CENTRALBIDDING
FROM CENTRAL AUCTION HOUSE

5000141500 Two Year Contract for Concrete Pavement Lifting and Sealing of Drainage Structures Utilizing High Density Polyurethane for the Jefferson Parish Department of Public Works- Street Department & all Jefferson Parish Agencies & Municipalities

Jefferson Parish Government

Jefferson Parish
State of Louisiana

Bid Number 50–00141500

Two (2) Year Contract for Concrete Pavement Lifting and Sealing of Drainage Structures Utilizing High Density Polyurethane for the Jefferson Parish Department of Public Works- Street Department and all Jefferson Parish Agencies and Municipalities.

Bid Due: APRIL 11, 2023 at 2:00 pm

ATTENTION VENDORS!!!

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

Jefferson Parish Purchasing Department
200 Derbigny Street
General Government Building, Suite 4400
Gretna, LA 70053
Buyer Name: Donna M Evans, Buyer II
Buyer Email: DMEVANS@jeffparish.net
Buyer Phone: 504-364-2691

DATE: 3/08/2023

BID NO.: 50-00141500

INVITATION TO BID
THIS IS NOT AN ORDER

JEFFERSON PARISH

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

BUYER: DMEVANS@jeffparish.net

BIDS WILL BE RECEIVED ONLINE VIA WWW.JEFFPARISHBIDS.NET UNTIL 2:00 PM, 4/11/2023 AND PUBLICLY OPENED THEREAFTER IN THE WEST BANK PURCHASING DEPT, SUITE 4400, JEFFERSON PARISH GENERAL GOVERNMENT BUILDING, 200 DERBIGNY STREET, GRETNA, LA 70053. At no charge, bidders are to submit via Jefferson Parish's electronic procurement page by visiting www.jeffparishbids.net to register for this free site. Additional instructions are included in the text box highlighting electronic procurement.

LATE BIDS WILL NOT BE ACCEPTED

NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN, AND PROPERLY SIGNED BY A MEMBER OF THE FIRM OR AUTHORIZED REPRESENTATIVE, WILL BE ACCEPTED. PENCIL AND/OR PHOTOSTATIC FIGURES OR SIGNATURES SHALL RESULT IN BID REJECTION. HOWEVER, ELECTRONIC SIGNATURES AS DEFINED IN LSA - R.S. 9:2620(8) ARE ACCEPTABLE. SIGNATURE MUST BE A SECURED DIGITAL SIGNATURE.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

THE FOLLOWING INSTRUCTIONS APPLY TO ALL BIDS

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

Jefferson Parish adheres to the Louisiana Code of Governmental Ethics, contained in Louisiana Revised Statutes Annotated, R.S. 42:1101, et seq. Vendor/Proposer by this submission, warrants that there are no "conflicts of interest" related to this procurement that would violate applicable Louisiana Law. Violation of the Louisiana Code of Governmental Ethics may result in rescission of contract, permit or licenses, and the imposition of fines and/or penalties, without contractual liability to the public in accordance with applicable law.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from http://purchasing.jeffparish.net and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Vendors may experience a delay in payment if your company is not a registered vendor with Jefferson Parish.

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

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

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

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

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

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

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

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

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

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

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

PROTESTS: Only those vendors that submit bids in response to this solicitation may protest any element of the procurement, in writing to the Director of the Purchasing Department. Written protest must be received within 48 hours of the release of the bid tabulation by the Purchasing Department. After consultation, the Parish Attorney's Office will then respond to protests in writing. (For more information, please see Chapter 2, Article VII, Division 2, Sec. 2-914.1 of the Jefferson Parish Code of Ordinances.)

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

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

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

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

D. PRICES: Jefferson Parish is exempt from paying sales tax under LSA-R.S. 47:301 (8)(c). All prices for purchases by Jefferson Parish of supplies and materials shall be quoted in the unit of measure specified and unless otherwise specified, shall be exclusive of state and local taxes. For purchases of labor and materials, the Contractor shall not pay any state or local sales or use taxes on materials and equipment which are affixed and made part of the immovable property of the project or which permanently incorporated in the project (hereinafter referred to as "applicable materials and equipment"). All purchases of applicable materials or equipment shall be made by the contractor on behalf of and as the agent of Jefferson Parish (Owner), a political subdivision of the State of Louisiana. No state and local sales and use taxes are owned on applicable materials and equipment under the provisions of Act 1029 of the 1991 Regular Session - Louisiana Revised Statute 47:301(8)(c). Owner will furnish contractor a certificate form which certifies that Owner is not required to pay such state or local sales and use taxes, and contractor shall furnish a copy of such certificate to all vendors or suppliers of the applicable materials and equipment. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit price shall prevail.

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

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

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

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

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

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

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

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

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

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

ADDITIONAL REQUIREMENTS FOR THIS BID

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

2,3,4,5,6,7,10,11,12,13,14,17

PRE-BID CONFERENCE TO BE HELD AT: General Government Bldg-200 Derbigny St
10:00 am Suite 4400 Gretna, La 70053
ON 3/23/2023

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

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

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

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

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

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

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

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

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

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

10. All bidders must comply with the requirements stated in the attached "Standard Insurance Requirements" sheet attached to this bid solicitation. Failure to comply with this instruction will result in bid rejection.

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

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

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

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

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

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

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

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

It shall be the duty of every parish officer, employee, department, agency, special district, board, and commission: and the duty of every contractor, subcontractor, and licensee of the parish, and the duty of every applicant for certification of eligibility for a parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to JPCO 2-155.10(19). By signing this document, every corporation, partnership, or person contracting with PARISH, whether by cooperative endeavor, intergovernmental agreement, bid, proposal, application or solicitation for a parish contract, and every application for certification of eligibility for a parish contract or program, attests that it understands and will abide by all provisions of JPCO 2-155.10.

See Page 1 for Conflicts of Interest Statement

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: JEFFERSON PARISH
PURCHASING DEPT
200 DERBIGNY ST. SUITE 4400
GRETNA, LA 70053
(Owner to provide name and address of owner)

BID FOR: TWO YEAR CONTRACT FOR CONCRETE LIFTING AND SEALING OF DRAINAGE TURES UTILIZING HIGH DENSITY PO THANE FOR THE JEFFERSON PARISH
(Owner to provide name of project and other identifying information)

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: URETEK USA, Inc. and dated: 04/11/2023
(Owner to provide name of entity preparing bidding documents.)

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA**: (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) N/A

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

Two Hundred Seventy Four Thousand Three Hundred Seventy Five Dollars ($) 274,375.00

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

_____ Dollars ($) _____

Alternate No. 2 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

_____ Dollars ($) _____

Alternate No. 3 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

_____ Dollars ($) _____

NAME OF BIDDER: URETEK USA, Inc.

ADDRESS OF BIDDER: 13900 Humble Rd., Tomball, TX 77375

LOUISIANA CONTRACTOR'S LICENSE NUMBER: CL.0031626

NAME OF AUTHORIZED SIGNATORY OF BIDDER: Edward Hibbard

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: President

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **: _____

DATE: 04/11/2023

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

** **A CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public work as prescribed by LA-R.S. 38:2218 (B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier'scheck as prescribed by LA-R.S. 38:2218.(A) is attached to and made a part of this bid.

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

Bid# 50-00141500

TO: JEFFERSON PARISH
PURCHASING DEPT
200 DERBIGNY ST. SUITE 4400
GRETNA, LA 70053
(Owner to provide name and address of owner)

TWO YEAR CONTRACT FOR CONCRETE PAVEMENT LIFTING AND SEALING OF DRAINAGE STRUCTURES UTILIZING HIGH DENSITY POLYURETHANE FOR THE JEFFERSON PARISH DEPART-
(Owner to provide name of project and other identifying information)

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0010 PAVEMENT LIFTING (VIA FILLING THE VOID SPACE JUST BELOW THE BOTTOM OF THE SLAB. NO BASE LIFTING) TWO (2) YEAR CONTRACT FOR LABOR,		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
0010	26,000.00	LB	6.25	162,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0020 PAVEMENT LIFTING (INCLUDING BASE MATERIAL UP TO 3 FEET IN THICKNESS)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
0020	10,000.00	LB	6.25	62,500.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0030 PAVEMENT LIFTING (INCLUDING BASE MATERIAL GREATER THAN 3 FEET TO 6 FEET IN THICKNESS)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
0030	1,500.00	LB	6.25	9,375.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0040 PAVEMENT LIFTING (INCLUDING BASE MATERIAL GREATER THAN 6 FEET TO 10 FEET IN THICKNESS)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
0040	500.00	LB	6.25	3,125.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0050 SEALING OF DRAINAGE PIPE/STRUCTURES (DEPTH FROM 0 TO 4 FEET) (EXCLUDING DRAINAGE BOX CULVERTS)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
0050	1,000.00	LB	6.25	6,250.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0060 SEALING OF DRAINAGE PIPE/STRUCTURES (DEPTH GREATER THAN 4 FEET TO 8 FEET) (EXCLUDING DRAINAGE BOX CULVERTS)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
0060	500.00	LB	6.25	3,125.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0070 SEALING OF DRAINAGE PIPE/STRUCTURES (DEPTH GREATER THAN 8 FEET TO 12 FEET) (EXCLUDING DRAINAGE BOX CULVERTS)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
0070	300.00	LB	6.25	1,875.00

DESCRIPTION:	[X] Base Bid [ ] Alt.#__	0080 SEALING OF DRAINAGE BOX CULVERTS (VARIOUS DEPTHS AND SIZES)		
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
0080	2,500.00	LB	6.25	15,625.00

Wording for "DESCRIPTION" is to be provided by the Owner.
All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

Bid# 50-00141500

TO: JEFFERSON PARISH
PURCHASING DEPT
200 DERBIGNY ST. SUITE 4400
GRETNA, LA 70053
(Owner to provide name and
address of owner)

TWO YEAR CONTRACT FOR CONCRETE PAVEMENT LIFTING AND SEALING OF DRAINAGE STRUCTURES UTILIZING HIGH DENSITY POLYURETHANE FOR THE JEFFERSON PARISH DEPART-
(Owner to provide name of project
and other identifying information)

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	☒ Base Bid ☐ Alt.#__	0090 FLUSH TRUCK ALONG WITH CAMERA/VIDEO		
REF NO.	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times Unit Price)**
0090	20.00	DY	500.00	10,000.00

DESCRIPTION:	☐ Base Bid ☐ Alt.#__			
REF NO.	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times Unit Price)**

DESCRIPTION:	☐ Base Bid ☐ Alt.#__			
REF NO.	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times Unit Price)**

DESCRIPTION:	☐ Base Bid ☐ Alt.#__			
REF NO.	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times Unit Price)**

DESCRIPTION:	☐ Base Bid ☐ Alt.#__			
REF NO.	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times Unit Price)**

DESCRIPTION:	☐ Base Bid ☐ Alt.#__			
REF NO.	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times Unit Price)**

DESCRIPTION:	☐ Base Bid ☐ Alt.#__			
REF NO.	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times Unit Price)**

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REF NO.	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times Unit Price)**

Wording for "DESCRIPTION" is to be provided by the Owner.
All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.

PUBLIC WORKS BID INSTRUCTIONS

A. LOUISIANA CONTRACTOR'S LICENSE FOR THIS PROJECT

Must be in the following category:

Highway, Street, and Bridge Construction and/or Undersealing or Leveling of Roads

Each bidder shall comply with all rules and regulations of the Louisiana State Licensing Board for Contractors in accordance with existing state laws, and shall comply with the Licensing Requirements of Jefferson Parish Ordinance No. 13574, as amended a copy of which may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, Louisiana 70053.

B. PROBABLE CONSTRUCTION RANGES AND PRICES

Range of the Probable Construction Cost for Base Bid: _____

Range of the Probable Construction Cost for Alternate No. 1: _____

Range of the Probable Construction Cost for Alternate No. 2: _____

Range of the Probable Construction Cost for Alternate No. 3: _____

Range of the Previous Contract Cap (Public Work Maintenance Contract): B - $250,000 - $500,000

The purpose and intention of this invitation to bid is to afford all suppliers/contractors an equal opportunity to bid on construction, maintenance, repair, operating, services, supplies and/or equipment listed in this bid proposal. Jefferson Parish will accept one bid only from each vendor. Items bid on must meet or exceed specifications. Where brand names, make, manufacturer or stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bidders may submit for products of equal quality, style, type and character, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

The price quoted for the work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit prices shall prevail. In the event there is a difference in unit prices, written unit prices shall prevail over numerical unit prices.

The quantities listed on the bid form are prepared for comparison of bids and may be approximate. Payment to the contractor will be made in accordance with measurement and payment requirements for bid items and other requirements of the project specifications. Bid item quantities may be increased, decreased, or omitted as provided in the specifications.

Jefferson Parish requires all products to be new (current), and all work must be performed according to standard practices for the project. Unless otherwise specified, no after market parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least a one (1) year guaranty, in writing, from the date of delivery/acceptance of the project.

C. METHODS OF BID SUBMISSION

All bids shall be submitted electronically through Jefferson Parish's eProcurement System online at no charge via Jefferson Parish's electronic procurement page by visiting www.jeffparishbids.net. Registration and use of this site are free to Jefferson Parish vendors. Additional instructions are included in the text box highlighting electronic procurement.

Only bids properly signed (see more below) will be accepted. NO LATE BIDS WILL BE ACCEPTED. The name of the bidder must be legibly shown. If the bidder is an individual, their name and address should be shown. If the bidder is an entity, the name of the person given the requisite authority to submit the bid on behalf of the entity shall be shown and the address of the entity's place of business should be shown.

Evidence of agency, corporate, limited liability or partnership authority of the person submitting and signing the bid is required for submission of bid. A copy of a corporate resolution or other signature authorization shall be required for submission of the bid. Failure to include a copy of the appropriate signature authorization will result in the rejection of the bid unless bidder has complied with LSA-R.S. 38:2212(B)(5). Photostatic or font signatures shall result in the bid being rejected. However, an electronic signature as defined in LSA-R.S. 9:2602(8) is acceptable. Signature must be a secured digital signature. A sample corporate resolution and sample certification of sole proprietorship can be downloaded from the Jefferson Parish Purchasing Department's website http://purchasing.jeffparish.net, or you may provide your own document.

D. TIMELINES

1. Prior to the closing time for receipt of scheduled bids

A bid may be withdrawn at any time prior to the scheduled closing time for receipt of bids, provided a request in writing, executed by the bidder or his duly authorized representative, is filed with the Parish prior to that time. When such a request is received, the bid will be returned to the bidder unopened. However, no bid can be modified, corrected or withdrawn after the time set for closing such bid, except as provided by LSA-R.S. 38:2214(C) & (D).

The Parish, its engineers, architects or anyone distributing plans and specifications for Parish public work projects, equal to or over the contract limit as defined in LA-R.S. 38:2212, shall furnish all prime bidders who request bid documents and who are properly licensed by the Louisiana State Licensing Board for Contractors with at least one set of complete bid documents. A deposit or fee may be charged on the documents as authorized by LA-R.S. 38:2212.

Addenda may be issued, as authorized by LA-R.S. 38:2212 (O). All formal Addenda require written acknowledgment on the bid form by the bidder. Failure to acknowledge an Addendum on the bid form shall cause the bid to be rejected. Jefferson Parish reserves the right to award the bid to the next lowest responsive and responsible bidder in this event.

Prior to submitting a bid each bidder shall visit the site of the proposed work and fully acquaint himself with all surface and subsurface conditions as they may exist so that he may fully understand the facilities, difficulties, and restrictions attending the execution of the work under this Contract. Bidders shall also thoroughly examine and be familiar with Drawings, Specifications, and Contract Documents. The failure or omission of any bidder to receive or examine any form, instrument, drawing, or document or to visit the site and acquaint himself with conditions there existing, shall in no way relieve any bidder from any obligation with respect to

his bid and the responsibility in the premises rests with him. Submission of a bid shall be considered prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to requirements of the plans, project specifications, Resolution No. 141125, as amended, and contract forms.

Any pre-bid test and boring data in connection with subsurface conditions which have been completed by the Parish or its engineers and furnished to the bidder shall not be considered as fully representative of subsurface conditions existing throughout the area tested nor shall they in any way be binding upon the Parish, it being understood that said data is furnished the bidder for his convenience only and the bidder shall be solely responsible for conducting his own boring explorations he deems necessary in preparing his bid. Any prospective bidder wishing to conduct boring explorations on Parish property must obtain written permission from Jefferson Parish prior to such explorations.

No claims shall be made against the Parish for additional compensation due to unforeseen subsurface conditions arising during progress of the work and which might be in variance with the Parish's pre-bid boring data.

2. Post-closing time for receipt of scheduled bids

Except as where provided by law, bidder agrees that this bid shall be legally binding and may not be withdrawn for a period of forty-five (45) calendar days after the scheduled closing time for receiving bids. In the event the Parish issues the Letter of Award (copy of adopted resolution awarding bid by Jefferson Parish Council) during this period, the bid accepted shall continue to remain binding pending execution of the Contract.

Bidder agrees to execute the ensuing Contract and will deliver applicable Bonds to secure the faithful performance thereof.

The Parish of Jefferson reserves the right to cancel this contract for convenience by issuing a thirty (30) day written notice to contractor.

E. BID REVIEW AND AWARD

1. Rejection of Bids

a. Jefferson Parish may reject any and all bids for just cause in accordance with LA R.S. 38:2214(B). Just cause, for the purpose of the construction of public works, is defined, but is not limited to, the following circumstances:

(1) The public entity's unavailability of funds sufficient for the construction of the proposed public work.
(2) The failure of any bidder to submit a bid within an established threshold of the preconstruction estimates for that public work, as part of the bid specifications.
(3) A substantial change by the public entity prior to the award in the scope or design of the proposed public work.
(4) A determination by the public entity not to build the proposed public work within twelve months of the date for the public opening and reading of bids.
(5) The disqualification by the public entity of all bidders.

b. Additionally, bids may be considered irregular and be rejected for any of the following, but is not limited to the following circumstances:

(1) If the bid form is on a form other than that furnished by the Parish or if the form is altered or any part thereof is detached.
(2) If affidavits included in bid form and/or required by law are not returned with the bid or are not properly executed and notarized.
(3) If there are unauthorized additions, conditional or alternate bids or irregularities which alter the general terms and conditions, the plans or specifications, or make the bid incomplete, indefinite, or ambiguous as to its meaning.
(4) If the bidder adds provisions reserving the right to accept or reject the award or to enter into the contract pursuant to the award.
(5) If an owner or a principal officer of the bidding firm is an owner or a principal officer of a firm which has been declared by the Parish to be ineligible to bid.
(6) If the proposed bid security does not meet the requirements of Section J.
(7) If more than one proposal for the same work, services, materials or supplies is received from an individual, partner, firm, corporation, joint venture, other legal entity, or combination thereof under the same or a different name.
(8) The bid is not properly signed or the authority of the signature person submitting the bid is deemed insufficient or unacceptable.
(9) If the bidder does not possess the proper license(s) required as noted in the specifications.
(10) Any other reasons for rejection set forth by State or Parish laws, Ordinances or Resolutions.

c. In awarding contracts for materials and supplies, Jefferson Parish shall reject the lowest bid if received from a bidder domiciled in a Communist country, or if the materials or supplies are manufactured in a Communist country, including but not limited to China, North Korea and Vietnam, and to award the contract to the next lowest bidder. This Section shall not apply to any country having established trade relations agreements or approvals from the government of the United States. (LSA-R.S. 38:2212.3)

2. Disqualification of Bids

a. The causes for disqualification from consideration for award of a contract with Jefferson Parish are as follows (Jefferson Parish Code of Ordinances, Section 2-912):

(1) Conviction for commission of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract or subcontract, or in the performance of such contract or subcontract;
(2) Conviction under state or federal statutes of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty which currently, seriously, and directly affects responsibility as a Parish contractor;
(3) Conviction under state or federal antitrust statutes arising out of the submission of bids or proposals;
(4) Violation of contract provisions, as set forth below, of a character which is regarded by the Purchasing Director or his designee for Jefferson Parish to be serious as to justify disqualification:
    i. Deliberate failure without good cause to perform in accordance with the specifications or within the time limit provided in the contract; or

ii. A recent record of failure to perform or of unsatisfactory performance in accordance with the terms of one or more contracts; provided that failure to perform or unsatisfactory performance caused by acts beyond the control of the contractor shall not be considered to be a basis for disqualification; or

iii. Failure to timely pay, without cause, a subcontractor for work performed under a construction contract as required under Section 2-976 in Chapter 2, Article VII, of the Jefferson Parish Code of Ordinances, provided disqualification on such basis shall not exceed a period of one (1) year from the deadline to pay the subcontractor.

(5) Any other cause the Purchasing Director determines to be so serious and compelling as to affect responsibility as a Parish contractor, including debarment by another governmental entity for any cause;

(6) Violation of the State Code of Ethics or the ethical standards set forth in the Jefferson Parish Code of Ordinances;

(7) Failure to secure and/or maintain necessary licenses and/or permits;

(8) Failure to comply with the Jefferson Parish Code of Ordinances and/or the Jefferson Parish Comprehensive Zoning Ordinance; or failure to comply with or meet bid specifications and/or failure to be a responsible bidder.

(9) A bid which is not responsive to, or does not meet bid specifications, will be rejected as being non-responsive, but that bidder will not be disqualified from future Parish bids, nor will that bidder be given a hearing pursuant to procedure listed below.

b. The procedures for disqualification from consideration for award of a contract with Jefferson Parish are set forth in Sec. 2- 912 (b).

3. Award of Contract

The award of the contract, if it be awarded, will be by the Parish to the lowest responsive and responsible bidder whose proposal shall have complied with all the bid requirements. The successful bidder will be notified via the e-Procurement site that his bid has been accepted. No contract shall be executed with any contractor until their certificates of insurance, performance bonds, labor and materials payment bonds, or any other bonds required are made satisfactory to the Parish.

Jefferson Parish reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination as shall, in its judgment, be in the best interest of Jefferson Parish. Every contract or order shall be awarded to the lowest responsible bidder, taking into consideration the conformity with the specifications, and the delivery and/or completion date.

Preference will be given to bidders requesting a preference in their bid in accordance with LSA-R.S. 38:2251-2261 for materials, supplies, and provisions, produced, manufactured or grown in Louisiana, quality being equal to articles offered by competitors outside the State of Louisiana, unless federal funding is directly spent by Jefferson Parish on this project.

The successful bidder shall execute the contract with the Parish in the form of the contract included in the specifications, a copy of which is annexed hereto, in such number of counterparts as the Parish may request within twelve (12) days after receipt of notice of award of the contract by the Parish. One copy of the executed contract with all documents forming a part thereof shall be filed at the expense of the contractor, with the Recorder of Mortgages in Jefferson Parish.

PROTESTS: Only those vendors that submit bids in response to this solicitation may protest any element of the procurement, in writing to the Director of the Purchasing Department. Written protest must be received within 48 hours of the release of the bid tabulation by the Purchasing Department. After consultation, the Parish Attorney's Office will then respond to protests in writing. (For more information, please see Chapter 2, Article VII, Division 2, Sec. 2-913 of the Jefferson Parish Code of Ordinances.)

Upon full execution of the contract and receiving a written notice to proceed, the bidder agrees that all work shall be completed as follows:

The work shall be substantially complete within __15__ calendar days of the written notice to proceed and completed and shall be ready for final acceptance no more than 30 calendar days after substantial completion.

F. SALES TAX EXEMPTION

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

G. LIQUIDATED DAMAGES

In accordance with Resolution No. 141125, as amended, Bidder agrees to pay, as liquidated damages, the sum of $____N/A____ for: (1) each consecutive calendar day after the agreed date of substantial completion that the work remains substantially incomplete, and (2) each consecutive calendar day after the 30th day following the actual date of substantial completion that the work has not been finally completed.

In addition to, but not in lieu of the per diem liquidated damages, Parish shall also be entitled to recover from the contractor or the contractor's surety additional liquidated damages as detailed in Resolution No. 141125, as amended. These additional liquidated damages may include, but are not limited to the following, in the amounts and for each of the items identified in the Supplementary Conditions:

(1)	Extended Architectural and/or Engineering Fees	$ N/A /hour
(2)	Extended Resident Project Representative Fee	$ N/A /hour
(3)	Extended Construction Management Fees	$ N/A /day
(4)	Extended Parish's Overhead and Personnel Expenses	$ N/A /hour

(5) Parish's Other Costs Directly Related to the Delay in Completion Beyond the Contract Times.

Whenever contractor's work requires inspections in excess of the budgeted amount for inspection, the contractor shall reimburse the Parish for the additional costs incurred by the Parish attributable to inspection of the contracted project in excess of the budgeted amount for inspections.

The reasonable budget for such inspections is $_____. Resident Project Representative overtime rates shall be calculated at 1.2 times the hourly rate. The cost of inspection in excess of this budgeted amount shall be assessed against Contractor's progress payments, all in accordance with Louisiana Public Bid Law.

H. ETHICAL STANDARDS AND COOPERATION WITH THE OFFICE OF THE INSPECTOR GENERAL, INCLUDING CONFLICTS OF INTEREST

Vendor agrees by bid submission to comply with all provisions of Louisiana Law as well as compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, as published on http://ethics.la.gov and applicable Jefferson Parish ethical standards and Jefferson Parish Terms and Conditions.

Inspector General: It shall be the duty of every Parish officer, employee, department, agency, special district, board, and commission; and the duty of every contractor, subcontractor, and licensee of the Parish, and the duty of every applicant for certification of eligibility for a Parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to JPCO 2-155.10(19). Every Parish contract and every bid, proposal, application or solicitation for a Parish contract, and every application for certification of eligibility for a Parish contract or program shall contain a statement that the corporation, partnership, or person understands and will abide by all provisions of JPCO 2-155.10. By submitting a bid, Bidder acknowledges this and will abide by all provisions of the referenced JPCO.

Conflicts of Interest: Jefferson Parish adheres to the Louisiana Code of Governmental Ethics, contained in Louisiana Revised Statutes Annotated, R.S. 42:1101, et seq. Vendor/Proposer by this submission warrants that there are no "conflicts of interest" related to this procurement that would violate applicable Louisiana Law. Violation of the Louisiana Code of Governmental Ethics may result in rescission of contract, permit or licenses, and the imposition of fines and/or penalties, without contractual liability to the public in accordance with applicable law.

I. REQUIRED AFFIDAVITS

For convenience, all legally mandated affidavits have been combined into one form, entitled **Public Works Bid Affidavit**. All bidders must submit with their bid submission, a completed, signed and properly notarized affidavit in its original format and without alteration in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid; however, the successful bidder must submit the original affidavit in its original format and without material alteration prior to, or at contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

The person submitting the bid, and whose authority to submit has been evidenced on the Corporate Resolution is the proper party to execute the **Public Works Bid Affidavit.**

J. BID REQUIREMENTS (BID DOCUMENTS, SPECIFICATIONS, BONDS, W-9 AND PAYMENT INFO)

Bidders must review the bid specifications and include any required documentation including but not limited to the LA Public Works Uniform Bid Form, Bid Security, Corporate Resolution or written evidence of signature authority, and the Public Works Affidavit. Pursuant to LA R.S. 38:2212(B)(3)(b), bidders shall also be responsible for providing any other documentation as required. Please note that the payment and performance bonds must be supplied by the successful bidder at contract signing.

No oral interpretation will be made to any bidder as to the meaning of the drawings, specifications, or contract documents. Every request for such interpretation shall be made in writing and addressed and forwarded to the Engineer, Architect or person distributing plans and specifications. No inquiry received within five (5) days prior to the day fixed for opening of the bids will be given consideration. Every interpretation made to the bidder shall be in the form of an addendum to the specifications and shall be issued as authorized by LA-R.S. 38:2212(O).

All such addenda shall become a part of the contract documents. Failure of any bidder to receive any such interpretation shall not relieve any bidder from any obligation under his bid as submitted without modification.

The specifications and plans are complementary of each other and all work called for or reasonably implied by either shall be performed as if called for by both. In case of conflict between the requirements of the specifications and plans, the specifications shall take precedence. Figured dimensions shall take precedence over scale dimensions, and larger scale details shall take precedence over smaller scale details in the general work drawings.

All vendors submitting bids shall register as a Jefferson Parish vendor, if not already registered. Registration forms may be downloaded from http://purchasing.jeffparish.net and click on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Vendors may experience a delay in payment if your company is not a registered vendor with Jefferson Parish.

Bidders must comply with all provisions of this Notice, the Standard General Conditions of the Construction Contract and any special conditions and specifications contained herein, all of which are made part of this bid proposal. Resolution No. 141125, as amended, will be considered a part of the bid whether attached or not. A copy of these terms and resolutions may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, Louisiana 70053. Bidders may also obtain a copy by visiting the Purchasing Department's webpage at http://purchasing.jeffparish.net and clicking on online forms.

Bid Security: Bidders shall provide bid security in the form of an electronic bid bond in the amount of five percent (5%) of the total bid price (Base Bid and any Alternates) (as per R.S. 38:2218). The Bid Security shall remain valid until the contract is executed or until final disposition is made of the bids submitted. Such security will become the property of the Parish in the event the successful bidder fails or refuses to execute the contract or fails to produce performance and payment bonds upon contract signing. Bids shall remain binding for at least forty-five (45) days after the date set for the Bid Opening. In the event the Parish issues the Letter of Award during this period, the bid

accepted shall continue to remain binding until the execution of contract. Jefferson Parish and the lowest responsible bidder, by mutual written consent, may agree to extend the deadline for award by one or more extensions of thirty (30) calendar days.

When submitting online, bidders must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.

Performance Bond: A performance bond is required in 100% of the contract amount and is due at the signing of the formal contract, unless another percentage is required in the bid specifications. In the event of a conflict between these instructions and the bid specifications, the bid specifications shall control.

Payment Bond: A payment bond is required in 100% of the contract amount and is due at the signing of the formal contract, unless another percentage is required in the bid specifications. In the event of a conflict between these instructions and the bid specifications, the bid specifications shall control.

To the extent permitted by law, the bond requirements as set forth herein are waived insofar as Community Development Housing Rehabilitation Construction Contracts are concerned for single family, owner-occupied dwellings. The Parish Attorney's Office will omit the requirements in connection with Community Development Housing Rehabilitation Construction Contracts for single family, owner-occupied dwellings.

K. INSURANCE REQUIREMENTS

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

JEFFERSON PARISH REQUIRED STANDARD INSURANCE

☒ **WORKER'S COMPENSATION INSURANCE**

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

☒ **COMMERCIAL GENERAL LIABILITY**

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

☒ **COMPREHENSIVE AUTOMOBILE LIABILITY**

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

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

FOR CONSTRUCTION AND RENOVATION PROJECTS:
The following are required if selected. Such insurance is due upon contract execution.

☐ **OWNER'S PROTECTIVE LIABILITY**

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

☐ **BUILDER'S RISK INSURANCE**

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

INSURANCE DEDUCTIBLES - The Parish Attorney with concurrence of the Director of Risk Management have waived the deductible section of the Terms and Conditions for all Invitations to Bid, until further notice.

L. INDEMNIFICATION

Bidder acknowledges that bidder recovered the cost of any required insurance in the contract price as required by LA R.S. 9:2780.1(I) and that bidder recovered any such cost for the purposes of insuring an obligation to indemnify Jefferson Parish, defend Jefferson Parish, or hold Jefferson Parish harmless and that bidder's indemnity liability is limited to the amount of the proceeds that are payable under the insurance policy or policies that bidder has obtained.

M. FAMILIARITY WITH LAWS AND ORDINANCES

Bidders shall familiarize themselves with and shall comply with all applicable Federal and State Laws, Parish/Municipal Ordinances, Resolutions, and the rules and regulations of all authorities having jurisdiction over construction of the project, which may directly or indirectly affect the work or its prosecution.

These laws and/or ordinances will be deemed to be included in the contract, the same as though herein written in full.

In case of conflict between the requirements of these specifications and any State and/or Federal Regulations or Laws, the State and/or Federal Regulations or Laws shall take precedence in all cases in which State and/or Federal Funding of the contract, in whole or in part, depends upon compliance with said State and/or Federal Regulations or Laws.

N. MISCELLANEOUS

The successful bidder may be required to furnish a statement of the origin, composition, and manufacture of materials to be used in construction of the work together with samples, which samples may be subjected to testing to determine their quality and fitness for the work, as specified.

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

Non-negotiable contract terms include but are not limited to taxes, assignment of contract, audit of records, EEOC and ADA compliance, record retention, content of contract/order of precedence, contract changes, force majeure, governing law, including ethics statements, claims or controversies, and termination based on contingency of appropriation of funds, as applicable.

CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF
URETEK USA
INCORPORATED.

AT THE MEETING OF DIRECTORS OF URETEK USA
INCORPORATED, DULY NOTICED AND HELD ON 7/30/2018,
A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED. IT WAS:

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

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

SECRETARY-TREASURER Amy B. Hyde

04/11/2023

DATE

R-1020 (4/12)

LDR
Contributing to a better quality of life

Designation of Construction Contractor as Agent of a Governmental Entity Sales Tax Exemption Certificate

_____, an agency of the United
Legal Name of Governmental Entity

States government, or an agency, board, commission, or instrumentality of the State of Louisiana or its political subdivisions, including parishes, municipalities and school boards, does hereby designate the following contractor as its agent for the purpose of making sales tax exempt purchases on behalf of the governmental body:

Name of Contractor: URETEK USA, Inc.		
Address: 13900 Humble Rd.		
City: Tomball	State: TX	ZIP: 77375

This designation of agency shall be effective for purchases of component construction materials, taxable services and leases and rentals of tangible personal property for the following named construction project:

Construction Project	Contract Number

This designation and acceptance of agency is effective for the period

Beginning Date *(mm/dd/yyyy)*	End Date *(mm/dd/yyyy)*

Purchases for the named project during this period by the designated contractor shall be considered as the legal equivalent of purchases directly by the governmental body. Any materials purchased by this agent shall immediately, upon the vendor's delivery to the agent, become the property of this government entity. This government entity, as principal, assumes direct liability to the vendor for the payment of any property, services, leases, or rentals made by this designated agent. This agreement does not void or supersede the obligations of any party created under any construction contract related to this project, including specifically any contractual obligation of the construction contractor to submit payment to the vendors of materials or services for the project.

This contractor-agent is not authorized to delegate this purchasing agency to others; separate designations of agency by this governmental entity are required for each contractor or sub-contractor who is to purchase on behalf of this governmental entity. The undersigned hereby certify that this designation is the entirety of the agency designation agreement between them. In order for a purchase for an eligible governmental entity through a designated agent to be eligible for sales tax exemption, the designation of agency must be made, accepted, and disclosed to the vendor before or at the time of the purchase transaction.

Designation of Agency			Acceptance of Agency		
Signature of Authorized Designator		Date *(mm/dd/yyyy)*	Signature of Contractor or Subcontractor Authorized Acceptor		Date *(mm/dd/yyyy)*
Name of Authorized Designator			Name of Contractor's or Subcontractor's Acceptor: Edward Hibbard, President		
Name of Governmental Entity			Name of Contractor: URETEK USA, Inc.		
Address			Address: 13900 Humble Rd.		
City	State	ZIP	City: Tomball	State: TX	ZIP: 77375

This designation of agency form, when properly executed by both the contractor and the governmental entity, shall serve as evidence of the sales tax exempt status that has been conferred onto the contractor. No other exemption certificate form is necessary to claim exemption from sales taxes. The agency agreement evidenced by this sales tax exemption certificate must be implemented at the time of contract execution with the governmental entity. The contract between the governmental entity and his agent must contain provisions to authenticate the conferment of agency.

Public Works Bid
Affidavit Instructions

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

Instruction sheet may be omitted when submitting the affidavit

Public Works Bid

AFFIDAVIT

STATE OF Texas

PARISH/COUNTY OF Harris

BEFORE ME, the undersigned authority, personally came and appeared: Edward Hibbard _____, (Affiant) who after being by me duly sworn, deposed and said that he/she is the fully authorized President of URETEK USA, Inc. (Entity), the party who submitted a bid in response to Bid Number 50-00141500, to the Parish of Jefferson.

Affiant further said:

Campaign Contribution Disclosures

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

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

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

Affiant further said:

Debt Disclosures

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

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

Choice B X There are **<u>NO</u>** debts which would require disclosure under Choice A of this section.

Affiant further said:

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

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

Affiant further said:

Affiant personally has not been convicted of, nor has he/she entered into a plea of guilty or nolo contendere to any of the crimes or equivalent federal crimes listed below. No individual partner, incorporator, director, manager, officer, organizer, or member, who has a minimum of a ten percent ownership in the Bidding Entity, has been convicted of, or has entered a plea of guilty or nolo contendere to any of the crimes or equivalent federal crimes listed below. A conviction of or plea of guilty or nolo contendere to the following state crimes or equivalent federal crimes shall permanently bar any person or the bidding entity from bidding on public projects:

(a) Public bribery (R.S. 14:118)
(b) Corrupt influencing (R.S. 14:120)
(c) Extortion (R.S. 14:66)
(d) Money laundering (R.S. 14:230)

A conviction of or plea of guilty or nolo contendere to the following state crimes or equivalent federal crimes shall bar any person or the bidding entity from bidding on public projects for a period of five years from the date of conviction or from the date of the entrance of the plea of guilty or nolo contendere:

(a) Theft (R.S. 14:67)
(b) Identity Theft (R.S. 14:67, 16)
(c) Theft of a business record (R.S. 14:67.20)
(d) False accounting (R.S. 14:70)
(e) Issuing worthless checks (R.S. 14:71)
(f) Bank fraud (R.S. 14:71.1)
(g) Forgery (R.S. 14:72)
(h) Contractors; misapplication of payments (R.S. 14:202)
(i) Malfeasance in office (R.S. 14:134)

The five-year prohibition provided for in this section shall apply only if the crime was committed during the solicitation or execution of a contract or bid awarded pursuant to these provisions. If evidence is submitted substantiating that a false attestation has been made and the project must be readvertised or the contract cancelled, the awarded entity making the false attestation shall be responsible to the public entity for the costs of rebidding, additional costs due to increased costs of bids and any and all delay costs due to the rebid or cancellation of this project.

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

Affiant further said:

(1) Entity is registered and participates in a status verification system to verify that all employees in the State of Louisiana are legal citizens of the United States or are legal aliens.

(2) Entity shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the State of Louisiana.

(3) Entity shall require all subcontractors to submit to the Entity a sworn affidavit verifying compliance with statements (1) and (2).

Signature of Affiant

Edward Hibbard, President
Printed Name of Affiant

SWORN AND SUBSCRIBED TO BEFORE ME
ON THE 11th DAY OF April, 2023.

Notary Public

Laura Goodwin
Printed Name of Notary

124167338
Notary/Bar Roll Number

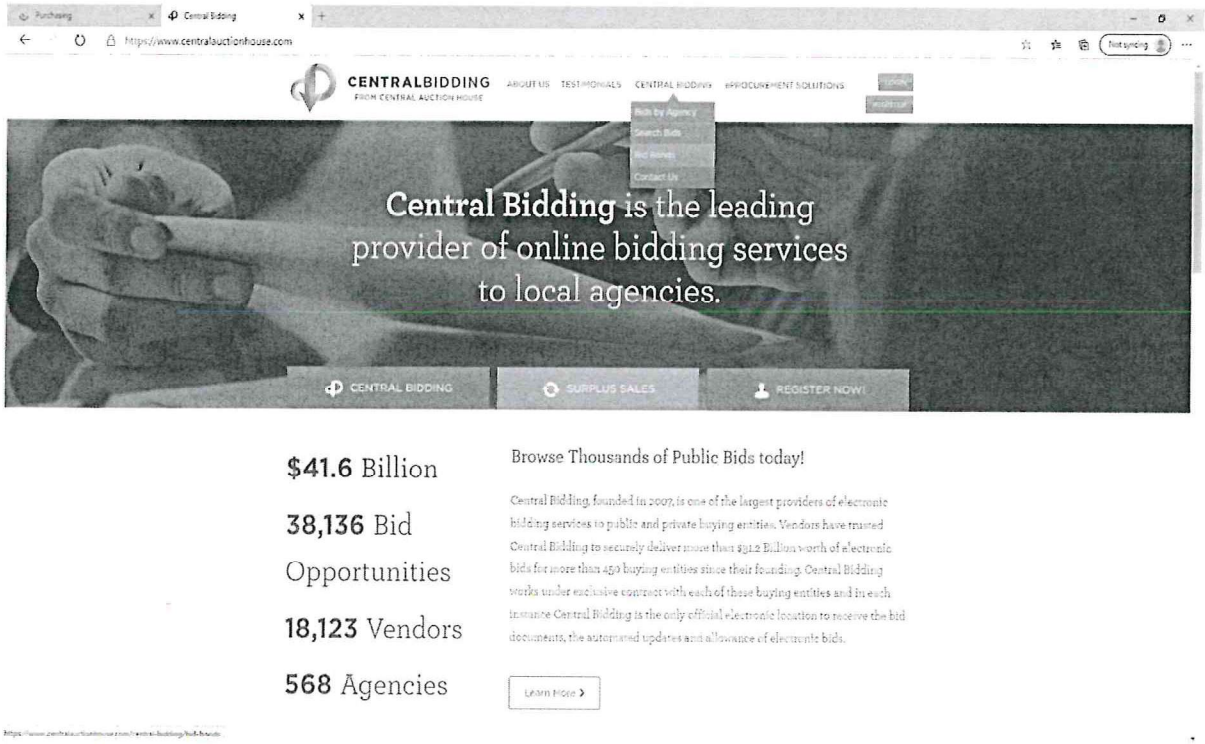
My commission expires 05/20/2025.

LAURA GOODWIN
Notary Public, State of Texas
Comm. Expires 05-20-2025
Notary ID 124167338

Bid Bond

An Electronic Bid Bond must be submitted with this bid, through one of the respective clearing houses at www.jeffparish.net or www.centralbidding.com. To access the bonding companies on Central Bidding, hover over the "Central Bidding" link at the top of the page and select the "Bid Bonds" link.

The electronic bid bond number is to be placed in the required section listed on the standard envelope. Scanned copies of bid bonds will not be accepted with your submission.



CONCRETE PAVEMENT LIFTING & SEALING OF DRAINAGE STRUCTURES

SCOPE:

Labor, materials and equipment for concrete pavement lifting and sealing of various drainage structures utilizing high-density polyurethane, for the Jefferson Parish Department of Public Works – Streets Department and all Jefferson Parish agencies and municipalities.

CONTRACT TERM:

The successful bidder shall be awarded the work for a period of two (2) years. The contract prices are firm during the entire two (2) year contract period.

BONDS:

SURETY BID BOND: A surety bond in the amount of 5% is due with the bid submission.

PAYMENT BOND: A payment bond in the amount of 50% of the contract amount is due at the signing of the formal contract.

PERFORMANCE BOND: A performance bond in the amount of 50% of the contract amount is due at the signing of the formal contract.

CONTRACTOR'S LICENSE:

A Louisiana State Contractor's License is required in the following category:

Highway, Street and Bridge Construction and/or Undersealing or Leveling of Roads

PRE-BID CONFERENCE:

A PRE-BID CONFERENCE will be held at 10:00 on MARCH 23,2023 in the PURCHASING DEPARTMENT, Suite 4400 JEFFERSON PARISH GENERAL GOVERNMENT BUILDING, 200 DERBIGNY STREET, GRETNA, LA 70053.

SPECIFICATIONS:

SPECIFICATION 1 – GENERAL:

1.0 Polyurethane Material

1.1 The material used for lifting pavements (including base material where applicable) and sealing all drainage structures shall be a two – part, water blown, closed cell, high-density polyurethane system.

1.2 The material shall have a free rise minimum density of 3.0 lbs/cubic ft. (48 kilograms per cubic meter) and a minimum compressive strength of 40 PSI.

1.3 The material shall be a polyurethane-forming mixture, having water insoluble diluents, which permit the formation of polyurethanes in excess water. The presence of these water insoluble diluents provides polyurethane foam with improved dimensional stability properties. This formula and these characteristics must be certified by the chemical supplier prior to installation.

1.4 The high-density polyurethane formulation shall reach 90% of full compressive strength within 15 minutes from the time of installation.

2.0 Testing and Data

2.1 All testing and data information related to the product and as required below shall be part of the bid document:

A. Material safety data sheets for all pertinent production material.

B. A certificate of compliance from the manufacturer of the polyurethane component materials to be used. The certification shall include the results of density and compressive strength analysis performed in accordance with ASTM D 1622 and ASTM D 1621 respectively.

C. A report from an industrial hygienist who has conducted a personnel review, production vehicle review, and typical job-site safety review of the contractor's implementation procedures involving the polyurethane component chemicals.

D. A test procedure for delivery of the contractor's polyurethane material in a simulated slab, with a report of actual performance, with regard to material spread, density, and compressive strength in both dry and wet conditions.

E. A copy of the contractor's employee safety manual specific to polyurethane pavement lifting and drainage structure sealing.

3.0 Measurement and Payment

3.1 Payment for all work done shall be determined by the project engineer and the contract.

The contractor shall be paid per pound of material installed based upon the contract unit price. Polyurethane material will be measured to the nearest pound as displayed by a certified flow meter. A mechanical stroke counter is not allowed as an acceptable method of measurement.

3.2 The quoted price and payment should include full compensation for furnishing all labor, supervision, materials, tools, equipment, traffic control, and incidentals for all work as called for in this specification, or as directed by the project engineer.

3.3 At the request of the inspector, all product delivery equipment in service should be capable to perform a product density test by dispensing a sample of the equipment's polyurethane material into a test cylinder of known volume. The sample's net weight and density result shall be witnessed by the inspector or the project engineer. The density must not be less than the requirement of Section 1.2 above.

3.4 The owner may test the contents and quality of the polyurethane at the owner's expense at any time.

3.5 Daily material usage should be attested by the inspector and the contractor and reported on a field production report.

4.0 Traffic Control

4.1 The contractor shall have a certified traffic control supervisor on-site for all work. All lane closures must meet the minimum requirements for equipment and layout as required by the MUTCD and Jefferson Parish Traffic Engineering Division (504) 736-6530. Contractor is responsible for all traffic control costs.

