is President of Eurofins Xenco, LLC
(a Partner of officer of the firm of, etc.)

The party making the foregoing proposal or bid, that such proposal or bid is genuine and not collusive or shame; that said Bidder has not colluded, conspired, connived or agreed directly or indirectly, with any Bidder or Person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price or affiant or of any other Bidder or to fix any overhead, profit or cost element of said bid price, or of that of any other Bidder, or to secure any advantage against the City of Laredo or any person interested in the proposed Contract; and that all statements in said proposal or bid are true.

Alex Montoya
Signature of:
Bidder, if the Bidder is an individual
Partner, if the Bidder is a Partnership
Officer, if the Bidder is a Corporation

Subscribed and sworn before me this 20 day of July 20 21

Notary Public

My commission expires:
07-23-2024

28.0 Tab E

City of Laredo
Discretionary Contracts Disclosure

Please fill out this form online, print completed form and submit with proposal to originating department. All questions must be answered.

For details on use of this form, see Section 4.01 if the City's Ethics Code.
***This is a** X **New Submission or** ___ **Correction or** ___ **Update to previous submission.**

1. Name of person submitting this disclosure form.

Alex		Montoya	
First	M.I.	Last	Suffix

2. Contract Information

a) Contract or Project name(s): FY21__082, Analytical Laboratory Services

b) Originating Department(s): Public Works

3. Name of individual(s) or entity(ies) seeking a contract with the City (i.e. parties to the contract).

Alex Montoya			
Name (Print)	Signature	Name (Print)	Signature
Name (Print)	Signature	Name (Print)	Signature
Name (Print)	Signature	Name (Print)	Signature
Name (Print)	Signature	Name (Print)	Signature

4. List any business entity(ies) that is a partner, parent, subsidiary business entity(ies) of the individual or entity listed in Question 3.

☐ Not applicable. Contracting party(ies) does not have partner, parent, or subsidiary business entities.

☒ Name of partner, parent, or subsidiary business entity(ies): Please see attached list

***5. List any individuals or entities that will be subcontractors on this contract.**

☐ Not applicable. No subcontractors will be retained for this contract.

☐ Subcontractors may be retained, but have not been selected at the time of this submission.

☒ List of subcontractors: Eurofins Xenco, Houston
Eurofins TestAmerica, Savannah
Eurofins TestAmerica St. Louis
City of Laredo Laboratory

***6. List any attorneys, lobbyists, or consultants that have been retained to assist in seeking this contract.**

☒ Not applicable. No attorneys, lobbyists, or consultants that have been retained to assist in seeking this contract.

☐ List of attorneys, lobbyists, or consultants that have been retained to assist in seeking this contract: _____

***7. Disclosure of political contributions.**

List any campaign or officeholder contributions made by the following individuals in the past 24 months totaling more than $100 to any current member of City Council, former member of City Council, any candidate for City Council, or to any political action committee that contributes to City Council elections.

a) Any individual seeking contract with the city (Question 3)
b) Any owner or officer of entity seeking contract with the city (Question 3)
c) Any individual or owner or officer of any entity listed above as partner, parent, or subsidiary business (Question 4)
d) Any subcontractor or owner/office of subcontracting entity retained for the contract (Question 5)
e) The spouse of any individual listed in response to (a) through (d) above
f) Any attorney, lobbyist, or consultant retained to assist in seeking contract (Question 6)

☒ Not applicable. No campaign or officeholder contributions have been made in the preceding 24 months by these individuals.

☐ List of contributors: _____

Updates on Contributions Required

Information regarding contributions must be updated by submission of a revised form from the date of the submission of this form, up through the time City Council takes action on the contract identified in response to Question 2 and continuing for 30 calendar days after the contract has been awarded.

***8. Disclosure of conflict of interest**

Are you aware of any fact(s) with regard to this contract that would raise a "conflict of interest" issue under Section 2.01 of the Ethics Code for any City Council member or board/commission member that has not or will not be raised by these city officials?

☒ I am not aware of any conflict(s) of interest issues under Section 2.01 of the Ethics Code for members of City Council or a city board/commission.

☐ I am aware of the following conflict(s) of interest: _____

***Acknowledgements**

☒ **Updates Required**

I understand that this form must be updated by submission of a revised form if there is any change in the information before the discretionary contract is the subject of action by the City Council, and no later than five (5) business days after any changes has occurred, whichever comes first. This include information about political contributions made after the initial submission and up until thirty (30) calendar days after the contract has been awarded.

☒ **No Contract with City Officials or Staff during Contract Evaluation**

I understand that a person or entity who seeks or applies for a city contract or any other person acting on behalf of that person or entity is prohibited from contracting city officials and employees regarding the contract after a Request for Proposal (RFP), Request for Qualifications (RFQ), or other solicitation has been released.