5.0 Warranty of Product /Workmanship

5.1 The contractor shall warranty all areas worked under items 0010-0040, Pavement Lifting (with or without base) against future settlement for a period of one (1) year.

The contractor shall also warranty all areas worked under item 0050 - 0080, Sealing of Drainage Pipe / Structures / Box Culverts against future settlement or further loss of surrounding soil material into the sealed drainage structure for a period of two (2) years.

If failure occurs in either instance, the contractor will perform repair work to the area at no charge.

6.0 Night Work/Weekend Work

6.1 Weekend work may be required in non-residential areas and heavily traveled major routes. In such an event contractor is required to perform the work at bid unit prices. Also if contractor chooses to perform work in these areas during the night/weekend he shall obtain permission from the Director of Streets, prior to scheduling the work. All night work to commence between 7 P.M. and end before 7 A.M. There is no added compensation for occasional night work other than the bid unit prices.

SPECIAL PROVISIONS

THIS SPECIFICATION REFERS TO:

- **Item No. 0010 - Pavement Lifting (via filling the void space just below the bottom of the slab, no base lifting)**

A. Description

1. This work shall consists of lifting the pavement structure only (excluding any base material) and filling voids at locations as indicated on contract work orders or as directed by the project engineer, through implementation of the process described in Section B below using polyurethane materials as described in Section 1.0 of Specification 1 - General above.

2. Contractor and on-site foreman shall have experience in lifting concrete pavement, utilizing the process described in Section B below and using polyurethane materials as described in Section 1.0 of Specification 1 - General.

3. The minimum contract work order shall be 300 pounds and encompass various locations in the parish.

4. The contractor shall be able to respond within 24 hours notice with necessary equipment, materials, labor and supervision to perform work as described in Section A.1 immediately above at the request of the engineer.

B. Process

1. The contractor is to provide for all equipment, materials, labor, and supervision required for the work. The owner is to provide on-site inspection personnel and engineering oversight for any special project conditions and specific project objectives.

2. The contractor shall, at a minimum, provide the following equipment (at contractor's expense) for such projects:

   a) Equipment capable of delivering the high-density polyurethane formulation to depths as required under the pavements and controlling the volume of installed material along with the rate and magnitude of pavement lifting, if required.

   b) Pressure and temperature control devices to assure and maintain proper temperature and proportionate mixing of the polyurethane component materials. All necessary electric generators, compressors, heaters, hoses, containers, valves, and gauges to efficiently conduct and control the project work.

   c) Pneumatic and electric drills capable of efficiently drilling access holes no larger than 1 inch diameter through pavements up to 1.5 feet thick.

   d) Suitable laser levels and/or dial indicator devices, used to insure that the pavement is sufficiently lifted to an even plane and to the required elevation.

   e) Product delivery equipment shall be equipped with a manufacturer's certified flow meter to measure the amount of high-density polyurethane installed at each location. The certified flow meter shall have a digital output in both pounds and gallons.

3. A pavement profile from laser level readings or string lines shall be used to determine where the pavement needs to be lifted.

4. In the project area, a series of access holes no larger than 1 inch diameter should be drilled through the pavement. Care is to be taken to protect the pavement surrounding each access hole from damage.

5. The material is to be delivered through the drilled access holes until all known or encountered voids under the pavement are filled. The rate and amount of material delivery should be determined by the contractor.

6. The contractor is responsible for any pavement blowouts or excessive pavement lifting which may occur as a result of his work and repairs are to be made to the subject to the satisfaction of the project engineer without additional cost.

7. Corrections to the grade of adjacent slabs, if necessary and as determined by the project engineer, should be made in the same manner that is required for pavement that is lifted. All lifted pavements must match the existing grade of adjacent slabs

that provide positive drainage. Final elevations should be within ¼ inch of the required elevations as determined by the profile or the project engineer.

8. The contractor's method of product delivery should prevent leakage during installation and upon completion of the installation should not interfere with the pavement surface. Access holes should be filled to the pavement surface with polyurethane material and a non-shrink grout.

9. At the end of each work shift, the work area shall be left in a clean, swept, and neat condition.

10. Although some flow of the polyurethane material into the drainage system is normal, the contractor shall perform work so as to minimize the flow of polyurethane material into the drainage system. Contractor shall be responsible to remove excess material from the drainage system in which contractor is working. In this case, the contractor shall provide the equipment necessary to clean/flush the drain lines as needed <u>at no additional cost</u> to remove the excess material.

11. The contractor shall be responsible to clean out any soils, rocks, or other obstructions that restrict the contractor from doing a quality job and as required to properly restore the drainage system.

THIS SPECIFICATION REFERS TO:

- **Item No. 0020 - Pavement Lifting (including base material up to 3 feet in thickness)**
- **Item No. 0030 - Pavement Lifting (including base material greater than 3 feet to 6 feet in thickness)**
- **Item No. 0040 - Pavement Lifting (including base material greater than 6 feet to 10 feet in thickness)**

A. Description

1. This work shall consists of pavement lifting (including base material of various depths) from the bottom surface of existing cementitious and asphalt pavement to lift the base and pavement at locations as indicated on contract work orders or as directed by the project engineer, through implementation of the process described in Section B below using polyurethane materials as described in Section 1.0 of Specification 1 - General above.

2. The contractor and on-site foreman shall have experience in lifting concrete pavement, utilizing the process described in Section B below and using polyurethane materials as described in Section 1.0 of Specification 1 - General. References for the contractor and on-site foreman shall be submitted within 10 days from the date of the bid opening.

3. The minimum contract work order shall be 300 pounds and encompass various locations in the parish.

4. The contractor shall be able to respond within 24 hours notice with necessary equipment, materials, labor and supervision to perform work as described in Section A.1 immediately above at the request of the engineer.

B. Process

1. The contractor is to provide for all equipment, materials, labor and supervision required for the work. The owner will provide on-site inspection personnel and engineering oversight for any special project conditions and specific project objectives.

2. The contractor shall, at a minimum, provide the following equipment (at contractor's expense) for such projects:

   a) Equipment capable of delivering the high-density polyurethane formulation to depths as required under the pavements, and controlling the volume of installed material along with the rate and magnitude of pavement lifting, if required.

   b) Pressure and temperature control devices to assure and maintain proper temperature and proportionate mixing of the polyurethane component materials. All necessary electric generators, compressors, heaters, hoses, containers, valves, and gauges to efficiently conduct and control the project work.

   c) Pneumatic and electric drills capable of efficiently drilling access holes no large than 1.5 inch diameter through pavements that typically range in thickness from 6 inches to 10 inches. However, due to settlement and asphalt maintenance overlays, some pavements can be up to 24 inches thick.

   d) Suitable laser levels and/or dial indicator devices, used to insure that the pavement is sufficiently lifted to an even plane and to the required elevation.

   e) Product delivery equipment shall be equipped with a manufacturer's certified flow meter to measure the amount of high-density polyurethane installed at each location. The certified flow meter shall have a digital output in both pounds and gallons.

3. A pavement profile from laser level readings or string lines shall be used to determine where the pavement needs to be lifted.

4. In the project area, a series of access holes no larger than 1.5 inches should be drilled at intervals (no closer than 2 ft.) through the pavement in the areas to be lifted. The exact location, spacing, and size of access holes along with depth of product delivery shall be determined by the contractor and approved by the engineer. Care shall be taken to protect the pavement surrounding each access hole from damage.

5. The material is to be delivered through the drilled access holes until all known or encountered voids under the pavement are filled. The rate and amount of material delivery should be determined by the contractor.

6. The contractor is responsible for any pavement blowouts or excessive pavement lifting which may occur as a result of his work and repairs are to be made to the subject to the satisfaction of the project engineer without additional cost.

7. Corrections to the grade of adjacent slabs, if necessary and as determined by the project engineer, should be made in the same manner that is required for pavement that is lifted. All lifted pavements must match the existing grade of adjacent slabs that provide positive drainage. Final elevations should be within ¼ inch of the required elevations as determined by the profile or the project engineer.

8. The contractor's method of product delivery should prevent leakage during installation and upon completion of the installation should not interfere with the pavement surface. Access holes should be filled to the pavement surface with polyurethane material and a non-shrink grout.

9. At the end of each work shift, the work area shall be left in a clean, swept, and neat condition.

10. Although some flow of the polyurethane material into the drainage system is normal, the contractor shall perform work so as to minimize the flow of polyurethane material into the drainage system. Contractor shall be responsible to remove excess material from the drainage system in which contractor is working. In this case, the contractor shall provide the equipment necessary to clean/flush the drain lines as needed <u>at no additional cost</u> to remove the excess material.

11. The contractor shall be responsible to clean out any soils, rocks, or other obstructions that restrict the contractor from doing a quality job and as required to properly restore the drainage system.

THIS SPECIFICATION REFERS TO:

- **Item No. 0050**
  Sealing of Drainage Pipe / Structures (depth from 0 to 4 feet) (excluding drainage box culverts)
- **Item No. 0060**

Sealing of Drainage Pipe / Structures (depth greater than 4 feet to 8 feet) (excluding drainage box culverts)

- **Item No. 0070**
  Sealing of Drainage Pipe / Structures (depth greater than 8 feet to 12 feet) (excluding drainage box culverts)
- **Item No. 0080**
  Sealing of Drainage Box Culverts (various depths and sizes)
- **Item No. 0090**
  Flush Truck along with Camera/Video

A. Description

1. This work shall consist of providing a positive encasement seal of drainage system pipes (i.e. joints, cracks, etc.), drainage structures (i.e. catch basins, drain inlets, manholes, etc.), and also any work required to seal leaks in drainage box culvert (primarily at construction joints) at locations as indicated on contract work orders or as directed by the project engineer, through implementation of the process described in Section B below using polyurethane materials as described in Section 1.0 of Specification 1 – General above.

2. The contractor and on-site foreman shall have experience in sealing drainage structures, utilizing the process described in Section B below and using polyurethane materials as described in Section 1.0 of Specification 1 - General. References for the contractor and on-site foreman shall be submitted within 10 days from the date of the bid opening.

3. The minimum contract work order shall be 300 pounds and encompass various locations in the parish.

4. The contractor shall be able to respond within 24 hours notice with necessary equipment, materials, labor and supervision to perform work as described in Section A.1 immediately above at the request of the engineer.

B. Process

1. The contractor is to provide for all equipment, materials, labor, and supervision required for the work. The owner will provide on-site inspection personnel and engineering oversight for any special project conditions and specific project objections.

2. The contractor shall, at a minimum, provide the following equipment (at contractor's expense) for such projects:

   a) Equipment capable of delivering the high-density polyurethane formulation to depths as required under the pavements (and/or ground

surface), and controlling the volume of installed material along with the rate and magnitude of pavement lifting, if required.

b) Pressure and temperature control devices to assure and maintain proper temperature and proportionate mixing of the polyurethane component materials. All necessary electric generators, compressors, heaters, hoses, containers, valves, and gauges to efficiently conduct and control the project work.

c) A drill capable of drilling access holes no large than 1.5 inch diameter through pavements that typically range in thickness from 6 inches to 10 inches. However, due to settlement and asphalt maintenance overlays, some pavements can be up to 24 inches thick.

d) Equipment and resources necessary to deliver the product to depths up to 30 feet.

e) Product delivery equipment shall be equipped with a manufacturer's certified flow meter to measure the amount of high-density polyurethane installed at each location. The certified flow meter shall have a digital output in both and gallons.

3. In the project area, if applicable, a series of access holes no larger than 1.5 inches should be drilled at intervals (no closer than 2 ft.) through the pavement in the area where the drainage structure is to be sealed. The exact locations, spacing, and size of access holes along with depth of product delivery shall be determined by the contractor and approved by the engineer. Care shall be taken to protect the pavement surrounding each access hole from damage (where applicable).

4. The material is to be delivered through the drilled access holes (where applicable) until the drainage structure is properly sealed. The rate and amount of material delivery should be determined by the contractor.

5. The contractor is responsible for any pavement blowouts or excessive pavement / ground lifting which may occur as a result of his work and repairs are to be made to the subject to the satisfaction of the project engineer without additional cost.

6. The contractor's method of product delivery should prevent leakage during installation and upon completion of the installation should not interfere with the pavement surface. Access holes should be filled to the pavement surface with polyurethane material and a non-shrink grout.

7. At the end of each work shift, the work area shall be left in a clean, swept, and neat condition.

8. Although some flow of the polyurethane material into the drainage system is normal, the contractor shall perform work so as to minimize the flow of polyurethane material into the drainage system. Contractor shall be responsible to remove excess material from the drainage system in which contractor is working. Equipment necessary to clean/flush the drain lines, along with equipment to provide video inspection as needed, to ensure proper sealing of the drainage structure without blocking the flow will be paid separately under Item 0090. The interior of the drain line shall be constantly monitored and recorded visually to ensure completeness of the seal and for the water jetting to remove excess HDP material from the pipe.

9. The contractor shall provide a digital recording that should include both audio and video information that accurately reproduces the original picture and sound of the video inspection. The video inspection should include: starting and ending structures, address, date, time, footage, flow direction, pipe size, depth and etc.

10. The contractor shall be responsible to clean out any soils, rocks, or other obstructions that restrict the contractor from doing a quality job and as required to properly restore the drainage system.

State of Louisiana

State Licensing Board for Contractors

This is to Certify that:

URETEK USA, INC.
P. O. Box 1929
Tomball, TX 77377

is duly licensed and entitled to practice the following classifications

SPECIALTY: RIGGING, HOUSE MOVING, WRECKING AND DISMANTLING; SPECIALTY: UNDERSEALING OR LEVELING OF ROADS

Witness our hand and seal of the Board dated,
Baton Rouge, LA 17th day of May 2022

Director

Chairman

Treasurer

Expiration Date: May 16, 2023

License No: 31626

This License Is Not Transferrable

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/28/2022

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

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

PRODUCER
IBTX Risk Services
32335 US Highway 281 N
Suite 1201
Bulverde TX 78163

CONTACT NAME: Daphne L Watkins
PHONE (A/C, No, Ext): 214-989-7100 **FAX (A/C, No):** 210-696-8414
E-MAIL ADDRESS: service@ib-tx.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Zurich American Insurance Company	16535
INSURER B : RSUI Indemnity Company	22314
INSURER C : Allied World Surplus Lines Insurance Company	24319
INSURER D :	
INSURER E :	
INSURER F :	

INSURED URETUSA-01
URETEK USA, Inc.
13900 Humble Road
Tomball TX 77375

COVERAGES **CERTIFICATE NUMBER:** 1478334626 **REVISION NUMBER:**

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY**			GLO 0187947-06	7/1/2022	7/1/2023	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 1,000,000
	X Contract Lia						MED EXP (Any one person)	$ 10,000
	X XCU						PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	POLICY X PRO-JECT X LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
A	**AUTOMOBILE LIABILITY**			BAP 0187948-06	7/1/2022	7/1/2023	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
B	**UMBRELLA LIAB** X OCCUR			NHA098499	7/1/2022	7/1/2023	EACH OCCURRENCE	$ 5,000,000
	X **EXCESS LIAB** CLAIMS-MADE						AGGREGATE	$
	DED X RETENTION $ 10,000							$
A	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY**			WC 0187946-06	7/1/2022	7/1/2023	X PER STATUTE / OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? **(Mandatory in NH)** Y / N: N	N / A					E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
C C	Pollution Liability Professional Liability Retention $25,000			0310-1771 0310-1771	7/1/2022 7/1/2022	7/1/2023 7/1/2023	Poll Per Occurr Prof Per Claim Prof/Poll Aggregate	$2,000,000 $4,000,000 $4,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
The General Liability and Auto policies include blanket additional insured endorsements [U-GL-2162-A CW 02/19, UGL1345BTX 4/13 with Ongoing/Completed Ops included, CG2007 04/13, UUMANB & UCA424FCW 04/14] as required in a written contract with the Named Insured. The General Liability, Auto & Work Comp policies include a blanket waiver of subrogation endorsement [UGL1345BTX 4/13, UCA424FCW 4/14,EXL6092 08/13, UUMANB, WC000313 4/84, & WC420304B 6/14] as required in a written contract with the Named Insured. Primary Noncontributory wording per attached endorsements [UGL1345BTX 4/13, UCA424FCW 4/14, UUMANB, RSG36111 10/13 & EXL3038 08/17]. Cancellation provisions-see attached [UGL1521BCW 01/19, UCA832ACW 1/13, WC990643 1/13 & RSG94118 02/14]. Excess is follow form of the General Liability, Auto and Work Compensation, Employers Liability policies subject to policy terms and conditions. Per Project Aggregate [CG2503 05/09]
Project: 5000129087 Concrete Pavement Lifting and Sealing of various drainage structures.

CERTIFICATE HOLDER

Jefferson Parish
1221 Elmwood Park Blvd
Suite 404
Jefferson LA 70123

CANCELLATION

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

AUTHORIZED REPRESENTATIVE

Insured: URETEK USA, Inc.

Additional Insured – Automatic – Owners, Lessees Or Contractors

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.	
Policy No. GLO 0187947-06	Effective Date: 7/1/22

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

A. Section **II – Who Is An Insured** is amended to include as an additional insured any person or organization whom you are required to add as an additional insured under a written contract or written agreement executed by you, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" and subject to the following:

1. If such written contract or written agreement specifically requires that you provide that the person or organization be named as an additional insured under one or both of the following endorsements:

a. The Insurance Services Office (ISO) ISO CG 20 10 (10/01 edition); or

b. The ISO CG 20 37 (10/01 edition),

such person or organization is then an additional insured with respect to such endorsement(s), but only to the extent that "bodily injury", "property damage" or "personal and advertising injury" arises out of:

(1) Your ongoing operations, with respect to Paragraph **1.a.** above; or

(2) "Your work", with respect to Paragraph **1.b.** above,

which is the subject of the written contract or written agreement.

However, solely with respect to this Paragraph **1.**, insurance afforded to such additional insured:

(a) Only applies if the "bodily injury", "property damage" or "personal and advertising injury" offense occurs during the policy period and subsequent to your execution of the written contract or written agreement; and

(b) Does not apply to "bodily injury" or "property damage" caused by "your work" and included within the "products-completed operations hazard" unless the written contract or written agreement specifically requires that you provide such coverage to such additional insured.

2. If such written contract or written agreement specifically requires that you provide that the person or organization be named as an additional insured under one or both of the following endorsements:

a. The Insurance Services Office (ISO) ISO CG 20 10 (07/04 edition); or

b. The ISO CG 20 37 (07/04 edition),

such person or organization is then an additional insured with respect to such endorsement(s), but only to the extent that "bodily injury", "property damage" or "personal and advertising injury" is caused, in whole or in part, by:

(1) Your acts or omissions; or

(2) The acts or omissions of those acting on your behalf,

in the performance of:

(a) Your ongoing operations, with respect to Paragraph **2.a.** above; or

(b) "Your work" and included in the "products-completed operations hazard", with respect to Paragraph **2.b.** above,

which is the subject of the written contract or written agreement.

However, solely with respect to this Paragraph **2.**, insurance afforded to such additional insured:

(i) Only applies if the "bodily injury", "property damage" or "personal and advertising injury" offense occurs during the policy period and subsequent to your execution of the written contract or written agreement; and

(ii) Does not apply to "bodily injury" or "property damage" caused by "your work" and included within the "products-completed operations hazard" unless the written contract or written agreement specifically requires that you provide such coverage to such additional insured.

3. If neither Paragraph **1.** nor Paragraph **2.** above apply and such written contract or written agreement requires that you provide that the person or organization be named as an additional insured:

a. Under the ISO CG 20 10 (04/13 edition, any subsequent edition or if no edition date is specified); or

b. With respect to ongoing operations (if no form is specified),

such person or organization is then an additional insured only to the extent that "bodily injury", "property damage" or "personal and advertising injury" is caused, in whole or in part by:

(1) Your acts or omissions; or

(2) The acts or omissions of those acting on your behalf,

in the performance of your ongoing operations, which is the subject of the written contract or written agreement.

However, solely with respect to this Paragraph **3.**, insurance afforded to such additional insured:

(a) Only applies to the extent permitted by law;

(b) Will not be broader than that which you are required by the written contract or written agreement to provide for such additional insured; and

(c) Only applies if the "bodily injury", "property damage" or "personal and advertising injury" offense occurs during the policy period and subsequent to your execution of the written contract or written agreement.

4. If neither Paragraph **1.** nor Paragraph **2.** above apply and such written contract or written agreement requires that you provide that the person or organization be named as an additional insured:

a. Under the ISO CG 20 37 (04/13 edition, any subsequent edition or if no edition date is specified); or

b. With respect to the "products-completed operations hazard" (if no form is specified),

such person or organization is then an additional insured only to the extent that "bodily injury" or "property damage" is caused, in whole or in part by "your work" and included in the "products-completed operations hazard", which is the subject of the written contract or written agreement.

However, solely with respect to this Paragraph **4.**, insurance afforded to such additional insured:

(1) Only applies to the extent permitted by law;

(2) Will not be broader than that which you are required by the written contract or written agreement to provide for such additional insured;

(3) Only applies if the "bodily injury" or "property damage" occurs during the policy period and subsequent to your execution of the written contract or written agreement; and

(4) Does not apply to "bodily injury" or "property damage" caused by "your work" and included within the "products-completed operations hazard" unless the written contract or written agreement specifically requires that you provide such coverage to such additional insured.

B. Solely with respect to the insurance afforded to any additional insured referenced in Section **A.** of this endorsement, the following additional exclusion applies:

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or failure to render, any professional architectural, engineering or surveying services including:

1. The preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

2. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional architectural, engineering or surveying services.

C. Solely with respect to the coverage provided by this endorsement, the following is added to Paragraph **2. Duties In The Event Of Occurrence, Offense, Claim Or Suit** of Section **IV – Commercial General Liability Conditions**:

The additional insured must see to it that:

(1) We are notified as soon as practicable of an "occurrence" or offense that may result in a claim;

(2) We receive written notice of a claim or "suit" as soon as practicable; and

(3) A request for defense and indemnity of the claim or "suit" will promptly be brought against any policy issued by another insurer under which the additional insured may be an insured in any capacity. This provision does not apply to insurance on which the additional insured is a Named Insured if the written contract or written agreement requires that this coverage be primary and non-contributory.

D. Solely with respect to the coverage provided by this endorsement:

1. The following is added to the **Other Insurance** Condition of Section **IV – Commercial General Liability Conditions**:

Primary and Noncontributory insurance

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured provided that:

a. The additional insured is a Named Insured under such other insurance; and

b. You are required by written contract or written agreement that this insurance be primary and not seek contribution from any other insurance available to the additional insured.

2. The following paragraph is added to Paragraph **4.b.** of the **Other Insurance** Condition under Section **IV – Commercial General Liability Conditions**:

This insurance is excess over:

Any of the other insurance, whether primary, excess, contingent or on any other basis, available to an additional insured, in which the additional insured on our policy is also covered as an additional insured on another policy providing coverage for the same "occurrence", offense, claim or "suit". This provision does not apply to any policy in which the additional insured is a Named Insured on such other policy and where our policy is required by a written contract or written agreement to provide coverage to the additional insured on a primary and non-contributory basis.

E. This endorsement does not apply to an additional insured which has been added to this Coverage Part by an endorsement showing the additional insured in a Schedule of additional insureds, and which endorsement applies specifically to that identified additional insured.

F. Solely with respect to the insurance afforded to an additional insured under Paragraph **A.3.** or Paragraph **A.4.** of this endorsement, the following is added to Section **III – Limits Of Insurance**:

Additional Insured – Automatic – Owners, Lessees Or Contractors Limit

The most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the written contract or written agreement referenced in Section **A.** of this endorsement; or

2. Available under the applicable Limits of Insurance shown in the Declarations,

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

All other terms, conditions, provisions and exclusions of this policy remain the same.

Insured: URETEK USA, Inc.

General Liability Supplemental Coverage Endorsement

ZURICH

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer	Add'l Prem.	Return Prem.
GLO 0187947-06	7/1/22	7/1/23		10836000	$ **INCL**	$

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

The following changes apply to this Coverage Part. However, endorsements attached to this Coverage Part will supersede any provisions to the contrary in this General Liability Supplemental Coverage Endorsement.

A. Broadened Named Insured

1. The following is added to Section **II – Who Is An Insured**:

Any organization of yours, other than a partnership or joint venture, which is not shown in the Declarations, and over which you maintain an ownership interest of more than 50% of such organization as of the effective date of this Coverage Part, will qualify as a Named Insured. However, such organization will not qualify as a Named Insured under this provision if it:

a. Is newly acquired or formed during the policy period;

b. Is also an insured under another policy, other than a policy written to apply specifically in excess of this Coverage Part; or

c. Would be an insured under another policy but for its termination or the exhaustion of its limits of insurance.

Each such organization remains qualified as a Named Insured only while you maintain an ownership interest of more than 50% in the organization during the policy period.

2. The last paragraph of Section **II** – Who Is An Insured does not apply to this provision to the extent that such paragraph would conflict with this provision.

B. Newly Acquired or Formed Organizations as Named Insureds

1. Paragraph **3.** of Section **II** – **Who Is An Insured** is replaced by the following:

3. Any organization you newly acquire or form during the policy period, other than a partnership or joint venture, and over which you maintain an ownership interest of more than 50% of such organization, will qualify as a Named Insured if there is no other similar insurance available to that organization. However:

a. Coverage under this provision is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier;

b. Coverage **A** does not apply to "bodily injury" or "property damage" that occurred before you acquired or formed the organization; and

c. Coverage **B** does not apply to "personal and advertising injury" arising out of an offense committed before you acquired or formed the organization.

An additional premium will apply in accordance with our rules and rates in effect on the date you acquired or formed the organization.

2. The last paragraph of Section **II** – Who Is An Insured does not apply to this provision to the extent that such paragraph would conflict with this provision.

C. Insured Status – Employees

Paragraph **2.a.(1)** of Section **II** – **Who Is An Insured** is replaced by the following:

2. Each of the following is also an insured:

   a. Your "volunteer workers" only while performing duties related to the conduct of your business, or your "employees", other than either your "executive officers" (if you are an organization other than a partnership, joint venture or limited liability company) or your managers (if you are a limited liability company), but only for acts within the scope of their employment by you or while performing duties related to the conduct of your business. However, none of these "employees" or "volunteer workers" are insureds for:

   (1) "Bodily injury" or "personal and advertising injury":

   (a) To you, to your partners or members (if you are a partnership or joint venture), to your members (if you are a limited liability company), to a co-"employee" while in the course of his or her employment or performing duties related to the conduct of your business, or to your other "volunteer workers" while performing duties related to the conduct of your business;

   (b) To the spouse, child, parent, brother or sister of that co-"employee" or "volunteer worker" as a consequence of Paragraph **(1)(a)** above;

   (c) For which there is any obligation to share damages with or repay someone else who must pay damages because of the injury described in Paragraphs **(1)(a)** or **(b)** above; or

   (d) Arising out of his or her providing or failing to provide professional health care services.

   However:

   Paragraphs **(1)(a)** and **(1)(d)** do not apply to your "employees" or "volunteer workers", who are not employed by you or volunteering for you as health care professionals, for "bodily injury" arising out of "Good Samaritan Acts" while the "employee" or "volunteer worker" is performing duties related to the conduct of your business.

   "Good Samaritan Acts" mean any assistance of a medical nature rendered or provided in an emergency situation for which no remuneration is demanded or received.

   Paragraphs **(1)(a), (b)** and **(c)** do not apply to any "employee" designated as a supervisor or higher in rank, with respect to "bodily injury" to co-"employees". As used in this provision, "employees" designated as a supervisor or higher in rank means only "employees" who are authorized by you to exercise direct or indirect supervision or control over "employees" or "volunteer workers" and the manner in which work is performed.

D. Additional Insureds – Lessees of Premises

1. Section **II** – **Who Is An Insured** is amended to include as an additional insured any person(s) or organization(s) who leases or rents a part of the premises you own or manage who you are required to add as an additional insured on this policy under a written contract or written agreement, but only with respect to liability arising out of your ownership, maintenance or repair of that part of the premises which is not reserved for the exclusive use or occupancy of such person or organization or any other tenant or lessee.

   This provision does not apply after the person or organization ceases to lease or rent premises from you.

   However, the insurance afforded to such additional insured:

   a. Only applies to the extent permitted by law; and

   b. Will not be broader than that which you are required by the written contract or written agreement to provide for such additional insured.

2. With respect to the insurance afforded to the additional insureds under this endorsement, the following is added to Section **III – Limits Of Insurance**:

The most we will pay on behalf of the additional insured is the amount of insurance:

a. Required by the written contract or written agreement referenced in Subparagraph **D.1.** above (of this endorsement); or

b. Available under the applicable Limits of Insurance shown in the Declarations,

whichever is less.

This Paragraph **D.** shall not increase the applicable Limits of Insurance shown in the Declarations.

E. Additional Insured – Vendors

1. The following change applies if this Coverage Part provides insurance to you for "bodily injury" and "property damage" included in the "products-completed operations hazard":

Section **II** – **Who Is An Insured** is amended to include as an additional insured any person or organization (referred to throughout this Paragraph **E.** as vendor) who you have agreed in a written contract or written agreement, prior to loss, to name as an additional insured, but only with respect to "bodily injury" or "property damage" arising out of "your products" which are distributed or sold in the regular course of the vendor's business:

However, the insurance afforded to such vendor:

a. Only applies to the extent permitted by law; and

b. Will not be broader than that which you are required by the written contract or written agreement to provide for such vendor.

2. With respect to the insurance afforded to these vendors, the following additional exclusions apply:

a. The insurance afforded the vendor does not apply to:

(1) "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that the vendor would have in the absence of the contract or agreement;

(2) Any express warranty unauthorized by you;

(3) Any physical or chemical change in the product made intentionally by the vendor;

(4) Repackaging, except when unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;

(5) Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products;

(6) Demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in connection with the sale of the product;

(7) Products which, after distribution or sale by you, have been labeled or relabeled or used as a container, part or ingredient of any other thing or substance by or for the vendor; or

(8) "Bodily injury" or "property damage" arising out of the sole negligence of the vendor for its own acts or omissions or those of its employees or anyone else acting on its behalf. However, this exclusion does not apply to:

(a) The exceptions contained in Subparagraphs **(4)** or **(6)**; or

(b) Such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products.

b. This insurance does not apply to any insured person or organization, from whom you have acquired such products, or any ingredient, part or container, entering into, accompanying or containing such products.

c. This insurance does not apply to any of "your products" for which coverage is excluded under this Coverage Part.

3. With respect to the insurance afforded to the vendor under this endorsement, the following is added to Section **III – Limits Of Insurance**:

The most we will pay on behalf of the vendor is the amount of insurance:

a. Required by the written contract or written agreement referenced in Subparagraph **E.1.** above (of this endorsement); or

b. Available under the applicable Limits of Insurance shown in the Declarations,

whichever is less.

This Paragraph **E.** shall not increase the applicable Limits of Insurance shown in the Declarations.

F. Additional Insured – Managers, Lessors or Governmental Entity

1. Section **II** – **Who Is An Insured** is amended to include as an insured any person or organization who is a manager, lessor or governmental entity who you are required to add as an additional insured on this policy under a written contract, written agreement or permit, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

a. Your acts or omissions; or

b. The acts or omission of those acting on your behalf; and

resulting directly from:

a. Operations performed by you or on your behalf for which the state or political subdivision has issued a permit;

b. Ownership, maintenance, occupancy or use of premises by you; or

c. Maintenance, operation or use by you of equipment leased to you by such person or organization.

However, the insurance afforded to such additional insured:

a. Only applies to the extent permitted by law; and

b. Will not be broader than that which you are required by the written contract or written agreement to provide for such additional insured.

2. This provision does not apply:

a. Unless the written contract or written agreement has been executed, or the permit has been issued, prior to the "bodily injury", "property damage" or offense that caused "personal and advertising injury";

b. To any person or organization included as an insured under Paragraph **3.** of Section **II** – Who Is An Insured;

c. To any lessor of equipment if the "occurrence" or offense takes place after the equipment lease expires;

d. To any:

(1) Owners or other interests from whom land has been leased by you; or

(2) Managers or lessors of premises, if:

(a) The "occurrence" or offense takes place after the expiration of the lease or you cease to be a tenant in that premises;

(b) The "bodily injury", "property damage" or "personal and advertising injury" arises out of the structural alterations, new construction or demolition operations performed by or on behalf of the manager or lessor; or

(c) The premises are excluded under this Coverage Part.

3. With respect to the insurance afforded to the additional insureds under this endorsement, the following is added to Section **III – Limits Of Insurance**:

The most we will pay on behalf of the additional insured is the amount of insurance:

a. Required by the written contract or written agreement referenced in Subparagraph **F.1.** above (of this endorsement); or

b. Available under the applicable Limits of Insurance shown in the Declarations,

whichever is less.

This Paragraph **F.** shall not increase the applicable Limits of Insurance shown in the Declarations.

G. Damage to Premises Rented or Occupied by You

1. The last paragraph under Paragraph **2. Exclusions** of Section **I – Coverage A – Bodily Injury And Property Damage Liability** is replaced by the following:

Exclusions **c.** through **n.** do not apply to damage by "specific perils" to premises while rented to you or temporarily occupied by you with permission of the owner. A separate Damage To Premises Rented To You Limit of Insurance applies to this coverage as described in Section **III** – Limits Of Insurance.

2. Paragraph **6.** of Section **III – Limits Of Insurance** is replaced by the following:

6. Subject to Paragraph **5.** above, the Damage To Premises Rented To You Limit is the most we will pay under Coverage **A** for damages because of "property damage" to any one premises while rented to you, or in the case of damage by one or more "specific perils" to any one premises, while rented to you or temporarily occupied by you with permission of the owner.

H. Broadened Contractual Liability

The "insured contract" definition under the **Definitions** Section is replaced by the following:

"Insured contract" means:

a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by "specific perils" to premises while rented to you or temporarily occupied by you with permission of the owner is not an "insured contract";

b. A sidetrack agreement;

c. Any easement or license agreement;

d. An obligation, as required by ordinance, to indemnify a municipality, except in connection with work for a municipality;

e. An elevator maintenance agreement;

f. That part of any other contract or agreement pertaining to your business (including an indemnification of a municipality in connection with work performed for a municipality) under which you assume the tort liability of another party to pay for "bodily injury", "property damage", or "personal and advertising injury" arising out of the offenses of false arrest, detention or imprisonment, to a third person or organization. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

Paragraph **f.** does not include that part of any contract or agreement:

(1) That indemnifies an architect, engineer or surveyor for injury or damage arising out of:

(a) Preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

(b) Giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage; or

(2) Under which the insured, if an architect, engineer or surveyor, assumes liability for an injury or damage arising out of the insured's rendering or failure to render professional services, including those listed in Paragraph **(1)** above and supervisory, inspection, architectural or engineering activities.

I. Definition – Specific Perils

The following definition is added to the **Definitions** Section:

"Specific perils" means:

a. Fire;

b. Lightning;

c. Explosion;

d. Windstorm or hail;

e. Smoke;

f. Aircraft or vehicles;

g. Vandalism;

h. Weight of snow, ice or sleet;

i. Leakage from fire extinguishing equipment, including sprinklers; or

j. Accidental discharge or leakage of water or steam from any part of a system or appliance containing water or steam.

J. Limited Contractual Liability Coverage – Personal and Advertising Injury

1. Exclusion **e.** of Section **I – Coverage B – Personal And Advertising Injury Liability** is replaced by the following:

2. Exclusions

This insurance does not apply to:

e. Contractual Liability

"Personal and advertising injury" for which the insured has assumed liability in a contract or agreement.

This exclusion does not apply to:

(1) Liability for damages that the insured would have in the absence of the contract or agreement; or

(2) Liability for "personal and advertising injury" if:

(a) The "personal and advertising injury" arises out of the offenses of false arrest, detention or imprisonment;

(b) The liability pertains to your business and is assumed in a written contract or written agreement in which you assume the tort liability of another. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement; and

(c) The "personal and advertising injury" occurs subsequent to the execution of the written contract or written agreement.

Solely for purposes of liability so assumed in such written contract or written agreement, reasonable attorney fees and necessary litigation expenses incurred by or for a party other than an insured are deemed to be damages because of "personal and advertising injury" described in Paragraph **(a)** above, provided:

(i) Liability to such party for, or for the cost of, that party's defense has also been assumed in the same written contract or written agreement; and

(ii) Such attorney fees and litigation expenses are for defense of that party against a civil or alternative dispute resolution proceeding in which damages to which this insurance applies are alleged.

2. Paragraph **2.d.** of Section **I – Supplementary Payments – Coverages A and B** is replaced by the following:

d. The allegations in the "suit" and the information we know about the "occurrence" or offense are such that no conflict appears to exist between the interests of the insured and the interests of the indemnitee;

3. The following is added to the paragraph directly following Paragraph **2.f.** of Section **I – Supplementary Payments – Coverages A and B**:

Notwithstanding the provisions of Paragraph **2.e.(2)** of Section **I** – Coverage **B –** Personal And Advertising Injury Liability, such payments will not be deemed to be damages for "personal and advertising injury" and will not reduce the limits of insurance.

K. Supplementary Payments

The following changes apply to **Supplementary Payments – Coverages A and B**:

Paragraphs **1.b.** and **1.d.** are replaced by the following:

b. Up to $2,500 for the cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.

d. All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to $500 a day because of time off from work.

L. Broadened Property Damage

1. Property Damage to Contents of Premises Rented Short-Term

The paragraph directly following Paragraph **(6)** in Exclusion **j.** of Section **I – Coverage A – Bodily Injury And Property Damage Liability** is replaced by the following:

Paragraphs **(1)**, **(3)** and **(4)** of this exclusion do not apply to "property damage" to premises (other than damage by "specific perils"), including "property damage" to the contents of such premises, rented to you under a rental agreement for a period of 14 or fewer consecutive days. A separate Limit of Insurance applies to Damage to Premises Rented to You as described in Section **III** – Limits Of Insurance.

2. Elevator Property Damage

a. The following is added to Exclusion **j.** of Section **I – Coverage A – Bodily Injury And Property Damage Liability**:

Paragraphs **(3)** and **(4)** of this exclusion do not apply to "property damage" arising out of the use of an elevator at premises you own, rent or occupy.

b. The following is added to Section **III – Limits Of Insurance**:

Subject to Paragraph **5.** above, the most we will pay under Coverage **A** for damages because of "property damage" to property loaned to you or personal property in the care, custody or control of the insured arising out of the use of an elevator at premises you own, rent or occupy is $25,000 per "occurrence".

3. Property Damage to Borrowed Equipment

a. The following is added to Exclusion **j.** of Section **I – Coverage A – Bodily Injury And Property Damage Liability**:

Paragraph **(4)** of this exclusion does not apply to "property damage" to equipment you borrow from others at a jobsite.

b. The following is added to Section **III – Limits Of Insurance**:

Subject to Paragraph **5.** above, the most we will pay under Coverage **A** for damages because of "property damage" to equipment you borrow from others is $25,000 per "occurrence".

M. Expected or Intended Injury or Damage

Exclusion **a.** of Section **I – Coverage A – Bodily Injury And Property Damage Liability** is replaced by the following:

a. Expected Or Intended Injury Or Damage

"Bodily injury" or "property damage" expected or intended from the standpoint of the insured. This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

N. Definitions – Bodily Injury

The "bodily injury" definition under the **Definitions** Section is replaced by the following:

"Bodily injury" means bodily injury, sickness or disease sustained by a person, including mental anguish, mental injury, shock, fright or death sustained by that person which results from that bodily injury, sickness or disease.

O. Insured Status – Amateur Athletic Participants

Section **II – Who Is An Insured** is amended to include as an insured any person you sponsor while participating in amateur athletic activities. However, no such person is an insured for:

a. "Bodily injury" to:

(1) Your "employee", "volunteer worker" or any person you sponsor while participating in such amateur athletic activities; or

(2) You, any partner or member (if you are a partnership or joint venture), or any member (if you are a limited liability company) while participating in such amateur athletic activities; or

b. "Property damage" to property owned by, occupied or used by, rented to, in the care, custody or control of, or over which the physical control is being exercised for any purpose by:

(1) Your "employee", "volunteer worker" or any person you sponsor; or

(2) You, any partner or member (if you are a partnership or joint venture), or any member (if you are a limited liability company).

P. Non-Owned Aircraft, Auto and Watercraft

Exclusion **g.** of Section **I – Coverage A – Bodily Injury And Property Damage Liability** is replaced by the following:

g. Aircraft, Auto Or Watercraft

"Bodily injury" or "property damage" arising out of the ownership, maintenance, use or entrustment to others of any aircraft, "auto" or watercraft owned or operated by or rented or loaned to any insured. Use includes operation and "loading or unloading".

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage" involved the ownership, maintenance, use or entrustment to others of any aircraft, "auto" or watercraft that is owned or operated by or rented or loaned to any insured.

This exclusion does not apply to:

(1) A watercraft while ashore on premises you own or rent;

(2) A watercraft you do not own that is:

(a) Less than 51 feet long; and

(b) Not being used to carry persons for a charge;

(3) Parking an "auto" on, or on the ways next to, premises you own or rent, provided the "auto" is not owned by or rented or loaned to you or the insured;

(4) Liability assumed under any "insured contract" for the ownership, maintenance or use of aircraft or watercraft;

(5) An aircraft that is hired or chartered by you or loaned to you, with a paid and licensed crew, and is not owned in whole or in part by an insured; or

(6) "Bodily injury" or "property damage" arising out of:

(a) The operation of machinery or equipment that is attached to, or part of, a land vehicle that would qualify under the definition of "mobile equipment" if it were not subject to a compulsory or financial responsibility law or other motor vehicle insurance law where it is licensed or principally garaged; or

(b) The operation of any of the machinery or equipment listed in Paragraph **f.(2)** or **f.(3)** of the definition of "mobile equipment".

Q. Definitions – Leased Worker, Temporary Worker and Labor Leasing Firm

1. The "leased worker" and "temporary worker" definitions under the **Definitions** Section are replaced by the following:

"Leased worker" means a person leased to you by a "labor leasing firm" under a written agreement between you and the "labor leasing firm", to perform duties related to the conduct of your business. "Leased worker" does not include a "temporary worker".

"Temporary worker" means a person who is furnished to you to support or supplement your work force during "employee" absences, temporary skill shortages, upturns or downturns in business or to meet seasonal or short-term workload conditions. "Temporary worker" does not include a "leased worker".

2. The following definition is added to the **Definitions** Section:

"Labor leasing firm" means any person or organization who hires out workers to others, including any:

a. Employment agency, contractor or services;

b. Professional employer organization; or

c. Temporary help service.

R. Definition – Mobile Equipment

Definition **12.** in **Section V – Definitions** is replaced by the following:

12. "Mobile equipment" means any of the following types of land vehicles, including any attached machinery or equipment:

a. Bulldozers, farm machinery, forklifts and other vehicles designed for use principally off public roads;

b. Vehicles maintained for use solely on or next to premises you own or rent;

c. Vehicles that travel on crawler treads;

d. Vehicles, whether self-propelled or not, maintained primarily to provide mobility to permanently mounted:

(1) Power cranes, shovels, loaders, diggers or drills; or

(2) Road construction or resurfacing equipment such as graders, scrapers or rollers;

e. Vehicles not described in Paragraph **a.**, **b.**, **c.**, or **d.** above that are not self-propelled and are maintained primarily to provide mobility to permanently attached equipment of the following types:

(1) Air compressors, pumps and generators, including spraying, welding, building cleaning, geophysical exploration, lighting and well servicing equipment; or

(2) Cherry pickers and similar devices used to raise or lower workers;

f. Vehicles not described in Paragraph **a., b., c.** or **d.** above maintained primarily for purposes other than the transportation of persons or cargo.

However, self-propelled vehicles with the following types of permanently attached equipment, exceeding a combined gross vehicle weight of 1000 pounds, are not "mobile equipment" but will be considered "autos":

(1) Equipment designed primarily for:

(a) Snow removal;

(b) Road maintenance, but not construction or resurfacing; or

(c) Street cleaning;

(2) Cherry pickers and similar devices mounted on automobile or truck chassis and used to raise or lower workers; and

(3) Air compressors, pumps and generators, including spraying, welding, building cleaning, geophysical exploration, lighting and well servicing equipment.

However, "mobile equipment" does not include any land vehicles that are subject to a compulsory or financial responsibility law or other motor vehicle insurance law in the state where it is license or principally garaged. Land vehicles subject to a compulsory or financial responsibility law or other motor vehicle insurance law are considered "autos".

S. Definitions – Your Product and Your Work

The "your product" and "your work" definitions under the **Definitions** Section are replaced by the following:

"Your product":

a. Means:

(1) Any goods or products, other than real property, manufactured, sold, handled, distributed or disposed of by:

(a) You;

(b) Others trading under your name; or

(c) A person or organization whose business or assets you have acquired; and

(2) Containers (other than vehicles), materials, parts or equipment furnished in connection with such goods or products.

b. Includes:

(1) Warranties or representations made at any time with respect to the fitness, quality, durability, performance, use, handling, maintenance, operation or safety of "your product"; and

(2) The providing of or failure to provide warnings or instructions.

c. Does not include vending machines or other property rented to or located for the use of others but not sold.

"Your work":

a. Means:

(1) Work, services or operations performed by you or on your behalf; and

(2) Materials, parts or equipment furnished in connection with such work, services or operations.

b. Includes:

(1) Warranties or representations made at any time with respect to the fitness, quality, durability, performance, use, handling, maintenance, operation or safety of "your work"; and

(2) The providing of or failure to provide warnings or instructions.

T. Priority Condition

The following paragraph is added to Section **III – Limits Of Insurance**:

In the event a claim is made or "suit" is brought against more than one insured seeking damages because of "bodily injury" or "property damage" caused by the same "occurrence" or "personal and advertising injury" caused by the same offense, we will apply the Limits of Insurance in the following order:

(a) You;

(b) Your "executive officers", partners, directors, stockholders, members, managers (if you are a limited liability company) or "employees"; and

(c) Any other insured in any order that we choose.