This no-contract provision shall conclude when the contract is posted as a City of Laredo Council agenda item. If contact is required with city officials or employees, the contact will take place in accordance with procedures incorporated into the solicitation documents. Violation of this prohibited contacts provision set out in Section 2.09 of the Ethics Code by respondents or their agents may lead to disqualification of their offer from consideration.

***Conflict of Interest Questionnaire (CIQ)**

Chapter 176 of the Local Government Code requires contractor and vendors to submit a Conflict of Interest Form (CIQ) to the Office of the City Secretary.

☒ I acknowledge that I have been advised of the requirement to file a CIQ form under Chapter 176 of the Local Government Code.

***Oath**

☐ I swear or affirm that the statements contained in this Discretionary Contracts Disclosure Form, including any attachments, to the best of my knowledge and belief are true, correct, and complete.

Alex Montoya		President
Name (Print)	Signature	Title
Eurofins Xenco, LLC		July 16, 2021
Company or DBA		Date

Please fill this form out online, print and submit completed form with proposal to origination department. All questions must be answered. If necessary to mail, send to:

City of Laredo
P.O. Box 579
Laredo, TX 78042-0579

eurofins | Environment Testing America

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Eurofins Air Toxics, LLC

Eurofins Eaton Analytical, LLC

Eurofins Frontier Global Sciences, LLC

Eurofins Lancaster Laboratories Environment Testing, LLC

Eurofins Calscience, LLC

Eurofins Environment Testing Philadelphia, LLC

Eurofins Environment Testing Northeast, LLC

Eurofins Ana Laboratories, LLC

Eurofins CEI, Inc.

Eurofins EPK Built Environment Testing, LLC

Eurofins Aerotech Built Environment Testing, Inc.

Eurofins J3 Resources, Inc.

Eurofins Xenco, LLC

29.0 Tab F – Certificate of Interested Parties (Form 1295)

In an effort to comply with state law the certificate of interested parties must be filled out once a vendor has been granted a contract. All of this information can be found on the State of Texas website, please use this link provided, **https://www.ethics.state.tx.us/tec/1295-Info.htm.**

Implementation of House Bill 1295

29.1 Certificate of Interested Parties (Form 1295):

In 2015, the Texas Legislature adopted House Bill 1295, which added section 2252.908 of the Government Code. The law states that a governmental entity or state agency may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental entity or state agency. The law applies only to a contract of a governmental entity or state agency that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least $1 million. The disclosure requirement applies to a contract entered into on or after January 1, 2016.

The Texas Ethics Commission was required to adopt rules necessary to implement that law, prescribe the disclosure of interested parties form, and post a copy of the form on the commission's website. The commission adopted the Certificate of Interested Parties form (Form 1295) on October 5, 2015. The commission also adopted new rules (Chapter 46) on November 30, 2015, to implement the law. The commission does not have any additional authority to enforce or interpret House Bill 1295.

29.2 Filing Process:

Staring on January 1, 2016, the commission will make available on its website a new filing application that must be used to file Form 1295. A business entity must use the application to enter the required information on Form 1295 and print a copy of the completed form, which will include a certification of filing that will contain a unique certification number. An authorized agent of the business entity must sign the printed copy of the form. The completed Form 1295 with the certification of filing must be filed with the governmental body or state agency with which the business entity is entering into the contract.

The governmental entity or state agency must notify the commission, using the commission's filing application, of the receipt of the filed Form 1295 with the certification of filing not later than the 30th day after the date the contract binds all parties to the contract. The commission will post the completed Form 1295 to its website within seven business days after receiving notice from the governmental entity or state agency.

Information regarding how to use the filing application will be available on this site starting on January 1, 2016.

Additional Information:

HB 1295

Certificate of Interested Parties (Form 1295)

New Chapter 46, Ethics Commission Rules:
- 46.1. Application
- 46.3. Definitions
- 46.5. Disclosure of Interested Parties Form

Eurofins Xenco will provide upon contract award

CITY OF LAREDO
PURCHASING DIVISION

CERTIFICATE OF INTERESTED PARTIES — FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 **Name of business entity filing form, and the city, state and country of the business entity's place of business.**

2 **Name of governmental entity or state agency that is a party to the contract for which the form is being filed.**

3 **Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the goods or services to be provided under the contract.**

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary

5 **Check only if there is NO Interested Party.** ☐

6 **AFFIDAVIT**

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

_____
Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20_____, to certify which, witness my hand and seal of office.

_____ _____ _____
Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us Adopted 10/5/2015

**********Form does not need to be notarized*******