U. Duties in the Event of Occurrence, Offense, Claim or Suit Condition

The following paragraphs are added to Paragraph **2. Duties In The Event Of Occurrence, Offense, Claim Or Suit** of Section **IV – Commercial General Liability Conditions**:

Notice of an "occurrence" or of an offense which may result in a claim under this insurance or notice of a claim or "suit" shall be given to us as soon as practicable after knowledge of the "occurrence", offense, claim or "suit" has been reported to any insured listed under Paragraph **1.** of Section **II** – Who Is An Insured or an "employee" authorized by you to give or receive such notice. Knowledge by other "employees" of an "occurrence", offense, claim or "suit" does not imply that you also have such knowledge.

In the event that an insured reports an "occurrence" to the workers compensation carrier of the Named Insured and this "occurrence" later develops into a General Liability claim, covered by this Coverage Part, the insured's failure to report such "occurrence" to us at the time of the "occurrence" shall not be deemed to be a violation of this Condition. You must, however, give us notice as soon as practicable after being made aware that the particular claim is a General Liability rather than a Workers Compensation claim.

V. Other Insurance Condition

Paragraphs **4.a.** and **4.b.(1)** of the Other Insurance Condition of Section **IV – Commercial General Liability Conditions** are replaced by the following:

4. Other Insurance

If other valid and collectible insurance is available to the insured for a loss we cover under Coverages **A** or **B** of this Coverage Part, our obligations are limited as follows:

a. Primary Insurance

This insurance is primary except when Paragraph **b.** below applies. If this insurance is primary, our obligations are not affected unless any of the other insurance is also primary. Then, we will share with all that

other insurance by the method described in Paragraph **c.** below. However, this insurance is primary to and will not seek contribution from any other insurance available to an additional insured provided that:

(1) The additional insured is a Named Insured under such other insurance; and

(2) You are required by written contract or written agreement that this insurance be primary and not seek contribution from any other insurance available to the additional insured.

Other insurance includes any type of self insurance or other mechanism by which an insured arranges for funding of its legal liabilities.

b. Excess Insurance

(1) This insurance is excess over:

(a) Any of the other insurance, whether primary, excess, contingent or on any other basis:

(i) That is property insurance, Builder's Risk, Installation Risk or similar coverage for "your work";

(ii) That is property insurance purchased by you (including any deductible or self insurance portion thereof) to cover premises rented to you or temporarily occupied by you with permission of the owner;

(iii) That is insurance purchased by you (including any deductible or self insurance portion thereof) to cover your liability as a tenant for "property damage" to premises rented to you or temporarily occupied by you with permission of the owner;

(iv) If the loss arises out of the maintenance or use of aircraft, "autos" or watercraft to the extent not subject to Exclusion **g.** of Section **I** – Coverage **A –** Bodily Injury And Property Damage Liability; or

(v) That is property insurance (including any deductible or self insurance portion thereof) purchased by you to cover damage to:

Equipment you borrow from others; or

Property loaned to you or personal property in the care, custody or control of the insured arising out of the use of an elevator at premises you own, rent or occupy.

(b) Any other primary insurance (including any deductible or self insurance portion thereof) available to the insured covering liability for damages arising out of the premises, operations, products, work or services for which the insured has been granted additional insured status either by policy provision or attachment of any endorsement. Other primary insurance includes any type of self insurance or other mechanism by which an insured arranges for funding of its legal liabilities.

(c) Any of the other insurance, whether primary, excess, contingent or on any other basis, available to an additional insured, in which the additional insured on our policy is also covered as an additional insured on another policy providing coverage for the same "occurrence", claim or "suit". This provision does not apply to any policy in which the additional insured is a Named Insured on such other policy and where our policy is required by written contract or written agreement to provide coverage to the additional insured on a primary and non-contributory basis.

W. Unintentional Failure to Disclose All Hazards

Paragraph **6. Representations** of Section **IV – Commercial General Liability Conditions** is replaced by the following:

6. Representations

By accepting this policy, you agree:

a. The statements in the Declarations are accurate and complete;

b. Those statements are based upon representations you made to us; and

c. We have issued this policy in reliance upon your representations.

Coverage will continue to apply if you unintentionally:

a. Fail to disclose all hazards existing at the inception of this policy; or

b. Make an error, omission or improper description of premises or other statement of information stated in this policy.

You must notify us as soon as possible after the discovery of any hazards or any other information that was not provided to us prior to inception of this Coverage Part.

X. Waiver of Right of Subrogation

Paragraph **8. Transfer Of Rights Of Recovery Against Others To Us** of Section **IV – Commercial General Liability Conditions** is replaced by the following:

8. Transfer Of Rights Of Recovery Against Others To Us

a. If the insured has rights to recover all or part of any payment we have made under this Coverage Part, those rights are transferred to us. The insured must do nothing after loss to impair them. At our request, the insured will bring "suit" or transfer those rights to us and help us enforce them.

b. If the insured waives its right to recover payments for injury or damage from another person or organization in a written contract executed prior to a loss, we waive any right of recovery we may have against such person or organization because of any payment we have made under this Coverage Part. The written contract will be considered executed when the insured's performance begins, or when it is signed, whichever happens first. This waiver of rights shall not be construed to be a waiver with respect to any other operations in which the insured has no contractual interest.

Y. Liberalization Condition

The following condition is added to Section **IV – Commercial General Liability Conditions**:

Liberalization Clause

If we revise this Coverage Part to broaden coverage without an additional premium charge, your policy will automatically provide the additional coverage as of the day the revision is effective in the state shown in the mailing address of your policy.

All other terms and conditions of this policy remain unchanged.

Insured: URETEK USA, Inc.
Policy #GLO 0187947-06

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – ENGINEERS, ARCHITECTS OR SURVEYORS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. **Section II – Who Is An Insured** is amended to include as an additional insured any architect, engineer, or surveyor engaged by you but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your acts or omissions or the acts or omissions of those acting on your behalf:

1. In connection with your premises; or
2. In the performance of your ongoing operations.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusion applies:

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of or the failure to render any professional services by or for you, including:

1. The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
2. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional services by or for you.

C. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

Endorsement No:	6
This endorsement, effective:	7/1/22
	(at 12:01 A.M. standard time at the address of the Named Insured as shown in Item 1. of the Declarations)
forms a part of Policy No:	0310-1771
Issued to:	URETEK USA, Inc.
by:	Allied World Assurance Company (U.S.) Inc.

AMENDATORY ENDORSEMENT

It is hereby agreed that the following changes are made to the policy:

1. Solely with respect to insurance afforded under **SECTION I – INSURING AGREEMENTS**, 2. **Contractors Pollution Liability**, a. **Contractors Operations Pollution Liability**, the first paragraph of **SECTION II – DEFENSE AND SETTLEMENT** is deleted in its entirety and replaced with the following:

   We will have the right and duty to defend any **claim** made against any **insured** seeking sums payable under this policy. We shall undertake and manage the defense of such **claim** even if such **claim** is groundless, false or fraudulent. **Claim expense** reduces the Limits of Liability and is included within the applicable Retentions stated in the Declarations. However, once the applicable Retention amount has been satisfied by payment by the **named insured**, **claim expense** will not begin to reduce the applicable Limits of Liability shown in Item 3., Item 4.(2) and 4.(2.a.) of the Declarations until we incur, on behalf of one or more **insureds**, **claim expense** in the total amount of $1,000,000 (hereafter "Specified Claim Expense Partially Outside of Limits of Liability"). Once we incur such amount, **claim expense** applies to and reduces the applicable Limits of Liability shown in Item 3., Item 4.(2) and Item 4.(2.a.) of the Declarations. Our duty to defend ends once the Limits of Liability are exhausted or tendered into a court of applicable jurisdiction or once the **insured** refuses a settlement offer as provided in the paragraph below.

   In the event that:

   (i) the Policy Aggregate Limit of Liability shown in Item 3. of the Declarations is exhausted by payment of **professional damages**, **mitigation expense**, **damages, clean-up costs**, **emergency clean-up costs** or any other amounts for which insurance is afforded under this policy, and

   (ii) the amount of Specified Claim Expense Partially Outside of Limits of Liability at the time of such exhaustion is greater than zero dollars ($0.00),

   then the amount of Specified Claim Expense Partially Outside of Limits of Liability is amended to be zero dollars ($0.00) and deemed exhausted.

2. Solely with regard to the use of the defined term **damages** as it appears in **SECTION IV – LIMITS OF LIABILITY AND RETENTION**, the term **damages** does not include any Specified Claim Expense Partially Outside of Limits of Liability that we may incur in accordance with paragraph 1. of this endorsement with respect to insurance afforded under **SECTION I – INSURING AGREEMENTS**, 2. **Contractors Pollution Liability**, a. **Contractors Operations Pollution Liability.**

3. The third paragraph of **SECTION II – DEFENSE AND SETTLEMENT**, is deleted in its entirety and replaced with the following:

   We have the right to investigate, conduct negotiations concerning, and with the **insured's** written consent, such consent not to be unreasonably withheld, settle, any **claim** or **damages** as we deem expedient. If the **insured** refuses to consent to the settlement or compromise recommended by us in writing and acceptable to the claimant and elect to further contest such **claim**, our liability for such **claim** shall not exceed the amount for which such **claim** could have been settled, including **claim expense** incurred, up to the date of such refusal, plus fifty (50) percent of such **damages**, **professional damages**, **clean-up costs** or other coverage afforded under this policy in excess of the settlement amount recommended. It is a condition of this insurance that the remaining fifty (50) percent of such **damages**, **professional damages**, **clean-up costs** or other coverage afforded under this policy excess of the settlement amount shall be borne by the **insured** at your own risk, and are uninsured. It is a condition that our Limits of Liability under this policy with respect to such **claim** will be reduced by the amount for which the **claim** could have been settled, including all **claim expenses** incurred up to the time we made our recommendation to the **insured**, plus any additional amount that we pay in accordance with the provisions of this paragraph. Notwithstanding the foregoing, this paragraph shall not apply until the settlement amount exceeds the applicable Retention stated in the Declarations or applicable endorsement.

4. **SECTION III – EXCLUSIONS**, 1. **Contractual Liability**, is deleted in its entirety and replaced with the following:

   1. **Contractual Liability**

      Arising from the **insured's**:

      a. Assumption of other's liability in a contract or agreement; or

      b. Breach of contract or agreement.

      This exclusion does not apply to liability: (1) That the **insured** would have in the absence of the contract or agreement; (2) as respects 1.b. above, for actual or alleged act, error or omission in **professional services**; or (3) Solely with regard to SECTION I - INSURING AGREEMENTS, 2.a. Contractors Operations Pollution Liability, liability assumed by the **named insured** in a contract or agreement that is an **insured contract**, provided the **bodily injury**, **property damage**, **environmental damage** or **emergency clean-up costs** occurs subsequent to the execution of the contract or agreement.

5. **SECTION III – EXCLUSIONS**, 3. **Damage to Property**, is deleted in its entirety and replaced with the following:

   3. **Damage to Property**

      For the loss of use of, physical injury to, or destruction of:

      a. Real property owned by the **named insured** or rented, leased or loaned to the **named insured**; or

      b. Personal Property in the care, custody control of the **named insured** used to perform **your work**.

This exclusion does not apply to: (1) real or personal property owned or leased by or in the care, custody or control of the **client**; or (2) **environmental damage** to **your insured location.**

6. **SECTION III – EXCLUSIONS**, 6**. Divested Location**, is deleted in its entirety and replaced with the following:

   6. **Divested Location**

   Based upon or arising out of a **pollution incident** on, at or migrating from **your insured location** that first commences after **your insured location** has been divested, sold, abandoned, given away, taken by eminent domain or condemned**.**

7. **SECTION III – EXCLUSIONS**, 7**. Electronic Services**, is deleted in its entirety and replaced with the following:

   7. **Electronic Services**

   Arising from any failure to prevent unauthorized access to or use of an electronic system or program, unless such unauthorized access arises out of an act, error or omission in the rendering of or failure to render **professional services** by you**.**

   This exclusion does not apply to **damages** arising out of a **pollution incident.**

8. **SECTION III – EXCLUSIONS**, 9**. Faulty Work/Own Work**, is deleted in its entirety and replaced with the following:

   9. **Faulty Work/Own Work**

   Solely with regard to Coverage 2.a., Contractors Operations Pollution Liability, the cost to repair or replace faulty workmanship in any construction, erection, fabrication, installation, assembly or manufacturing process performed or provided by the **named insured** or anyone for whom any **insured** is legally responsible or any organization or affiliate that controls, manages or holds more than a twenty-five percent (25%) ownership interest in an **insured**, including materials, parts or equipment furnished in connection therewith, including any workmanship which is not in accordance with the drawings and specifications with respect to any construction, erection, fabrication, installation, assembly or manufacturing process**.**

   This exclusion does not apply to work performed by a sub-contractor that is not an affiliate of an **insured.**

9. **SECTION III – EXCLUSIONS**, 17**. Related Entities**, is deleted in its entirety and replaced with the following:

   17. **Related Entities**

   Based upon or arising out of a **claim** by: (a) an entity or individual that is an affiliate of an **insured**; (b) an entity or individual the **insured** controls, manages, operates or holds more than twenty-five percent (25%) ownership interest in; (c) an entity or individual that manages, operates or holds more than a twenty-five percent (25%) ownership interest in an **insured**; or (d) an entity that is controlled or managed by an **insured.**

For the purpose of this exclusion only, the term **insured** does not include a person or organization that qualifies as such solely on the basis of SECTION VI – DEFINITIONS, 15.d. and on no other basis.

10. **SECTION V – CONDITIONS**, 2. **Subrogation**, is deleted in its entirety and replaced with the following

2. **Subrogation**

In the event of any payment under this policy, we will be subrogated to all the **insured's** rights of recovery thereof and the **insured** will execute and deliver all instruments and papers and do whatever else is necessary to secure such rights. The **insured** will do nothing to waive or prejudice such rights. Any amounts recovered in excess of our total payment will be paid to the **insured**, less the cost to us of recovery. However, it is agreed that we waive our rights of subrogation under this policy against **clients** of the **named insured** and any other person or organization that the **named insured** has agreed to waive such rights to the extent required by a written contract between the **client** and the **named insured**, but only:

a. To the extent required by such contract; and

b. When such written contract has been executed prior to any event, services, **your work** or **professional services** that would give rise to coverage under this policy.

11. **SECTION V – CONDITIONS**, 5. **Cancellation**, is deleted in its entirety and replaced with the following:

5. **Cancellation**

a. This policy may only be cancelled by us for any of the following reasons:

(1) Non-payment of any premium or Retention amount; or

(2) A material misrepresentation or concealment of facts which affects the Company's assessment of the risks insured by this policy; or

(3) A material breach of or failure to comply with any provision of, or obligation under this policy.

If this policy is cancelled by us, notice of cancellation will be sent in writing to the **named insured**, at the address indicated on the Declarations. We will provide such written notice at least ninety (90) days or ten (10) days for non-payment of premium prior to the date such cancellation is to take effect.

The effective date and hour of cancellation will be stated in such notice. Cancellation by us also cancels the Automatic Extended Reporting Period and Extended Reporting Period. Both the **policy period** and the Automatic Extended Reporting Period and Extended Reporting Period will end on that date.

If we cancel for reasons stated in subparagraph (1), the earned premium will be computed short-rate of the unearned policy term premium.

If we cancel for reasons stated in subparagraphs (2) or (3), the earned premium

will be computed pro-rata of the policy term premium. Payment of any return premium will not be a condition of cancellation.

b. This policy may be cancelled by the **named insured** for any reason. In the event that the **named insured** cancels the policy, the earned premium will be short-rate of the unearned policy term premium.

c. In the event the policy has a minimum earned premium, the premium returnable after the minimum earned is retained by us will be computed utilizing the customary short rate or pro-rate tables, whichever is applicable. If the minimum earned is one hundred percent (100%), you are not entitled to any return premium regardless of the reason for cancellation. Payment by the company of insurance under this policy would result in 100% minimum earned.

d. In the event of cancellation by us by reason of sub-section a.(3) above, you will have sixty (60) days from the date of notice of cancellation to remedy each breach and each failure that is a ground for cancellation, but only as to each and every breach and failure that are capable of being remedied. If your remedial efforts are completed within such sixty (60) day period and are satisfactory to us, the Company will rescind such Notice of Cancellation with a written confirmation.

12. **SECTION VI – DEFINITIONS**, 4. **Client**, is deleted in its entirety and replaced with the following:

4. **Client** means the individual or entity who hires or engages the **named insured** to perform services.

13. **SECTION VI – DEFINITIONS**, 16. **Insured contract**, is deleted in its entirety and replaced with the following:

16. **Insured contract** means that part of any written contract or written agreement under which the **named insured** assumes the tort liability of another party to pay damages for **bodily injury**, **property damage or environmental damage** to a third person or organization, provided that such written contract or written agreement is signed by the **named insured** prior to the **bodily injury**, **property damage** or **environmental damage.** Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

14. **SECTION VI – DEFINITIONS**, 29. **Pollutants**, is deleted in its entirety and replaced with the following:

29. **Pollutants** means any solid, liquid, gaseous or thermal irritant or contaminant, including: smoke, vapors, soot, fumes, acids, alkalis, chemicals, hazardous substances, petroleum hydrocarbons; low level radioactive waste and material; **microbial matter**; legionella pneumophila; medical, infectious and pathological waste; waste materials; electromagnetic fields; and silt and sediment.

15. **SECTION VI – DEFINITIONS**, 34. **Responsible manager**, is deleted in its entirety and replaced with the following:

34. **Responsible manager** means any of your officers, directors, partners or managers, your manager or supervisor responsible for health and safety or

environmental affairs, control or compliance or any other management employee authorized by you to give or receive notice of an **occurrence** or **claim**

16. **SECTION VI – DEFINITIONS**, 40. **Your work**, is deleted in its entirety and replaced with the following:

40. **Your work** means:

a. Contracting services, work or operations as stated in the application or by endorsement performed by the **named insured** or on behalf of the **named insured** or by others for whom the **named insured** is legally responsible at a **project site**;

b. All contracting services, work or operations performed by the **named insured** or on behalf of the **named insured** or by others for whom the **named insured** is legally responsible; and

c. Goods, materials, products or equipment furnished in connection with such services, work or operations described in paragraph a. or b. above, other than **your product.**

Notwithstanding anything to the contrary in this policy, **your work** does not include **professional services** otherwise covered by this policy pursuant to **SECTION I – INSURING AGREEMENTS**, 1. **Professional Liability.**

All other terms and conditions of this policy remain unchanged.

By: 

Joseph Cellura

Title: **President, North American Casualty Division**

Date: **July 11, 2019**

Insured: URETEK USA, Inc.

POLICY NUMBER: GLO 0187947-06

COMMERCIAL GENERAL LIABILITY
CG 25 04 05 09

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED LOCATION(S) GENERAL AGGREGATE LIMIT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Designated Location(s):
EACH LOCATION OWNED BY OR LEASED TO THE NAMED INSURED
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

A. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section **I** – Coverage **A,** and for all medical expenses caused by accidents under Section **I** – Coverage **C,** which can be attributed only to operations at a single designated "location" shown in the Schedule above:

1. A separate Designated Location General Aggregate Limit applies to each designated "location", and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.

2. The Designated Location General Aggregate Limit is the most we will pay for the sum of all damages under Coverage **A,** except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under Coverage **C** regardless of the number of:

a. Insureds;

b. Claims made or "suits" brought; or

c. Persons or organizations making claims or bringing "suits".

3. Any payments made under Coverage **A** for damages or under Coverage **C** for medical expenses shall reduce the Designated Location General Aggregate Limit for that designated "location". Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Location General Aggregate Limit for any other designated "location" shown in the Schedule above.

4. The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Location General Aggregate Limit.

B. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section **I** – Coverage **A,** and for all medical expenses caused by accidents under Section **I** – Coverage **C,** which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:

1. Any payments made under Coverage **A** for damages or under Coverage **C** for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.

C. When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.

D. If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.

E. The provisions of Section **III** – Limits Of Insurance not otherwise modified by this endorsement shall continue to apply as stipulated.

WAIVER OF SUBROGATION

THIS ENDORSEMENT CHANGES THE POLICY, PLEASE READ IT CAREFULLY.

We agree to waive our right of subrogation against any person or organization to whom or to which you are obligated, prior to any loss, by an "insured contract" to provide such a waiver, but only with respect to "your work", "your product" or facilities owned or used by you.

This endorsement does not change any other provision of the policy.

NONCONTRIBUTORY – AMENDED OTHER INSURANCE

This endorsement modifies insurance provided under the following:

Commercial Excess Liability Policy

SECTION IV – CONDITIONS, 3., Other Insurance is replaced by:

3. This insurance is excess over any other valid and collectible insurance whether primary, excess, contingent or any other basis.

However, this provision will not apply if:

1. the other insurance is written specifically to be excess over this insurance; or
2. you have agreed in a written contract or agreement that the relevant policies shown in the Schedule of Underlying Insurance and subsequently this policy will apply before any other valid and collectible insurance and would not seek contribution from any other insurance available to the additional insured.

This endorsement effective 7/1/22
forms part of Policy Number
issued to URETEK USA, Inc.
by

PRIMARY NON-CONTRIBUTORY OTHER INSURANCE ENDORSEMENT

THIS ENDORSEMENT CHANGES THIS POLICY, PLEASE READ IT CAREFULLY.

The **Other Insurance** Condition is deleted and replaced by the following:

This Policy shall be primary to and non-contributory with any other insurance available to the Insured, other than any Underlying Policy/ies, with respect to a loss covered under this Policy.

This endorsement does not change any other provision of the policy.

policy.

8. **Service of Suit**

In the event of our failure to pay any amount claimed to be due hereunder, we, at your request, will submit to the jurisdiction of a court of competent jurisdiction within the United States. Nothing in this condition constitutes or should be understood to constitute a waiver of our rights to commence an action in any court of competent jurisdiction in the United States, to remove an action to a United States District Court, or to seek transfer of a case to another court as permitted by the laws of the United States or of any state in the United States. It is further agreed that service of process in such suit may be made upon counsel, Legal Department, Allied World Assurance Company (U.S.) Inc., 199 Water Street, 24th Floor, New York, NY 10038 or his or her representative, and that in any suit instituted against us upon this policy, we will abide by the final decision of such court or of any appellate court in the event of an appeal.

Further, pursuant to any statute of any state, territory, or district of the United States which makes provision therefore, we hereby designate the Superintendent, Commissioner or Director of Insurance, or other officer specified for that purpose in the statute, or his or her successors in office, as its true and lawful agent upon whom may be served any lawful process in any action, suit, or proceeding instituted by or on your behalf or any beneficiary hereunder arising out of this policy of insurance and hereby designates the above named as the person to whom the said officer is authorized to mail such process or a true copy thereof.

9. **Severability**

If any material provision or clause of this policy is declared illegal or unenforceable by any court of competent jurisdiction and cannot be modified to be enforceable, that provision will immediately become null and void, leaving the remainder of this policy in full force and effect.

Except with respect to the Limits of Liability and the retention amounts, Exclusion 11. Insured verses Insured, and any rights or duties specifically assigned in this policy to the **named insured**, this insurance applies: (i) as if each **named insured** were the only **named insured**; and (ii) separately to each **insured** against whom a **claim** is made.

Any misrepresentation, act or omission that is in violation of a term, duty or condition under this policy by one **insured** shall not prejudice another **insured** under this policy. This condition shall not apply to an **insured** who is a parent, subsidiary or affiliate of the **insured** which committed the misrepresentation, act or omission referenced above

10. **Sole Agent**

If there is more than one **insured** named in this policy, the first **named insured** shall act on behalf of all **insureds** for all purposes, including but not limited to the payment or return of premium, payment of any applicable Retention, receipt and acceptance of any endorsement issued to form a part of this policy, complying with all applicable **claims** provisions, giving and receiving notice of cancellation or nonrenewal, reimbursement to us of any Retention advanced and the exercise of the rights provided in the Extended Reporting Period or Subrogation provisions of this policy.

11. **Other Insurance**

If there is other valid and collectible insurance, our obligations are as follows:

a. With regard to Coverage 1 – Professional Liability, as set forth in SECTION I - Insuring Agreements, this insurance is excess over any other valid and collectible insurance, whether such

other insurance is stated to be primary, contributory, excess, contingent or otherwise;

b. This insurance is excess over any other valid and collectible insurance under a project specific insurance policy, contractor controlled insurance program, owner controlled insurance program, consolidated (wrap-up) insurance program or any other similar insurance or program, whether such other insurance or program is stated to be primary, contributory, excess, contingent or otherwise.

c. Where other valid and collectible insurance is available and is also primary, our obligation to the **insured** is as follows:

(1) If other primary insurance permits contribution by equal shares, we will also follow this method. Under this method, each insurer contributes equal amounts until it has paid the applicable Limit of Liability or none of the loss remains, whichever comes first; or

(2) If any other insurance does not permit contribution by equal shares, we will contribute pro-rata by limits. Under this method, each Insurer's share is based on the ratio of its applicable Limit of Liability to the total applicable Limit of Liability of all primary insurers.

d. With regard to **restoration costs**, this insurance is excess over any other valid and collectible insurance, whether such other insurance is stated to be primary, contributory, excess, contingent or otherwise.

12. **Multiple Claims**

Two or more **claims** arising out of a single act, error, omission, incident or **pollution incident**, or arising out of a series of acts, errors, omissions or incidents related to each other, will be considered a single **claim** subject to the respective single Each Loss Limit of Liability and one Retention, and will not operate to increase our Limits of Liability. All such **claims**, whenever made, will be considered first made during the **policy period** of the earliest **claim** was first made.

13. **Notice of Possible Claim**

a. If during the **policy period**, the **insured** becomes aware of an act, error or omission in **professional services** or **pollution incident** which may be expected to give rise to a **claim** (thereafter referred to as a "possible claim") under the policy, the **insured** must provide written notice to us during the **policy period** containing all the information listed under paragraph b. below. Any possible claim that subsequently becomes a **claim** shall be deemed to have been first made and reported during the **policy period** of this policy. Such **claim** shall be subject to the terms, conditions and limits of coverage of the policy under which the possible claim was reported.

b. It is a condition precedent to the rights afforded the **insured** under this Condition 13. and any possible coverage afforded by this policy that such written notice under paragraph a. directly above contain all of the following information:

(1) The circumstances and date of the actual or alleged errors or omissions in **professional services** and the specific nature, date and extent of any injury or **professional damages** which are the subject of the possible claim;

(2) The date and details of the **pollution incident** and related services or work that may have caused such condition;

(3) Copies of any contract executed by the **insured** that is related to such possible claim;

(4) The circumstances by which the **insured** first became aware of the possible claim.

14. **Extended Reporting Period for Contractor Professional Liability Insuring Agreement (Insuring Agreement 1.a.)**

The **named insured** shall be entitled to an Automatic Extended Reporting Period, and (with certain exceptions as described in Paragraph b. of this section) be entitled to purchase an Optional Extended Reporting Period for SECTION I - INSURING AGREEMENTS, 1. Professional Liability, upon termination of coverage as defined in paragraph b.(3) of this section. Neither the Automatic nor the Optional Extended Reporting Period shall reinstate or increase any of the limits of liability of this policy.

a. **Automatic Extended Reporting Period**

Provided that the **named insured** has not purchased any other insurance to replace this insurance and the **claim** is otherwise covered hereunder, the **named insured** shall have the right to the following: a period of ninety (90) days following the effective date of such termination of coverage in which to provide written notice to the Company of **claims** first made and reported within the Automatic Extended Reporting Period. A **claim** first made and reported within the Automatic Extended Reporting Period will be deemed to have been made on the last day of the **policy period**, provided that the **claim** arises from an actual or alleged act, error or omission in the performance of **your professional services** rendered on or after the **professional liability retroactive date** and prior to the end of the **policy period** and is otherwise covered by this policy. No part of the Automatic Extended Reporting Period shall apply if the Optional Extended Reporting Period is purchased.

b. **Optional Extended Reporting Period**

The **named insured** shall be entitled to purchase an Optional Extended Reporting Period upon termination of coverage as defined herein (except in the event of nonpayment of premium), as follows:

(1) A **claim** first made and reported within the Optional Extended Reporting Period, if purchased in accordance with the provisions contained in paragraph (2) below, will be deemed to have been made on the last day of the **policy period**, provided that the **claim** arises from an actual or alleged act, error or omission in the performance of **your professional services** rendered on or after the **professional liability retroactive date** and prior to the end of the Policy Period and is otherwise covered by this policy;

(2) The Company shall issue an endorsement providing an Optional Extended Reporting Period of up to thirty-six (36) months from termination of coverage hereunder, provided that the **named insured**:

(a) Makes a written request for such endorsement which the Company receives within thirty (30) days after termination of coverage as defined herein; and

(b) Pays the additional premium when due. If that additional premium is paid when due, the Company may choose not to cancel the Extended Reporting Period, provided that all other terms and conditions of the policy are met, such determination to be made at the Company's sole discretion.

(3) Termination of coverage occurs at the time of cancellation or nonrenewal of this policy by the **named insured** or by the Company.

and certified to provide environmental services. We shall consult with you in conjunction with the selection of the **environmental professional**.

14. **Fungi** means any of numerous eukaryotic organisms of the kingdom Fungi, which lack chlorophyll and vascular tissue and range in form from a single cell to a body mass of branched filamentous hyphae that produce specialized fruiting bodies.

15. **Insured(s)** means:

    a. The **named insured**;

    b. Any present or former partner, director, officer, manager, member or employee, including a **leased worker** and a **temporary worker**, of the **named insured** solely while acting on behalf of the **named insured**;

    c. Any **insured** with regard to its participation in a legal entity including a joint venture, but solely for the **insured's** legal liability for its performance of **professional services** or **your work** under the respective legal entity or joint venture. **Insured** does not include the legal entity itself, the joint venture itself or any other entity that is part of either the legal entity or joint venture, except as respects liability assumed by the **insured** for a **pollution incident**;

    d. With regard to SECTION I - INSURING AGREEMENTS, 2. Contractors Pollution Liability only, any client of the **named insured** that the **named insured** has agreed by written contract to name as an additional **insured** on this policy, but only with respect to covered **damages** caused by **your work**;

    e. Any entity which is specifically referenced as an **insured** by endorsement;

    f. The estate, heirs, executors, administrators or legal representatives of an **insured** in the event of such **insured's** death, incapacity or bankruptcy but only to the extent such **insured** would otherwise be provided coverage under this policy;

    g. Any entity newly formed or acquired by the **named insured** during the **policy period** in which the **named insured** has more than fifty percent (50%) legal or beneficial interest. However:

        (1) Coverage will only be provided for **claims** arising out **professional services** or **your work** performed on or after the date of formation or acquisition; and

        (2) This coverage will expire within ninety (90) days of such formation or acquisition or the end of the **policy period**, whichever is earlier, unless the **named insured** provides written details of such newly formed or acquired entity to us and pays the additional premium requested by us, if any.

16. **Insured contract** means that part of any written contract or written agreement under which the **named insured** assumes the tort liability of another party to pay compensatory damages for **bodily injury**, **property damage**, **environmental damage** or **emergency response expense**, to a third person or organization, provided that such written contract or written agreement is signed by the **named insured** prior to the **bodily injury**, **property damage**, **environmental damage** or **emergency response expense**. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

17. **Leased worker** means a person leased to you by a labor leasing firm under an agreement between you and the labor leasing firm, to perform duties related to the conduct of your business. **Leased worker** does not include a **temporary worker**.

18. **Location** means premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway, waterway or right-of-way of a railroad.

WAIVER OF SUBROGATION

THIS ENDORSEMENT CHANGES THE POLICY, PLEASE READ IT CAREFULLY.

We agree to waive our right of subrogation against any person or organization to whom or to which you are obligated, prior to any loss, by an "insured contract" to provide such a waiver, but only with respect to "your work", "your product" or facilities owned or used by you.

This endorsement does not change any other provision of the policy.

WAIVER OF SUBROGATION

THIS ENDORSEMENT CHANGES THE POLICY, PLEASE READ IT CAREFULLY.

We agree to waive our right of subrogation against any person or organization to whom or to which you are obligated, prior to any loss, by an "insured contract" to provide such a waiver, but only with respect to "your work", "your product" or facilities owned or used by you.

This endorsement does not change any other provision of the policy.

Insured: URETEK USA, Inc.

Coverage Extension Endorsement

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
BAP0187948-06	7/1/22	7/1/23	7/1/22	10836000	INCL	

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Business Auto Coverage Form
Motor Carrier Coverage Form

A. Amended Who Is An Insured

1. The following is added to the **Who Is An Insured** Provision in **Section II – Covered Autos Liability Coverage**:

The following are also "insureds":

a. Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow for acts performed within the scope of employment by you. Any "employee" of yours is also an "insured" while operating an "auto" hired or rented under a contract or agreement in an "employee's" name, with your permission, while performing duties related to the conduct of your business.

b. Anyone volunteering services to you is an "insured" while using a covered "auto" you don't own, hire or borrow to transport your clients or other persons in activities necessary to your business.

c. Anyone else who furnishes an "auto" referenced in Paragraphs **A.1.a.** and **A.1.b.** in this endorsement.

d. Where and to the extent permitted by law, any person(s) or organization(s) where required by written contract or written agreement with you executed prior to any "accident", including those person(s) or organization(s) directing your work pursuant to such written contract or written agreement with you, provided the "accident" arises out of operations governed by such contract or agreement and only up to the limits required in the written contract or written agreement, or the Limits of Insurance shown in the Declarations, whichever is less.

2. The following is added to the **Other Insurance** Condition in the Business Auto Coverage Form and the **Other Insurance – Primary and Excess Insurance Provisions Condition** in the Motor Carrier Coverage Form:

Coverage for any person(s) or organization(s), where required by written contract or written agreement with you executed prior to any "accident", will apply on a primary and non-contributory basis and any insurance maintained by the additional "insured" will apply on an excess basis. However, in no event will this coverage extend beyond the terms and conditions of the Coverage Form.

B. Amendment – Supplementary Payments

Paragraphs **a.(2)** and **a.(4)** of the **Coverage Extensions** Provision in **Section II – Covered Autos Liability Coverage** are replaced by the following:

(2) Up to $5,000 for the cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" we cover. We do not have to furnish these bonds.

(4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earnings up to $500 a day because of time off from work.

C. Fellow Employee Coverage

The **Fellow Employee** Exclusion contained in **Section II – Covered Autos Liability Coverage** does not apply.

D. Driver Safety Program Liability and Physical Damage Coverage

1. The following is added to the **Racing** Exclusion in **Section II – Covered Autos Liability Coverage**:

This exclusion does not apply to covered "autos" participating in a driver safety program event, such as, but not limited to, auto or truck rodeos and other auto or truck agility demonstrations.

2. The following is added to Paragraph **2.** in the **Exclusions** of **Section III – Physical Damage Coverage** of the Business Auto Coverage Form and Paragraph **2.b.** in the **Exclusions** of **Section IV – Physical Damage Coverage** of the Motor Carrier Coverage Form:

This exclusion does not apply to covered "autos" participating in a driver safety program event, such as, but not limited to, auto or truck rodeos and other auto or truck agility demonstrations.

E. Lease or Loan Gap Coverage

The following is added to the **Coverage** Provision of the **Physical Damage Coverage** Section:

Lease Or Loan Gap Coverage

In the event of a total "loss" to a covered "auto", we will pay any unpaid amount due on the lease or loan for a covered "auto", less:

a. Any amount paid under the **Physical Damage Coverage** Section of the Coverage Form; and

b. Any:

(1) Overdue lease or loan payments at the time of the "loss";

(2) Financial penalties imposed under a lease for excessive use, abnormal wear and tear or high mileage;

(3) Security deposits not returned by the lessor;

(4) Costs for extended warranties, credit life insurance, health, accident or disability insurance purchased with the loan or lease; and

(5) Carry-over balances from previous leases or loans.

F. Towing and Labor

Paragraph **A.2.** of the **Physical Damage Coverage** Section is replaced by the following:

We will pay up to $75 for towing and labor costs incurred each time a covered "auto" of the private passenger type is disabled. However, the labor must be performed at the place of disablement.

G. Extended Glass Coverage

The following is added to Paragraph **A.3.a.** of the **Physical Damage Coverage** Section:

If glass must be replaced, the deductible shown in the Declarations will apply. However, if glass can be repaired and is actually repaired rather than replaced, the deductible will be waived. You have the option of having the glass repaired rather than replaced.

H. Hired Auto Physical Damage – Increased Loss of Use Expenses

The **Coverage Extension** for **Loss Of Use Expenses** in the **Physical Damage Coverage** Section is replaced by the following:

Loss Of Use Expenses

For Hired Auto Physical Damage, we will pay expenses for which an "insured" becomes legally responsible to pay for loss of use of a vehicle rented or hired without a driver under a written rental contract or written rental agreement. We will pay for loss of use expenses if caused by:

(1) Other than collision only if the Declarations indicate that Comprehensive Coverage is provided for any covered "auto";

(2) Specified Causes Of Loss only if the Declarations indicate that Specified Causes Of Loss Coverage is provided for any covered "auto"; or

(3) Collision only if the Declarations indicate that Collision Coverage is provided for any covered "auto".

However, the most we will pay for any expenses for loss of use is $100 per day, to a maximum of $3000.

I. Personal Effects Coverage

The following is added to the **Coverage** Provision of the **Physical Damage Coverage** Section:

Personal Effects Coverage

a. We will pay up to $750 for "loss" to personal effects which are:

(1) Personal property owned by an "insured"; and

(2) In or on a covered "auto".

b. Subject to Paragraph **a.** above, the amount to be paid for "loss" to personal effects will be based on the lesser of:

(1) The reasonable cost to replace; or

(2) The actual cash value.

c. The coverage provided in Paragraphs **a.** and **b.** above, only applies in the event of a total theft of a covered "auto". No deductible applies to this coverage. However, we will not pay for "loss" to personal effects of any of the following:

(1) Accounts, bills, currency, deeds, evidence of debt, money, notes, securities, or commercial paper or other documents of value.

(2) Bullion, gold, silver, platinum, or other precious alloys or metals; furs or fur garments; jewelry, watches, precious or semi-precious stones.

(3) Paintings, statuary and other works of art.

(4) Contraband or property in the course of illegal transportation or trade.

(5) Tapes, records, discs or other similar devices used with audio, visual or data electronic equipment.

Any coverage provided by this Provision is excess over any other insurance coverage available for the same "loss".

J. Tapes, Records and Discs Coverage

1. The Exclusion in Paragraph **B.4.a.** of **Section III – Physical Damage Coverage** in the Business Auto Coverage Form and the Exclusion in Paragraph **B.2.c.** of **Section IV – Physical Damage Coverage** in the Motor Carrier Coverage Form does not apply.

2. The following is added to Paragraph **1.a. Comprehensive Coverage** under the **Coverage** Provision of the **Physical Damage Coverage** Section:

We will pay for "loss" to tapes, records, discs or other similar devices used with audio, visual or data electronic equipment. We will pay only if the tapes, records, discs or other similar audio, visual or data electronic devices:

(a) Are the property of an "insured"; and

(b) Are in a covered "auto" at the time of "loss".

The most we will pay for such "loss" to tapes, records, discs or other similar devices is $500. The **Physical Damage Coverage Deductible** Provision does not apply to such "loss".

K. Airbag Coverage

The Exclusion in Paragraph **B.3.a.** of **Section III – Physical Damage Coverage** in the Business Auto Coverage Form and the Exclusion in Paragraph **B.4.a.** of **Section IV – Physical Damage Coverage** in the Motor Carrier Coverage Form does not apply to the accidental discharge of an airbag.

L. Two or More Deductibles

The following is added to the **Deductible** Provision of the **Physical Damage Coverage** Section:

If an accident is covered both by this policy or Coverage Form and by another policy or Coverage Form issued to you by us, the following applies for each covered "auto" on a per vehicle basis:

1. If the deductible on this policy or Coverage Form is the smaller (or smallest) deductible, it will be waived; or

2. If the deductible on this policy or Coverage Form is not the smaller (or smallest) deductible, it will be reduced by the amount of the smaller (or smallest) deductible.

M. Physical Damage – Comprehensive Coverage – Deductible

The following is added to the **Deductible** Provision of the **Physical Damage Coverage** Section:

Regardless of the number of covered "autos" damaged or stolen, the maximum deductible that will be applied to Comprehensive Coverage for all "loss" from any one cause is $5,000 or the deductible shown in the Declarations, whichever is greater.

N. Temporary Substitute Autos – Physical Damage

1. The following is added to **Section I – Covered Autos**:

Temporary Substitute Autos – Physical Damage

If Physical Damage Coverage is provided by this Coverage Form on your owned covered "autos", the following types of vehicles are also covered "autos" for Physical Damage Coverage:

Any "auto" you do not own when used with the permission of its owner as a temporary substitute for a covered "auto" you do own but is out of service because of its:

1. Breakdown;

2. Repair;

3. Servicing;

4. "Loss"; or

5. Destruction.

2. The following is added to the Paragraph **A. Coverage** Provision of the **Physical Damage Coverage** Section:

Temporary Substitute Autos – Physical Damage

We will pay the owner for "loss" to the temporary substitute "auto" unless the "loss" results from fraudulent acts or omissions on your part. If we make any payment to the owner, we will obtain the owner's rights against any other party.

The deductible for the temporary substitute "auto" will be the same as the deductible for the covered "auto" it replaces.

O. Amended Duties In The Event Of Accident, Claim, Suit Or Loss

Paragraph **a.** of the **Duties In The Event Of Accident, Claim, Suit Or Loss** Condition is replaced by the following:

a. In the event of "accident", claim, "suit" or "loss", you must give us or our authorized representative prompt notice of the "accident", claim, "suit" or "loss". However, these duties only apply when the "accident", claim, "suit" or "loss" is known to you (if you are an individual), a partner (if you are a partnership), a member (if you are a limited liability company) or an executive officer or insurance manager (if you are a corporation). The failure of any

agent, servant or employee of the "insured" to notify us of any "accident", claim, "suit" or "loss" shall not invalidate the insurance afforded by this policy.

Include, as soon as practicable:

(1) How, when and where the "accident" or "loss" occurred and if a claim is made or "suit" is brought, written notice of the claim or "suit" including, but not limited to, the date and details of such claim or "suit";

(2) The "insured's" name and address; and

(3) To the extent possible, the names and addresses of any injured persons and witnesses.

If you report an "accident", claim, "suit" or "loss" to another insurer when you should have reported to us, your failure to report to us will not be seen as a violation of these amended duties provided you give us notice as soon as practicable after the fact of the delay becomes known to you.

P. Waiver of Transfer Of Rights Of Recovery Against Others To Us

The following is added to the **Transfer Of Rights Of Recovery Against Others To Us** Condition:

This Condition does not apply to the extent required of you by a written contract, executed prior to any "accident" or "loss", provided that the "accident" or "loss" arises out of operations contemplated by such contract. This waiver only applies to the person or organization designated in the contract.

Q. Employee Hired Autos – Physical Damage

Paragraph **b.** of the **Other Insurance** Condition in the Business Auto Coverage Form and Paragraph **f.** of the **Other Insurance – Primary and Excess Insurance Provisions** Condition in the Motor Carrier Coverage Form are replaced by the following:

For Hired Auto Physical Damage Coverage, the following are deemed to be covered "autos" you own:

(1) Any covered "auto" you lease, hire, rent or borrow; and

(2) Any covered "auto" hired or rented under a written contract or written agreement entered into by an "employee" or elected or appointed official with your permission while being operated within the course and scope of that "employee's" employment by you or that elected or appointed official's duties as respect their obligations to you.

However, any "auto" that is leased, hired, rented or borrowed with a driver is not a covered "auto".

R. Unintentional Failure to Disclose Hazards

The following is added to the **Concealment, Misrepresentation Or Fraud** Condition:

However, we will not deny coverage under this Coverage Form if you unintentionally:

(1) Fail to disclose any hazards existing at the inception date of this Coverage Form; or

(2) Make an error, omission, improper description of "autos" or other misstatement of information.

You must notify us as soon as possible after the discovery of any hazards or any other information that was not provided to us prior to the acceptance of this policy.

S. Hired Auto – World Wide Coverage

Paragraph **7a.(5)** of the **Policy Period, Coverage Territory** Condition is replaced by the following:

(5) Anywhere in the world if a covered "auto" is leased, hired, rented or borrowed for a period of 60 days or less,

T. Bodily Injury Redefined

The definition of "bodily injury" in the **Definitions** Section is replaced by the following:

"Bodily injury" means bodily injury, sickness or disease, sustained by a person including death or mental anguish, resulting from any of these at any time. Mental anguish means any type of mental or emotional illness or disease.

U. Expected Or Intended Injury

The **Expected Or Intended Injury** Exclusion in Paragraph **B. Exclusions** under **Section II – Covered Auto Liability Coverage** is replaced by the following:

Expected Or Intended Injury

"Bodily injury" or "property damage" expected or intended from the standpoint of the "insured". This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

V. Physical Damage – Additional Temporary Transportation Expense Coverage

Paragraph **A.4.a.** of **Section III – Physical Damage Coverage** is replaced by the following:

4. Coverage Extensions

a. Transportation Expenses

We will pay up to $50 per day to a maximum of $1,000 for temporary transportation expense incurred by you because of the total theft of a covered "auto" of the private passenger type. We will pay only for those covered "autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage. We will pay for temporary transportation expenses incurred during the period beginning 48 hours after the theft and ending, regardless of the policy's expiration, when the covered "auto" is returned to use or we pay for its "loss".

W. Replacement of a Private Passenger Auto with a Hybrid or Alternative Fuel Source Auto

The following is added to Paragraph **A. Coverage** of the **Physical Damage Coverage** Section:

In the event of a total "loss" to a covered "auto" of the private passenger type that is replaced with a hybrid "auto" or "auto" powered by an alternative fuel source of the private passenger type, we will pay an additional 10% of the cost of the replacement "auto", excluding tax, title, license, other fees and any aftermarket vehicle upgrades, up to a maximum of $2500. The covered "auto" must be replaced by a hybrid "auto" or an "auto" powered by an alternative fuel source within 60 calendar days of the payment of the "loss" and evidenced by a bill of sale or new vehicle lease agreement.

To qualify as a hybrid "auto", the "auto" must be powered by a conventional gasoline engine and another source of propulsion power. The other source of propulsion power must be electric, hydrogen, propane, solar or natural gas, either compressed or liquefied. To qualify as an "auto" powered by an alternative fuel source, the "auto" must be powered by a source of propulsion power other than a conventional gasoline engine. An "auto" solely propelled by biofuel, gasoline or diesel fuel or any blend thereof is not an "auto" powered by an alternative fuel source.

X. Return of Stolen Automobile

The following is added to the **Coverage Extension** Provision of the **Physical Damage Coverage** Section:

If a covered “auto” is stolen and recovered, we will pay the cost of transport to return the “auto” to you. We will pay only for those covered “autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage.

All other terms, conditions, provisions and exclusions of this policy remain the same.

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

ALL PERSONS AND/OR ORGANIZATIONS THAT ARE REQUIRED BY WRITTEN CONTRACT OR AGREEMENT WITH THE INSURED, EXECUTED PRIOR TO THE ACCIDENT OR LOSS, THAT WAIVER OF SUBROGATION BE PROVIDED UNDER THIS POLICY FOR WORK PERFORMED BY YOU FOR THAT PERSON AND/OR ORGANIZATION.

(Ed. 6-14)

TEXAS WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

This endorsement applies only to the insurance provided by the policy because Texas is shown in Item 3.A. of the Information Page.

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule, but this waiver applies only with respect to bodily injury arising out of the operations described in the Schedule where you are required by a written contract to obtain this waiver from us.

This endorsement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

The premium for this endorsement is shown in the Schedule.

Schedule

1. ( ) Specific Waiver

   Name of person or organization

   (x) Blanket Waiver

   Any person or organization for whom the Named Insured has agreed by written contract to furnish this waiver.

2. Operations:
3. Premium:
   The premium charge for this endorsement shall be_____ percent of the premium developed on payroll in connection with work performed for the above person(s) or organization(s) arising out of the operations described.
4. Advance Premium:

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 7/1/22 Policy No. WC0187946-06 Endorsement No.

Insured: URETEK USA, Inc.

Insurance Company Countersigned by _____

Zurich American Insurance Co.

Insured: URETEK USA, Inc.

Blanket Notification to Others of Cancellation or Non-Renewal

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.	
Policy No. GLO 0187947-06	Effective Date: 7/1/22

This endorsement applies to insurance provided under the:

Commercial General Liability Coverage Part

A. If we cancel or non-renew this Coverage Part by written notice to the first Named Insured, we will mail or deliver notification that such Coverage Part has been cancelled or non-renewed to each person or organization shown in a list provided to us by the first Named Insured if you are required by written contact or written agreement to provide such notification. Such list:

1. Must be provided to us prior to cancellation or non-renewal;

2. Must contain the names and addresses of only the persons or organizations requiring notification that such Coverage Part has been cancelled or non-renewed; and

3. Must be in an electronic format that is acceptable to us.

B. Our notification as described in Paragraph **A.** of this endorsement will be based on the most recent list in our records as of the date the notice of cancellation or non-renewal is mailed or delivered to the first Named Insured. We will mail or deliver such notification to each person or organization shown in the list:

1. Within 10 days of the effective date of the notice of cancellation, if we cancel for non-payment of premium; or

2. At least 30 days prior to the effective date of:

a. Cancellation, if cancelled for any reason other than nonpayment of premium; or

b. Non-renewal, but not including conditional notice of renewal,

unless a greater number of days is shown in the Schedule of this endorsement for the mailing or delivering of such notification with respect to Paragraph **B.1.** or Paragraph **B.2.** above.

C. Our mailing or delivery of notification described in Paragraphs **A.** and **B.** of this endorsement is intended as a courtesy only. Our failure to provide such mailing or delivery will not:

1. Extend the Coverage Part cancellation or non-renewal date;

2. Negate the cancellation or non-renewal; or

3. Provide any additional insurance that would not have been provided in the absence of this endorsement.

D. We are not responsible for the accuracy, integrity, timeliness and validity of information contained in the list provided to us as described in Paragraphs **A.** and **B.** of this endorsement.

SCHEDULE	
The total number of days for mailing or delivering with respect to Paragraph **B.1.** of this endorsement is amended to indicate the following number of days:	*
The total number of days for mailing or delivering with respect to Paragraph **B.2.** of this endorsement is amended to indicate the following number of days:	**
* If a number is not shown here, 10 days continues to apply. ** If a number is not shown here, 30 days continues to apply.	

All other terms and conditions of this policy remain unchanged.

Insured: URETEK USA, Inc.

Blanket Notification to Others of Cancellation or Non-Renewal

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
BAP0187948-06	7/1/22	7/1/23	7/1/22	10836000	INCL	

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Commercial Automobile Coverage Part

A. If we cancel or non-renew this Coverage Part by written notice to the first Named Insured, we will mail or deliver notification that such Coverage Part has been cancelled or non-renewed to each person or organization shown in a list provided to us by the first Named Insured if you are required by written contact or written agreement to provide such notification. However, such notification will not be mailed or delivered if a conditional notice of renewal has been sent to the first Named Insured. Such list:

1. Must be provided to us prior to cancellation or non-renewal;
2. Must contain the names and addresses of only the persons or organizations requiring notification that such Coverage Part has been cancelled or non-renewed; and
3. Must be in an electronic format that is acceptable to us.

B. Our notification as described in Paragraph **A.** of this endorsement will be based on the most recent list in our records as of the date the notice of cancellation or non-renewal is mailed or delivered to the first Named Insured. We will mail or deliver such notification to each person or organization shown in the list:

1. Within seven days of the effective date of the notice of cancellation, if we cancel for non-payment of premium; or
2. At least 30 days prior to the effective date of:
   a. Cancellation, if cancelled for any reason other than nonpayment of premium; or
   b. Non-renewal, but not including conditional notice of renewal.

C. Our mailing or delivery of notification described in Paragraphs **A.** and **B.** of this endorsement is intended as a courtesy only. Our failure to provide such mailing or delivery will not:

1. Extend the Coverage Part cancellation or non-renewal date;
2. Negate the cancellation or non-renewal; or
3. Provide any additional insurance that would not have been provided in the absence of this endorsement.

D. We are not responsible for the accuracy, integrity, timeliness and validity of information contained in the list provided to us as described in Paragraphs **A.** and **B.** of this endorsement.

All other terms and conditions of this policy remain unchanged.

BLANKET NOTIFICATION TO OTHERS OF CANCELLATION OR NONRENEWAL ENDORSEMENT

This endorsement adds the following to Part Six of the policy.

PART SIX
CONDITIONS

Blanket Notification to Others of Cancellation or Nonrenewal

1. If we cancel or non-renew this policy by written notice to you, we will mail or deliver notification that such policy has been cancelled or non-renewed to each person or organization shown in a list provided to us by you if you are required by written contract or written agreement to provide such notification. However, such notification will not be mailed or delivered if a conditional notice of renewal has been sent to you. Such list:
   a. Must be provided to us prior to cancellation or non-renewal;
   b. Must contain the names and addresses of only the persons or organizations requiring notification that such policy has been cancelled or non-renewed; and
   c. Must be in an electronic format that is acceptable to us.
2. Our notification as described in Paragraph 1. above will be based on the most recent list in our records as of the date the notice of cancellation or non-renewal is mailed or delivered to you. We will mail or deliver such notification to each person or organization shown in the list:
   a. Within seven days of the effective date of the notice of cancellation, if we cancel for non-payment of premium; or
   b. At least 30 days prior to the effective date of:
      (1) Cancellation, if cancelled for any reason other than nonpayment of premium; or
      (2) Non-renewal, but not including conditional notice of renewal.
3. Our mailing or delivery of notification described in Paragraphs 1. and 2. above is intended as a courtesy only. Our failure to provide such mailing or delivery will not:
   a. Extend the policy cancellation or non-renewal date;
   b. Negate the cancellation or non-renewal; or
   c. Provide any additional insurance that would not have been provided in the absence of this endorsement.
4. We are not responsible for the accuracy, integrity, timeliness and validity of information contained in the list provided to us as described in Paragraphs 1. and 2. above.

All other terms and conditions of this policy remain unchanged.

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 7/1/22 Policy No. WC0187946-06 Endorsement No.
Insured URETEK USA, Inc. Premium $

Insurance Company Zurich American Insurance Company

This Endorsement Changes The Policy. Please Read It Carefully.

NOTICE OF CANCELLATION
ADDITIONAL INSURED

This endorsement modifies insurance provided under the following:

ALL COVERAGE FORMS

If you are required by written contract to provide Notice of Cancellation (for reasons other than nonpayment of premium or deductible reimbursement) to any additional insured under this policy, we agree to provide such Notice stating when, no less than 30 days from the date of mailing, such cancellation shall take effect.

You agree that as a condition precedent to us providing such notice, you will provide us with a complete list of such additional insureds including appropriate designees and complete mailing addresses. Such list shall be provided within 7 days from the date it is electronically requested.

If notice is mailed, proof of mailing is sufficient proof of notice.

This endorsement effective 7/1/22
forms part of Policy Number
issued to URETEK USA, Inc.
by RSUI Indemnity Company

BaySystems 486Star PUR

Product Information

Polyurethane Foam Grout System

Product Description

BaySystems 486Star polyurethanes are a family of two component high density thermoset polyurethane foam systems. They are prepared by mixing the BaySystems 486Star Resin with Mondur MR Isocyanate. The Isocyanate is commonly referred to as the "A" Component, while the Resin is known as the "B" component. When properly combined in a 1:1 ratio by volume, BaySystems 486Star PUR systems are capable of expanding by up to 25 times their original volume in unconfined spaces. BaySystems 486Star PUR systems are formulated to obtain various foam densities and with different reactivities for specific project applications. These applications may include:

- Slab Jacking and concrete lifting
- Soil stabilization to increase its load bearing capacity
- Infrastructure and foundation repairs
- Void filling
- Bridge approaches

Unique Properties

BaySystems 486Star PURs have a composition that allows for its direct application in wet or very damp regions while still maintaining good physical properties. Because it contains a hydrophobic additive, BaySystems 486Star will react correctly even when being injected directly into water. This property makes it ideal for lifting and stabilizing in areas with elevated soil moisture. Because of the resulting foam's hydrophobic nature, the BaySystems 486Star PURs will resist erosion and weakening from water.

The low viscosity of the BaySystems 486Star components lets it penetrate into the soil easily. As it expands, it compacts loose soil and displaces water without detrimental dilution to the resin or loss of physical properties in the cured polyurethane.

Properties of Components[1]

Property	Mondur MR Isocyanate	BaySystems 486Star Resin
Appearance	Dark Brown Liquid	Amber Liquid
NCO, Wt. %	31.5	--
Viscosity** at 25℃,	200	Varies by grade
Specific Gravity at 25℃	1.24	1.01 – 1.04
Flash Point, PMCC, ℃	199	>93

Storage and Handling

BaySystems 486Star components should be stored in tightly sealed containers out of direct sunlight.

The Mondur MR is sensitive to moisture, and can react with water to form solids and carbon dioxide gas, which may cause sealed containers to expand and rupture. It should be stored between 50° and 86°F.

BaySystems 486Star Resins may phase separate if stored at temperatures below 50°F for prolong periods. If separation occurs, the material must be warmed and thoroughly mixed prior to use.

[1] *These items are provided as general information only. They are approximate values and are not part of the production specifications.*

Typical Foam Physical Properties of Baysystems 486 PUR[2]

Physical Property	Test Method	684EXP	486STAR-3#	486STAR-4#BD	486STAR-4#	486STAR-4#GD	486STAR-6#	486STAR-8#
Apparent Density, min	ASTM D 1622	2 lbs/ft^3	3 lbs/ft^3	4 lbs/ft^3	4 lbs/ft^3	4 lbs/ft^3	6 lbs/ft^3	8 lbs/ft^3
Compressive Strength	ASTM D 1621	20 psi	30 psi	60 psi	60 psi	60 psi	100 psi	175 psi
Compressive Modulus	ASTM D 1621	500 psi	1000 psi	2000 psi	2000 psi	2000 psi	3000 psi	4000 psi
Dimensional Stability	ASTM D 2126							
Volume Change @ -40°F		< 2%	< 2%	< 2%	< 2%	< 2%	< 1%	< 1%
Volume Change @ +200°F		< 15%	< 2%	< 2%	< 2%	< 2%	< 1%	< 1%
Flexural Strength	ASTM D 790	30 psi	50 psi	90 psi	90 psi	90 psi	170 psi	280 psi
Flexural Modulus	ASTM D 790	700 psi	950 psi	2000 psi	2000 psi	2000 psi	4000 psi	7000 psi
Shear Strength	ASTM C 273	30 psi	35 psi	45 psi	45 psi	45 psi	70 psi	100 psi
Shear Modulus	ASTM C 273	350 psi	500 psi	900 psi	900 psi	900 psi	1100 psi	1400 psi
Tensile Strength	ASTM D 1623	50 psi	60 psi	90 psi	90 psi	90 psi	120 psi	150 psi
Tensile Modulus	ASTM D 1623	700 psi	1700 psi	2000 psi	2000 psi	2000 psi	3000 psi	4000 psi
%Water Absorption	ASTM D 2842	< 2%	< 2%	< 2%	< 2%	< 2%	< 2%	< 2%
Closed Cell Content	ASTM D 6226	90%	90%	90%	90%	90%	90%	90%

[2]Typical properties generated under controlled laboratory conditions. These properties may vary, depending on environmental conditions including atmospheric pressure (altitude) and other factors.

Health and Safety Information

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling this product. Before working with this product, you must read and become familiar with the available information on its risks, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., safety data sheets and product labels. For further information contact your Covestro LLC representative or the Product Safety and Regulatory Affairs Department in Pittsburgh, PA.

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

This product is not designated as “Medical Grade” and therefore shall not be considered a candidate for the manufacture of a medical device or of intermediate products for medical devices, which are intended under normal use to be brought into direct contact with the patient's body (e.g., skin, body fluids or tissues, including indirect contact to blood). If the intended use of the product is for the manufacture of a medical device or of intermediate products for medical devices, Covestro LLC must be contacted in advance, in writing, to provide its agreement to sell such product for such purpose. Nonetheless, any determination as to whether a product is appropriate for use in a medical device or intermediate products for medical devices must be made solely by the purchaser of the product without relying upon any representations by Covestro LLC. For further information, please see the "Guidance on Use of Covestro Products in a Medical Application" document which can be located at www.productsafetyfirst.covestro.com

Note: The information contained in this bulletin is current as of November 2020. Please contact Covestro LLC to determine whether this publication has been revised.

Covestro LLC

1 Covestro Circle • Pittsburgh, PA 15205 • Phone: 1-844-646-0545 • www.covestro.com

Jorge Majano
Purchasing
Uretek USA, Inc.
13900 Humble Rd.
Tomball, TX 77375

Covestro LLC
1 Covestro Circle
Pittsburgh, PA 15205
USA

Stephen J Harasin
Polyurethanes
Development

Telephone
412-413-2672

Email
Steve-J.Harasin@
covestro.com

January 22, 2019

Subject: BaySystems 486Star4 PUR Properties

Dear Mr. Majano,

BaySystems 486Star4 PUR is a two part closed cell high density polyurethane foam that are combined in a one-to-one ratio by volume and comprise a water insoluble diluent to render the foam insensitive to water.

Covestro LLC has measured the typical properties of BaySystems 486Star4, when combined with Mondur MR Light in the proper ratio in our laboratory, and these are listed below.

BaySystems 486Star4 PUR Typical Properties*

Property	Method	Typical Value
Free Rise Density	ASTM D1622	4.0 lb./ft^3
Compressive Strength	ASTM D1621	60 psi
Tensile Strength	ASTM D1623	90 psi
Shear Strength	ASTM C 273	40 psi
Closed Cell Content	ASTM D2858	85 %

Furthermore, our evaluation also indicates that the foam obtains approximately 85% of its final compressive strength within 15 minutes and 95% of its final compressive strength with 30 minutes of application. Material produced from the following batches would all meet these specifications:

PB95018013, PA86001789

Covestro LLC is the manufactuer of BaySystems 486Star4 and Mondur MR, and provides these materials to Uretek ICR and Uretek USA for application. All products are sold pursuant to Covestro LLC's Conditions of Sale, which are available upon request.

Sincerely,

Stephen J Harasin

Stephen J Harasin
Principal Scientist

*Typical properties generated under controlled laboratory conditions. These properties may vary, depending on environmental conditions including atmospheric pressure (altitude) and other factors.

Hugh A. Rose
Environmental, Health & Safety Consulting

August 28, 1997

Mr. Don Moody
Vice President
Uretek USA, Inc.
20687 Peach Blossom Rd.
Walnut, CA 91789

SUBJECT: Industrial Hygiene Sampling
Methylene bis (phenylisocyanate) (MDI)
Project No. 97-103

Dear Mr. Moody:

In accordance with my engagement letter to you date August 1, 1997, I conducted personal air sampling for Methylene bis (phenylisocyanate) (MDI) on three of your employees. The work was conducted the night of August 12 and the early morning of August 13, 1997. The location of the work was the over crossing of the 91 (Artesia) freeway at Long Beach Boulevard in the City of Compton. The test method, and the number of samples collected, were discussed in advance with Mr. Ted Brucker, Industrial Hygienist with the State of California, Department of Transportation.

Executive Summary

The samples were collected using treated glass fiber filters and personal air sampling pumps. The treated glass filters were prepared, and the laboratory analysis conducted by, Health Science Associates, an American Industrial Hygiene Association accredited laboratory. The analytical method was OSHA method 47-high pressure liquid chromatography.

In summary, the analytical results were at least forty times less than the OSHA Permissible Exposure Limit of 0.2 milligrams per cubic meter (mg/m^3) of air. Similarly, the exposures were ten or more times elow the American Conference of Governmental Industrial Hygienists (ACGIH) recommended Threshold Limit Value-Time Weighted Average (TWA-TLV) of 0.051 mg/m^3.

Discussion

Uretek USA, Inc. is engaged in the business of raising the level of roads and bridges that have settled since their construction. The process by which this is accomplished is that two part urethane foam, which contains MDI, is mixed at a nozzle and injected into approximately ½" holes that have been predrilled into the road surface. The foam is injected underground at approximately 40 pounds per square inch. As it cures, the foam reportedly expands to approximately fifteen times its original volume. As it expands, the foam exerts pressure that raises the roadbed. The two part foam is stored in 250 gallon totes inside an enclosed truck. The totes are loaded into the truck at Uretek's shop, and the hoses that lead to the injection

23702 La Salle Canyon Drive Newhall, CA (805) 254-8759 Phone & Fax

nozzle are connected to the totes at the shop. Under normal circumstances, the workers do not have to open up the totes during the work cycle. During the sampling effort, the totes were not opened by Uretek personnel. All mixing of the two part foam, with the exception of a few test mixes which occur as the technician adjust the injection nozzle mixture, occur under the road bed. The reaction between the two part foam occurs within a few seconds.

Sampling

A total of four pre-treated glass fiber filters were received, under refrigerated conditions, from Health Science Associates. MSA™ Escort-brand air sample pumps were rented from Hazco™ equipment rental company. The pumps were calibrated before and after use using a Buck™ Mini Calibrator, which was also rented from Hazco. Upon completion of the sampling effort, the filters were shipped back to the laboratory refrigerated and with a chain of custody. Three sampling apparatus were connected to the following individuals:

Name	Job Description	Sample No.	Results (mg/m^3)
Brandon Robertson	Construction	UT-1	<0.002
Tim Robertson	Foreman	UT-2	<0.002
Richard Espinoza	Technician	UT-3	0.005

In addition to the above a fourth sample (UT-4) was a blank quality control sample (i.e., the filter was carried to the job site, but not used, and turned in as a blind laboratory sample).

The work practices and sampling was generally as follows:

Brandon Robertson (Sample UT-1)

A pump and filter apparatus were connected to Mr. Brandon Robertson at 10:36 PM on August 12, 1997. Mr. Robertson never entered the truck where the 250 gallon totes were stored. Mr. Robertson's job was composed of two primary activities; drilling holes in the roadbed into which the foam would be injected, and injection of the foam under the roadbed. The subject's time was spend approximately evenly between drilling holes and injecting foam. The subject began drilling holes in the roadbed at approximately 10:40 PM and continued that work until approximately 11:45 PM, at which time he began injecting foam. The subject then alternated between drilling and injecting until the end of the work cycle. The sample pump was disconnected from Mr. Robertson at 3:16 AM on August 13, 1997.

Tim Robertson (Sample UT-2)

A pump and filter apparatus were connected to Mr. Tim Robertson at 10:37 PM on August 12, 1997. Mr. Robertson never entered the truck where the 250 gallon totes were stored. Mr. Robertson's job was

composed of two primary activities; drilling holes in the roadbed into which the foam would be injected, and injection of the foam under the roadbed. Approximately 75% of the subject's time was spend injecting foam and 25% drilling holes in the roadbed. The subject began injecting foam at approximately 11:45 PM and alternated between injecting and drilling until the end of the work cycle. The sample pump was disconnected from Mr. Tim Robertson at 3:16 AM on August 13, 1997.

Richard Espinoza (Sample UT-3)

A pump and filter apparatus were connected to Mr. Espinoza at 10:38 PM on August 12, 1997. Mr. Espinoza was the technician responsible for cleaning the injection guns and calibrating the flow rates of the two foam components. Mr. Espinoza worked from approximately 10:30 PM until 11:40 PM inside the truck where the 250 gallon totes and the pumps for the injection nozzles were located. Mr. Espinoza test fired the injection nozzles several times in to a plastic garbage bag in order to check for proper flow. The test firing occurred for approximately one minute at approximately 11:45 PM.
Mr. Espinoza began injecting foam under the roadbed at approximately 12:00AM on August 13, 1997. The subject then injected foam until approximately 2:45 PM at which time he began collecting equipment, cleaning up debris and generally getting ready to shut down the job site. Mr. Espinoza periodically (five to six times during the remainder of the work cycle) reentered the enclosed truck where the 250 gallon totes were located to check on the equipment. He spent one to two minutes inside the truck each time. It is estimated that Mr. Espinoza spent approximately two hours, or approximately ½ of the entire sampling period, inside the truck. The sampling pump was disconnected from Mr. Espinoza at 3:18 AM on August 13, 1997.

Conclusions

In looking at the analytical results, the sample for Mr. Espinoza (UT-1) had the highest of the three exposures, at least 2.5 times higher than those of the other subjects (0.005 mg/m^3 versus <0.002 mg/m^3). It is concluded that Mr. Espinoza's higher exposure is probably the result of the time spent inside the truck cleaning the injection guns, and test firing the injection guns into a garbage bag. Mr. Espinoza's average exposure over the sampling time of 240 minutes was still 40 times less than the OSHA Permissible Exposure Limit, as a Ceiling exposure of 0.2 mg/m^3.

Should you have any questions regarding this report, please call me at (805) 254-8759, or (818) 382-1760.

Sincerely,

Hugh A. Rose

Hugh A. Rose

Certified Industrial Hygienist No. 5200
Expires 12/31/97

CERTIFIED INDUSTRIAL HYGIENIST HUGH A. ROSE 5200 CIH

C:\HUGH\CONSUL.T\97-103A.RPT

Health Science Associates

LABORATORY REPORT

Report No.: 974442
Purchase Order: 97-103
External No.:

HUGH A ROSE
ENVIRONMENTAL HEALTH & SAFETY CONSULTING
23702 LA SALLE CANYON DRIVE
NEWHALL CA 91321

Date Received : 14-AUG-97
Date Completed : 27-AUG-97
Date Sent : 27-AUG-97
Page 1 of 1

Sample Description : 4- TREATED GLASS FIBER FILTERS

Method of Analysis : High Pressure Liquid Chromatography (OSHA 47)

Sample Number	Submitter Number	Air Volume (Liters)	MDI (ug)	MDI (mg/m3)
119909	UT-1	282.24	<0.5	<0.002
119910	UT-2	285.70	<0.5	<0.002
119911	UT-3	281.26	1.4	0.005
119912	UT-4	280.00	<0.5	<0.002
Detection Limit			0.5	

Remarks : Sample(s) and sampling data as provided by HUGH A ROSE

Analyst : VV

Ref : HPLC-97-02

California ELAP No.: 1406
AIHA Accreditation No.: 172
NVLAP Accreditation No.: 101384
AIHA ELLAP Accreditation No.: 10985
LACSD Lab No.: 10125

Reviewed by: SBR
Susan B. Rosenberg

Technical Approval: Susan B Rosenberg
Laboratory Director, Susan B. Rosenberg, CIH

10771 Noel St., Los Alamitos, CA 90720 714/220-3922 FAX 714/220-2081 e-mail hsa@earthlink.net

97 4442

RECEIVED OCT 4 1997

CHAIN OF CUSTODY

Normal TAT

Hugh A. Rose
Environmental, Health & Safety Consulting
23702 La Salle Canyon Drive, Newhall, CA 91321 (805) 254-8759 Phone & Fax 818-382-1790

Project Name: URETEK USA, INC
Project No. 97-103 8/12-13/97
91 FRWY @ Long Beach BLVD

Worker Name/Job	Test Method	Pump No.	Sample No.	Flow (cc/min) Start	Flow (cc/min) Stop	Start Time	Stop Time	Start Time	Stop Time	Sample Minutes	Total Flow (cc)
	MDT-F										
Brendon Robertson - const.	OSHA 47	10993	UT-1	1008 ~~10:36~~	1008	10:31	3:16	119909		280	282.24
Tim Robertson - Foreman		10985	UT-2	1028 ~~10:37~~	1020	10:37	3:16	119910		279	285.7
Richard Espinoza - Tech		10990	UT-3	1009 ~~10:38~~	1000	10:38	3:18	911		280	281.26
Hugh Rose - IH		10715	UT-4	1000	1000	10:40	3:20	912		280	280.0

Comments:

Relinquished by:	Hugh Rose (Print Name)	Hugh A. Rose (Signature)	Hugh A. Rose - EH&S (Company)	8/13/97 3:[illegible] pm (Date/Time)
Received by:	M. FELIZ (Print Name)	M. Feliz (Signature)	HSA (Company)	8/14/97 9:[illegible] (Date/Time)
Relinquished by:	M. FELIZ (Print Name)	M. Feliz (Signature)	HSA (Company)	8/15/97 9:00 am (Date/Time)

Bayer MaterialScience

20 February 2012

Subject: BaySystems 486STAR Hydro-insensitive polyurethane

To whom it may concern:

Hydro-insensitivity is the inherent chemical property of a material to be unaffected by water. That is, to behave in such a manner as if there was no water present. For hydro-insensitive polyurethanes the reacting components will polymerize, as usual, even in the presence of water.

BaySystems 486STAR two part polyurethane has enhanced hydro-insensitivity because of the patented hydrophobic, water repelling, nature of the reacting polymer. While there will inevitably be some commingling with water because of the injection nature of the process, the finished polyurethane will have significantly better properties than materials that are less hydro-insensitive or non-hydro-insensitive.

A useful tool for determining the extent to which a material is hydro-insensitive is to inject the reacting polymer directly into water. By doing this the reacting polyurethane is presented with the worst possible conditions for proper cross linking of the molecules; far greater interaction with water than typically seen in real world field conditions. A hydro-insensitive material will have good cell structure and retention of polymer density, indicating that the isocyanate or "A" side was reacting with the polyol resins or "B" side. A poor hydro-insensitive material will have coarse cells indicative of the isocyanate preferentially reacting with the water in the surrounding environment, thereby not forming the proper urethane linkage. Poor hydro-insensitive materials will have far greater diminishment of physical properties as a result.

URETEK USA Inc. and URETEK ICR Inc. are the sole providers of the patented BaySystems 486STAR polyurethane system, US Patent 6,521,673.

Should you have any other questions, please feel free to contact me.

Sincerely,

Jose Luna
Polyurethane Technology Manager
Bayer MaterialScience LLC

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Phoenix, AZ 85005
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PROJECT REPORT

EMPLOYING
THE
URETEK DEEP INJECTION (UDI) PROCESS
TO
INCREASE BEARING CAPACITY FOR
BINZ-ENGLEMAN ROAD

URETEK PROJECT NUMBER 13TX02040

Binz-Engleman Road
(between Woodlake Parkway and Henry Metzger Middle School)

San Antonio, TX

Prepared By

Tony Vasquez
Streets and Drainage Manager
Bexar County, TX

Michael R. Vinton
COO & VP of Sales
URETEK USA, Inc.

02 June 2014

INTRODUCTION

Pursuant to meetings between URETEK USA and Bexar County, a pavement stabilization project was developed and executed to improve the bearing capacity of a portion of Binz-Engleman Road employing the URETEK Deep Injection (UDI) process. The purpose of the project was to upgrade the roadway's foundation soils in preparation for a capital improvement project planned for the Binz-Engleman corridor. The purpose of this report is to document the pavement stabilization project so the reader can understand its various aspects.

In an effort to make the large volume and variety of data palatable and useful to the reader, this report employs a format of a concise summary backed by exhibits.

REPORT ORGANIZATION

- Exhibit A – Project Location Maps
- Exhibit B – DCP Location Map (pre-injection site assessment)
- Exhibit C – DCP Test Results (pre-injection site assessment)
- Exhibit D – Injection Map (highlighting injections at -7′ below the pavement surface)
- Exhibit E – Project Photos

PROJECT TIMETABLE

- 3-4 Dec 13 URETEK USA executed 6 Dynamic Cone Penetrometer (DCP) tests to assess site conditions and obtain information for developing an injection plan
- 15 Dec 13 URETEK USA delivered project proposal to Bexar County via e-mail
- 18 Feb–7 Mar 14 URETEK USA injected polymer at the Binz-Engleman site
- 22 May 14 URETEK USA releases Project Report for the Binz-Engleman site

PROJECT SUMMARY

- Project Location/Designation
  - Binz-Engleman Road (between Woodlake Parkway and Henry Metzger Middle School), San Antonio TX
  - URETEK USA Job Number: 13TX02040
- Bexar County Contact

- Tony Vasquez – Streets and Drainage Manager, Phone 210-335-6710, CELL 210-265-7079, avasquez@bexar.org

- **URETEK USA Contacts**

  - Michael R. Vinton, Chief Operations Officer, Phone 281-351-7800, CELL 281-841-6555, mike.vinton@uretekusa.com

  - Jim Reid, Regional Representative – Sales, CELL 281-389-3087, jim.reid@att.net

- **Binz-Engleman Site Description**

  - Project Site Dimensions
    - Length = 2900 feet
    - Width = 28 feet
    - Area = 81,200 square feet

  - Other than pavement distress observations (passed from Bexar County officials to URETEK USA representatives) and results of the 6 DCP tests executed by the URETEK USA crew (Exhibit C), there was very little soils information available for the site. Fortunately, URETEK USA had previously completed a project for Bexar County in the vicinity of the Binz-Engleman site which provided rudimentary knowledge about subgrade conditions.

  - Pavement Distresses Noted by Bexar County Officials
    - Fatigue cracking in asphalt pavement
    - Settlement/loss of support in certain sections
    - Water infiltration

  - Comments on DCP Testing

    - The DCP tests were executed at the 6 locations indicated in Exhibit B

    - This portion of Binz-Engleman Road is a rolling thoroughfare, i.e., marked by hills and valleys. Tests 1 and 5 were conducted on top of high points (hills). All other tests were conducted in or near low points in the roadway.

    - Tests 1, 2, 3, and 4 were conducted in the westbound lane. Tests 5 and 6 were executed in the eastbound lane.

      The occurrence of single-digit blow counts in the upper elevations of a flexible pavement system typically indicate insufficient bearing capacity that will likely result in premature pavement distress. The following summarizes the DCP results for the site (note: all elevations are measured from the pavement surface):

      - DCP 1 – no single-digit values
      - DCP 2 – single-digit values from -1.64′ to - 6.23′
      - DCP 3 – single-digit values from -1.97′ to - 8.86′

- DCP 4 – single-digit values from -1.97′ to -8.20′
- DCP 5 – single-digit values from -1.97′ to -3.28′
- DCP 6 – single-digit values from -1.97′ to -7.22′

- **Binz-Engleman Site Treatment Summary**

  - **A Definition of the URETEK Deep Injection (UDI) Process**

    The pavement system at the Binz-Engleman project site was stabilized using the URETEK Deep Injection (UDI) process. The proprietary UDI process (U.S. Patent number 6,634,831) is a technique for stabilizing weak and/or poorly compacted foundation soils insitu by injecting high-density polyurethane into the foundation soils.

    Expansive forces are created when the two components of the specially formulated high-density polyurethane polymer (U.S. Patent number 6,521,673) react. Prior to the reaction, the low viscosity polymer flows easily into the voids and weak zones in the soil mass. As the reaction occurs, the expanding polymer compacts the surrounding soils. The resistance necessary for compaction to occur is achieved by the soil overburden and by creating a stabilized mass in the upper elevations by the top down injection pattern.

    In sum, the UDI process is a chemical compaction grouting technique using a low-viscosity polymer that also infiltrates most soils. The polymer components are formulated to resist the intrusion of water which could otherwise compromise the integrity of the polyurethane being formed during the reaction.

  - **The polymer selected for the Binz-Engleman project site was URETEK 486 STAR (4-pcf free-rise density, REGULAR formulation).**

  - **The polymer was injected using a 4′ x 4′ areal pattern with a primary injection depth at -4′ below the pavement surface. Additional polymer was injected at -7′ below the surface in select areas of indicated weakness.**

  - **For this site: 75,951 pounds of polymer were injected at the -4′ depth and 5,057 pounds of polymer were injected at the -7′ depth.**

  - **URETEK USA provided Bexar County with a two-year warranty against settlement of more than 0.25″ since the UDI process was used to stabilize the pavement system.**

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The URETEK Method®
Deep Injection®
Stitch-In-Time®

The URETEK Deep Injection Process has been used worldwide successfully in 100s of projects over the past 12 years. In the past 9 years it has been used in the following regional roadway projects:

URETEK Roadway Deep Injection Projects in WV/NY/NJ/CT/PA/DE/VA

State/Entity: Maryland State Highway Administration, District #3
Project: 2003 (Aug) DI to minus 5 ft: RT 410, asphalt, raised 6".
Contact: Vernon Stinette, Jr. 301 952 0555 vstinnett@sha.state.md.us

State/Entity: Virginia; Dulles International Airport – Metro Washington Airports Authority
Projects: 2003-2010 Yearly Maintenance Contract for DI to minus 4 ft: Concrete Runway/Taxiway slab stabilization and lifting; multiple projects each year.
Contact: Alison Fisher P.E., 703 572 7226 Alison.Fischer@mwaa.com

State/Entity: Delaware DOT
Project : 2004 (Oct) DI to minus 5 ft: SR-1, concrete w/drainable base
Contact: Jim Pappas 302 760 2400 James.Pappas@state.de.us

State/Entity: Virginia; City of Norfolk
Project : 2007 (Feb) DI to minus 9 ft, multiple levels in very weak soils to stabilize and raise Bay Ave. a 4 lane concrete roadway.
Contact: Tammy Halstead, E.I.T. 757 644 4610 tammy.halstead@norfolk.gov

State/Entity: Pennsylvania DOT Dist 4
Project : 2007 (Sept) DI to minus 5 ft: one approach slab, I-81SB @ Lenox
Contact: Richard Bohr 570 963 4023 rbohr@state.pa.us

State/Entity: Pennsylvania DOT Dist 2
Projects : 2007 (Nov) DI to minus 5 & 10ft: two bridges, both sides, I-99
2008 (Nov) DI to minus 6 & 12ft: approach slab, I-99SB at Eagle Pass
Contact: Tom McNally 814 861 7011 tmcnally@state.pa.us

State/Entity: Delaware DOT
Projects : 2008 (June) DI to minus 4 & 8ft: SR-1, concrete w/drainable base
2008 (June) DI to minus 4 & 8ft: RT273, concrete w/very weak soil; 8" lift.
Contact: Jim Pappas, P.E. 302 760 2400 James.Pappas@state.de.us

State/Entity: New Jersey DOT
Project : 2008 seven cross pipe projects, via DI
Contact: Kiong Chan 609 530 5354 kiong.chan@dot.state.nj.us

State/Entity: Connecticut DOT
Project: 2008 (Oct) DI to minus 3 ft: one exit ramp from Rt8SB at I-84 (raising the slab)
Contact: Edgardo Block 860 594 2495: edgardo.block@po.state.ct.us

State/Entity: Pennsylvania DOT Dist 6
Projects : 2008 (June) DI to minus 4ft: I-95NB @ Academy
2009 (May) DI to minus 4ft: I-95SB (Jacking of concrete pavement)
Contact: Lorraine Ryan 610 205 6735: loryan@state.pa.us

State/Entity: Virginia DOT, Hampton Roads District
Projects : 2008 (Sept-Oct) Yearly Maintenance Contract; DI to minus 4', concrete roadway slabs, bridge approach/departures, full depth repair areas that had settled. 2009 (June-July) Yearly Maintenance Contract; DI to minus 4', Concrete roadway slabs, bridge approach/departures, full depth repair areas that had settled.
Contact: Michael J. Johnson, 757 494 5479 Michael.Johnson2@VDOT.Virginia.gov

State/Entity: West Virginia Turnpike
Projects : 2008 (May) UDI to minus 3.5 ft: 2 lane-miles of joint re-alignment I-77
2009 (Oct) UDI to minus 4 ft: 3 bridges, approach and departures I-77
Contact: Jim Meadows 304 256 6680 jmeadows@wvturnpike.com

State/Entity: New York State Thruway
Project : 2009 (Oct) DI to minus 3 ft: one departure slab, exit 54, I-90
Contact: Bill Allen 716 826 8445: william.allen@thruway.state.ny.us

State/Entity: New York State DOT
Project : 2009 (Oct) DI to minus 5 and 9ft: stabilization of 90 linear ft of I-87 @15th St
Contact: Bruce Ogurek 718 482 4625: bogurek@dot.state.ny.us

State/Entity: Virginia DOT, Salem district
Project : 2009 (Sept-Nov) I-81 Sub-grade stabilization to minus 4' under a composite roadway, 18 lane miles.
Contact: Jeff Wright, 540-387-5466 Jeff.Wright@VDOT.Virginia.gov

The projects listed above only include roadway projects through 2009, and only regional projects. The URETEK Deep Injection Process has also been used by many other state, county and local DOTs in the past few years.

White Paper

URETEK Deep Injection (UDI) Process

June 28, 2010

Randall W. Brown, PhD, PE
Vice President for Engineering
URETEK USA, Inc.

PURPOSE

The purpose of this paper is to provide a technical discussion of the URETEK Deep Injection (UDI) process to engineering professionals involved in evaluating insitu soil stabilization alternatives.

UDI Definition

The proprietary UDI process (U.S. Patent number 6,634,831) is a technique for stabilizing weak and/or poorly compacted foundation soils insitu and leveling structures (including pavements) by injecting a high-density polyurethane into the foundation soils.

Expansive forces are created when the two components of the specially formulated high-density polyurethane polymer (U.S. Patent number 6,521,673) react. Prior to the reaction, the low viscosity polymer flows easily into the voids and weak zones in the soil mass. As the reaction occurs, the expanding polymer compacts the surrounding soils. The resistance necessary for compaction to occur is achieved by the soil overburden and by creating a stabilized mass in the upper elevations by the top down injection pattern.

In sum, the UDI process is a chemical compaction grouting technique using a low-viscosity polymer that also infiltrates certain soils. The polymer components are formulated to resist the intrusion of water which could compromise the integrity of the polyurethane being formed during the reaction.

UDI Tenets

Since the UDI patent is 12-pages long, a detailed discussion of each paragraph and drawing therein is well beyond the scope of this paper. However, four fundamental tenets may be used to distinguish the UDI process:

1. The polymer is placed via an injection tube. The tube allows the polymer to be "surgically" placed in the strata where stabilization is needed.

2. Multiple injection tubes are used to promote full coverage throughout the area being stabilized. As mentioned above, the injection tubes are inserted to depths within the soil mass that require stabilization.

3. The injected substance is a two-component, high-density polyurethane characterized by its rapid expansion and large volume increase (a minimum of 5 times its original volume is specified). These characteristics are caused by a chemical reaction between the two components.

4. Movement is monitored at the surface during the injection process. The first movement indicates the soil mass has been stabilized at that injection point. If stabilization is the desired goal, injections at that injection point cease.

   Since the soil mass refuses to accept more polymer into the matrix at that injection point, subsequent injections will result in an upward movement, detectable on the surface. This phenomenon is desirable if the project requires leveling of the structure.

UDI Project Development

UDI is an engineered solution. While variables such as soil/water conditions, loads, and client budgets (just to name a few) make each UDI project different, there are shared aspects. Consequently, a protocol for developing UDI projects has evolved over time.

1. Assess the Site
   a. Collect available geotechnical information
   b. Execute Dynamic Cone Penetrometer (DCP) tests
   c. Examine the structure for load-related distresses
   d. Determine current loading and projected loading

2. Design the Treatment Plan
   a. Review the geotechnical information and DCP test data
      i. Identify weak and poorly compacted soil layers
      ii. Examine lab results (soil classification, sieve analysis, etc.)

b. Select injection pattern and depths
c. Develop injection specifications
    i. Polymer characteristics (density, lift capability, etc.)
    ii. Injection pressure
    iii. Injection temperature
    iv. Shot length and sequence

3. Perform Cost Analysis
    a. Estimate polymer quantities
    b. Calculate mobilization and installation costs
    c. Reconcile costs to available budget

4. Prepare Project Proposal
    a. Internal review
    b. Client review
    c. Revisions (as required)

5. Execute Project
    a. Upon receipt of Proposal Acceptance
    b. Upon receipt of Notice to Proceed (NTP)

6. Post-injection Assessment of Site

Soil/Polymer Interaction

The interaction of the polyurethane grout and the soil mass is a complex issue. The relationship is governed by soil properties (particularly – density, grain size, porosity, degree of saturation) and polymer properties (namely – chemical composition and viscosity). Moreover, the interaction can be adjusted for better effectiveness by varying injection temperature, injection pressure, shot duration, and shot sequencing in the field.

Despite the complexity, the following trends have emerged.

1) Aggregate Bases/Subbases and Coarse Sand
    a. Polymer travels into the void space and displaces water (if present). The polymer remains, starts to cure, and acts as a binder.
    b. Lower percentages of smaller particles in these soils permit greater infiltration into the layer prior to expansion.
    c. These soils benefit from the dual events of polymer infiltration (binding) and polymer expansion (compacting).
    d. The injection process is repeated until surface movement is detected indicating the soil is now stable and the expansion force is constrained in all directions except up.

2) Saturated Fine Sands

a. Polymer expansion displaces the water and flowable soils.
b. Polyurethane encapsulates the remaining soil and begins to "set up".
c. The injection process is repeated until surface movement is detected indicating the soil is now stable and the expansion force is constrained in all directions except up.

3) Layers with Silts and Clay Size Particles

a. The polymer infiltrates weak lenses in these layers.
b. As the polymer begins to expand, it encapsulates and compacts the surrounding soils.
c. The injection process is repeated until surface movement is detected indicating the soil is now stable and the expansion force is constrained in all directions except up.

4) Organic Soils

a. When operating in soft soils, the polymer reaction time is accelerated so the polymer spends little time moving laterally.
b. The rapid reaction time causes the polyurethane to form a vertical shear wall within the soft soil mass.
c. By designing the injection pattern, these walls can be shaped into an interconnected series of confinement cells (a honeycomb-type arrangement) capable of supporting loads.

Photographs of various UDI-stabilized soil systems are attached to this document.

Conclusion

The URETEK Deep Injection (UDI) process has proven an efficient and effective technique for insitu stabilization of a variety of soils. Through its research and forensic investigation programs, URETEK continues to gain knowledge of the technology's capabilities and limitations.

Stabilization of Aggregate Subbase below the Basaltic Base of an Asphalt Pavement

Excavation Revealing UDI-Stabilized Sand

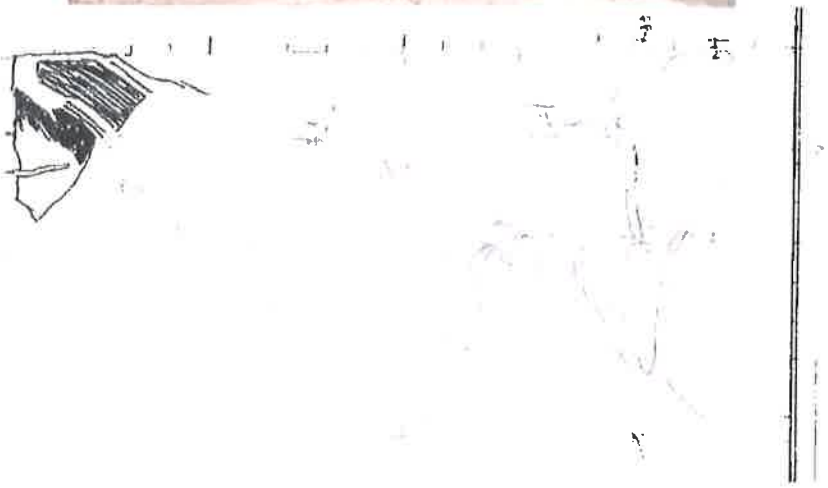
Stabilization of Uncompacted Crater Backfill Material for the U. S. Navy

Excavating Native Soil to Expose the Crater Repair (notice the veins of polymer)

Intact Extraction of the Stabilized Crater Repair

Forensic Excavation of a UDI-Stabilized Peat Deposit

(Note map depicting confinement cell locations)



URETEK USA

ANDREWS AIR FORCE BASE RUNWAY REPAIR PROJECT

PROBLEM

LOCATION: **ANDREWS AIR FORCE BASE, MARYLAND**

SITUATION:

A significant dip (2" deep) had developed Runway 1L/19R at Andrews Air Force Base, Maryland. An engineering investigation revealed the settlement was caused by water infiltrating the pavement system and transporting soil particles through a leaking culvert underlying the runway. The settlement presented operational problems, particularly for small aircraft.

FACTORS FOR CONSIDERATION:

Runway 1L/19R is the primary runway for Air Force One. Disruptions to this runway cause far-reach impact. Consequently, U.S. Air Force engineers sought an alternative to reconstruction. URETEK USA provided an alternative that minimized runway downtime, security concerns, and upheaval of the President's schedule. In addition, URETEK USA delivered a solution that conservatively cost 50% than reconstruction.

LEADERSHIP

Leader in cost and time savings, accuracy and precision

Environmentally inert materials and processes

INNOVATION

Inventor of polymer-based technology in use today

Most patents in industry - Period

Ongoing engineering research and development

EXPERTISE

Developed the industry's most accurate, monitoring process

Developed URETEK 486 STAR material

Pioneered the URETEK Deep Injection Process

Most experienced technicians and best safety record in industry

PROVEN SUCCESS

85,000+ successful projects

20+ years experience solving complex soil/pavement problems

Industry-leading warranty and customer care

SOLUTION

URETEK USA's solution involved 5 key elements:

- Initial Slab Lifting Using High-Density Polyurethane

- URETEK Deep Injection® (UDI) Soil Stabilization
This unique process relies on a two-part polymer system, injected beneath the concrete through pre-drilled holes of 5/8-inch diameter (penny-size). The polymer system travels through tubing to elevations beneath the pavement surface characterized by weak soils (determined by cone penetration testing). Expansion of the polymer compacts the surrounding soils – eliminating voids in the soil mass and improving bearing capacity.

- Leaking Culvert Repair by Injecting Resin (from inside the culvert)

- Final Slab Alignment Using High-Density Polyurethane

- Pavement Joint and Crack Sealing Using Urethane Caulk

RESULTS

- URETEK USA realigned the 15 slabs fully encompassed in the 60' x 88' work area.

- URETEK USA stabilized the soft soils in the work area down to -14' elevation (measured from the surface) using the UDI process.

- Acting as Prime Contractor, URETEK USA oversaw repair of the leaking culvert and pavement joint/crack sealing by hand-picked subcontractors.

BENEFITS

TRADITIONAL REPAIR METHODS
COST: $250,000 REPAIR TIME: 30 DAYS

URETEK USA REPAIR METHODS
COST: $125,000 REPAIR TIME: 10 DAYS

COST SAVINGS:	TIME SAVINGS:
$125,000	20 DAYS

Time Savings: Conservatively Reduced Runway Closure Time by 60% (versus the initial proposal of reconstruction).

Cost Savings: Conservatively Reduced Repair Costs by 50% (versus the initial proposal of reconstruction).

Performance: Repair was evaluated by USAF and their consultants in 2000, 2004, 2006, 2007 and found to be performing well each time.

Longevity: Sample excavated in December 2010 during a runway keel replacement project was still intact after 11+ years of service.

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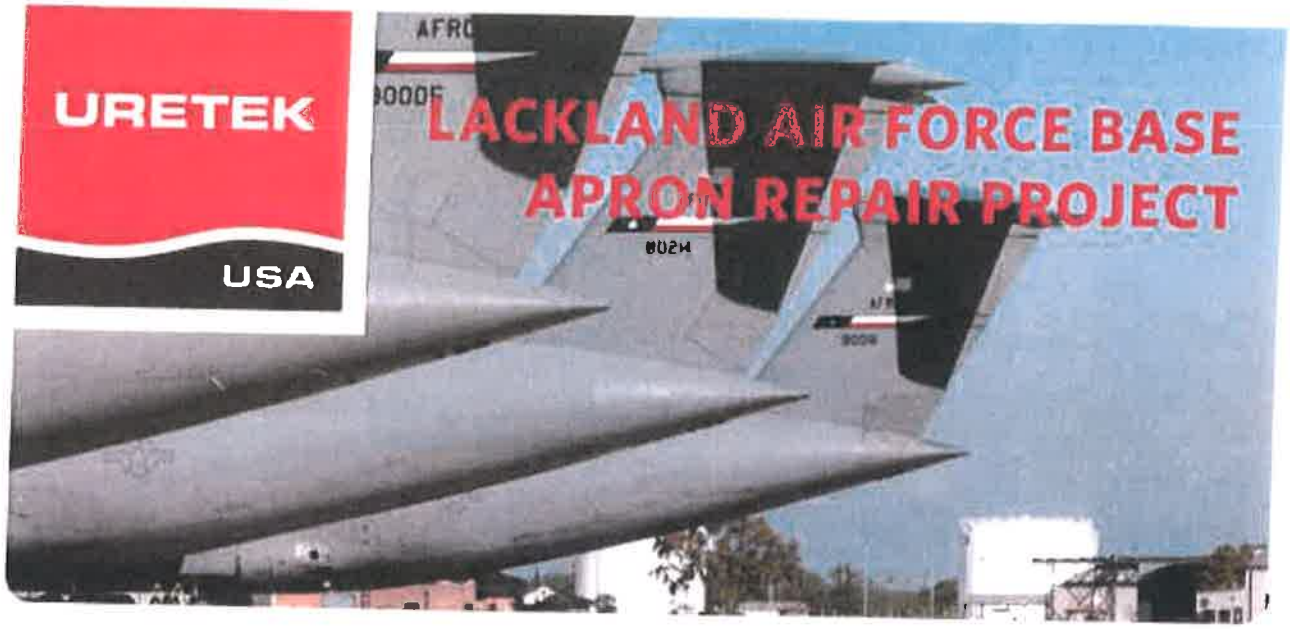
Vice President, Engineering

Michael R. Vinton
Vice President, Sales

Ernie Huse, COL (Ret)
Federal Program Manager

URETEK USA



LACKLAND AIR FORCE BASE APRON REPAIR PROJECT

PROBLEM

LOCATION: **LACKLAND AFB, TEXAS (433d AW APRON)**
PROJECT EXECUTION: **FALL 2011 (FY 2012)**

SITUATION:

Representatives from URETEK USA and the 802d Civil Engineering Squadron performed a site visit to problem areas on the 433d Air Wing (AW) Apron. The 433d Air Wing is an Air Force Reserve (AFRES) unit that operates the C-5 Galaxy out of its home at Lackland AFB, Texas. The 802d representatives identified the following problem areas to URETEK USA personnel:

- Problem Area 1 – Faulted slabs near the intersection of Taxiway H and the 433 AW Apron
- Problem Area 2 – Prematurely cracked slabs on and near the Apron taxilane extending from Taxiway H
- Problem Area 3 – Pumping slabs near the Entry Control Point (ECP) where the Apron taxilane (extending from Taxiway H) ends

A URETEK USA crew deployed to Lackland to gather additional information on the problem areas by performing Dynamic Cone Penetrometer (DCP) tests, mapping pavement distresses, and collecting slab elevation data. URETEK USA engineering personnel also benefitted from Air Force-provided insights, particularly those in the September 2007 *Airfield Pavement Evaluation Report* prepared by the Air Force Civil Engineer Support Agency (AFCESA).

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Developed URETEK 486 STAR material

Pioneered the URETEK Deep Injection Process

Most experienced technicians and best safety record in industry

PROVEN SUCCESS

85,000+ successful projects

20+ years experience solving complex soil/pavement problems

Industry-leading warranty and customer care

FACTORS FOR CONSIDERATION:

The following considerations were also applied to proposals for lifting faulted pavement and performing insitu stabilization of soils beneath the pavement:

- Minimize disruption to 433d AW operations during the project
- Accommodate future slab replacement projects, i.e., stabilization of foundation soils should withstand the removal of the current slabs and the construction of the new slabs
- Reduce Foreign Object Damage (FOD) potential

SOLUTION

URETEK USA's solution involved the URETEK Deep Injection® (UDI) Soil Stabilization process, which relies on a two-part polymer system, injected beneath the pavement through pre-drilled holes of 5/8-inch diameter (penny-size). The polymer system travels through tubing to elevations beneath the pavement surface characterized by weak soils (determined by cone penetration testing). Expansion of the polymer compacts the surrounding soils – eliminating voids in the soil mass and improving bearing capacity. After stabilization is achieved, injection into the soils can continue to achieve pavement lifting, as needed. For this project, one injection depth was used in Repair Area 1 while two injection depths were used in Repair Areas 2 and 3.

RESULTS

- URETEK USA realigned the 14 faulted slabs in Problem Area 1
- URETEK USA stabilized the soils down to -10' elevation (measured from the surface) for 54 slabs in Problem Area 2
- URETEK USA displaced the water and stabilized the soils under 26 slabs in Problem Area 3

BENEFITS

MINIMIZED DOWNTIME

REPAIR TIME: 26 WEEKDAYS

SLABS RE-ALIGNED OR STABILIZED: 94

APRON REOPENED:
EVERY NIGHT FOR THEIR USE

Minimized Mission Disruption
- Kept small footprint during repair operations
- Cleaned repair area after each day's work
- Airfield Management inspected area after each day's work
- Apron returned to 433d each night for their use

Accommodated Future Slab Replacement Projects
- Injection tubes countersunk beneath bottom of pavement

Reduced FOD Potential
- Capped injection holes with rapid set epoxy
- Buffed caps after they set to restore a smooth pavement surface

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DUNS: 556910990

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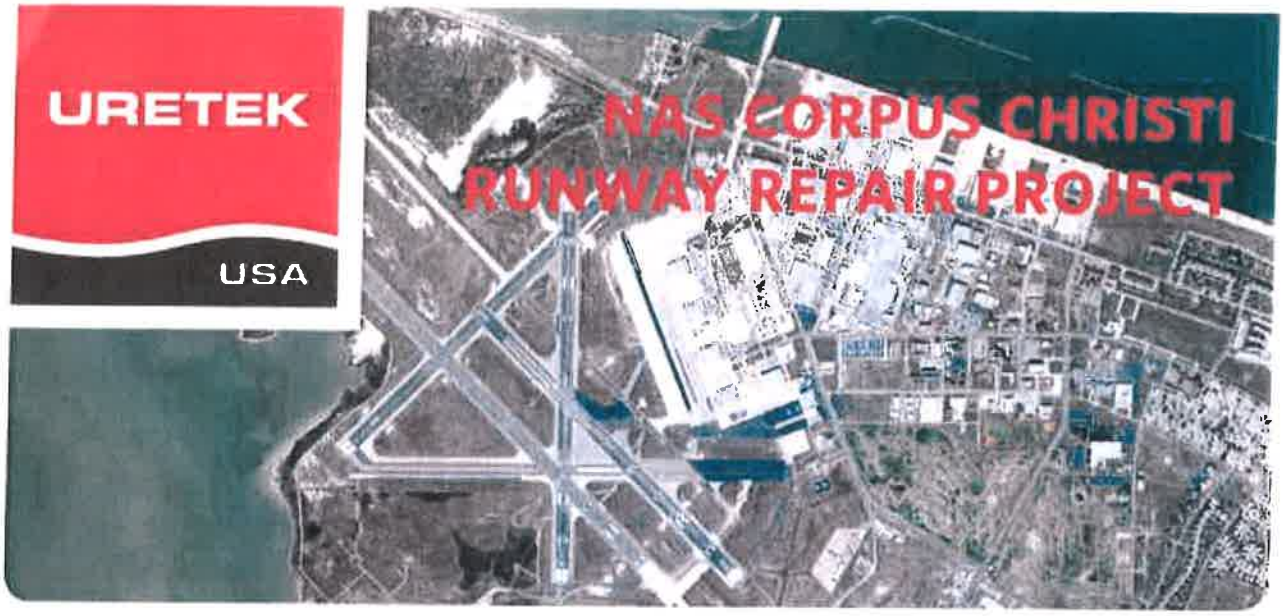
Vice President, Sales
Ernie G. Huse
Colonel, USA (Ret)
Federal Program Manager

URETEK USA

URETEK USA



NAS CORPUS CHRISTI RUNWAY REPAIR PROJECT

PROBLEM

LOCATION: **NAVAL AIR STATION, CORPUS CHRISTI**

SITUATION:

Significant settlement developed in Runway 13L/31R at NAS Corpus Christi, Texas. Conversations with the client revealed that while the previous sliplining repair of the 36" Reinforced Concrete Pipe (RCP) storm culvert corrected leaking issues and prevented further loss of soil, it did not address the poor compaction and loss of support for the pavement structure.

By the time URETEK USA was contacted, the runway was already shut down due to operational problems caused by the settlement issues. The settled areas were particularly troublesome to the small aircraft operations at NAS Corpus Christi.

FACTORS FOR CONSIDERATION:

URETEK USA was asked to respond immediately and provide a long-term runway stabilization solution so aircraft operations could resume safely.

LEADERSHIP

Leader in cost and time savings, accuracy and precision

Environmentally inert materials and processes

INNOVATION

Inventor of polymer-based technology in use today

Most patents in industry - Period

Ongoing engineering research and development

EXPERTISE

Developed the industry's most accurate, monitoring process

Developed URETEK 486 STAR material

Pioneered the URETEK Deep Injection Process

Most experienced technicians and best safety record in industry

PROVEN SUCCESS

85,000+ successful projects

20+ years experience solving complex soil/pavement problems

Industry-leading warranty and customer care

SOLUTION

URETEK USA's solution involved the URETEK Deep Injection® (UDI) Soil Stabilization process, which relies on a two-part polymer system, injected beneath the pavement through pre-drilled holes of 5/8-inch diameter (penny-size). The polymer system travels through tubing to elevations beneath the pavement surface characterized by weak soils (determined by cone penetration testing). Expansion of the polymer compacts the surrounding soils - eliminating voids in the soil mass and improving bearing capacity.

For this Runway Repair project, injections were done at 2 depths in order to stabilize the soil. Pre-injection dynamic cone penetrometer (DCP) results indicated that soil compaction was inconsistent, thus injection was more difficult than anticipated. Although URETEK USA personnel had virtually no soils data before starting the project, less water and coarser sands were expected. Supervisor Sam Hendricks and his operations team developed and employed innovative drilling and injection techniques. In spite of the tendency of the holes to collapse due to the very fine sands and water, their innovations allowed the polymer to reach where it was needed most.

RESULTS

- URETEK USA stabilized the soft soils in the work area down to -10' elevation (measured from the surface) using the UDI process.
- The increased flow through the leaks in the junction boxes indicated the treatment was improving the stability of the pavement system by displacing water from under the runway. The soils outside the junction boxes were stabilized after the runway treatment was completed.
- After the URETEK USA work was completed, the asphalt contractor executed a mill-and-overlay operation on top of the stabilized soil.

BENEFITS

EMERGENCY REPAIR PROJECT

MOBILIZATION: 5 DAYS FROM NTP

PROJECT DURATION: 4 DAYS

RUNWAY REOPENED:
7 DAYS FROM PROJECT START

Time Savings - URETEK USA completed the project within 4 days.

Emergency Response - From the date of the initial site investigation, URETEK USA mobilized in 5 days. The runway was back up and running in a total of 7 days, with URETEK's portion completed in 4 days.

Longevity - in the nearly 2 years since project completion, no further settlement has occurred in the repaired area.

URETEK USA, Inc.
P.O. Box 1929
Tomball, TX 77377-1929

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Vice President, Sales

Ernie Huse, COL (Ret)
Federal Program Manager

URETEK USA

Boudreau Engineering, Inc.

PAVEMENT DESIGN, EVALUATION & MATERIALS CONSULTANTS

November 27, 2018

Matthew Sotirin, EIT
Civil Engineer I
URETEK USA, Inc.
PO Box 1929
Tomball, Texas 77377

Subject: Hydro-Insensitivity Certification for
URETEK High Density Polyurethane Grout
486STAR 4# Reg (Covestro)
BEI Project No. 18-079

Dear Mr. Sotirin:

Boudreau Engineering, Inc. (BEI), in association with TEC Services, has completed the required inspection and physical property testing of a high density polyurethane grout referenced as 486STAR 4# Regular. The testing was conducted in general conformance with the Georgia Department of Transportation (GADOT) Test Procedure: *Hydro-Insensitivity of High Density Polyurethane Grout – Panel Test (August 2018).*

A dry panel and a wet panel were injected with the polymer on the afternoon of November 14, 2018. The attached data form documents the particulars with respect to material and equipment utilized, as witnessed by Mr. Richard Boudreau.

The GADOT Panel Test Procedure requires a minimum of 90 percent density retention between the wet panel samples and the dry panel samples. **Test results indicate that this requirement was satisfied**ð as highlighted at the bottom of the data form included on page 2. The specified minimum compressive strength requirement of 60psi was also achieved, as illustrated on page 3 (average of 71.9psi) with samples shot into 4-in diameter x 8-in height concrete cylinder molds (free rise).

If you have any questions, please do not hesitate to contact me at (404) 388-1137.

Sincerely,

Richard L. Boudreau, P.E.
Executive VP ï Director of Engineering

attachment: Panel Test Data Sheet
clients\uretek\panel tests\covestro 486star 4lb reg-14nov2018.docx

Hydro-Insensitivity of High Density Polyurethane Grout - Panel Test Data Sheet

Polymer Type & Manufacturer: Covestro - 486Star 4# Reg

Lot # & Date on Component Containers: Resin: Covestro 486STAR 4# (Lot #PB95018019)
Catalyst: MONDUR MR (Lot #03801792)

PROPORTIONING EQUIPMENT

Proportioner: Graco Reactor E-30

Hose Length (ft.): 7.5ft

Gun: Graco GX-7

Gun Set-up: A20

A/B/H Temperature (°F): 110

A/B Pressure (psi): 1050/1050

CALIBRATION TEST

0:00:00 Time at Beginning of Injection (HH:MM:SS)

0:00:17 Time at End of Injection (HH:MM:SS)

10 "clicks"

2.6 Sample Weight (lbs.) vs. 2.6 Certified Flow Meter Weight (lbs.)

INJECTION PROCEDURE - DRY

√ (√) 5 lbs. of Material Injected into Box

√ (√) After 10 minutes, Remove Top Cover

√ (√) After 30 minutes, Sample the HDP Material

INJECTION PROCEDURE - Wet

√ (√) Add 15 lbs. of Water into Box

√ (√) 5 lbs. of Material Injected into Box - 10.8lbs injected

√ (√) After 10 minutes, Remove Top Cover

√ (√) After 30 minutes, Sample the HDP Material

MATERIAL ANALYSIS

	Dry Injection Shots		Wet Injection Shots	
	Density (pcf)	Compressive Strength (psi)	Density (pcf)	Compressive Strength (psi)
Sample 1	4.70	60.5	4.60	58.4
Sample 2	4.70	57.1	4.60	58.7

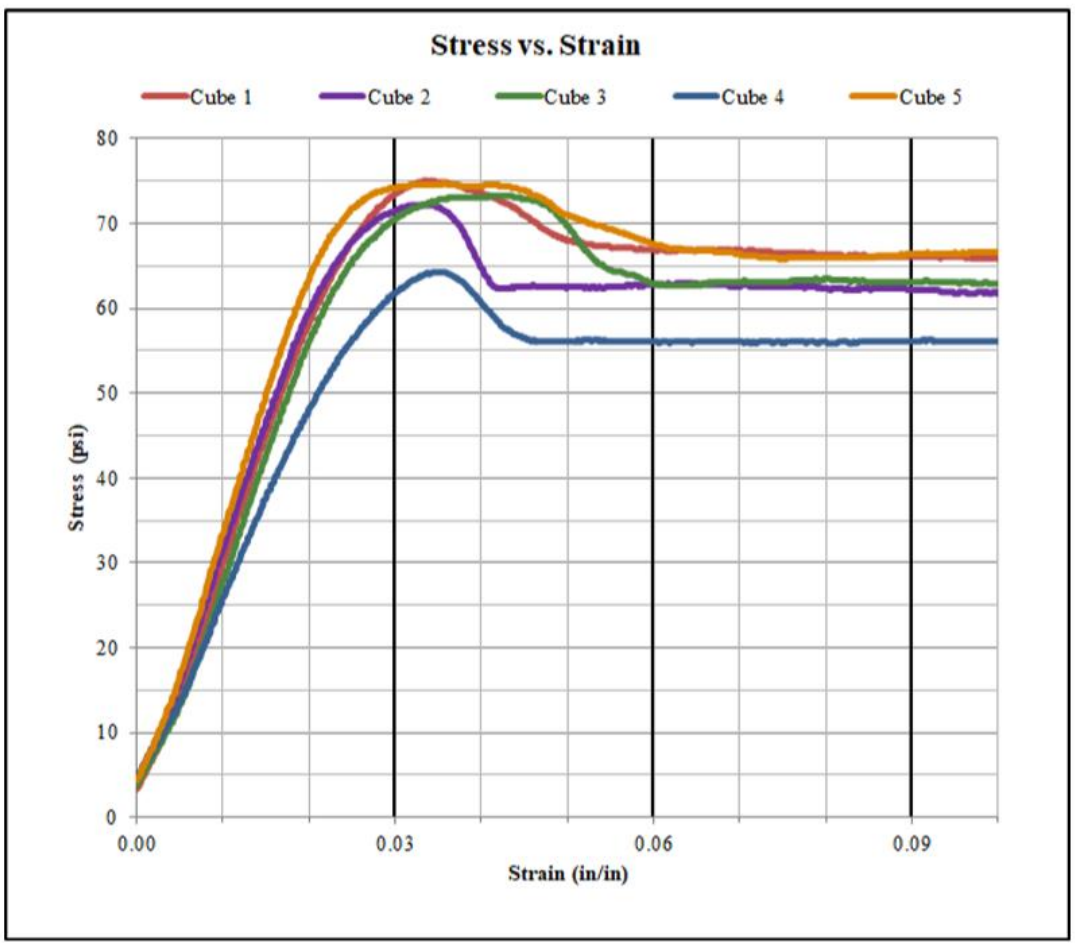
	% Retention of Density
Sample 1	97.9%
Sample 2	97.9%

Technician: Richard L. Boudreau

Date: 14-Nov-18

ASTM D1621/D1622 Testing (Set of 5 Specimens) on Free Rise Samples injected into 4òx8ò cylinder molds and trimmed to nominal 2ò cubes

#	Width (in.)	Length (in.)	Height (in.)	Area (in^2)	Peak Load (lbf.)	Peak Stress (psi)	Modulus (psi)	Bulk Density (pcf)
1	2.200	2.186	1.990	4.8092	361	75.1	3268	4.4
2	2.203	2.183	2.022	4.8091	347	72.2	3158	4.1
3	2.191	2.198	2.032	4.8158	353	73.3	3068	4.0
4	2.193	2.186	2.035	4.7939	308	64.2	2417	4.1
5	2.184	2.185	1.889	4.7720	357	74.8	3445	4.3
Avg	**2.194**	**2.188**	**1.994**	**4.8000**	**345**	**71.9**	**3071**	**4.2**



TEST PROCEDURE FOR HYDRO-INSENSITIVITY OF HIGH DENSITY POLYURETHANE GROUT- PANEL TEST

PANEL TEST PROCEDURE

August 2018

Georgia Department of Transportation

TEST PROCEDURE:
HYDRO-INSENSITIVITY OF HIGH DENSITY POLYURETHANE GROUT-PANEL TEST

GEORGIA DEPARTMENT OF
TRANSPORTATION

August 2018

TABLE OF CONTENTS

1. SCOPE

1.1 This procedure is used to demonstrate that the high density polyurethane material meets the 90% density and compressive strength requirements in dry and wet conditions.

2. APPLICABLE DOCUMENTS

2.1 ASTM D 1622 Standard Test Method for Apparent Density of Rigid Cellular Plastics.

2.2 ASTM D 1621 Standard Test Method for Compressive Properties of Rigid Cellular Plastics.

2.3 ASTM D 1623 Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.

3. TERMINOLOGY

3.1 **Slabjacking** is used to correct settlement and stability problems associated with concrete slabs positioned over unstable ground materials. As defined in Ground Improvement Technology Manual, FHWA DP-3 (1996), slabjacking procedures include:

Raising or leveling;

Under-slab void filling (no raising);

Grouting slab joints; and

Asphalt subsealing.

Proprietary methods for slabjacking utilize chemical grouts to create a reaction to fill the void, seal the crack, or create uplift pressure to realign the slab.

3.2 **Hydrophilic** chemical grouts can produce either closed cell foam or a non-cellular gel when mixed with water. Hydrophilic chemical grout attracts water and is able to bond to wet surfaces. This product seeks out water as it reacts and allows the resin to work its way into water filled pores. Hydrophilic chemical grouts are flexible and resilient after full cure and will allow movement to occur in the structure without damaging the seal or bond.

3.3 **Hydrophobic** chemical grouts require a catalyst that is blended into the resin prior to installation. The dosage of catalyst added to the resin controls the reaction time and the volume of foam produced. Hydrophobic chemical grouts repel water after activation. Hydrophobic resins cure rigid and do not recover from compression. Hydrophobic chemical grout is low viscosity and permeates loose and non-consolidated soils readily.

4. SUMMARY OF METHOD

4.1 This laboratory test procedure is used to ensure that the High Density Polymer Material maintains 90% of the density of the dry polyurethane grout when injected directly into water.

4.2 Hydro-insensitivity is the inherent chemical property of a material to be unaffected by water (i.e. to behave in such a manner as if there was no water present). For hydro insensitive polyurethanes (hydrophobic), the reacting components will polymerize even in the presence of water. This procedure tests and compares dry injection shots and wet injection shots.

5. SIGNIFICANCE AND USE

5.1 Polyurethane grouting is a grouting technique that employs a high density expanding polymer used as fill to densify and stabilize low-density compressible soils. The process may be used to fill voids beneath concrete slabs, or behind walls, or may be used to cutoff water flow through concrete joints. The grout, injected through predrilled injection ports, or "packers", expands under reaction to fill the crack or void. Polyurethane grouts can be single or multi-component grouts and can react when coming in contact with water or require a reactant.

6. APPARATUS

6.1 Provide a wood box constructed of 2" x 4" framing and ¾" thick plywood on the top and bottom as indicated in the detail. The box dimensions will be 48" in length and 48" in width by 3" in depth. Ensure that the bottom seams of the box are sealed with latex caulk so that the box is capable of holding water. Provide an injection tube with ½" diameter steel or copper tubing on the top in the center of the box for injecting HDP material. The plywood on the top of the box will be fixed with 1½" long wood screws. The inside of the box will also contain four 2" x 4" blocks (3½" by 9" by 1½"in dimension) spaced equidistant at 9½" from the injection tube and parallel to the sides of the box.

6.2 Provide a stop watch to keep time.

6.3 Provide axle grease to coat the inside of the box so that the HDP material can be easily removed.

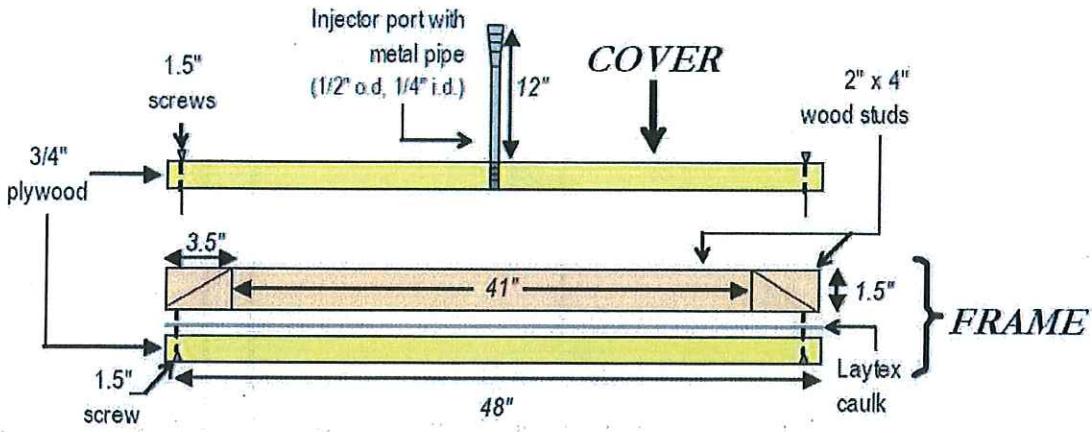


Figure 1 Apparatus - Side View

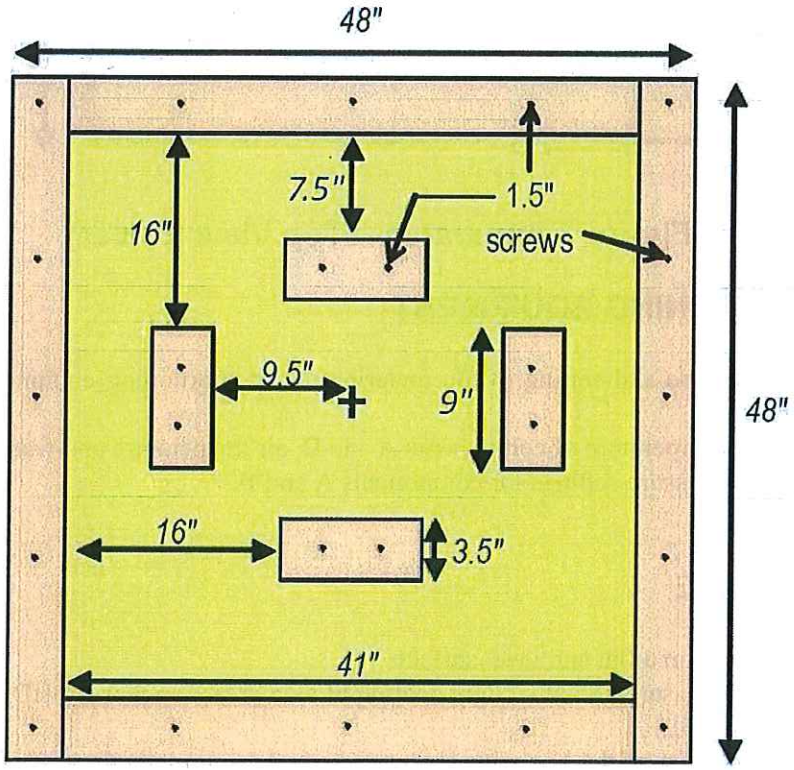


Figure 2 Apparatus – Top View (Frame)

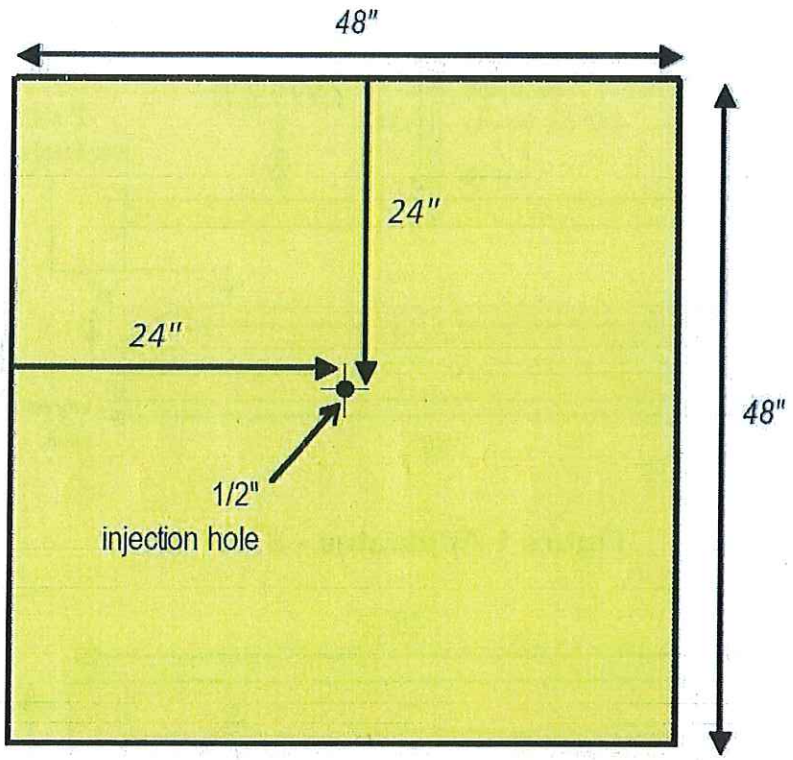


Figure 3 Apparatus – Top View (Cover)

7 PROPORTIONING EQUIPMENT

7.1 Record the type and setting of the metering and proportioning equipment for the HDP material.

7.2 Record the temperature of components A and B, air temperature and water temperature.

7.3 Record the pressure settings for components A and B.

8 PROCEDURE

8.1 Place the box on a flat and level surface.

8.2 Coat the inside surface with a light coating of axle grease so that the HDP material can be easily removed.

8.3 Fix the top cover of the box with 1½" wood screws to provide the necessary confinement for the HDP material.

8.4 Perform a calibration injection of the **HDP** material and record the time required to inject 5 lbs. of material. Record the time. Weigh the sample to check against the certified flow meter weights to ensure correct calibration.

8.5 Inject the **HDP** material into the box using 5 lbs. of material. After 10 minutes of completing the injection, remove the top cover off the box. After 30 minutes, sample the **HDP** material for density (ASTM D1622) and compressive strength (ASTM D1621) testing. Density and compressive strength samples shall be taken from the center portion ofthe box in the interior of the 2" x 4" blocks.

8.6 Repeat steps 8.2 and 8.3. Add 15 lbs. of water to the box and repeat step 8.5.

Figure 4 Frame Assembly

Figure 5 Sampling Area

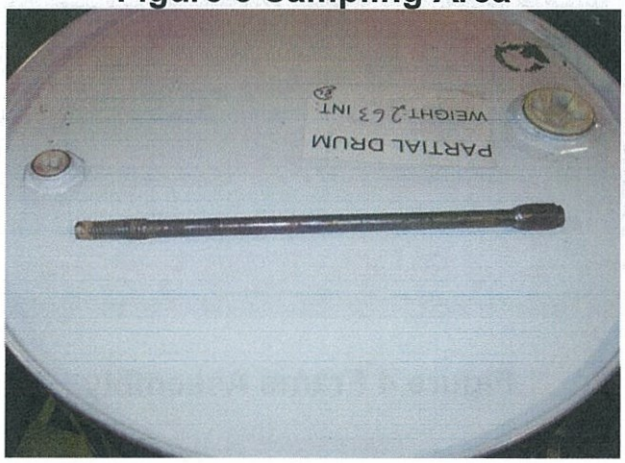


Figure 6 Injector

Figure 7 Cover

9 DOCUMENTATION

Report the following:

9.1 Type and settings of the metering and proportioning equipment.
9.2 Temperatures and pressures of components A, B, air and water during test.
9.3 Density and compressive strength results of the HDP in the dry and wet conditions.
9.4 Percent of density: **PASS or FAIL.**

APPENDIX

Hydro-Insensitivity of High Density Polyurethane Grout-
Panel Test Data Sheet

Polymer Type & Manufacturer _____

Lot # & Date on Component Containers_____

PROPORTIONING EQUIPMENT

Proportioner_____ Hose Length (ft.) _____

Gun _____ Gun Set-up _____

A/B/H Temperature (°F) _____ A/B Pressure (psi) _____

CALIBRATION TEST

_____Time at Beginning of Injection (HH:MM:SS)

_____Time at End of Injection (HH:MM:SS)

_____Sample Weight (lbs.) vs. _____Certified Flow Meter Weight (lbs.)

INJECTION PROCEDURE-DRY

_____(✓) 5lbs. of Material Injected into Box

_____(✓) After 10 minutes, Remove Top Cover

_____(✓) After 30 minutes, Sample the HDP Material

INJECTION PROCEDURE -WET

_____(✓) Add 15 lbs. of Water into Box

_____(✓) 5 lbs. of Material Injected into Box

_____ (✓) After 10 minutes, Remove Top Cover

_____(✓) After 30 minutes, Sample the HDP Material

MATERIAL ANALYSIS

	Dry Injection Shots		Wet Injection Shots	
	Density (pcf)	Compressive Strength (psi)	Density (pcf)	Compressive Strength (psi)
Sample 1	_____	_____	_____	_____
Sample 2	_____	_____	_____	_____

	% Retention of Density
Sample 1	_____
Sample 2	_____

Technician_____

Date_____

URETEK

Safety and Health Manual

URETEK USA, Inc. [M] PO Box 1929, Tomball, Texas 77377 [S] 13900 Humble Road, Tomball, Texas 77375 [T] 888.287.3835 [W] uretekusa.com

Table of Contents

Policy Statement

As an employee of URETEK you are personally responsible to know, to understand, and to strictly adhere to the policies outlined in this manual.

You have received training in these safety policies and you will have the opportunity to review some of these policies periodic training sessions. There will be updates and additions to this manual and it is your job to carefully add these to your book and completely understand and implement the new information.

Your personal safety and wellbeing, as well as that of your fellow employees and workers, is your first obligation and responsibility. You must think about and carry out safe work, safe conduct, and safe job management. Your health, your employment, your future, and your family all depend on you being safe!

I know I can count on you for your help in assuring safety in the work places of URETEK Your suggestions for improving any safety procedure or bringing our attention to any safety related issue is always welcomed and appreciated.

Sincerely,

Brent J. Barron
President

Goals

Safety begins at the top and goes downward throughout the company. The primary goal of URETEK is to continue operating a profitable business while protecting employees from injuries, illness, or harm. This can be achieved in part by delegating responsibility and accountability to all involved in this company's operation.

- Responsibility: Having to answer for activities and results.
- Accountability: The actions taken by management to insure the performance of responsibilities. In other words, to reach our goal of a safe workplace everyone needs to take responsibility and be held accountable.

Benefits of achieving our goals are:

- Minimizing of injuries and accidents.
- Minimizing the loss of property and equipment.
- Elimination of potential fatalities.
- Elimination of potential permanent disabilities.
- Elimination of potential OSHA fines.
- Reductions in workers' compensation costs.
- Reductions in operating costs.
- Having the best Safety and Health conditions possible in the workplace.

Management Commitment

The management of URETEK is committed to the company's safety policy, and to provide direction and motivation by:

- Establishing company safety goals and objectives.
- Developing and implementing a written Safety and Health program.
- Ensuring total commitment to the Safety and Health program.
- Facilitating employees' safety training.
- Establishing responsibilities for management and employees to follow.
- Ensuring that management and employees are held accountable for performance of their safety responsibilities.
- Establishing and enforcing disciplinary procedures for employees.
- Reviewing the Safety and Health program annually, and revising or updating as needed.

Assignment of Responsibility

Safety Coordinator

It is the duty of the Safety Coordinator to assist the Supervisor and all other levels of Management in the initiation, education, and execution of an effective safety program including the following:

- Reviewing the safety program with new employees.

- Following up on recommendations, suggestions, etc., made at Safety Meetings.
- Assisting employees in the execution of safety policies.
- Conducting safety inspections on a periodic basis.
- Addressing existing or potential hazards as needed.
- Preparing accident reports and investigations.
- Maintaining an adequate stock of first aid supplies and other safety equipment to insure their immediate availability.
- Becoming familiar with OSHA regulations and local and state safety codes.
- Emphasizing to employees that accidents create unnecessary personal and financial losses.

Supervisor
It is the responsibility of the Supervisor to establish a work environment that ensures that safety and health is managed in the same manner and with the same degree of emphasis as production, cost, and quality control, by:

- Regularly emphasizing that accident and health hazard exposure prevention are not only moral responsibilities, but also a condition of employment.
- Identifying procedures that could contribute to accidents which can result in injuries and property damage.
- Participating in safety and health related activities, including routinely attending safety meetings, reviews of the facility, and correcting employee behavior that can result in accidents and injuries.
- Spending time with each person hired explaining the safety policies and the hazards of his/her particular work.
- Ensuring that initial orientation of "new hires" is carried out.
- Not short-cutting safety for expediency, or allowing workers to do so.
- Enforcing safety rules consistently and following the company's discipline and enforcement procedures.
- Conducting periodic workplace safety inspections and correcting noted safety violations.

Employee
It is the duty of each and every employee to know the safety rules and conduct their work in compliance with these rules. Disregard of the safety and health rules shall be grounds for disciplinary action up to and including termination. It is also the duty of each employee to make full use of the safeguards provided for their protection. Every employee will receive an orientation when hired and receive a copy of the work and safety rules that apply to their work duties.

Employee responsibilities include the following:

- Reading, understanding, and following safety and health rules and procedures.
- Signing the Policies and Procedures Acknowledgement form.
- Wearing Personal Protective Equipment (PPE) at all times.

- Wearing suitable work clothes as determined by the Supervisor.
- Performing all tasks safely as directed by their Supervisor.
- Reporting ALL injuries, no matter how slight to their Supervisor immediately, and seeking treatment promptly.
- Knowing the location of first aid supplies, firefighting equipment, and other safety devices.
- Attending required safety and health meetings.
- Not performing potentially hazardous tasks, or using any hazardous material until properly trained, and following all safety procedures when performing those tasks.
- STOPPING AND ASKING QUESTIONS IF EVER IN DOUBT ABOUT THE SAFETY OF ANY OPERATION.

Training and Education

Training is an essential component of an effective safety and health program addressing the responsibilities of both management and employees in the workplace. Training is most effective when incorporated into other education on performance requirements and job practices.

Training programs are provided as follows:
- Initially when the safety and health plan is developed or upgraded.
- For all new employees before beginning work.
- When new equipment, materials, or processes are introduced.
- When procedures have been updated or revised.
- When incidents/accidents show that safety performance must be improved.

Besides the standard training, employees should also be trained in the recognition of hazards – to be able to look at an operation and identify unsafe acts and conditions.

A list of typical hazards employees should be able to recognize may include:
- Fall Hazards: Fall exposures from ladders (straight and step) and any other surface more than 6 feet above the floor.
- Electrical Hazards: Damaged cords, outlets, overloads, extension cords, portable tools (broken casing or damaged wiring), grounding, metal boxes, switches, Ground Fault Circuit Interrupters (GFCI).
- Housekeeping Issues: Exits, walkways, floors, trash, storage of materials (Hazardous and Non-Hazardous), trips/slips, uneven flooring, etc.
- Fire Hazards: Oily-dirty Rags, combustibles, fuel gas cylinders, exits blocked, damaged electrical cords, etc.
- Health Hazards: Loss of hearing from noisy environments, and eye injury due to flying objects, etc.

Safety Meetings

Employees of URETEK shall attend and participate in periodic safety meetings. The safety meeting shall be conducted by the Supervisor. Safety problems that have arisen or that are anticipated shall be discussed along with any other work site or operations topics. The meeting shall be kept a valuable educational experience by:

- Keeping the meetings moving.
- Starting and stopping on time.
- Using illustrated material and demonstrations to make the point.
- Discussing each topic thoroughly, providing handouts if possible.
- Reviewing accidents, injuries, property losses, and "near misses".

The meetings must be documented using the appropriate form.

Recordkeeping and OSHA Review

In the event of a fatality (death on the job) or a work-related hospitalization, amputation, or loss of an eye, contact the EMERGENCY CHIEF, **KEITH MCCLURE**, office: **(281) 351-7800** or **(888) 287-3835** and cell: **(713) 918-9386**.

The EMERGENCY CHIEF, **KEITH MCCLURE** will turn in report fatalities to the OSHA National Emergency Line at (800) 321-OSHA (6742), or the local Regional OSHA Office, within 8 hours after the occurrence. Other reportable conditions noted above will be reported within 24 hours.

If an injury or accident should occur, employees are to report the injury to their Supervisor as soon as possible. A log entry and summary report shall be maintained for every recordable injury and illness. The entry should be done within 7 days after the injury or illness has occurred. The OSHA 300 or equivalent shall be used for the recording.

An OSHA recordable injury or illness is defined as an injury resulting in loss of consciousness, days away from work, days of restricted work, or medical treatment beyond first aid.

First Aid includes:

- Tetanus shots.
- Band-Aids or butterfly bandages.
- Cleaning, flushing or soaking wounds.
- Ace bandages and wraps.
- Non-prescription drugs at non-prescription strength (Aspirin, Tylenol, Etc.).
- Drilling fingernails/toenails.
- Eye patches, eye flushing and foreign body removal from eye with Q-tips.
- Finger guards.
- Hot or cold packs.

- Drinking fluids for heat stress.

An annual summary of recordable injuries and illnesses must be posted at a conspicuous location in the workplace and contain the following information: Calendar year, company name-establishment name, establishment address, certifying signature, title, and date. If no injury or illness occurred in the year, zeroes must be entered on the total line at the bottom of the form.

The OSHA logs will be evaluated by management to determine trends or patterns in injuries in order to appropriately address hazards and implement prevention strategies

Emergency Team Members:

Main line phone number: **(281) 351-7800**

- **EMERGENCY CHIEF: KEITH MCCLURE – EXT 131.**
- **EMERGENCY ASSISTANT: CHRIS PHELPS – EXT 125.**
- **OPERATOR: ALOMA CAMPAGNA – EXT 139.**
- **FACILITY MANAGER: CHRIS PHELPS – EXT 125.**

Aerial Lifts

Reference: OSHA 29 CFR; 1910.67, 1926.453, 1926.952

Purpose
The purpose of this section is to ensure safe operations during aerial lift work.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Types of Aerial Lifts
Types include extensible boom platforms, aerial ladders, articulating boom platforms, vertical towers, or a combination of any such device.

Conformance dates for Aerial Lifts
Aerial lifts acquired for use on or after January 22, 1973 shall be designed and constructed in conformance with the applicable requirements of the American National Standards for "Vehicle Mounted Elevating and Rotating Platforms", ANSI A92.2-1969, including appendix. Aerial lifts acquired before January 22, 1973 which do not meet the requirements of ANSI A92.2-1969 may not be used unless they have been modified so as to conform to the applicable design and construction requirements of ANSI A92.2-1969.

Procedure

Responsibility
It is the responsibility of the Supervisor or designee to monitor and maintain the process within their division.

General Requirements
- General requirements for operation using aerial lifts include:
- Lift controls shall be tested each day prior to use to determine that such controls are in safe working condition. Tests shall be made at the beginning of each shift during which the equipment is to be used to determine that the brakes and operating systems are in proper working condition.
- Only authorized persons shall operate an aerial lift.
- Belting off to an adjacent pole, structure, or an equivalent while working from an aerial lift is not permitted.
- Employees shall always stand firmly on the floor of the basket and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.
- A personal fall arrest system shall be worn, and a lanyard attached to the boom or basket when working from an aerial lift. Refer to the Fall Protection Section.
- Boom and basket load limits specified by the manufacturer shall not be exceeded.

- The brakes shall be set and when outriggers are used, they shall be positioned on pads or a solid surface.
- Wheel chocks shall be installed before using an aerial lift on an incline, provided they can be safely installed.
- An aerial lift truck shall not be moved when the boom is elevated in a working position with a man in the basket, except for equipment, which is specifically designed for this type of operation.
- Articulating boom and extensible boom platforms, primarily designed for personnel carriers, shall have both platform (upper) and lower controls. Upper controls will be in or beside the platform within easy reach of the operator. Lower controls shall provide for overriding the upper controls. Controls will be plainly marked as to their function. Lower level controls shall not be operated unless permission has been obtained from the employee in the lift, except in case of emergency.
- The insulated portion of an aerial lift shall not be altered in any manner that might reduce its insulating value.
- Before moving an aerial lift for travel, the boom(s) shall be inspected to see that it is properly cradled, and outriggers are in stowed position.
- All employees must stay at least 10 feet away from overhead power lines.

Training

OSHA requires a qualified person to train all aerial lift users. The training must include:

- Any electrical, fall, and falling object hazards.
- Procedures for dealing with hazards.
- Correct operation of the lift (including maximum intended load and load capacity).
- Manufacturer requirements.

If the hazards change, the type of aerial lift changes, or a worker is not operating a lift properly, workers shall be retrained.

Audits and Inspections

Reference: OSHA 29 CFR; 1910.119

Purpose
The purpose of this section is to verify and ensure that policies and procedures are being complied with along with state and federal regulatory requirements.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Safety Audits/Inspections
These are organized verification procedures including auditing of facility equipment, operational trucks & equipment, chemical storage, and training. Audits and inspections are required to be documented using the Facility Inspection and Field Operation Inspection forms.

Procedure

Responsibility
It is the responsibility of the Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
General auditing and inspection schedules include:

- Daily inspections/audits will be conducted on operational equipment such as trucks, cranes, and forklifts using daily inspection forms (if applicable).
- Monthly audits will be conducted on equipment as needed.
- Yearly audits will be conducted by the respective or designee of facilities or yards such as DOT recordkeeping, OSHA recordkeeping, and operating procedures.
- Contractors that perform work on behalf of the Company at the well site will be audited on an initial basis; for approved contractors, whose performance is questionable, additional audits may be conducted. Refer to the Contractor Safety Questionnaire.
- Shop personnel assigned to facilities may be asked to participate in safety audits and inspections by answering questions about how they follow their procedures in day-to-day activities. Refer to Facility Inspection form.
- Random inspections for field operations will be conducted by The Supervisor or designate; field personnel may be asked to participate in safety audits and inspections by answering questions about how they follow their procedures in day-to-day activities. Refer to Field Operations Inspection form.
- Findings will be reviewed at the conclusion of the audit and/or inspection. If findings show room for improvement, then the Operations Manager will make any and all efforts to correct and implement corrective actions.

Bloodborne Pathogens

Reference: OSHA 29 CFR; 1910.1030

Purpose
The purpose of the Bloodborne Pathogens Exposure Control Plan is to minimize or eliminate significant risk of employee exposure to all bloodborne pathogens and to provide for the effective evaluation, treatment, and follow-up of employees who are involved in a potential exposure incident.

Scope
This section applies to all URETEK employees and contractors.

Definitions

Bloodborne Pathogens
Pathogenic microorganisms that are present in human blood and can cause diseases in humans. These pathogens include, but are not limited to, Hepatitis B Virus (HIV) or Human Immunodeficiency Virus (HIV).

Contaminated
Contamination includes the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry
Contamination includes laundry that has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps
Contamination includes any contaminated object that can penetrate the skin, including, but not limited to, needles, scalpels, broken glass, and broken capillary tubes.

Decontamination
Decontamination includes the use of physical or chemical substance to remove, activate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Engineering Controls
Controls include objects that are engineered (e.g. sharps, disposal containers, self-sheathing needles) to isolate or remove the bloodborne pathogens from the workplace.

Hand washing Facilities
This is a facility providing an adequate supply of running potable water, soap, single-use towels

or hot air-drying machines.

Occupational Exposure
Reasonable anticipated skin, eye, mucous membrane, or contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Personal Protective Equipment (PPE)
This is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g. uniforms, pants, shirts, or blouses) not intended to function as protection against a hazard is not considered to be PPE.

Universal Precautions
All human blood and body fluids will be considered potentially infectious materials and appropriate precautions will be taken.

Procedure

Responsibility
It is the responsibility of the respective Manager or designee to monitor and maintain the process within their division.

General Requirements
An important element to implementing an effective exposure control plan is to identify job classifications which have the potential exposure to bloodborne pathogens. This determination is made without regard to the use of PPE.

The following is a list of all job classification/job functions at URETEK's operations in which all employees have potential occupational exposure:
- Operators.
- Field Engineers.
- Mechanics.
- Shop Personnel.

Methods of Compliance
Engineering and work practice controls shall be utilized to eliminate or minimize employee exposure with blood or other potentially infectious materials, including:
- Accessible hand washing facilities supplied with soap and running water.
- Appropriate antiseptic hand cleaner in conjunction with clean cloth/paper towels or antiseptic towelettes when hand washing facilities are not feasible.
- Appropriate containers for disposable sharps that are designed so as not to require employees to reach in by hand to store or process the sharp.
- Appropriate containers for storage, transport or shipment of blood or other potentially infectious materials, regulated waste, and contaminated laundry.

- Appropriate and accessible PPE (e.g. gloves, aprons, masks, etc.).
- Work practice controls that reduce the likelihood of exposure to bloodborne pathogens by specifying task performance procedures. These include, but are not limited to:
- Hand washing immediately after removing gloves or other PPE and after any unprotected contact with blood or other infectious material.
- When provision of hand washing facilities is not feasible, use of an antiseptic hand cleaner in conjunction with paper towelettes shall be utilized.
- Contaminated needles/sharps shall not be recapped, removed, broken, or sheared. The entire syringe, scalpel, or sharp shall be disposed of in an approved sharps container.
- Eating, drinking, smoking, handling of contact lenses and the application of cosmetics is prohibited in any area where bloodborne pathogens might be present. Food and drink may not be stored in refrigerators, freezers, shelves, cabinets, or on countertops or other surfaces where blood or other potentially infectious materials are present.
- Equipment with may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be cleaned and decontaminated by trained employees wearing PPE.
- All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

When there is the potential for occupational exposure to bloodborne pathogens, Company employees must be provided with appropriate PPE at no cost. Appropriate equipment includes, but is not limited to:

- Rubber gloves.
- Gowns or aprons.
- Face shields and goggles.
- Safety glasses with side shields.
- Mouthpiece for artificial respiration.

PPE must be used under the following conditions:

- Gloves must be worn when it is reasonably anticipated that the worker may have skin contact with blood or other potentially infectious materials and when handling or touching contaminated items or surfaces.
- Whenever there is the possibility that splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated that could contaminate the eyes, nose or mouth employees must wear masks in combination with eye protection devices such as goggles or glasses.
- Depending on the task and degree of occupational exposure anticipated, employees are required to wear protective clothing such as gown, aprons, lab coats or similar outer garments.
- Mouthpieces must be supplied to those who are trained in CPR and who could reasonably be expected to use life-saving skills.

Housekeeping

General housekeeping activities to prevent bloodborne pathogen exposure shall include:

- Worksites are to be maintained in a clean and sanitary condition. An appropriate written schedule for cleaning and method of decontamination must be determined and implemented.
- All equipment, environmental, and working surfaces are to be cleaned and decontaminated after contact with blood or other potentially infectious materials.
- Contaminated work surfaces are decontaminated with an appropriate disinfectant such as chlorine bleach, immediately as soon as feasible when surfaces are overtly contaminated or if the surface may have become contaminated.
- Protective coverings, such as plastic wrap, aluminum foil, or imperviously backed absorbent paper used to cover equipment and environmental surfaces are to be removed and replaced as soon as feasible when overtly contaminated or at the end of the shift, if contaminated.
- All bins, pails, cans, and similar receptacles intended for reuse which likely became contaminated are inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.
- Broken glassware which may be contaminated is not to be picked up directly with hands and is to be cleaned up using mechanical means, such as a brush and dustpan, tongs, or forceps.
- Reusable sharps, which are contaminated, are not to be stored nor processed in a manner that requires employees to reach by hand into the containers holding sharps.
- Regulated waste, such as contaminated sharps, is discarded immediately or as soon as feasible in containers that are closable, puncture-resistant, leak-proof on sides and bottom, and labeled or color-coded.
- Contaminated sharps containers are to be maintained in an upright manner throughout use and are to be replaced routinely and not allowed to overfill.
- When moving contaminated sharps containers from the area of use, they are to be closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.
- If leakage is possible, the contaminated sharps containers are placed in a secondary container which is closable, contains all contents, prevents leakage during handling, storage, transport, or shipping and are labeled or color-coded.
- Reusable contaminated sharps containers are not to be opened, emptied, or cleaned manually or in any other manner, which would expose employees to the risk of injury.
- All regulated wastes are to be placed in containers, which are closable, contains contents and prevents leakage during handling, storage, transport, and shipping.
- Regulated waste containers are labeled or color-coded.
- The regulated waste containers are closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.
- If the outside of regulated containers become contaminated, they are to be placed in a secondary container, which meets all the requirements described previously.

- All regulated waste is to be disposed of in accordance with applicable Federal, State and Local Rules and Regulations.

Hepatitis B Vaccinations, Post-Exposure Evaluation, and Follow-up
All employees with potential occupational exposure to bloodborne pathogens will be eligible to receive the Hepatitis B vaccination series at no cost. However, if any Company employee wishes to receive a pre-exposure HBV vaccine, one will be made available to the employee at no charge.

Employees who are newly hired or newly assigned to designated job classifications will be given the opportunity (after training) to receive the vaccination within ten (10) working days of their assignment/employment. Employees may be exempted from this vaccination if he/she has the following conditions:

- The employee has already received the complete Hepatitis B vaccination series.
- Antibody testing has revealed the employee is immune.
- The vaccine is contraindicated for medical reasons.
- Documentation of all employees who receive the Hepatitis B vaccinations must be completed.
- Any employee who chooses not to receive the vaccinations shall:
- Sign a declination/waiver statement. Refer to the Hepatitis B Vaccine Declination form.
- Be allowed to change his/her mind at any time in the future and receive the vaccination at no cost.

When an employee has had an exposure incident, an Incident Report shall be completed; a copy of the report will be placed in the employee's HR file and Company medical files. Medical records shall be maintained for at least the duration of employment plus 30 years.

Elements of post-exposure evaluation and follow-up include:

- Documentation of exposure route(s) and circumstances.
- Identification and documentation of the source individual, unless infeasible or prohibited by state or local law.
- Testing source individual's blood as soon as feasible after consent obtained to determine HBV and HIV infectivity.
- If consent is not obtained, it will be established that legally required consent cannot be obtained. When law does not require consent, the source individual's blood, if available, will be tested and results documented.
- When the source individual is already known to be infected, testing need not be repeated.
- Results of tests are to be made available to exposed employees, and exposed informed of applicable laws and regulations about disclosures of the source individual's identity and infectious status.
- Exposed employee's blood will be collected as soon as feasible and tested after consent is obtained. If he or she consents to baseline blood testing, but not HIV testing, the blood sample shall be preserved for at least 90 days. If within 90 days of exposure the employee

elects to have the blood sample tested for HIV, it shall be done as soon as feasible.

- Post-exposure prophylaxis, when medically indicated, is offered including counseling and evaluation of the reported illness.

The following information shall be provided to the health care professional:

- A copy of any State or Federal standards pertaining to Occupation Exposure to Bloodborne Pathogens, if available.
- A description of the exposed employee's duties relating to the exposure incident.
- Documentation of route(s) of exposure and exposure circumstances.
- The results of the source individual's blood testing, if available.
- All medical records relevant to the appropriate treatment of the employee, including vaccination status, which are maintained.
- The written opinion of the Health Care Professional shall be limited to the following information:
- Whether it is recommended that the employee receive the Hepatitis B vaccination and if the employee has received such vaccination.
- Whether the employee has been informed of the results of the evaluation, including any medical conditions resulting from the exposure which would require further evaluation or treatment.
- All other findings or diagnosis shall remain confidential and will not be included in the written report.

Communication of Hazards to Employees

The appropriate biohazard labels shall be used. Warning labels are affixed to containers of regulated waste, refrigerators, and freezers containing blood or other potentially infectious materials, and other containers used to store, transport, or ship blood or other potentially infectious materials except as specified per special procedures.

Labels are fluorescent orange or orange-red or predominantly so, with lettering or symbols in a contrasting color; fixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal; not required when red bags or red containers are substituted for labels; exempted from being required on container of blood, blood components, or blood products that are labeled as to their contents and have been released for transportation or other clinical use; exempted for individual containers of blood or other potentially infectious materials that are placed in labeled containers during storage, transport, shipment or disposal; required for contaminated equipment and must state which portions of the equipment remains contaminated; and not required for regulated waste that has been decontaminated.

Training

In an effort to provide a safe workplace, URETEK will provide its employees with information and training on hazardous chemicals in their work area at the time of their initial assignment to that area, and whenever a new hazardous chemical is introduced into their work area. All

URETEK workers who may be exposed to hazardous chemicals while performing job duties in assigned work areas will receive training. It is the responsibility of URETEK and the Site Manager to assure that such training takes place.

1. Employees are informed of:
    a. The requirements of the Hazard Communication Standard.
    b. Operations in their work area where hazardous chemicals are present.
    c. The location and availability at URETEK Corporation's written Hazard Communication Program, the Chemical Inventory, and the Safety Data Sheets.
    d. How the Hazard Communication Program is implemented at URETEK.
    e. How to read and interpret information on labels and the SDS.
    f. How to read our in-house labeling system: The HMIS System (Hazardous Materials Identification System).
    g. How employees can obtain and use the available hazard information.
    h. The physical and health hazards of the chemicals in their work area.
    i. Measures employees can take to protect themselves from hazards during routine operations.
    j. Specific procedures put into effect by URETEK to provide protection such as engineering controls, work practices, and the use of personal protective equipment.
    k. Methods and observations, such as visual appearance or smell, workers can use to detect the presence of a hazardous chemical to which they may be exposed.
    l. Emergency procedures to follow if the employee is exposed to chemicals.
2. At a minimum, all employees who are or may be exposed to airborne pollutants at or above the action level will receive additional training as required by the applicable Federal and State regulations.
3. Upon completion of their training, each employee will sign a form verifying attendance, receipt of written materials and understanding of URETEK policies. The Hazard Communication Verification forms are kept on file in the Environmental/Safety Department's central file.

The person conducting the training shall be knowledgeable in the subject matter covered by the elements of the training program as it relates to the workplace.

URETEK shall maintain an accurate training record for each employee with occupational exposure. Training records shall include the date and content of training, and the name and job titles of persons attending. Training records shall be maintained for 3 years from the date of training.

Maintenance of Exposure Control Plan

The Exposure Control Plan for Bloodborne Pathogens shall be reviewed and/or audited annually by Corporate Management. Periodic reviews and updates are made as necessary to keep the Exposure Control Plan current.

Compressed Gas Cylinders

Reference: URETEK's Policy

Purpose
The purpose of this program is to prevent injury from failing or failure of compressed gas cylinders and to establish requirements for handling, lifting, and storing compressed gas cylinders safely.

Scope
This program covers all employees and contractors who handle, transport and/or use compressed gas cylinders.

Key Responsibilities

Managers/Supervisors
- Shall ensure that all employees are aware of the proper handling, storage, and use requirements for compressed gas cylinders.
- Shall ensure that initial training is conducted for all new employees and that retraining is conducted when employee behaviors suggest that retraining is warranted.

Employees
- Shall follow all requirements regarding the safe handling, storage and use of compressed gas cylinders.

Procedure

General
Cylinders shall not be accepted, stored, or used if evidence of denting, bulging, pitting, cuts, neck, or valve damage is observed. If damage is observed:
- The cylinder must be taken out of service.
- The cylinder's owner shall be notified to remove the cylinder from the premises.
- If owned, the cylinder shall be de-pressured and inspected as required by this program.

Cylinder Identification
Gas identification shall be stenciled or stamped on the cylinder or a label used. No compressed gas cylinder shall be accepted for use that does not legibly identify its content by name.

Handling
- Valve caps must be secured onto each cylinder before moving or storage.
- Secure the cylinder in a blanket when being lifted by mechanical means. Slings, ropes, or electromagnets are prohibited to be used for lifting compressed gas cylinders.

- The preferred means to move compressed gas cylinders is with a cart, carrier or with a helper. Compressed gas cylinders must not be allowed to strike each other.
- When a cylinder cap cannot be removed by hand the cylinder shall be tagged "Do Not Use" and returned to the designated storage area for return to vendor.

Storing

- All cylinders must be secured upright in a safe, dry, well-ventilated area that limits corrosion and deterioration.
- Cylinders must be secured by means that will prevent the cylinder from falling.
- When securing the cylinder, the restraints shall not be attached to electrical conduit or process piping.
- Empty and non-empty cylinders shall be stored separately. All stored cylinders shall be capped.

Oxygen cylinders must be stored a minimum of 20 feet from combustible gas cylinders or areas where there may be open flame or arcing. Cylinders may also be stored where the oxygen is separated from combustible gas cylinders by a 5 foot or higher wall with a fire resistance rating of 30 minutes.

Storage areas for full and empty cylinders must be designated and labeled. Cylinders should be stored in definitely assigned places away from elevators, stairs, or gangways.

Use

- Cylinders must be equipped with the correct regulators. Regulators and cylinder valves should be inspected for grease, oil, dirt, and solvents. Only tools provided by the supplier should be used to open and close cylinder valves.
- Never force or modify connections. Only regulators and gauges shall be used within their designated ratings.
- The use of a pressure-reducing regulator is required at the cylinder unless the total system is designed for the maximum cylinder pressure.
- Valves must be closed when cylinders are not in use. Cylinders shall not be used as rollers or supports.
- Cylinders shall not be placed where they can come in contact with electrical circuits.
- Cylinders must be protected from sparks, slag, or flame from welding, burning, or cutting operations. Empty cylinders must be returned to designated storage areas as soon as possible after use.

Inspection of Compressed Gas Cylinders

URETEK shall determine that compressed gas cylinders under its control are in a safe condition to the extent that this can be determined by visual inspection. Visual and other inspections shall be conducted as prescribed in the Hazardous Materials Regulations of the Department of Transportation (49 CFR parts 171-179 and 14 CFR part 103). Where those regulations are not applicable, visual, and other inspections shall be conducted in accordance with Compressed

Gas Association Pamphlets C-6-1968 and C-8-1962. Some elements include, but are not limited to:

- Hoses and connections should be inspected regularly for damage. Hoses should be stored in cool areas and protected from damage.
- These owned cylinders shall be visually inspected prior to charging before each use and at least annually.
- All inspections and testing must be documented.

High Pressure Cylinders are those cylinders marked for service pressures of 900 psi and greater.

- High pressure cylinders shall be taken out of service and submitted for re-qualification testing when any of the following conditions are identified by visual inspection.
- Cuts, dings, gouges, dents bulges, pitting, neck damage or evidence of exposure to fire.
- The cylinders shall be inspected and retested according to the requirements stated in 49 CFR 180.205 and .209.
- Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.

Low Pressure Cylinders are those cylinders marked for service pressures of less than 900 psi.

- Low pressure cylinders fall into two categories, those requiring requalification and those that do not require re-qualification.
- Low pressure cylinders that do not require re-qualification shall be taken out of service and condemned when any of the following conditions are identified during inspection:
- The tare weight of the cylinder is less than 90% of the stamped-on weight of the cylinder.
- Observed pitting, dents, cuts, bulging, gouges, or evidence of exposure to fire.
- Low pressure cylinders subject to re-qualification shall be taken out of service, inspected and retested when visual inspection identifies any of the following conditions: dents, bulges, pitting or neck damage.
- Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.

Leaking Cylinders

Leaking cylinders should be moved promptly to an isolated, well-ventilated area, away from ignition sources. Soapy water should be used to detect leaks. If the leak is at the junction of the cylinder valve and cylinder, do not try to repair it. Contact the supplier and ask for response instructions.

Transportation

Cylinders must be transported in a vertical secured position using a cylinder basket or cart and must not be rolled. Regulators should be removed, and cylinders capped before movement. Cylinders should not be dropped or permitted to strike violently, and protective caps are not used to lift cylinders.

Empty Cylinder Marking
Cylinders should be marked as "MT" and dated when empty. Never mix gases in a cylinder and only professionals should refill cylinders. Empty cylinders must be handled as carefully as when filled.

Engineering Controls
Engineering controls such as emergency shutoff switches, gas cabinets and flow restrictors should be used wherever possible to control hazards. Emergency eyewash facilities should be present where corrosive gases or materials are used.

Confined Space

Reference: OSHA 29 CFR; 1910.146

Purpose
The purpose of this section is to emphasize the hazards associated with working in tanks, bins, sewer shafts, and similar confined spaces, and providing a process for safe entry.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Confined Space
A space that has limited or restricted means of entry or exit. It is large enough for an employee to enter and perform assigned work and is not designed for continuous occupancy by the employee.

Permit-required Confined Space
A space that meets the definition of a confined space and has one or more of these characteristics:

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

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the process within their division.

General Requirements
The following activities shall apply to confined spaces:

- No URETEK's personnel shall enter any type of tank or other enclosed spaces without proper authorization.
- The atmosphere is to be tested within the enclosure for oxygen deficiency and the presence of dangerous gases or fumes.
- Emergency entry may be made into confined spaces when unsafe conditions exist only if approved respiratory breathing is used by employees that are trained to use the equipment.
- Each affected employee must be trained prior to initial assignment, prior to a change in

assigned duties, if a new hazard has been created or special deviation have occurred.

- Entrants are to be protected from external hazards while in the confined space.
- Pedestrians are to be protected by the use of barriers, warning lights, or posting a watch.
- Vehicles are to be directed by the use of barriers, warning lights, or posting a watch or traffic guard.
- The confined space shall be isolated by blinding, disconnecting, and/or blanking all lines connected to the space or by other approved means of isolating the space from potentially hazardous material.
- Ignition sources should be removed in the event of flammable or combustible materials in the vicinity of the work area.
- Energized equipment should be locked out and tagged out to prevent inadvertent start-up.
- To verify that conditions in the permit space are acceptable, a qualified Entry Supervisor is employed to the scene.

Confined Entry Permit System

The Supervisor shall employ a system for the preparation, issuance, use, and cancellation of entry permits. The System begins with a Confined Space Decision Tree; if it is determined a permit is required, the Supervisor completes the permit documentation, unless the client requires their permit system to be followed. The entry permit is a written or printed document that controls entry into a permitted confined space. Refer to Confined Space Entry Permit.

Entry is controlled by:

- Identifying permit requirements, the job site.
- Indicating the date, time, and duration of the entry on the permit.
- Identifying the purpose of the entry.
- Including a list of authorized entrants.
- Including a list of eligible attendants.
- Specifying the testing requirements and other conditions in order to perform the job safely.
- The Entry Supervisor signing the permit when conditions are acceptable and ensure that the PPE is available and in working condition.
- Conducting pre-entry evaluations to ensure the combustible and flammable hazards are addressed and this level does not exceed 10%. Evaluation of the oxygen level will be performed, and the oxygen level is between 19.5% and 25%. If the oxygen is below or above the acceptable range, then respiratory protection equipment shall be required.
- Analyzing toxic substances, and if knowledge exists as to the contents or previous contents utilizing detection equipment such as, but not limited to, H2S detection equipment.
- Evaluating the integrity of the confined space to address physical hazards.
- Ensuring standby personnel are present in an immediate danger to life and health (IDLH) environment.
- The Entry Supervisor determining if personnel may enter the permitted confined space and under what conditions.
- Training standby personnel in rescue, having the appropriate PPE for the hazards present, and training in First Aid/CPR.
- Maintaining communication during the confined space entry procedure.

- Employing Lockout/Tagout measures, equipment and procedures for purging, ventilating, and flushing for removing or controlling potential hazards.

When hot work is authorized in a permitted confined space, it shall be noted on the permit that a separate hot work permit is attached, refer to Section 66: Welding, Cutting and Hot Work.

Entrants shall immediately exit the permitted confined space when the attendant orders evacuation, when an automatic alarm is activated, or if the entrants perceive that they are in danger.

Training and Duties of the Authorized Entrant (AE)
The Supervisor or designee shall ensure that all AE's are properly trained and perform their assigned duties under the permit program and maintain a list of trained AE's. The Supervisor must certify that the required training has been accomplished. The certification shall include employees name, trainer signature, and dates of training. Certification must be made available to employees and their authorized representative.
Duties for the AE include:

- All AE's shall fully comprehend the hazards, which may be faced during the entry, recognize the signs and symptoms of exposure to a hazard, and understand the consequences of exposure to a hazard.
- AE's shall maintain contact with the attendant and further notify the attendant when entrant evacuates the permit space.
- AE's shall be aware of the required PPE such as respirators, special clothing, retrieval lines and systems. AE's are required to properly use all PPE. AE's must be aware of the required external barriers and the proper use of them.
- AE's must immediately exit the permitted space when the attendant orders evacuation, when an automatic alarm is activated, or if the AE's perceive that they are in danger.

Training and Duties of the Attendant
The Supervisor or designee shall ensure that an attendant is stationed outside the permitted space at all times during entry and that the attendant received appropriate training and performs the assigned duties under the entry permit program. The Supervisor must certify that the required training has been accomplished. The certification shall include employees name, trainer signature, and dates of training. Certification must be made available to employees and their authorized representative.

Performing duties, the attendants shall ensure that they maintain an accurate count of all AE's. The attendants shall know of and recognize potential permitted space hazards to determine if it is safe for AE's to remain in the space.

The attendants shall maintain continuous contact with the AE's. The attendant shall further order AE's to evacuate the permitted space when:

- A condition that is not allowed in the permitted space is observed.

- Behavioral effects of hazards exposure are detected.
- A dangerous situation outside the space that could affect the AE's is detected.
- An uncontrollable hazard within the space is detected.
- The attendant must leave the workstation. The attendant shall summon rescue and emergency services when AE's need to escape from the permitted space. The attendant shall take appropriate action when unauthorized persons' approach or enter a permitted space while entry is under way.

Attendants must not enter the permitted space to attempt a rescue unless they are a designated member of the rescue team and they have been properly relieved of their attendant duties. The attendant must also properly use all rescue equipment provided and perform assigned rescue duties. If attendants are not members of the rescue team, they cannot enter the permitted space as a rescuer.

Training and Duties of Entry Supervisors
The Supervisor or designee shall ensure that individuals authorizing or in charge of entry receive appropriate training and must certify that the required training has been accomplished. The certification shall include employees name, trainer signature, and dates of training. Certification must be made available to employees and their authorized representative.

Entry Supervisors perform the following functions:
- Determine that the permit contains the required information before entry.
- Determine that necessary procedures, practices and equipment are in effect prior to the entry.
- Determine at appropriate intervals that entry operations remain consistent with the terms of the permit and those acceptable conditions are present.
- Cancel and terminate the entry when acceptable conditions are not present.
- Close off the permit space and cancel the permit once work has been completed.
- Serve as AE's or attendants, if properly trained.
- Take appropriate measures to remove unauthorized personnel who are in or near permitted spaces.

Training and Duties of the Rescue Team
In-Plant Rescue Team – Each Division Supervisor, in conjunction with local facility management shall ensure that personnel assigned to the rescue team are provided with and trained to use the necessary rescue equipment; that the team is trained to perform the assigned rescue functions and has received the authorized entrant training; that rescue teams practice rescue procedures under real-life conditions at least once every 12 months. Employees must be provided PPE at no cost. Due to the complexity of the requirements, in-plant rescue teams are strongly discouraged.

Outside Rescue Team
Each Division Supervisor, in conjunction with local facility management shall ensure that the

designated rescuers are aware of the hazards that they may confront so that the outside team can equip, train, and conduct itself appropriately. Outside services must be given an opportunity to examine the entry site, practice rescue, and decline as appropriate. If there is reliance on the client host rescue service for use, this must be stated and agreed to in contract language. Where IDLH conditions exist, trained rescue is required while work is being performed.

Disciplinary Action

Reference: URETEK's Policy

Purpose
The purpose of this section is to provide consistent documentation and disciplinary action for non-compliance regarding URETEK Policy or Federal Motor Carrier Safety Regulations.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Disciplinary Action
This is an action that is enforced when an employee violates Company Policy or Procedure.

Procedure

Responsibility
It is the responsibility of the respective The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
Discipline, when necessary, should not be viewed as punishment. Instead, it should be used as a means of turning negative actions into positive responses, such as: helping to correct employee behaviors, resolving misunderstandings, and helping employees learn to take responsibility for their own actions. URETEK employees may be subject to disciplinary action when they are involved in an at-fault incident such as:

- An on-the-job incident resulting in personal injury or property damage.
- A vehicle accident/incident.
- A violation of a Company policy or procedure.
- A violation of Federal Motor Carrier Safety Regulations.

First Offense
A first offense of non-compliance shall result in a verbal and documented warning. This warning shall be used as a coaching / counseling / instructional session to reinforce the safety policy to the employee and reaffirm Management's expectations.

Documentation actions will include:

- Record of incident on a Non-Compliance Disciplinary Notice form.
- Give a copy to the employee.
- The employee is not required to sign the form.
- The original is sent to HR; a copy is forwarded to The Supervisor if applicable.

Second Offense
A second offense of non-compliance indicates a more serious problem with the employee's behavior. A written warning will be provided along with consequences of further violation. Documentation actions will include:

- Record of incident on a Non-Compliance Disciplinary Notice form.
- Give a copy to the employee.
- The employee is required to sign the form (if possible).
- The original is sent to HR; a copy is forwarded to The Supervisor if applicable.

Third Offense
A third offense of non-compliance indicates a more serious problem with the employee's behavior, and a written notice will be issued. Discharge or termination may occur. Management has the ultimate authority to terminate an employee. Documentation actions will include:

- Record of incident on a Non-Compliance Disciplinary Notice form.
- The supervisor and employee are required to sign the form (if possible).
- The original is sent to HR; a copy is forwarded to The Supervisor if applicable.

Exceptions
Discharge without prior disciplinary action of any kind will be imposed when required. The following actions may result in immediate termination of employment:

- Intoxication or under the influence of illegal drugs while on the job.
- Positive drug screen findings.
- Conviction of DUI or DWI.
- Flagrant / willful violation of URETEK policies and programs.

Upon physical inspection of URETEK's workplaces / job sites that indicate violations showing an overall lack of commitment by Supervisors or any employee, shall be considered under the same level of disciplinary action as an actual offense.

Driver Safety

Reference: URETEK's Policy

Purpose
The purpose of this section is to provide URETEK's employee safety throughout Driving operations.

Scope
This section applies to all URETEK's employees and contractors.

Management Statement

At URETEK, we take Driver Safety seriously for the protection of both Life and Economic wellbeing. The Accident Control Plan applies to all departments and all employees. Cooperation of ALL employees is expected and required.

The following safe driving practices deal with the factors that make driving the leading cause of accidents and accidental deaths. It should result in the use of safety belts and awareness of driving as a skill that requires constant alertness and attention.

WHAT EVERYONE NEEDS TO KNOW
Motor vehicle accidents are the leading cause of unintentional deaths in the U.S. today. However, we can assume that most of the people killed or injured in motor vehicle accidents knew how to drive, yet that did not prevent the accident.

The major contributors of vehicular accidents:

1. **Drinking**. At least 1/2 of all fatal accidents.

2. **Night Driving**. More than 1/2 of fatal accidents.

Seat belts and shoulder harnesses are life savers! Half of auto accident fatalities and critical injuries are eliminated by buckling up.

DRUG AND ALCOHOL POLICY: URETEK has a "ZERO TOLERANCE" policy regarding drug and alcohol abuse by its employees. IF AN EMPLOYEE FAILS DRUG SCREENING AND/OR ALCOHOL SCREENING, HE WILL BE IMMEDIATELY TERMINATED FROM COMPANY EMPLOYMENT. For URETEK's complete Drug and Alcohol Policy.

IMPORTANT POINTS IN THE MASTER SAFETY PLAN
No Company vehicle shall be operated by an Employee of URETEK unless that Employee has demonstrated competency in operating a motor vehicle and has been issued a valid and current driver's license by the State Department of Public Safety of the proper type for operating either

commercial or non-commercial motor vehicles. No Company vehicle shall be driven on public or rural streets, roads or on Company property without proper Insurance Certification and Registration. The current Insurance Certificate shall always be kept in the vehicle. The vehicle must also possess and display current license plates and inspection stickers as required by state law. If, for some reason, a vehicle is lacking its Insurance Certificate, current license plates or inspection sticker, **NOTIFY YOUR SUPERVISOR**. Immediate corrective action is required before further vehicle operation.

ANY EMPLOYEE operating any Company vehicle and receiving a moving violation ticket or a fine for failing to keep proper paperwork shall be responsible for paying that citation/ticket or fine. The Employee may also be subject to serious disciplinary actions in accordance with the Company's Policy and Procedures. Employees who place themselves in situations which result in the impound of Company vehicles will be subject to disciplinary action as directed by operations management.

No Employee shall operate any Company vehicle while under the influence of drugs/alcohol. **See URETEK's Drug and Alcohol Policy in Appendix.**

SEAT AND SHOULDER BELTS shall and must be worn by all Employees whenever Company motor vehicles are in operation or whenever Employee personal vehicles are used for Company business, and by all other occupants/passengers of the vehicles. Each driver shall be held responsible for making sure seat and shoulder belts are used properly.

If passengers in the vehicle do not comply, the driver shall be hereafter instructed and authorized to cease operation of the vehicle in a safe manner and shall not resume operation until full compliance of seat belt rules are followed and achieved.

No person shall take a Company vehicle home without permission from their immediate supervisor. Any person who is **NOT** an Employee of the Company shall not be permitted to drive and/or operate a Company vehicle at any time or for any reason.

These general rules for vehicle operations and safety must be obeyed:

1. Report any damage or vehicle problems to your supervisor immediately.
2. Report all traffic citations received while in a Company vehicle to your immediate supervisor.
3. Violation of traffic laws **WILL NOT** be tolerated.
4. Any person who is not covered by our Company auto insurance policy shall not be allowed to drive/operate any Company vehicle at any time.
5. Always employ the proper use of turn signals.
6. All towed trailers must have safety connector chains in place during travel to assure trailer security.

GENERAL DRIVING CONCEPTS

A good driver is a defensive driver, always alert and aware when behind the wheel. Some specific driving rules are:

1. Obey the speed limit.
2. Obey traffic signs and signals.
3. Do not tailgate.
4. Pass on the left only.
5. Yield right of way.
6. Do not overload a vehicle.
7. Secure loads.
8. Secure trailer hitches and safety chains.
9. Do not drive drunk or under the influence.
    - It Slows your reactions.
    - Blurs your vision.
    - Reduces your ability to judge distance.
    - Impairs your judgment.
    - Endangers your job future.
    - Endangers your life.
10. Be especially cautious at night.
    - Let your eyes adjust to the dark.
    - Make sure your headlights are clean and working properly.
    - Allow more distance between you and the car in front than during the day.
    - Do not use your high beams if there is a car in front of you or coming from the other direction.
    - Stop at a rest area when you are tired.
    - Try not to stop on the side of the road, especially on curves.
11. Bad Weather.
    - Use wipers, defroster, and headlights to improve visibility.
    - Be careful of large puddles that can make your brakes less effective.
    - Avoid hydroplaning. If you do lose control, take your foot off the gas. Do not brake suddenly.
12. Snow and Ice.
    - Wear sunglasses to reduce glare.
    - Clear snow off windshield, windows, hood, roof, and lights.
    - Use your wipers and defroster.
    - Drive and brake slowly and stay further behind the car in front.
    - Watch out for ice.
    - Turn into a skid and take your foot off the gas. Do not brake.
13. Do not be a “Jack-Rabbit” driver with quick accelerations or stops. Our vehicles are part of our livelihood. We are responsible for moderate driving habits, conservative and courteous conduct, very safe – overly safe, completely safe -- operation of our trucks, autos, and leased equipment.

14. When you drive, **THINK** about your own driving, the traffic conditions, any possible driving hazards, warning signs and speed limits. Concentrate on your driving! It's part of your job and it is your responsibility to do your driving job safely.
15. **EACH TIME YOU GET BEHIND THE WHEEL OF A COMPANY VEHICLE, MAKE CERTAIN THAT YOU DRIVE CAREFULLY CONSIDERATELY AND SAFELY. DRIVE LIKE YOUR JOB, YOUR NEXT RAISE, YOUR NEXT PROMOTION ALL DEPEND ON HOW WELL YOU DRIVE TODAY --- AND YOU WILL HAVE ACCURATELY ANALYZED THE SITUATION!**

    WHEN YOU DRIVE A URETEK VEHICLE, YOU REPRESENT URETEK ANY UNSAFE DRIVING CAN BE REPORTED TO 1-888-2-URETEK LISTED ON ALL COMPANY VEHICLES.

    DRIVER AND FLEET SAFETY PROGRAM

Driver and vehicle operations present a high potential exposure for an accident and resulting injury to an employee or a member of the public. This program has been prepared to help assure that all vehicles owned by URETEK are operated by a safe, defensive driver who respects, operates, and maintains all vehicles in compliance with federal, state, local and insurance regulations.

POLICY

In an effort to achieve a safer working environment for our drivers and to minimize insurance claims, URETEK has developed this Fleet Safety Program.

In as much as this is not a new program, and yet one that has been updated and improved upon, URETEK must continue making it mandatory for each and every driver to put forth their complete efforts to make this a successful program that will benefit both you, as well as URETEK

It is required that all drivers must adhere to all Texas Department of Public Safety laws, as well as rules set forth by URETEK

All drivers are entrusted with the sue of the vehicle for company business only. A driver <u>must</u> receive permission from management for uses other than company business. No one other than the <u>driver</u> is permitted to drive the vehicles of URETEK without the expressed written permission of management. Picking up hitchhikers is <u>absolutely</u> forbidden as this increases the company's liability in the event of an accident.

For as long as you drive for URETEK please be aware that management can and will be monitoring, as well as recording, your driving performance and adherence to this Fleet Safety Program.

DRIVER RESPONSIBILITIES AND OPERATING POLICIES

1. Each employee operating a company vehicle shall have a valid and appropriate driver's license issued from the state wherein the employee is based.
2. Each driver will be given a 30-45-minute check ride to evaluate defensive driving skills and habits. Unsafe drivers will not be allowed to operate road vehicles. A checklist will be used during this process (Driver's Seeing Habits checklist, See Appendix Section).
3. The operator and all occupants shall wear seat belts.
4. Company vehicles are not to be used for personal purposes at any time without permission.
5. Passengers (family, hitchhikers, friends, former employees) are forbidden to be in company vehicles at any time. Vehicles are insured for company use only. We carry no passenger insurance and employees are not insured while using vehicles for personal reasons. This means if you have an accident while using a vehicle for personal use, there is no insurance on you or your passenger. You will be held personally responsible for all expense.
6. The operator will be responsible for properly securing all cargo with tie down straps, rope, chains, etc.
7. All vehicles shall be locked when out of sight of operator.
8. Daily and weekly vehicle inspections will be mandatory. The enclosed checklist shall be utilized.
9. Reckless driving in any manner if forbidden.
10. Only current employees are allowed to operate company equipment.
11. Vehicle security is a priority. It shall be parked in prudent location where it is well lighted and locked.
12. Employees who have authority to take vehicles home shall always lock and park in a safe location. No vehicles may be parked in apartment complexes. Residential homes only.
13. Do not leave vehicles running while unattended.
14. Carrying firearms in company vehicles is prohibited.
15. No animals in vehicles.
16. Radar detectors in vehicles are prohibited.
17. Vehicles will not be loaned to anyone for any purpose.
18. Problems with vehicles that may pose a safety hazard should be reported to management immediately.
19. Speeds in excess of posted limits is forbidden.
20. Never fuel a vehicle with the motor running.
21. Operation of a company vehicle while under the influence of intoxicating beverages or drugs is prohibited. URETEK has a "ZERO TOLERANCE" policy regarding drug and alcohol abuse by its employees. IF AN EMPLOYEE FAILS DRUG SCREENING AND/OR ALCOHOL SCREENING, HE WILL BE IMMEDIATELY TERMINATED FROM COMPANY EMPLOYMENT. For URETEK's complete Drug and Alcohol Policy.
22. All accidents involving a company vehicle, regardless of severity, shall be reported to the operator's supervisor immediately.
23. Commercial drivers must comply with D.O.T. licensing and paperwork, and understand operation of the unit (All Brakes, etc.).
24. Pulling of trailers is limited to those familiar with trailing operations and D.O.T. paperwork requirements.

POSSIBLE LOSS OF DRIVING PRIVILEGES

A driver shall not be allowed to drive a company vehicle if any of the following conditions are true:

- The employee is currently under suspension or has had driver's license revoked by the state.
- The employee has been convicted of or forfeited bond or collateral for any of the following charges:
  - A felony involving a motor vehicle.
  - Operating a company vehicle while under the influence of alcohol.
  - A crime involving the knowing transportation, possession, or unlawful use of controlled or restricted drugs, such as but not limited to, amphetamines or narcotics.
  - Leaving the scene of a vehicular accident, which resulted in personal injury or death.
- The company has determined through investigation or driving records that the employee has displayed a lack of concern for the safety of the general public or fellow workers. Attendance of a defensive driving course can be required in some cases. This shall be a management decision.

Electrical Safety

Reference: OSHA 29 CFR; 1910.301 – 399

Purpose
The purpose of this section is to prevent electrical shock and/or electrocution through direct or indirect electrical contact while working on or around electrical equipment or circuits that are or may be energized.

Scope
This section applies to URETEK's employees and contractors.

Definitions

Qualified Person
An individual permitted to work on or near exposed energized parts who is trained in and familiar with:

- The skills and techniques necessary to distinguish exposed live parts from other parts of electrical equipment.
- The skills and techniques necessary to determine nominal voltage of exposed live parts Proper use of special precautionary techniques, PPE, insulating and shielding materials, and insulated tools.
- The clearance distances for work performed near overhead lines and the corresponding voltages for which he/she will be exposed.

Unqualified Person
This is an individual with little or no training in avoiding the electrical hazards of working on or near exposed energized parts.

Procedure

Responsibility
It is the responsibility of the respective The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
This procedure covers electrical safety-related work practices for both qualified persons and unqualified persons who are working on, near or with the following installations:

- Installation of electrical conductors and equipment within or on buildings or other structures.
- Installation of conductors that connect to the supply of electricity.
- Installation of other outside conductors on the premises.
- Installation of optical fiber cable where such installations are made along with electrical conductors.

- Installations that involve work performed by unqualified persons on or near exposed energized parts.

This program does not apply to work performed by qualified persons on or directly associated with the following; installations, communications installations, installations in vehicles, railway installations, generation, transmission and distribution installations for the generation, control and transformation, transmission, transmission and distribution of electrical energy (including communication and metering), located in buildings used for such purposed or located outdoors.

Working on or Near Exposed Energized Parts
Live parts to which an employee may be exposed shall be de-energized before any employee works on or near them unless de-energizing will introduce additional or increased hazards or is infeasible due to equipment design or operation limitations. Live parts that operate at less than fifty (50) volts to ground do not need to be de-energized, due to no increase in exposure to electrical burns or to explosion due to electrical arcs.

Whenever any employee is exposed to contact with parts of fixed electric equipment or circuits that have been de-energized, the circuit energizing the parts should be locked out or tagged out, or both.

Stored electrical energy that might endanger personnel shall be released. Capacitors shall be discharged, and high capacitance elements should be short circuited and grounded if the stored electric energy might endanger personnel.

In those cases, where the exposed live parts are not de-energized, either because of increased or additional hazards, or because of infeasibility due to equipment design or operational limitations, other safety related work practices must be used to protect employees who may be exposed to the electrical hazards involved. Those work practices must protect employees against contact with energized circuit parts directly with any part of their body or indirectly through some other conductive object or where employees are near enough to be exposed to any hazard they present.

Only qualified persons may work on electrical circuit parts or equipment that has not been de-energized. Such persons shall be capable of working safely with energized circuits and shall be familiar with the proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools.

Whenever an unqualified person is working in an elevated position or on the ground in the vicinity of overhead lines, the location shall be such that the person and the longest conductive object he/she may contact cannot come closer to any unguarded energized overhead line than the following distances.
- For voltages to ground 50 KV or below – 10 feet.
- For voltages to ground over 50 KV – 10 feet plus 4 inches for every 10 KV over 50 KV.

Whenever a **qualified person** is working on overhead lines, the lines shall be de energized and grounded before work is started. Whenever a qualified person is working in the vicinity of overhead lines, whether in an elevated position or on the ground, the person may not approach or take any conductive object without an approved insulating handle closer to exposed energized parts than shown below.

The person is insulated from the energized part. Gloves with sleeves, if necessary, rated for the voltage involved, are considered to be insulation of the person from the energized part on which the work is performed.

The energized part is insulated both from all other conductive objects at a different potential and from the person.

The person is insulated from all conductive objects at a potential different from that of the energized part.

The minimum approach distances are as follows:

- Voltage range (phase to phase) Minimum approach distance.
  - 300V and less……Avoid contact.
  - Over 300V, not over 750V……1 ft. 0 in. (30.5 cm).
  - Over 750 V, not over 2kV……1 ft. 6 in. (46 cm).
  - Over 2kV, not over 15 kV……2 ft. 0 in. (61 cm).
  - Over 15 kV, not over 37 kV……3 ft. 0 in. (91 cm).
  - Over 37 kV, not over 87.5 kV……3 ft. 6 in. (107 cm).
  - Over H7.5 kV, not over 121 kV…4 ft. 0 in. (122 cm).
  - Over 121 kV, not over 140 kV……4 ft. 6 in. (137 cm).
- Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines shall be operated so that a clearance of 10 ft. (305 cm) is maintained. If the voltage is higher than 50kV, the clearance shall be increased 4 in. (10 cm) for every 10kV over that voltage.
- If insulating barriers are installed to prevent contact with the lines, and if the barriers are rated for the voltage of the line being guarded and are not a part of or an attachment to the vehicle or its raised structure, the clearance may be reduced to a distance within the designed working dimensions of the insulating barrier.
- If the equipment is an aerial lift insulated for the voltage involved, and if a qualified person performs the work, the clearance (between the un-insulated portion of the aerial lift and the power line).
- Whenever an employee works in a confined or enclosed space (such as a manhole or vault) that contains exposed energized parts, the employer shall provide, and the employee shall use, protective shields, protective barriers, or insulating materials as necessary to avoid inadvertent contact with these parts. Proper illumination shall be provided to enable the employee to work safely. Doors, hinged panels, and the like shall be secured to prevent their swinging into an employee and causing the employee to contact exposed energized parts.

- Portable ladders shall have nonconductive side rails if they are used where the employee or the ladder could contact exposed energized parts.
- Conductors and parts of electrical equipment that have been de-energized but have not been locked or tagged out shall be treated as live parts.

Use of Portable Electric Equipment
All cord and plug-type connected electrical equipment; flexible cords, flexible cord sets (extension cords) and portable electrical equipment shall be handled in such a manner that will not cause damage. Flexible cords may not be fastened with staples or otherwise hung in such a fashion as could damage the outer jacket or insulation.

Portable cord and plug connected equipment and flexible cord sets (extension cords) shall be visually inspected before use on any shift for external defects (such as loose parts, deformed and missing pins, or damage to outer jacket or insulation) and for evidence of possible internal damage (such as pinched or crushed outer jacket).

Flexible cord sets (extension cords) used in shop environments shall be of the round type, as opposed to the flat three-wire set.

Portable cables shall not be operated with splices unless the splices are of the permanent molded, vulcanized, or other approved type. Terminations on high-voltage portable cables shall be accessible only to authorized electrical personnel. Flexible cords shall be used only in continuous lengths without splices or taps.
All electrical equipment, powered hand tools and electrical appliances must be properly grounded before use. All portable tools and machine lights must be equipped with a three-prong plug unless they are double insulated by the manufacturer and approved by Underwriter Laboratories.

Personal Protection Safeguards
Employees working in areas where there are potential electrical hazards shall be provided with, and shall use, electrical protective equipment that is appropriate for the specific parts of the body to be protected and for the work to be performed. Such equipment includes rubber protective equipment such as insulating gloves, blankets, hoods, line hoses, sleeves and matting for use around electrical apparatus. Employees shall wear nonconductive head protection wherever there is a danger of head injury from electric shock or burns due to contact with exposed energized parts.

Employees shall wear protective equipment for the eyes or face wherever there is danger of injury to the eyes or face from electric arcs or flashes or from flying objects resulting from electrical explosion.

When working near exposed energized conductors or circuit parts, each employee shall use insulated tools or handling equipment if the tools or handling equipment might make contact with these conductors or parts. If the insulating capability of insulated tools or handling

equipment is subject to damage, the insulating material should be protected.

Conductive items of jewelry or clothing shall not be worn unless they are rendered nonconductive by covering, wrapping or other insulating means.
Alerting techniques should be used to warn and protect employees from hazards, which could cause injury due to electric shock, burns, or failure of electric equipment parts as follows:

- Safety signs and tags.
- Barricades.
- Attendants.

Training
Appropriate training shall be provided for those employees who face a risk of electrical shock. Electricians and welders always face such a risk and shall be provided with appropriate training. This is also true for the following personnel:

- Electrical and electronic engineers.
- Electrical and electronic equipment assemblers.
- Electrical and electronic technicians.
- Industrial machine operators.
- Material handling equipment operators.
- Mechanics and Millwrights.
- Painters.
- Riggers.

Each URETEK employee that is required to be trained shall be trained in and shall be familiar with, the safety-related work practices required by this manual that pertain to their respective job assignments.

Employees who are not qualified persons will also be trained in and familiar with any electrically related safety procedures not specifically addressed by this manual, but which are necessary for their safety.

Qualified persons (i.e., those permitted to work on or near exposed energized parts) will, at a minimum, be trained and familiar with the following:

- The skills and techniques necessary to distinguish exposed live parts from other parts of electrical equipment.
- The skill and techniques necessary to determine the nominal voltage of those exposed parts.
- The degree of training shall be determined by the risk likely to be encountered by the employee. Training should be site- and/or job-specific and should also include appropriate Lockout/Tagout (LOTO) procedures. Refer to Lockout/Tagout section of this manual.

Emergency Response

Reference: OSHA 29 CFR; 1910.38

Purpose
The purpose of this section is to protect URETEK employees from serious injury, or loss of life, in the event of an actual or potential major disaster.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Major Disaster
May include, but not limited to fire, severe weather, earthquake, power failure, bomb threat, workplace violence or hazardous chemical discharge or spill.

Procedure

Responsibility
It is the responsibility of the respective Manager or designee to monitor and maintain the process within their division.

General Requirements
All facilities shall develop, write, and implement an Emergency Response Plan (ERP) for the following situations:

- Fires.
- Severe weather including hurricanes, severe thunderstorms, tornadoes, hail, downbursts, snowstorms, ice storms, blizzards, flooding, and high winds.
- Chemical discharge and spills.
- Bomb threats.
- Workplace violence.
- Emergency Response Plans shall be available at the front desk of each facility for all employees. Each ERP must include at a minimum:
- Procedures for reporting a fire or other emergency.
- Procedures for emergency evacuation, including type of evacuation and exit route assignments.
- Procedures to be followed by employees who remain to operate critical plant operations before they evacuate.
- Procedures to account for all employees after evacuation.
- Procedures to be followed by employees performing rescue or medical duties.
- The name or job title of every employee who may be contacted by employees who need more information about the plan or an explanation of their duties under the plan.

- The employee alarm system must use a distinctive signal; most facilities will use a canned air horn.

URETEK employees will be designated and trained to assist in a safe and orderly evacuation of other employees.

The ERP will be reviewed with each employee covered by the plan:
- When the plan is developed, or the employee is assigned initially to a job.
- When the employee's responsibilities under the plan change.
- When the plan is changed.

The use of floor plans or workplace maps which clearly show the emergency escape routes should be included in the ERP. Color coding could aid employees in determining their route assignments. Escape routes shall be posted at every facility entrance and exit.

EMERGENCY RESPONSE PLAN
This must be filled out BEFORE beginning work on each site.

FOR _____JOBSITE

CITY/LOCATION: _____

SUBDIVISION: _____

STREET NAME: _____

JOB ADDRESS: _____

JOB PHONE CONTACT: _____

EMERGENCY PHONE CONTACT NUMBERS: **911**

LOCAL FIRE DEPT/EMS AREA: _____

AMBULANCE SERVICE: _____

NEAREST MEDICAL TREATMENT: _____

DIRECTIONS (EMS/Clinic/Dr.): _____

DIRECTIONS TO WORKSITE: _____

EMERGENCY NUMBERS

Tomball Regional Hospital – **281-401-7500**

General Emergency #: **911**

Tomball Fire Department – **281-351-7101**

Tomball Police Department – **281-351-5451**

Northwest EMS – **281-351-8272**

Company Operator – **"0"**

Operator

Take emergency calls from employees

Make emergency announcements and issue evacuation orders upon request from a corporate officer or a member of the Emergency Coordinator team.

Report all emergency calls to **911**

Assist the Emergency Coordinator team, as necessary.

EMERGENCY EVACUATION

If you exit doors 1 and 3, please meet in the parking lot by Building 8

If You exit doors 2 and 4, Please meet in the parking lot by Building 3

Employee Access

Reference: OSHA 29 CFR; 1910.38

GENERAL ACCESS
URETEK will upon request, assure the access to each employee and designated representative to employee exposure and medical records relevant to the employee.

Assure the access of each employee and designated representative to each analysis using exposure or medical records concerning the employee's working conditions or workplace.

URETEK will assure that personal identifiers are removed before access is provided. If it is not feasible to remove personal identifiers from an analysis, access to the personally identifiable portions of the analysis will not be provided.

OSHA ACCESS
Upon request, URETEK will allow OSHA access to employee exposure, medical records, and to analyses records that may be on file.

If OSHA provides a written request for access to personally identifiable employee medical information, URETEK will prominently post a copy of the written access order and its accompanying cover letter for at least fifteen (15) working days.

TRADE SECRETS
Any information felt to be a trade secret will be withheld within the limits allowed by law.

EMPLOYEE INFORMATION
Upon an employee's first entering into employment, and at least annually thereafter, URETEK will inform employees of the following:

- The existence, location, and availability of any records covered by this section.
- The person responsible for maintaining and providing access to records.
- Each employee's rights of access to these records.

A copy 29 CFR 1910.1020, “Access to Employee Exposure and Medical Records” and its appendices upon request will be made available to employees. When the Assistant Secretary of Labor for OSHA sends information concerning employee access, this information will be made available to employees.

TRANSFER OF RECORDS
If for whatever reason, URETEK ceases to do business, URETEK will transfer all records subject to the requirements of 29 CFR 1910.1020 to the successor employer.

If there is no successor employer to receive and maintain the records subject to 29 CFR 1910.1020, URETEK will notify affected current employees of their rights of access to records at least three (3) months prior to the cessation of the business.

If URETEK intends to dispose of any records required to be preserved for at least thirty (30) years, the company will:

- Transfer the records to the Director of the National Institute for Occupational Safety and Health (NIOSH) if required by a specific occupational safety and health standard; or
- Notify the Director of NIOSH in writing of the impending disposal of records at least three (3) months prior to the disposal of the records.

If URETEK regularly disposes of records required to be preserved for at least thirty (30) years, the company may, with at least (3) months' notice, notify the Director of NIOSH on an annual basis of the records intended to be disposed of in the coming year.

Ergonomics and Soft Tissue Injury Prevention

Reference: OSHA 29 CFR General Duty Clause

Purpose
The purpose of this section is to promote health and safety of URETEK employees by providing proper lifting techniques for handling materials throughout operations.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Body Mechanics
This is the study of human movement. The principles of body mechanics are used to enhance movement efficiency and to prevent injuries.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
Strains, sprains, fractures, and bruises are among the most common injuries resulting from manual material handling. They are caused primarily by unsafe work practices. Improper lifting, carrying too heavy a load, incorrect grip, failure to observe proper foot and hand clearance, and failing to use proper personal protective equipment. Training and proper procedures can help eliminate injuries. The following work instructions apply:

- Avoid lifting and bending whenever you can. Anytime you can spare you are back the stress and strain of lifting and bending, do so! If you do not use you back like a lever, you avoid putting it under so much potentially damaging force.
- Place objects up off the floor. If you can set objects down on a table or elevated surface instead of the floor, you will not have to reach down to pick it up again. Raise or lower shelves. The best zone for lifting is between your shoulders and your waist. Put heavier objects on shelves at waist level, lighter objects on lower or higher shelves.
- Use carts and dollies to move objects, instead of manually carrying the load alone.
- You cannot always avoid lifting, but there are ways to reduce the amount of pressure placed on the back when you do so. By bending the knees, you keep your spine in a better alignment, and you essentially take away the lever principle forces. Instead of using your back like a crane, you allow your legs to do the work.
- Reduce the amount of weight lifted.
- Use handles and lifting straps.
- Get help if the shape is too awkward or the object is too heavy for you to lift and move by

yourself.

- It is important to know your body's limitations, and it is important to be aware of your body position at all times. Learn to recognize situations where your back is most at risk: bending, lifting, reaching, twisting, etc.
- Assess the manual lift before doing it. The assessment must consider size, bulk, and weight of the object(s), if mechanical lifting equipment is available, two-man lift options, whether vision is obscured while carrying, and the walking surface path where the object will be carried.
- Training should include general principles of ergonomics, recognition of hazards and injuries, procedures for reporting hazardous conditions, and methods and procedures for early reporting of injuries. Additionally, job specific training should be given on safe lifting and work practices.
- Musculoskeletal injuries caused by improper lifting must be investigated and documented. Incorporation of investigation findings into work procedures must be accomplished to prevent future injuries.
- Where use of lifting equipment is impractical or not possible, two-man lifts must be used.
- Supervision must periodically evaluate work areas and employees' work techniques to assess the potential for and prevention of injuries. New operations should be evaluated to engineer out hazards before work.

Manual lifting equipment such as dollies, hand trucks, lift-assist devices, jacks, carts, hoists must be provided for employees when appropriate. Other engineering controls such as conveyors lift tables and works station design should be considered for the shop areas.

CALCULATOR FOR ANALYZING LIFTING OPERATIONS

Evaluator: _____ Job: _____ Date: _____

1. **Enter** the weight of the object lifted: **Weight Lifted: lbs.**

2. **Circle** the number on a rectangle in the Lifting Diagram (Figure 1) that corresponds to the position of the person's hands when they begin to lift or lower the objects.

3. **Circle** the number in the chart (below) that corresponds to the number of times the person lifts per minute and the total number of hours per day spent lifting. Note: For lifting done less than once every five minutes, use 1.0

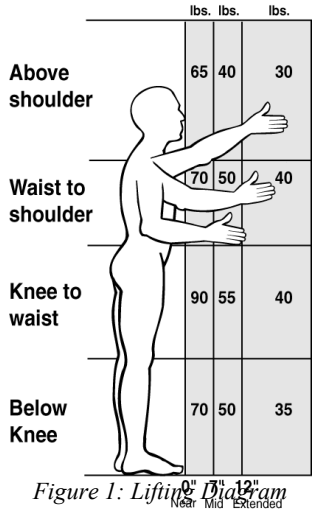


Figure 1: Lifting Diagram

How many lifts per minute?	How many hours per day?		
	1 hr or less	1 hr to 2 hrs	2 hrs or more
1 lift every 2-5 min	1.0	0.95	0.85
1 lift every min	0.95	0.9	0.75
2-3 lifts every min	0.9	0.85	0.65
4-5 lifts every min	0.85	0.7	0.45
6-7 lifts every min	0.75	0.5	0.25
8-9 lifts every min	0.6	0.35	0.15
10+ lifts every min	0.3	0.2	0.0

4. **Circle** 0.85 if the person twists 45 degrees or more while lifting, otherwise circle 1.0.

0.85 1.0

5. **Calculate:** Copy below the numbers you've circled in steps 2, 3, and 4.

lb. _____ X	_____ X	_____ =	**Lifting Limit: lbs.**
Step 2	Step 3	Step 4	

CALCULATOR FOR ANALYZING LIFTING OPERATIONS (CONTINUED)

6. **Compare:** Is the **Weight Lifted** (step 1) **<u>less than</u>** the **Lifting Limit** (step 5)?
   Yes = OK; No = Redesign

YES = OK **NO = HAZARD** See Step 7 *(below)* for solution ideas.

7. **SOLUTIONS PRINCIPLES**

To find the most appropriate solution for this job, look for the lowest number you used when calculating in steps **2, 3, 4**. Find the solution in the chart below.

HANDS POSITION (2)	**FREQUENCY (3)**
Reduce the horizontal distance from the body. Remove barriers, obstacles. Reduce weight of load. Reduce capacity of the container. Team lift the object with two or more workers. Design workstations with adjustable heights to eliminate forward trunk bend. Provide handholds. Store objects at 30 inches off the floor.	• Increase weight of a load so it requires mechanical assistance. • Improve layout to minimize manual material handling. • Use mobile storage racks.
DURATION (3)	**TWISTING (4)**
Use mechanical assistance such as overhead hoist, manipulator, vacuum lift, pneumatic balancer, or forklift. Eliminate the use of deep shelves. Job rotation to other jobs where no lifting is required.	• Redesign workstation layout to eliminate trunk twisting. • Locate lifting operations in front of the body. • Use slides, gravity, chutes to eliminate lifting/twisting.

CALCULATOR FOR HAND-ARM VIBRATION

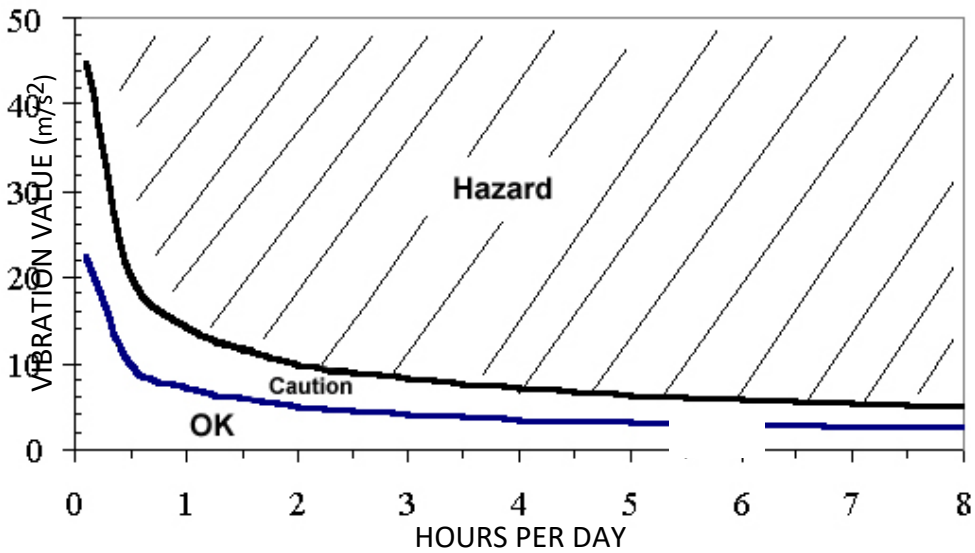
Find the vibration value for the tool. Get it from the manufacturer. On the graph below, mark the point on the left side shown as Vibration value.

Vibration Value: m/s^2

Hours Per Day:

1. Find out how many total hours per day the employee is using the tool and mark that point on the bottom of the chart below.

2. Trace a line onto the graph from each of these two points until they cross.



3. Interpretation
   a. If that point lies in the crosshatched "Hazard" area above the upper curve, then the vibration hazard must be reduced below the hazard level, or to the degree technologically and economically feasible.
   b. If the point lies between the two curves in the "Caution" area, then the job remains as a "Caution Zone Job."
   c. If the point falls in the "OK" area below the bottom curve, then no further steps are required.
   d. Note: The caution limit curve (bottom) is based on an 8-hour energy-equivalent frequency- weighted acceleration value of 2.5 m/s^2. The hazard limit curve (top) is based on an 8-hour energy-equivalent frequency- weighted acceleration value of 5 m/s^2.

URETEK PRE-SHIFT STRETCHING AND FLEXING

Soft tissue injuries are a significant problem for virtually every business, but they are a particular challenge and source of loss in the construction industry. In fact, strains, and sprains (most often involving the back) account tor a major portion of all injuries and illness resulting in absence from work. Experience has proven that soft tissue injuries can be greatly reduced through proper physical conditioning and pre-work "warm up drills" done as part of a Stretch and Flex Program.

These programs promote and institutionalize a short (no more than 10 minutes) and simple routine of stretching and flexing muscles immediately prior to a work shift. In addition to the job injury prevention benefits, Stretch and Flex Programs produce multiple physical and mental benefits that employees will enjoy outside of their workdays. These include enhanced agility, balance, coordination, circulation, and flexibility along with reduced tension and stress.

Stretch and Flex

Stretching and warming up before starting a job can bring you many benefits. Not only does it reduce your risk for injury on the job, but it also promotes a healthy and safe team culture. You would not participate in a sport or exercise before stretching, so why not stretch before starting your workday? It helps you loosen up, warm your muscles, and makes you feel great, too.

Importance of Workplace Stretching

Stretching before work—and even during work—has many benefits.

Preventing Future Injuries

Workplace injuries are common, and many problems can arise over time that contribute to them. It is not always easy to determine what caused an injury but it is easy to prove that stretching and warming up can prevent them. Whether you are going to be applying wall coverings or sandblasting, stretching can improve your workday by preventing potential injuries.

Building Team Culture

One of the most important parts about implementing stretching at work is what it says to employees .When a business has pre-shift stretching it shows that they care about their employees. It is a great way to build the team's culture and to do something that's health at the start of each day. Stretching allows each team member to prepare their mind and body for the workday ahead. It also follows in line with safety standards, which helps build team culture.

Promoting a Healthy Lifestyle

Trying to stretch every day is trying to live a healthier life. Your healthy lifestyle may also rub off on your coworkers and promote a healthier work environment. Stretching before a job gets your blood flowing, warms up your muscles and helps prevent future injuries on the job. In addition, it is good for you! Stretch and flex before starting every job and you will be on track to a happier and healthier life.

STRETCH & FLEX

SPENDING 10 MINUTES A DAY DOING STRETCHES CAN REDUCE FATIGUE AND AVOID INJURY

IT IS RECOMMENDED YOU ALWAYS CONSULT YOUR PHYSICIAN BEFORE STARTING A NEW EXERCISE PROGRAM

Back Stretch

Standing with feet apart, slowly lean backwards, reaching both arms back and towards each other. Hold for five seconds. Repeat 3 times.

Neck Stretch 1

While tilting the head forward, gently lower chin towards chest. Place your hand on the back of your head for added stretch. Do this once for 15 seconds.

Neck Stretch 2

Tilt head towards shoulder without twisting the neck. You should feel the neck pull on the opposite side. Do this once for 15 seconds. Repeat for the other side.

Lateral Torso Stretch

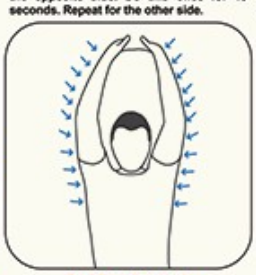
Raising one arm above the head, grasp it with the other hand and lean sideways. Hold the position for 5 seconds. Repeat 3 times on both sides.

Lateral Shoulder Stretch

Raising one arm overhead, grasp with the other hand and pull the elbow slowly behind the head. Hold this position for 15 seconds. Do once on each side.

Posterior Shoulder Stretch

Stand and place left hand on right shoulder. Using your left hand, pull right arm across the chest toward the left shoulder. Hold position for 15 seconds. Repeat for other shoulder.



Bridge Stretch

Liting arms above your head, interlace fingers, straightening elbows and reaching as high as possible. Hold for 15 seconds.

Calf Stretch

Assume a lunge position, bending the back knee. Stretch the calf muscle by grasping the toes of the front leg. Hold for 15 seconds. Repeat for the other leg.

Lower Back Stretch

Standing with feet shoulder width apart, twist while leaning forward to touch your toe with the opposite hand. Extend your other arm up behind you. Hold for 5 seconds. Repeat with the other hand.

Inner Thigh, Groin Stretch

Stand with feet shoulder width apart and with toes pointed forward. Bend slightly at the knee and move left hip downward toward right knee. Hold for 15 seconds and repeat for the other leg.

Forearm & Wrist Stretch

Without bending the elbow, extend one arm outwards. Bending the wrist upwards, use the other hand to pull the fingers back towards you. Release and bend the same wrist downwards, gently pulling on the fingers. Repeat with the other hand.

Front Thigh Stretch

Lift one leg behind you and grasp with your arm. Pull the leg up behind you to stretch the front of the thigh. Hold for 15 seconds. Repeat with the opposite leg.

BENEFITS OF REGULAR STRETCHING

- ✓ Prepares muscles for everyday work stresses, pre-fueling them with oxygen and other needed chemicals
- ✓ Instant circulation for instant energy boost
- ✓ Improves the body's posture, decreasing the risk for possible injury
- ✓ Reduces muscle shortening, internal friction and stiffness of the tendons, joints or ligaments
- ✓ Increases oxygen flow to the brain for improved morning alertness
- ✓ Increases mental relaxation and reduces anxiety

To Order Any Additional Required Postings Or For more Information, Please Call...

Extreme Temperatures

Reference: URETEK's Policy

Purpose
The purpose of this section is to provide protection for URETEK's employees from temperature extremes.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Frostbite: Damage to tissues from freezing due to the formation of ice crystals within cells, rupturing the cells and leading to cell death.

Heat Exhaustion: A state when the body can no longer keep blood flowing to supply vital organs and send blood to the skin to reduce body temperature at the same time.

Heat Stroke: A state when the body can no longer cool itself and the body temperature rises to critical levels.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
URETEK employees will be issued cold weather work clothes NFPA standard and the Personal Protective Equipment section of this manual.

Cold Weather Precautions
- Bring extra clothes to dress in layers.
- Have emergency supplies such as water and snacks.
- Beware of spending too much time outside in extreme cold without proper protection (have gloves, zero hoods for hardhats, and appropriate cold weather work clothes).
- If clothing or gloves become wet, they must be replaced with dry substitutes.
- Do not wear too much clothing (if you begin to sweat, it will lower your body temperature too much).
- If extremities such as hands or feet become very cold or numb, take action to warm them up slowly (frostbite is a real threat).
- If a person becomes disoriented during work in cold weather (slurred speech, non-responsiveness) get them inside so that they can be observed while they warm up.

Hot Weather Precautions
It is difficult to predict just who will be affected by heat stress and when, because individual susceptibility varies. There are, however, certain physical conditions that can reduce the body's natural ability to withstand high temperatures. The most common personal risk factors that contribute to heat related illnesses are:

- Weight.
- Poor physical condition.
- Previous heat illness.
- Age.
- Heart disease or high blood pressure.
- Recent illness that resulted in dehydration.
- Alcohol consumption.
- Medication.
- Lack of acclimatization.

Environmental factors such as ambient air temperature, air movement, and relative humidity can all affect an individual's response to heat.

- The best practice of staying hydrated is the single most important precaution to take when working in the heat. Other important steps to follow are:
- Taking frequent breaks.
- Avoid eating hot, heavy meals.
- Avoid beverages such as energy drinks.
- Watch new employees that are not heat acclimated.

Heat Stress
If symptoms of heat stress occur (cramps, nausea, feeling faint, lack of sweating, weakness, etc.) get the employee to a cooler place to rest. If medical treatment is needed, call for help according to the emergency numbers provided on site.

Water
URETEK's employees shall have access to potable water. Where it is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity throughout the work shift.

Heat Related Illness
URETEK's employees suffering from heat illness or believing a preventative recovery period is needed, will be provided access to an area with shade that is either open to the air or provided with ventilation or cooling. Such access to shade shall be permitted at all times.

Supervisors must receive training in the prevention of heat related illnesses prior to supervising employees working in heat.

Supervisors should be trained in the URETEK's heat illness procedures to prevent heat illness

and procedures to follow when an employee exhibits symptom consistent with possible heat illness, including emergency response procedures.

Procedures must be in place to control the effects of environmental factors that can contribute to heat related illness. The most common environmental factors are air temperature, humidity, radiant heat sources and air circulation.

Physical factors that contribute to heat related illness should be taken into consideration before performing a task. The most common physical factors that can contribute to heat related illness are type of work, level of physical activity and duration, and clothing color, weight, and breathability.

Supervisors must ensure personal factors that contribute to heat related illness are taken into consideration before assigning a task where there is the possibility of a heat related illness occurring. The most common personal factors that can contribute to heat related illness are age, weight/fitness, drug/alcohol use, prior heat related illness, etc.

Fall Protection

Reference: OSHA 29 CFR; 1910.23 & 1926.501-503

Purpose
The purpose of this section is to provide fall protection for URETEK employees working 6 feet or higher during any operations.

Scope
This section applies to all URETEK employees and contractors.

Definitions

Elevated Surface
Any surface designed to be a walkway or working area that is 6 feet (2 meters) above the adjacent ground floor, or ground level.

Personal Fall Arrest System
An ANSI approved, over-the-torso, body harness with lanyard that is worn in such a manner that it will reduce and/or eliminate the possibility of injury or death of employees falling from elevations of 6 feet or more.

Anchorage
The terminating component of a fall protection system or rescue system that is intended to support any forces applied to the system.

Authorized Person
A person assigned by the employer to perform duties at a location where the person will be exposed to a fall hazard.

Competent Person
An individual designated by the employer to be responsible for the immediate supervision, implementation, and monitoring of the employer's managed fall protection program who, through training and knowledge, is capable of identifying, evaluating, and addressing existing and potential fall hazards, and who has the employer's authority to take prompt corrective action with regard to such hazards. The Competent Person (CP) assigned by URETEK is The Supervisor

D-Ring
An integral "D" shaped connector typically used in harnesses, lanyards, energy absorbers, lifelines, and anchorage connectors as an integral connector as an attachment point.

Harness, Full Body
A body support designed to contain the torso and distribute the fall arrest forces over at least

the upper thighs, pelvis, chest, and shoulders.

Lanyard
A component consisting of a flexible rope, wire rope, or strap, which typically has a connector at each end for connecting to the body support and to a fall arrester, energy absorber, anchorage connector, or anchorage.

Rescue Plan
This is a written process that describes in a general manner how rescue is to be approached under the specified parameters, such as location or circumstances.

Self-Retracting Lanyard (SRL)
A device containing a drum wound line that automatically locks at the onset of a fall to arrest the user, but that automatically pays out from and retracts onto the drum during normal movement of the person to whom the line is attached. After onset of a fall, the device automatically locks the drum and arrests the fall.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements

Identifying Elevated Surfaces
An elevated surface is a walkway or working area that is 6 feet (2 meters) above the adjacent ground floor of level, but does not apply to fully enclosed halls, rooms, offices, etc. When employees or contractors are working at heights greater than 6 feet (2 meters) without a railing or net, fall protection must be used. Situations that constitute an elevated surface include, but are not limited to the following:

Elevated Surfaces	
Balconies	Lofts
Floor Openings	Scaffolds
Catwalks	Ladders
Working on or over opened-sided floors	Aerial Lifts/Man Lifts

URETEK employees or contractors working over water without a personal flotation device, must use fall protection. Personnel platforms raised by forklifts, cranes, scissor lifts, etc. are also considered elevated working surfaces and employees or contractors shall use a full body harness connected to the platform.

Designing Fall Protection Systems and Programs
Fall protection systems within this program can vary by location and situation. When purchasing equipment and raw materials for use in fall protection systems, applicable ANSI & ASTM requirements should be met. The following section outlines the requirements for using various types of fall protection equipment.

Fall Arrest System Requirements
Fall arrest systems typically include anchorage, connectors, and full body harnesses. Fall arrest systems also include deceleration devices, lanyards, lifelines, or suitable combinations. **When using components of fall arrest systems, try to match equipment from the same manufacturer**.

Fall Arrest System Requirements
Must be capable of limiting the arresting force on the employee to 1800 lbs. (816.47 kg) when a body harness is used
Body harness shall be rigged so that an employee cannot free fall more than 6 ft (2 meters) or contact any lower levels
Limit the deceleration distance to 3 ft (1 meters)
Sufficient strength to withstand twice the potential impact energy of an employee free falling 6 ft (2 meters)
Prior to using a Fall Arresting system, a rescue plan shall be developed. This rescue plan will include information on use of equipment routinely used at the facility, such as man lifts or forklifts equipped with personnel baskets, or specialized high-angle rescue devices, such as pulleys, winches, etc.

Anchoring Requirements
Shall be independent of any anchorage used to support or suspend platforms
Used under the supervision of a qualified person
Capable of supporting at least 5,000 lbs. (2,267.96 kg) per attached employee designed, installed, and used as part of a complete personal fall protection system.
Do not anchor fall protection systems to guardrails or hoists without prior approval from a qualified person

When a fall arrest system is used in a hoist area, rig the system to allow the employee to move only to the edge of the walking/working surface.

Connector Requirements
Made of dropped forged, pressed, formed steel or equivalent materials
Have a corrosion resistant finish with smooth surfaces and edges to prevent damage to interfacing parts of the system
Use D-rings and snap hooks that have a minimum tensile strength of 5,000 lbs (2,267.96 kg)
Have been tested to a minimum tensile strength of 3,000 lbs. (1,360.78 kg) without cracking, breaking, or being permanently deformed.
Only use double locking snap hooks to prevent unintentional disengagement

Body Harness

Only use body harnesses and components for employee protection. Do not use them to hoist materials. Attach the body harness to the center of the wearer's back near the shoulders. Harnesses must be capable of limiting the arresting force on the employee to 1800 pounds (816.47 kg). Use of belt type fall protection is prohibited.

Deceleration Device

Deceleration devices are used to dissipate or otherwise limit the energy imposed on an employee during fall arrest.

Deceleration Devices	
Rope grabs	Rip-stitch lanyards
Specially woven lanyards	Tearing or deforming lanyards
Automatic self-retracting lifelines/lanyards	

Lanyards and Lifelines

Lanyards and lifelines shall be protected from cuts and abrasions and have a minimum breaking strength of 5,000 pounds (2,267.96 kg). When using rip stitch, tearing, and deforming lanyards, the lifeline must be able to sustain a minimum tensile load of 5,000 pounds (2,267.96 kg) when fully extended.

Type	Requirement
Horizontal Lifelines	Design, install, and use the lifeline under the supervision of a qualified person only
Vertical Lifelines	Attach each employee to a separate lifeline
Self-Retracting Lifelines and Lanyards	Automatically limit free fall to 2 ft. (.696 meters) or less, the lifeline must be able to sustain a minimum tensile load of 3,000 lbs. (1,360.78 kg) when fully extended
	Do not automatically limit free fall distance to 2 ft. (.696 meters) or less, should be able to sustain a minimum tensile load of 5,000 lbs. (2,267.96 kg) when fully extended

Inspection and Maintenance of Fall Protection Equipment
Shall be inspected before each use by a competent person.
Evaluate the strength for providing the required support.
Evaluate for visible wear, damage, defect, or other deterioration.
Remove defective components from service.
Routine monthly inspections shall be conducted. Document all inspections.
Inspection of fall arrest equipment records shall be kept on file at the facility.
Dedicated storage areas to keep equipment clean, dry, and free from oils, chemicals, paint, and excessive heat.
Prior to using a Fall Arresting system, a rescue plan shall be developed. This rescue plan will include information on use of equipment routinely used at the facility, such as manlifts or forklifts equipped with personnel baskets, or specialized high-angle rescue devices, such as pulleys, winches, etc.

Protecting Personnel Working on Lower Levels

The danger zone for employees on lower levels includes the area directly below elevated surface and the space within a 12 feet (4 meters) radius around the area. Personnel working in the danger zone shall wear a hard hat. Barricades shall be erected around the immediate area of the overhead work to keep employees from entering the area.

Employees working on the elevated surfaces will keep tools, materials, and equipment from falling by securing them with rope or wire when possible or keeping them away from the edge of the elevated surface.

Employee Training

Each Company facility where fall protection is used shall have a designated and qualified person trained in:

Training
The nature of fall hazards in the work area.
The correct procedures for building, maintaining, disassembling, and inspecting the fall protection systems.
The use and operation of fall arrest systems.
The correct procedures for handling and storing equipment and materials.
The correct procedure for building overhead protection.

A training program shall be provided for each employee who might be exposed to fall hazards. Training shall enable each employee in the procedures to follow to minimize these hazards. Re-training shall be provided when the following are noted:

Re-training
Deficiencies in training.
Workplace changes.
Fall protection systems or equivalent changes that render previous training obsolete.

Employee Safety Monitoring Systems

Each facility where fall protection is used shall utilize an employee safety monitoring system which contains at least the following:

Safety Monitoring System
A competent person shall be designated to monitor the safety of other employees using fall protection devices. This person will be designated as the “Safety Monitor”.
The safety monitor shall be competent to recognize fall hazards.
The safety monitor shall warn the employee when it appears that the employee is unaware of a fall hazard or is acting in an unsafe manner.
The safety monitor shall be on the same walking/working surface and within visual sighting distance of the employee being monitored.
The safety monitor shall be close enough to communicate orally with the other employees.
The safety monitor shall not have other responsibilities which could take the monitor’s attention from the monitoring function.

Fall Protection Plan

Each facility where fall protection is used shall create and maintain a fall protection plan which conforms to the following provisions:

Fall Protection Plan
The fall protection plan will be prepared by The Supervisor and developed to site-specific requirements.
Any changes to the fall protection plan will be approved by The Supervisor or District Manager.
A copy of the fall protection plan with all approved changes shall be maintained onsite.
The implementation of the fall protection plan will be under the supervision of The Supervisor.
The plan shall include a written discussion of other measures that will be taken to reduce or eliminate the fall hazard for workers who cannot be provided with protection from the conventional fall protection systems.
The plan shall identify each location where conventional fall protection methods cannot be used. These locations shall then be classified as controlled access zones.
The plan must include a statement which provides the name or other method of identification for each employee who is designated to work in controlled access zones. No other employees may enter controlled access zones.
All incidents involving fall protection must be reviewed to determine if the fall protection plan needs to be changed.
Improvements to the fall protection plan must be made where they are deemed necessary.
The plan shall provide for prompt rescue of employees in the event of a fall or shall assure the employees are able to rescue themselves.

Recordkeeping and Reporting

Written certification records must be maintained showing the following:

Recordkeeping
Who was trained & dates of training?
Signature of person providing training & date employer determined training was adequate.

Deployment Actions

- Identify elevated walking and working surfaces.
- Design and install fall protection systems.
- Develop procedures for working or walking on elevated surfaces.

- Develop and deploy schedule for monthly inspection of fall protection components and ladders.
- Document inspection and training and retain at the facility.
- Develop and deploy a Fall Protection Plan as required.

Industry Applications

- Fall protection is required whenever employees are potentially exposed to falls from heights that exceed applicable regulatory thresholds. Guardrails, safety nets, or personal or fall arrest systems should be used. Some applicable regulatory thresholds may include:
- General Industry 1910.23(b)-Protection for wall openings and holes. Every wall opening from which there is a drop of more than 4 feet shall be guarded.
- Construction Industry 1926.501(b)(1)-Unprotected sides and edges. Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.
- Marine Terminal 1917.112(b)(1)-Guardrails shall be provided at locations where employees are exposed to floor or wall openings or waterside edges, including bridges or gangway-like structures leading to pilings or vessel mooring or berthing installations, which present a hazard of falling more than 4 feet (1.22m) or into the water.
- Shipyard Industry 1915.73(d)-When employees are exposed to unguarded edges of decks, platforms, flats, and similar flat surfaces, more than 5 feet above a solid surface, the edges shall be guarded by adequate guardrails.
- Steel Erection 1926.760(a)(1)-Each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge more than 15 feet (4.6m) above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.

Client Requirements

In the event of additional client requirements, the Company must be prepared to comply with them such as working at 4 ft. or higher requires fall protection where guards cannot be used.

Fire Safety

Reference: OSHA 29 CFR; 1910.38 & 157

Purpose
The purpose of this section is to protect the lives and property of URETEK employees through fire prevention and response.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Class A Fires
Fires involving ordinary combustible materials, such as wood, paper, plastic, cardboard, textiles, etc. Water, foam, or water-based liquids are used to extinguish these types of fires.

Class B Fires
Fires of flammable or combustible liquids, such as gasoline, diesel, oil, grease, etc. Dry chemicals or carbon dioxide are used to extinguish these types of fires**.**

Class C Fires
Fires involving electrical equipment. Dry chemical or carbon dioxide is used to extinguish these types of fires.

Class D Fires
Fires involving combustible metals. These fires are rare but are also very difficult to extinguish. Dry chemical is most often used to extinguish these types of fires.

Procedure

Responsibility
It is the responsibility of the respective Manager or designee to monitor and maintain the processes within their division.

General Requirements
URETEK will ensure safe evacuation of all personnel in the event of a fire. Firefighting shall be left to the profession fire fighters. No attempt to fight a fire involving explosives shall be attempted by any employee. URETEK will isolate and protect people and property in adjacent areas and on the roads.

Alarm
- Facilities shall use a canned air horn or electronic alarm system to notify all employees of fire emergency.

- Emergency Use of Portable Fire Extinguishers.
- URETEK Personnel will receive training prior to initial assignment in the use of hand fire extinguishers and are authorized to use them on fires that are in the incipient stage. Annual refresher training is required.
- In no case shall any employee attempt to use a hand fire extinguisher to fight a fire that has gone beyond the incipient stage.

Evacuation

- All posted exits remain unlocked and unblocked during business hours. Posted "Fire/Emergency Evacuation Route" placards are placed at regular intervals to indicate the recommended path to exit.

Assembly

- In the event of an evacuation all personnel shall assemble at a specified area. All personnel will report to the supervisor in charge.

Fire Prevention and Protection

A serious fire affects everyone. If the fire is beyond control, follow these safety rules to help prevent the spread of fire:

- All fire extinguishers will be kept at assigned locations and clearly marked or labeled.
- All fire extinguishers shall be periodically inspected as required.
- Replace all fire extinguishers that are no longer in service.
- Recharge discharged (even partially) fire extinguishers by an authorized inspector.
- All solvents shall be kept in approved, properly labeled containers. All flammable chemicals shall be kept and dispensed in approved containers.
- All employees shall follow proper safety precautions when handling any flammable/combustible materials.
- Only use approved chemicals for cleaning purposes.
- All no smoking signs shall be observed by employees and visitors.

5.4 Training

All employees will receive the appropriate training which shall include, but not limited to:

- General principles of fire extinguisher use.
- The hazards involved in incipient stage firefighting.
- Classification of fires.

Fire Drills, at a minimum, will be conducted annually. Training records shall be maintained by The Supervisor.

Fire Extinguisher Inspection Procedure and Maintenance

- All fire extinguishers shall be inspected on a regular basis, monthly visuals by employees at a minimum and annually, by authorized fire extinguisher servicing personnel. The extinguisher must be tagged and dated.

- Hand extinguishers shall be maintained and kept in their designated places at all times when not in use.
- Extinguishers shall be located where they are clearly visible, accessible, and a means to indicate the location, in the event of a fire.
- All URETEK employees will be made aware of the different types of extinguisher available.
- Extinguishers shall be installed on approved hangers, brackets, cabinets or set on shelves unless the extinguisher is of the wheeled type.
- Extinguishers having a gross weight of less than 40 pounds shall be installed so that the top of the extinguisher is no more than 5 feet above the floor.
- Extinguishers having a gross weight greater than 40 pounds shall be installed no more than 3 ½ feet above the floor.
- Extinguishers mounted in cabinets, wall recesses, or shelves shall be placed in a manner such that the extinguisher operation instructions face outward.

How to Use a Fire Extinguisher

Employees should be instructed in the proper use of fire extinguishers by supervisors and management. Fire extinguishers are installed throughout the work site. They are clearly marked with signs or labels. Extinguishers are located to be near enough should you need one. Locate the extinguishers in your work area; one should be placed every 3,000 sq. ft. See 1926 Standard.

The Company has extinguishers which can be used for all three classes of fires you are likely to encounter (Class A, B and C).

Class A - Ordinary combustibles or fibrous material such as paper, wood, cloth, rubber, and some plastics
Class B - Flammable or combustible liquids such as gasoline, kerosene, paint thinners, propane, and chemicals
Class C - Energized electrical equipment such as tools, appliances, or machines; or circuits including wiring, plugs, fixtures, junctions, and panel or distribution boxes

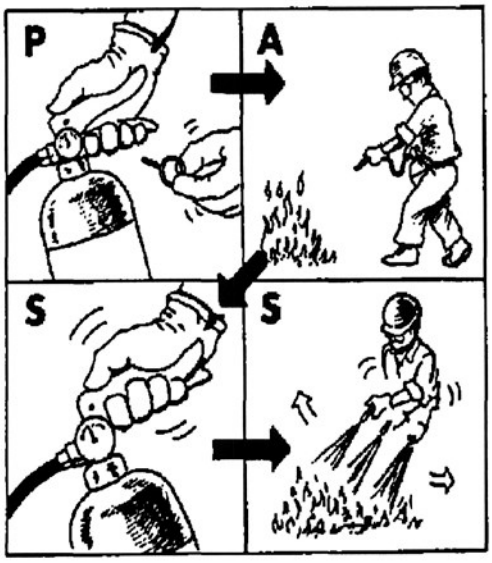
Remember to <u>P. A. S. S.</u> when using a fire extinguisher:

P—PULL: Break the seal and **PULL** the pin.

A—AIM: Stand about 3-5 feet or more from the fire and **AIM** the nozzle at the base of the fire. If you stand too close, pressure of the spray can spread the fire.

S—SQUEEZE: **SQUEEZE** the trigger while holding the extinguisher upright.
Stand away and move in on fire.

S—SWEEP: **SWEEP** the extinguisher from side to side, covering the area of the fire with the extinguishing agent.



The overriding rule: Use the extinguisher only if it is safe. Do not take chances.

Reporting
Report any fire extinguisher with a gauge that is not showing "in the green." An indicator pointing out of the green area (into the red) is showing too little or too much pressure. This extinguisher requires maintenance or service. Also, the pin should be in place and secured with a plastic seal.

Notify your supervisor about any fire extinguisher that has been used. Arrangements then can be made to have it serviced. If an extinguisher is used even a little, it will continue to leak gas. Over a few days, the gas will discharge, and the extinguisher will be unusable.

Fire Evacuation Procedures
Despite all precautions, there always is the possibility of fire in the workplace. Consequently, it is necessary to have an evacuation plan that everyone understands. The Emergency Evacuation Plan designates primary and secondary escape routes from each work area. These are routes for getting to the outside in the quickest, safest, and most direct manner. Evacuation routes are posted on maps throughout the workplace.

In an evacuation, all Employees should go to the designated Gathering Area. Make sure that you are a safe distance away from the building. Remain in the Gathering Area so that a roll call can be taken. The roll call ensures that all on-duty personnel are accounted for.

DO NOT re-enter the evacuated building for any reason until the **ALL CLEAR** is announced by your supervisor!

Workplace Chemical Awareness
You have a right to know about any hazardous chemicals that you work with in your job. URETEK has a written Hazard Communications Program that makes this information available and helps you to understand it.

Under this program, all Employees must be trained on their "Right to Know" about hazardous chemicals used at work. The Company maintains a binder containing a Safety Data Sheet (SDS) for each hazardous chemical authorized for use in the workplace. It is kept in the **Right to Know Station**. Safety Data Sheets are available for you to read and use at any time while you are at work.

Each Safety Data Sheet supplies important information about a chemical or product. You should read the SDS for each chemical or product you work with. It specifies the kind of safety equipment you must use when working with the chemical. It also gives first aid instructions in case you are injured by the chemical. The SDS will tell you:

1. A substance's chemical and trade name.
2. Physical data.
3. Health hazard data.
4. Reactivity data.
5. Personal Protection Equipment (PPE) required.
6. Manufacturer's name, address, and phone number.
7. Any hazardous ingredients.
8. Fire and explosion data.
9. First aid procedures.
10. Spill and leak procedures.
11. Other special precautions**.**

ALWAYS read the label or SDS before using a chemical product. Follow instructions. **DO NOT** mix cleaners or other chemicals together unless label instructions tell you to do so. As a rule, if you get a chemical on your body, wash it off immediately. Seek First Aid if necessary. If you have questions about a chemical, ask your supervisor.

First Aid and CPR

Reference: OSHA 29 CFR; 1910.151

Purpose
The purpose of this section is to provide First Aid and CPR trained personnel in the workplace to respond injuries or illnesses.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

CPR
Cardiopulmonary Resuscitation

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
Trained Personnel

- At least one field employee shall be trained in First Aid/CPR on each crew. URETEK will ensure training for designated personnel in First Aid and cardiopulmonary resuscitation (CPR). Training resources that meet nationally recognized medical organization criteria would provide First Aid/CPR training. The Supervisor or designated representative maintains documentation of all employees who have received training and certification in First Aid and CPR.

Emergency Contacts

- All URETEK employees will be made aware of all emergency telephone numbers needed for the transportation of injured personnel. These numbers are conspicuously posted in all URETEK's offices, job sites, vehicles, or are communicated by URETEK management. In the event of a serious injury requiring medical attention other than minor First Aid, only qualified, certified personnel should manage the injured person until professional medical help has arrived.

The following telephone numbers may be contacted for professional assistance:

Local Fire, Police, Ambulance	Dial 911 or Local Emergency Number
Chemtrec	Dial 1-800-424-9300
National Poison Control	Dial 1-800 256-9822
Company Emergency Numbers	Main office 281-351-7800

Emergency Action

- First aid measures are of extreme importance within the first few minutes for a worker that has incurred a serious or incapacitating injury. A primary assessment by an emergency responder will determine the nature and extent of the injury experienced. Each responder will be trained to evaluate the situation and take the following steps:
  - Stay calm; take a deep, relaxing breath.
  - Look for mechanisms or forces that caused this incident.
  - Be aware of environmental limitations (cold, heat, and moisture).
  - Control outside interference (traffic, crowds, and bystanders).
  - Check unknown hazards (gas, chemical, electrical, fire, explosion, lack of oxygen, radiation, weapons, etc.)

Body Barriers and First Aid Kits

Each responder will protect themselves and the patient, utilizing disposable barriers consisting of latex disposable or equivalent gloves, mouth-to-mouth barrier, eye-shield and face shield, and protective clothing if provided. Equipment for bloodborne pathogen protection is also located with the first aid kits located on-site.

First aid kits items are determined to be adequate for the environment to which it will be used in.

Each first aid kit is to be checked periodically for items to be replenished. The contents of the first aid kits shall be checked before being sent out to each job and at least weekly on each job to ensure that the expanded items are replaced. Each employee is responsible for maintaining the first aid kit in a company issued vehicle.

First aid kits shall be easily accessible, maintained in a serviceable condition, and are to be used for no other type of storage, inside or on top of the cabinet. Individual packaging and sealing shall be required only for those items that must be kept sterile.
Items such as scissors, tweezers, and tubes of ointment with caps or rolls of adhesive tape, need not be individually wrapped, sealed, or disposed of after a single use application. Tear-open individual packages of ointments, antiseptics, and the like shall be disposed of after one-time use and not stored.

Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities shall be provided within the work area.

Medical Assistance Guidelines

- Seriously injured or incapacitated personnel should be treated as found, or moved as little as possible, unless the following hazards are present:
  - **Electrical** – If still in contact with energized sources, shut off the power supply or move victim away from power source with a non-conducting device.
  - **Asphyxiation** – If inadequate oxygen exists or toxic gas is present, move victim to fresh air or supply with oxygen where found, if safe to do so.
  - **Fire /Explosion** – Remove victim from flames or combustible sources.
  - **Corrosive liquid splashes** – Move victim to dry, uncontaminated area upwind of release, using appropriate PPE to control exposures.
  - **Building / structural failure** – Remove victim if building collapse is imminent or expected.
- If emergency movement becomes necessary and no stretcher is available, you may use a blanket, tarpaulin, or sheet of heavy plastic. Pull in the direction of the body's axis, never sideways. Use help and extreme caution if spinal injuries are suspected.

First Aid Procedures

- Promptly analyze the situation and determine how to help the victim. If responders decide to treat the victim, begin at once. If you are confused or unsure of yourself, do not attempt to give treatment. Incorrect treatment may cause more damage than no treatment at all. If responders need professional help in giving first aid, call a hospital, the fire department, or the police. Knowing the correct first aid procedure may save a life.
- In the event of injury to the body and/or eyes by chemical or other objects, proper cleansing and flushing facilities will be provided.
- The general first aid procedure includes the following:
  - provide urgent care for life threatening emergencies.
  - examine the victim for injuries.
  - treat the victim for shock.
  - call a physician or medical professional.

Provide Urgent Care

- Certain medical emergencies require immediate care to save the victim's life. If the victim is bleeding severely, has been poisoned, or has stopped breathing, treatment must begin at once. A delay of even a few minutes can be fatal in these cases.
- Do not move a victim who may have a broken bone, internal injuries, or damage to the neck or spine, unless absolutely necessary to prevent further injury. If the victim is lying down keep the person in that position. Do not allow the victim to get up and walk about. Never give food or liquid to a person who may require surgery.
- If the victim is unconscious, turn the head to one side to help prevent the person from choking on blood, saliva, or vomit. Do not move the head of a person who may have a

broken neck or spinal injury. Never pour liquid into the mouth of an unconscious person. Make certain that the victim has an open airway. The airway consists of the nose, mouth, and upper throat. These passages must remain open in order for the victim to breathe.

Examine the Victim for Individual Injuries

- Treat the person for any life-threatening emergencies first, before beginning this step. The victim may suffer from diabetes, heart trouble, or some other disease that can cause sudden illness. Many people with such medical problems carry a medical tag or card. The tag or card lists instructions for care that should be followed exactly. If you must examine the victim's purse or wallet to look for a medical card, you should do so in the presence of a witness, if possible.
- Make the victim comfortable but handle the person as little as possible. If necessary, shade the victim from the sun or cover the victim to prevent chilling. Loosen the person's clothing, but do not pull on the victim's belt, because this pressure could further damage an injured spine. Remain calm and reassure the victim. Explain what has happened and what is being done. Ask any spectators to stand back.

Treat for Shock

- Shock results from the body's failure to circulate blood properly. Any serious injury or illness can cause a victim to suffer from shock. When a person is in shock, the blood fails to supply enough oxygen and food to the brain and other organs. The most serious form of shock may result in death.
- A victim in shock may appear fearful, light-headed, weak, and extremely thirsty. In some cases, the victim may feel nauseated. The skin appears pale and feels cold and damp; the pulse is rapid and faint; and breathing is quick and shallow, or deep and irregular. It is best to treat a seriously injured person for shock even if these signs are not present. The treatment will help prevent a person from going into shock.
- To treat shock, place the victim on his or her back, with the legs raised slightly. If the victim has trouble breathing in this position, place the person in a half-sitting, half-lying position. Warm the victim by placing blankets over and under the body.

Professional Medical Services

Send someone else to call for a doctor, an ambulance, or other help while you care for the victim. If you are alone with the victim, you must decide when you can safely leave to call for assistance. Always treat the victim for any life-threatening conditions before leaving to get help.

When telephoning for help, be prepared to describe the nature of the victim's illness of injury, the first aid measures you have taken, and the exact location of the victim. Also be prepared to write down any instructions and ask questions to clarify instructions you do not understand. Transportation by ambulance is preferable, as trained paramedical personnel will then be available to attend to the victim.

In areas where 911 is not available the numbers of physicians, hospitals etc. shall be posted in a conspicuous place. Every office should have a list of emergency phone numbers posted on or

near the telephone.

Employees with known medical conditions or problems should disclose this information to their physician so that immediate, appropriate medical attention can be provided for instances of allergies, seizures, diabetes, cardiovascular conditions, respiratory problems, asthma, etc.

Employee personnel files should list their family, address, telephone number, next of kin, and telephone number for any needed contact or support. Anticipatory orders from identified physicians should also be on file to cover emergency or routine care for special health problems.

Good Samaritan

In the absence of a trained medical responder, a by-stander, can implement the above-mentioned guidelines. This State provides for a Good Samaritan Law that protects bystanders from civil liability if acting in good faith to provide care to the level of training and to the best of their ability.

Actual consent must be stated or displayed by the victim before care can be initiated. Any refusal of care must be respected. A clear, informed victim's decision must be made before you may proceed. If unconscious, confused, or so severely injured that a clear decision cannot be made, implied consent is assumed, and patient care initiated.

Forklift and Industrial Trucks

Reference: OSHA 29 CFR; 1910.178

Purpose
The purpose of this section is to provide safe operation of forklifts and industrial trucks.

Scope
This section applies to all URETEK employees and contractors.

Definitions

Center of Gravity
This is the point on an object at which all of the object's weight is concentrated. For symmetrical loads, the center of gravity is at the middle of the load.

Counterweight
This is the weight that is built into the forklift's basic structure and is used to offset the load's weight and to maximize the vehicle's resistance to tipping over.

Dynamic Stability
The weight transfers and the resultant shift in the center of gravity due to the dynamic forces created when the machine is moving, braking, cornering, lifting, tilting, or lowering loads, etc.

Fulcrum
This is the forklift's axis of rotation when it tips over.

Grade
The slope of a surface, which is usually measured as the number of feet of rise or fall over a hundred-foot horizontal distance (the slope is expressed as a percent).

Lateral Stability
This is the forklift's resistance to overturning sideways.

Line of Action
This is an imaginary vertical line through an object's center of gravity.

Load Center
The horizontal distance from the load's edge (or the fork's or other attachment's vertical face) to the line of action through the load's center of gravity.

Longitudinal Stability
This is the forklift's resistance to overturning forward or rearward.

Moment
The product of the object's weight times the distance from a fixed point (usually the fulcrum). In the case of a forklift, the distance is measured from the point at which the forklift will tip over to the object's line of action. The distance is always measured perpendicular to the line of action.

Track
This is the distance between the wheels on the same axle of the forklift.

Wheelbase
This is the distance between the centerline of the forklift's front and rear wheels.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
- This procedure establishes uniform requirements designed to ensure that forklift safety training, operation, and maintenance practices are communicated to and understood by the affected employees.
- Forklift operator candidates must meet certain requirements in order to be eligible to operate a forklift. They are:
  - See and hear within reasonably acceptable limits, (this includes the ability to see at a distance and peripherally, and in certain instances, it is also necessary for the driver to discern different colors, primarily red, yellow, and green).
  - Endure the physical demands of the job.
  - Endure the environmental extremes of the job, such as the ability of the person to work in areas of excessive cold or heat. An operator must be able to climb onto and off of a forklift, to sit in the vehicle for extended periods of time, and to turn his/her body to look in the direction of travel when driving in reverse.

Initial and Ongoing Training
- Once it is determined that the potential operator is physically capable of performing forklift duties, the training can begin.
  - During an operator's initial training, the instructor(s) combine(s) both classroom instruction and practical training. Instructors must have knowledge, training, and experience to train forklift operators and evaluate their competence.
  - The content of both the classroom instruction and the practical training includes:
  - Operating instruction, warnings, and precautions for the types of forklifts the operator will be authorized to operate.
  - Differences between the forklift and the automobile.
  - Forklift controls and instrumentation: where they are located, what they do, and how

they work.
  - Engine or motor operation.
  - Steering and maneuvering.
  - Visibility (including restrictions due to loading).
  - Fork and attachment adaptation, operation, and use limitations.
  - Vehicle capacity.
  - Vehicle stability.
  - Any vehicle inspection and maintenance that the operator will be required to perform.
  - Refueling and/or charging and recharging of batteries (if applicable).
  - Operating limitations.
  - Balance/counterbalance.
  - Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.
  - Surface conditions where the vehicle will be operating.
  - Composition of loads to be carried and load stability.
  - Load manipulation, stacking, and unstacking.
  - Pedestrian traffic in areas where the vehicle will be operated.
  - Narrow aisles and other restricted places where the vehicle will be operated.
  - Hazardous (classified) locations where the vehicle will be operated.
  - Ramps and other sloped surfaces that could affect the vehicle's stability.
  - Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust.
  - Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.
- Performance Evaluation
  - If each potential operator has received training in any of the elements of our training program, and is evaluated to be competent, they need not be retrained in those elements before initial assignment in our workplace.
  - Each certified forklift operator is evaluated at least once every three (3) years to verify that the operator has retained and uses the knowledge and skills needed to drive safely. Refer to Forklift Operator Evaluation form.
- Refresher Training
  - Refresher training is triggered by any of the following situations:
- If the operator is involved in a forklift accident or near-miss incident.
- If the operator has been observed driving the forklift in an unsafe manner.
- When the operator is assigned to a different type of forklift.
- If it has been determined during an evaluation that the operator needs additional training.
- When there are changes in the workplace that could affect safety operation of the forklift.

Inspections

URETEK requires operators to perform and document pre-operational equipment checks on forklifts prior to the beginning of each shift in which those forklifts will be utilized to ensure the safe operating condition of the vehicle. The pre-operational check is performed by completing

the Daily Forklift Inspection checklist.

Periodic inspections are in conjunction with the particular forklift's maintenance or service schedule. Inspections and maintenance or repair beyond the recommended service schedules are done by authorized workshops and/or service technicians.

Operations

All URETEK forklift operators must observe the following guidelines:

- Yard speed limits must be observed, and under all travel conditions and the forklift must be operated at a speed that will permit it to stop in a safe manner.
- The forklift must be kept under control at all times.
- When vision is obscured, the operator must slow down and sound the horn.
- If a load blocks the operator's view, the forklift must be driven backwards.
- All forklifts must cross railroad tracks at a diagonal.
- Forklifts must be parked at least eight feet from the center line of the railroad tracks.
- The operator must be able to see where the forklift is going at all times.

Maintenance

Investing time and effort into the proper upkeep of our equipment produces day-to-day reliability. Keeping up with the manufacturer's recommended maintenance and lubrication schedules, and completing the proper records, will also increase our forklifts' longevity.

The Maintenance Supervisor follows the manufacturer's operator instruction manual for daily or weekly maintenance. Periodic maintenance (those completed monthly, every 6 months, or annually) is done by a factory-trained expert or a dealer.

Hands and Power Tools

Reference: OSHA 29 CFR; 1910.241 – 244

Purpose
The purpose of this section is to provide guidelines for proper personal protection through the examination and proper use of all hand and power tools.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Portable Grinding
A grinding operation where the grinding machine is designed to be handheld and may be easily moved from one location to another.

Protective Shield or Guard
A device or guard attached to the muzzle end of the tool, which is designed to confine flying particles.

Safety Guard
An enclosure designed to restrain the pieces of the grinding wheel and furnish all possible protection in the event that the wheel is broken in operation.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
The following general guidelines apply when using hand or power tools:

- Use the proper tool for the task.
- Follow the correct maintenance requirements to keep tools in good operating condition.
- Inspect for damage on each tool before use and do not use damage tools.
- Wear goggles when there is a risk of flying particles.
- Use tools in a manner so that a slip or miss does not result in a cut or hit to the user.
- Practice good housekeeping in all work areas and wear slip-resistant shoes.
- Provide adequate lighting.
- A hard hat, gloves, earplugs, and other protective equipment may be required for certain tasks and some locations. Make certain that this equipment is available and worn.
- Read and heed the operator's manual.

- Read and heed all safety decals on the equipment.
- Keep all guards and shields in place at all times.
- DO NOT by-pass, disconnect, or in any manner void any of the safety features built into the equipment.
- Only those employees trained in the safe and proper use of the equipment may use power equipment.
- Use only sharp bits and blades.
- DO NOT use power tools in areas that may contain ignitable vapor such as gasoline.
- Stop and unplug the tool if any unusual noise, smell, or vibration is detected.
- Tools having mushroom heads, split or defective handles, worn out parts or other defects that will impair their strength or render them unsafe for use, shall be removed from service until they are repaired.
- Tie back long hair and do not wear ties, jewelry or loose clothing that can become caught in moving parts.
- All hand-held powered drills, fastener drivers, horizontal, vertical and angle grinders with wheels, and disc sanders with discs greater than two (2) inches in diameter, belt sanders, reciprocating saws, saber, scroll and jig saws with blade shanks greater that a nominal one-fourth inch, and other similarly operating powered tools must be equipped with a constant pressure switch or control. They may have a lock-on control, provided that a single motion of the same finger or fingers that turn it on can accomplish turnoff.
- All other hand-held powered tools such as, but not limited to, platen sanders, grinders with wheels, and disc sanders with discs two inches in diameter or less, routers, planers, laminate trimmers, nibblers, shears, saber, scroll and jigsaws with blade shanks a nominal one-fourth of an inch wide or less may be equipped with a positive “on-off” control.
- Remove gloves when working with or around spinning or rotating equipment.

Electrical Safety Procedures

The following protocols shall be used when working with electrical tools:

- Electrical tools must always protect the user from electrical shock or electrocution. This can be accomplished by providing “double-insulated” tools, three-wired cords with the ground wire connected, and/or by use of a ground fault circuit interrupter (GFCI).
- Avoid working with electrical power tools in damp or wet areas. If this cannot be avoided, always wear gloves and footwear designed for use when working with electricity.
- Never carry tools by the cord; never disconnect them by “yanking” on them.
- Always disconnect tolls when not in use and before servicing them or changing accessories.
- Check plugs and cords regularly for cracks, fraying or other signs of wear.
- Damaged electrical power tools must be removed from service and be tagged “Do not use”.
- Electrical appliances used around water should be plugged into wall receptacles equipped with a GFCI.
- For outdoor work, use heavy insulated orange or yellow extension cords.
- Never use electric tools outdoors in rainy weather.
- Keep cords and hoses away from heat, oil, and sharp edges.
- Employees not involved with the work must maintain a safe distance.

- Store electric tools in a dry place when not in use.
- Keep electrical tool cords from becoming tripping hazards.

Gasoline-powered Safety Procedures

The following protocols shall be used when working with gasoline-powered tools:

- Utilize the required PPE.
- Make sure the engine has cooled before refueling.
- Refuel in well-ventilated areas.
- Replace the tank cap and wipe up spill before restarting the engine.
- Remove the spark plug wire before servicing.

Battery-powered Safety Procedures

The following protocols shall be used when working with battery-powered tools:

- Battery tools have power anytime the battery is in place; therefore, remove the battery when not using the tool.
- Store the batteries so that the contact plates cannot be shorted.
- Dispose of dead batteries as indicated in the directions or by local code.

Drill Safety Procedures

The following protocols shall be used when working with battery-powered tools:

- Make sure that you will not be drilling into concealed wire or pipes.
- Make sure the work piece is securely clamped.
- Just before the bit breaks through the other side, reduce the pressure on the drill bit.
- Bits can be very hot after use so keep them away from yourself and others while they cool.

Saw Safety Procedures

The following protocols shall be used when working with saws:

- Make sure the cord is out of the blade path.
- Make sure the work piece is secure.
- Support both sides of the cut to prevent binding.
- Keep blade guard in place.
- Take the necessary precautions when sawing wet or warped material.
- Wear sturdy shoes, thick pants, long sleeves, and safety goggles.
- Keep work are free of debris that could make you slip or trip.
- Sharpen the saw’s teeth frequently.

Grinding Wheel Safety Procedures

The following protocols shall be used when working with grinding wheels:

- Grinding wheels shall be guarded for at least three fourths of the circumference. The safety guard shall not be manipulated in such a way that will compromise its integrity or compromise the protection in which intended.
- Work or tool rests shall not be adjusted while grinding wheel is in motion. Tool rests on power grinders should not be allowed to be more than one-eighth inch distance from the wheel.

- Cracked or damaged grinding wheels shall not be used.

Operator Training
Training and competence demonstration in the safe selection, operation, and handling of each piece of equipment used is required. Instruction in the inspection and maintenance of tools and recognized signs of tool damage of wear should be provided. The Maintenance Foreman or designee will ensure training will be provided to employees using power tools.

Inspection of Power Tools

- Documented inspections and maintenance activities will be maintained in accordance with the tool manufactures' recommendations. Regular schedules for the inspection, maintenance, and repair of all power tools should be put in place at each facility. Inspections should include testing of tools, and visually assessing tool wear, damage, the integrity of chords, air hoses, couplings, and sharpness of blades or bits. Damaged tools should be immediately taken out of service.

Hazard Communications (GHS)

Reference: OSHA 29 CFR; 1910.1200

Purpose
The purpose of this section is to ensure the hazards of all chemicals purchased are evaluated, and that the information concerning these hazards is transmitted to URETEK's employees.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Chemical Name
The scientific designation of a chemical in accordance with the Chemical Abstract Service (CAS), which will clearly identify the chemical for the purpose of conducting a hazard evaluation.

Combustible Liquid
This is any liquid having a flashpoint at or above 100 deg. F (37.8 deg. C), but below 200 degrees F (93.3 deg. C).

Container
Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems, engines, fuel tanks, or other operating systems in a vehicle are not considered to be containers.

Explosive
This is a chemical that causes a sudden release of pressure, gas and heat when subjected to sudden shock, pressure, or high temperature.

Exposure
This is when an employee is subjected to a chemical that is a physical or health hazard and includes potential accidental exposure. Subjected in terms of health hazards includes any route of entry (e.g. inhalation, ingestion, skin contact or absorption).

Flammable Liquid
This is any liquid having a flashpoint below 100 deg. F.

Flammable Solid
A solid, other than a blasting agent or explosive, that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change or which can be ignited readily.

Flashpoint
This is the minimum temperature at which a liquid gives off a vapor in sufficient concentration

to ignite.

Hazardous Chemical
Any chemical that is a physical or health hazard.

Hazard Warning
These are any words, pictures, symbols on a label or other form of warning which convey the specific physical and health hazards, including target organ effects of the chemical in the container.

Health Hazard
A chemical has been proven to cause acute or chronic health effects in exposed employees. The term “health hazard” includes chemicals which are carcinogenic, toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins and agents which damage the blood, lungs, skin, eyes, or mucous membranes.

Immediate Use
The hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it was transferred.

Oxidizer
This is a chemical other than a blasting agent or explosive that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

Physical Hazard
A chemical for which there is valid, scientific evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water reactive.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
Requirements for managing hazard communications are provided in the specific sections to follow.

Hazardous Chemical Inventory
An inventory (list) of hazardous materials and chemicals, which are used in the course of URETEK normal business activities, are maintained and continually updated. This list includes all substances that require a SDS. The list is cross-referenced to the SDS and serves as an index to

aid employees in identifying and locating necessary information.

One copy of the inventory is kept in the front of each SDS book and one copy is kept on file with The Supervisor or Designate for each chemical used in the workplace, a SDS sheet is available to employees upon request in a timely manner.

Safety Data Sheets (SDS)
All Safety Data Sheets are kept in an organized fashion and are placed in an identified and accessible location for all employees to view at will. The SDS are kept in a binder that is known as the employee “Right to Know” station. The Supervisor or Designate maintains a duplicate set of SDS information. Copies of the SDS for all hazardous chemicals to which URETEK employees may be exposed are to be kept at the facility and will be readily available for review to all employees during each work shift.

SDS books and the Hazardous Chemical List is maintained and kept up to date. SDS for products phased out of URETEK operations are not thrown away. As updated copies replace obsolete SDS; discontinued SDS are retained in a separate file or binder.

If a hazardous chemical or substance is received without a proper SDS, the manufacturer or distributor of the product must be contacted immediately and asked to fax the SDS to the facility and mail a copy as a follow-up. If, for some reason, the manufacturer or distributor is unable to produce a SDS upon request, The Supervisor is notified immediately, and the hazardous materials or substances received without a SDS will be returned to the sender.

Subcontractors working on URETEK’s jobsite are required to bring copies, or must be able to obtain copies, of all SDS for hazardous materials brought onto the jobsite so that the information is accessible to all employees. It is preferable to have each subcontractor bring their Hazard Communication Program and SDS in a binder labeled with the contractor's name and identified as a Hazard Communication Program. Upon leaving the jobsite and the removal of all hazardous materials, they may take their information with them.

Labeling
Each container of a hazardous chemical that is used in or around the work area must be properly labeled with the identity of the hazardous material, the appropriate hazard warnings, and the name and address of the manufacturer. Appropriate labels must be on all containers, regardless of size. Containers must be approved and recommended for storage and/or dispensing of the particular hazardous chemicals contained in them.
Worn and torn labels must be replaced. Existing labels on incoming containers of hazardous chemicals will not be removed or defaced unless the container is immediately marked with the required information. DOT shipping labels on containers will not be removed until all residues have been removed from the container. Employees are responsible for reporting inappropriate labels to their Supervisor. The Supervisor or Designate is responsible for ensuring that appropriate labels are in place and that replacement labels are available.

Training
Education and training is provided to all URETEK employees who may be, or potentially may be, exposed to hazardous chemicals in the workplace. Each affected employee working for the Company is required to receive Hazard Communication training. The Supervisor or designated representative will provide or coordinate the training. This training is provided during the new employee orientation process before the new employee assumes status as an active employee and whenever a new hazardous chemical is introduced into the workplace. All URETEK employees are informed of the location of the written Hazard Communication Program, chemical inventory, and SDS.

Training may be either in the classroom or on-the-job and presented prior to first exposure to the hazardous material. Information and training may be designed to cover categories of hazards (flammability) or specific chemicals. Chemical-specific information is always available through labels and SDS. Employee training includes at least the following:

- Methods and observations that are in place or may be used to detect the presence or release of a hazardous chemical in the work area.
- The physical and health hazards of the chemicals in the work area.
- The measures employees can take to protect themselves from the hazards, such as work practices, emergency procedures, and PPE to be used.
- Details of the Hazard Communication Program, including the labeling system.
- Safety Data Sheets.
- How employees can obtain and use the appropriate hazard information.
- If the management of the Company engages in the services of contract labor personnel, and exposure to hazardous materials is possible, the contract laborers must be made aware of the locations of the Hazardous Chemical List and the SDS Right-to-Know station.

Storage
All storage areas for hazardous substances are secured, properly ventilated, and identified by signs.

Non-Routine Tasks
Before any non-routine task is performed, employees are advised of potential or new hazards. If employees have concerns or questions, they may contact their Supervisor or designated representative, to address the issue or establish special precautions to follow. In addition, the Supervisor shall inform any other personnel who could be exposed to the hazards.

If a non-routine task is necessary, the Supervisor or designated representative will provide the following information about the activity as it relates to the specific chemicals expected to be encountered:

- Specific chemical name(s) and hazard (s).
- PPE required and safety measures to be taken.
- Measures that have been taken to lessen the hazard(s).
- Emergency procedures.

Other Personnel Exposures (Contractors)

The Supervisor can provide, upon request, other personnel, or outside contractors with the following information as follow:

- Hazardous chemicals to which they may be exposed while in the workplace.
- Measures to minimize the possibility of exposure.
- Location of the SDS and labeling requirements for all hazardous chemicals.
- Procedures to follow if exposed.

The Supervisor may contact each contractor before work is started to gather and disseminate any information concerning chemical hazards the contractor may bring into the workplace and vise-versa. It will be the responsibility of the contractor to properly train contract employees.

Hazard Identification and Risk Management

Reference: URETEK Policy

Purpose
The purpose of this section is to provide a process to identify all hazard risks in the workplace so that they can be eliminated or mitigated through the consistent application of sound management strategies.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Intolerable
This is a risk that the Company cannot accept. Stop activities until risk controls that will move activity into at least the tolerable risk region have been implemented.

Tolerable
This is an identified risk where work can continue without interruption. Continued risk assessment is required to establish improved controls.

Low Risk
Any identified risk deemed acceptable. No further action is required.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
Only qualified personnel conduct risk assessments. They will identify and address potential hazards to the company and its businesses, personnel, facilities, customers, other direct product receivers, including the public and the environment. They will also include assessments of emergency situations, including transportation incidents, and their potential impacts.

Having been identified, risk is evaluated in terms of the possible severity of outcome and the probability of occurrence. In reducing risk to acceptable levels, initially preventive and then protective measures are considered, evaluated, selected, and implemented.

Where PPE requirements are identified, they are communicated to employees and contractors. Suitable PPE is purchased, and personnel are trained to make certain that the PPE requirements clearly understood and consistently followed including the use and care of proper PPE.

Incident, Near Miss Reports, Environmental Compliance, Job Observations, Job Safety Analysis, and other Risk Management Systems are reviewed by Management to evaluate the effectiveness of the controls. When deficiencies are found, the controls are modified accordingly. All Risk Assessments are periodically reviewed.

Regular evaluation of working environments and processes allows for identification of both effective control systems, and malfunctioning control systems. Effective systems may be selected for use elsewhere while malfunctioning systems can be reevaluated and redesigned.

A system of regular maintenance is in place to eliminate the catastrophic failure of equipment and the attendant risk to personnel.

URETEK employees and sub/contractors are required to participate in the Hazard ID and Risk Assessment processes through the use of systems like Near Miss reporting, Job Safety Analysis and other Hazard ID techniques that may be developed. The identified risks and hazards are reviewed with the affected employees and using a corrective action form to dedicate assignment for eliminating or mitigating the findings, we ensure appropriate documentation of completion, and implemented controls. In this way we ensure that hazards are managed between planned inspection and throughout each job process.

Work planning is a regular and integrated activity and an effective means of controlling and identifying the hazards. It allows individuals to prepare for the work environment.

Control systems are known and understood by all.

Hazards resulting from URETEK's activities are identified and controlled consistently across all locations.

During purchasing, the consequences of the product are known and considered. Information on the potential hazards of materials involved in operations is kept current (all hazardous products will have hazard information supplied with them) and based on assessed risk to personnel, exposures are monitored, proper protective measures are communicated, and pertinent health data recorded and reviewed.

A system exists for conducting health checks, absentee monitoring and working with medical service providers to identify any conditions that may be causing harm to employees or others who come into contact with our Company services.

Through controlling company vehicles and drivers, minimum standards are maintained throughout all locations providing a degree of safety to all who travel.

Minimum standards and training allow for the transportation of all equipment to be carried out safely. Hazardous items carry clear labeling identifying them as such allowing the correct controls to be put in place.

Contractor performance requirements are defined and communicated, which include responsibility for providing personnel who are trained, qualified and able to perform specified duties. Evaluation and selection procedures for contractor services include assessment of their capabilities to perform work in a safe and environmentally sound manner and in a manner consistent with URETEK's management system.

A system is in place to monitor emerging compliance requirements that may have significant impact on the operating units, or the company's regional or global business. This information is then communicated to all responsible parties. Since changes in technology, work environments and statutory requirements take place almost daily, management systems are designed and implemented that identify and respond to any unplanned or unidentified risk that results from such change. Procedures are in place to periodically assess compliance with all applicable laws, regulations, permits, and company requirements.

Job Safety Analysis (JSA) is a tool most commonly used by the Company in daily risk management in the field. This tool is formally documented.

- JSA's are to be conducted before every task/job.
- JSA's should be reviewed and adjusted as necessary as job conditions change.
- All affected URETEK's personnel should be included in the JSA process.
- JSA's can have pre-identified conditions typical of a particular task as a guide, but should be manually constructed to better ensure, job-specific considerations and avoid the common pit-fall of simply "checking off" points without real consideration of the specific job elements.

The hazard identification process should be used for routing and non-routine activities as well as new processes, changes in operation, products, or services as applicable.

Hearing Conservation Policy

Reference: URETEK Policy

OBJECTIVE

The objective of the URETEK Hearing Conservation Program is to minimize occupational hearing loss by providing hearing protection, training, and annual hearing tests to all persons working in areas or with equipment that have noise levels equal to or exceeding an eight-hour time-weighted average (TWA) sound limit of 85 dBA (decibels measured on the A scale of a sound level meter). A copy of this program will be maintained by all affected departments. A copy of OSHA's Hearing Conservation Standard, 29 CFR 1910.95, can be obtained from the Supervisor. A copy of the standard will also be posted in areas with affected employees.

ASSIGNMENT OF RESPONSIBILITY

A. Management
1. Use engineering and administrative controls to limit employee exposure.
2. Provide adequate hearing protection for employees.
3. Post signs and warnings in all high noise areas.
4. Conduct noise surveys annually or when new equipment is needed.
5. Conduct annual hearing test for all employees.
6. Conduct hearing conservation training for all new employees.
7. Conduct annual hearing conservation training for all employees.

B. Employees
1. Use company-issue approved hearing protection in designated high noise areas.
2. Request new hearing protection when needed.
3. Exercise proper care of issued hearing protection.

PROCEDURES

C. Noise Monitoring
1. Monitoring for noise exposure levels will be conducted by the Supervisor**.** It is the responsibility of the individual departments to notify the Supervisor when there is a possible need for monitoring. Monitoring will be performed with the use of sound level meters and personal dosimeters at the discretion of the Supervisor.
2. Monitoring will also be conducted whenever there is a change in equipment, process or controls that affect the noise levels. This includes the addition or removal of machinery, alteration in building structure, or substitution of new equipment in place of that previously used. The responsible supervisor must inform the Supervisor when these types of changes are instituted.

D. Employee Training

1. Affected employees will be required to attend training concerning the proper usage and wearing of hearing protection. The training will be conducted by the Supervisor, or a designated representative, within a month of hire and annually thereafter.
2. Training shall consist of the following components:
   a. how noise affects hearing and hearing loss.
   b. review of the OSHA hearing protection standard.
   c. explanation of audiometric testing.
   d. rules and procedures.
   e. locations within company property where hearing protection is required; and
   f. how to use and care for hearing protectors.

Training records will be maintained by the Supervisor (see Attachment A).

Hearing Protection

Management, supervisors, and employees shall properly wear the prescribed hearing protection while working or traveling through any area that is designated as a high noise area.

3. Hearing protection will be provided at no cost to employees who perform tasks designated as having a high noise exposure and replaced, as necessary. It is the supervisor's responsibility to require employees to wear hearing protection when noise levels reach or exceed 85 dBA. Those employees will have the opportunity to choose from at least two different types of hearing protection.
4. Personal earbuds are not approved for hearing protection and are not permitted in any operating area of company property.
5. Signage is required in areas that necessitate hearing protection. It is the responsibility of the Supervisor to provide signage to the appropriate areas.
6. Preformed earplugs and earmuffs should be washed periodically and stored in a clean area. Foam inserts should be discarded after each use. Hands should be washed before handling preformed earplugs and foam inserts to prevent contaminants from being placed in the ear.
7. the Supervisor will keep a log of the areas or job tasks designated as requiring hearing protection, as well as the personnel affected by this Hearing Conservation Program (see Attachment B).

E. Audiograms/Hearing Tests

1. Employees subject to the Hearing Conservation Program who have time-weighted average (TWA) noise exposures of 85 dBA or greater for an eight (8) hour work shift will be required to have both a baseline and annual audiogram. The audiograms will be provided by the URETEK and conducted by the Customer with no cost to the employee.
2. The baseline audiogram will be given to an employee within one (1) month of employment and before any exposure to high noise levels. Annual audiograms will be performed within one year from the date of the previous audiogram. It is the responsibility of the individual and the Supervisor to schedule the annual audiogram.
3. If an annual audiogram shows that an employee has suffered a standard threshold shift, the employee will be retested within thirty (30) days of the annual audiogram. If the retest

confirms the occurrence of a standard threshold shift, the employee will be notified in writing within twenty-one (21) days of the confirmation. Employees who do experience a standard threshold shift will be refitted with hearing protection and provided more training on the effects of noise.

Attachment A

Hearing Conservation Training Log

Training Date:_____

Topic:_____

Training Conducted by:_____

Employee Name (printed)	Employee Signature	Job Title

Record of Hearing Protection Needs

Company Name: **Personnel in Hearing Conservation Program:** **Date**				
Hearing protection is required for and has been issued to the following personnel:				
Employee Name	**Department**	**Job Description/ Equipment Being Used**	**Type of Hearing Protection Issued**	**Date Issued**

Housekeeping Awareness

Reference: OSHA 29 CFR; 1910.21 - .30 and 1910.119

Good Practice

- Practice good housekeeping at all times. Keep your work areas, walk areas, and aisles in good order. Cluttered floors, aisles, storage and work area, blocked exits, all make your job more difficult, as well as more dangerous. Keep all equipment and materials in their proper place. All places such as storerooms and service rooms and general areas shall be kept clean and orderly and in a sanitary condition. Poor housekeeping will result in injuries as well as cause fires.
- Containers for scrap and refuse shall be provided and used in the warehouse, shop areas and jobsites.
- Tools, trucks and general equipment used in Company operations shall be kept clean and in safe operating condition.

Facility Location: _____

Evaluated By: _____ Date: _____

Facility Safety Inspection Checklist

Yes	No	**Are building evacuation drawings that indicate exit routes and staging areas for assembly outside the building up to date and posted near doorways?** Corrective Action: _____ Person Responsible:_____Due Date: _____
Yes	No	**Are all fire doors to storage, telephone equipment and power rooms in working order, unobstructed and closed?** Corrective Action: _____ Person Responsible:_____Due Date: _____ Open fire doors increase the speed at which fire spreads and allow smoke to circulate more freely, causing an increased risk to both occupants and equipment.
Yes	No	**Are doors and passageways that may be mistaken for emergency exits marked "Not an Exit" to minimize possible confusion?** Corrective Action: _____ Person Responsible:_____Due Date: _____
Yes	No	**Are fire extinguishers installed in appropriate locations and not further than 150 feet apart? Are extinguishers clearly marked and unobstructed by equipment or materials? Have the extinguishers been inspected within the past 12 months?** Corrective Action: _____ Person Responsible:_____Due Date: _____ ABC-rated dry chemical extinguishers are appropriate in most areas. They should each have attached inspection tags that indicate they have been inspected within the last 12 months.

Yes No	**Are hand-held extinguishers mounted on walls as opposed to being stored on the ground or in file cabinets?** Corrective Action: _____ Person Responsible:_____Due Date: _____ OSHA requires portable fire extinguishers to be mounted on a wall. Extinguishers stored on the ground are likely to be moved and not replaced in the same location, causing the extinguisher to not be where expected when needed during an emergency.
Yes No	**Are wall, floor and ceiling penetrations for cables, wires, pipes and mechanical systems (such as ductwork) sealed to prevent the spread of fire and smoke?** Corrective Action: _____ Person Responsible:_____Due Date: _____ Sealed wall penetrations prevent the spread of fire and smoke from one room to another. Penetrations can be sealed with drywall, fire retardant pipe seal or firestop pillows.
Yes No N/A	**Are flammable and combustible liquids stored in approved flammable storage cabinets?** Corrective Action: _____ Person Responsible:_____Due Date: _____ Quantities of flammable and combustible liquids in excess of the following quantities should be stored in approved flammables storage cabinets: 25 gallons of Class IA liquids (flashpoint below73 degrees F. and boiling point below 100 degrees F.)* 120 gallons of Class IB, IC, II or III (flashpoint below73 degrees F. and boiling point above 100 degrees F.)* *Refer to the product's Material Safety Data Sheet (SDS) to determine its flammability/combustibility class.
Yes No N/A	**Have the facility's sprinkler and/or fire alarm systems been inspected in the past 12 months? Is the fire suppression system tagged to verify this inspection?** Corrective Action: _____ Person Responsible:_____Due Date: _____ Additional inspection requirements may apply according to local regulations.
Yes No N/A	**Do sprinkler heads have at least 18 inches of vertical clearance from material stored below?** Corrective Action: _____ Person Responsible:_____Due Date: _____ This clearance is required by OSHA and is necessary for proper functioning of the sprinkler system.

Yes No	**Does the facility have a written Hazard Communication program, including a complete chemical list and file of Safety Data Sheets (SDS) for chemicals used and stored in the facility? Are these SDS accessible to all employees, visitors, and contractors for review upon request? Does the written program describe how the employer will meet the requirements of OSHA's Hazard Communication standard?** Corrective Action: _____ Person Responsible: _____Due Date: _____ SDS should be on file for solvents, fuels, batteries, cleaners, lubricants, and other potentially hazardous materials.
Yes No	**Are all chemical containers properly labeled with the identity of the chemical, the name and address of the manufacturer, and appropriate hazard warnings such as corrosiveness, toxicity, or flammability?** Corrective Action: _____ Person Responsible:_____Due Date: _____
Yes No	**Have all employees received training on the hazardous chemicals in their work area?** Corrective Action: _____ Person Responsible: _____Due Date: _____ OSHA's Hazard Communication standard requires employers to provide training to employees that addresses: The requirements of the OSHA Hazard Communication standard. Location of the company's written Hazard Communication program, Safety Data Sheets and chemical lists. Methods to detect the presence or release of a hazardous chemical in the work area. The physical and health hazards of the chemicals in the work area. Measurements employees can take to protect themselves from these hazards. A detail of the employer's chemical labelingsystem. Refer to 29 CFR 1910.1200, OSHA's Hazard Communication standard, for more information and a complete list of requirements.

Yes No	**Are all stairways, aisles and access ways kept clear of trip hazards and not used for storage?** Corrective Action: _____ Person Responsible:_____Due Date: _____
Yes No	**Are walking/working surfaces and storage areas free of potential fall hazards? Are open- sided edges or other fall hazards in excess of four feet protected by handrails, guardrails or covers**? Corrective Action: _____ Person Responsible:_____Due Date: _____ Areas to look out for include stairways, mezzanines, loading docks and mechanic's pits.
Yes No	**Is general housekeeping in good order?** Corrective Action: _____ Person Responsible:_____Due Date: _____ Look for unnecessary debris, trip hazards, excessive accumulations of dust, standing water, other spilled liquids, etc.

Incident Investigation

Reference: OSHA 29 CFR; 1910.119

Purpose
The purpose of this section is to provide a process for investigating incidents.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Tier 1 Incident
A minor incident and is investigated by the supervisor.

Tier 2 Incident
An incident with the potential of being a major Incident and is investigated by URETEK's Investigation Team using the Tier 2 Root Cause Form.

Investigation Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the process within their division.

General Requirements
To ensure that incidents will be reported, employees must be encouraged to participate in the "fact-finding" process. The point emphasized must be that "hazardous conditions" and "unsafe practices" are an indication of a much bigger problem with a breakdown in the Safety and Health policy.

For Tier I, depending on whether it was a near miss or actual incident, use the respective form. Refer to Near Miss Investigation and Injury Incident Report.

The purpose of the Tier 2 incident investigation then becomes one that will uncover symptomatic problems and provide solutions that will result in long-term corrective action. Refer to the Tier 2 Root Cause Form.

It is important to gather facts and interview witnesses as soon as possible after an accident to ensure the most accurate information is being recorded. The efficiency of the corrective measures is determined by the accuracy of the information gathered. The best place to conduct an interview is wherever the employee being interviewed feels comfortable.
A case number will be assigned by The Supervisor, consisting of the month, year, and potentially an additional identifying number if there is more than one Tier 2 incident in the month;

example: 03/01/19.

Incident Cause Identification
Incidents occur when hazards escape detection during preventative measures, such as a job safety analysis (JSA), when hazards are not obvious, or as the result of combinations of circumstances that were difficult to foresee. A thorough incident investigation may identify previously overlooked physical, environmental, or process hazards; the need for new or more extensive safety training; or unsafe work practices.

The primary focus of any incident investigation shall be the determination of the facts surrounding the incident and the lessons that can be learned to prevent future similar occurrences. The process shall be positive and thought of as an opportunity for improvement.

Incident Investigation Plan
A systematic approach to accident investigation, identification of contributing factors, and implementation of corrective actions is essential to ensuring a good Safety and Health program and management system. A less orderly approach can increase the potential for injury and financial loss. Good incident investigation procedures and plans include:

- Providing information needed to determine injury rates, identifying trends or problem areas, permit comparisons, and satisfy worker's compensation requirements.
- Identifying, without placing blame, the basic contributing factors directly or indirectly to each incident.
- Identifying deficiencies in the Safety and Health management system, and
- Suggesting corrective action alternatives for the Safety and Health management system.
- A good incident investigation will usually yield a number of contributing factors and corrective actions. The corrective actions selected shall include both the specific measures needed to eliminate or reduce the probability of recurrence of a given type of incident and the measures needed to improve the Safety and Health management system.

As the Safety and Health management system improves, the overall Safety and Health performance also should improve. When Management insists on excellence in safety performance, it shows respect for human values. It also is likely to achieve greater productivity, improved quality, lower production costs, and increased profits.
An effective incident investigation requires strong management commitment and involvement. Management shall support the investigation process and act on the results. It shall make sure that the investigators are capable and have sufficient resources for an adequate investigation. Management shall designate a Safety and Health professional, or another qualified individual, to evaluate the quality of all incident investigations. The elements to be evaluated shall include:

A thorough evaluation is necessary to assure management that it is getting a high- quality investigation that offers adequate, but not excessive, recommendations for corrective action. Accuracy and completeness of the information shall include:

- Clarity and completeness of the description of the sequence of events leading to the

incident.

- Correct identification of all contributing factors.
- Clarity and completeness of the description of contributing factors.
- Corrective actions already taken.
- Recommendations made for corrective actions to reduce or eliminate the probability of recurrence of a similar incident.
- Recommendation for corrective actions to improve the management system.
- Proper review and signoffs.
- Timeliness.

Principles of Incident Investigation

An incident is an unplanned event that results in personal injury or property damage. An incident investigation should determine what happened, how it happened, and why it happened, and what should be done to prevent similar incidents. The method presented in this program is flexible. It allows considerable latitude in the makeup of an incident investigation team and in its activities.

The scope of the investigation shall be defined carefully at the outset by specification of the beginning and the end of the incident. The investigation should be limited to factors that relate directly to the incident.

All incidents shall be investigated, regardless of the extent of injury or property damage. An incident that involves injuries requiring medical treatment normally requires extensive investigation. An incident that does not involve injuries, but involves significant property damage, also will normally require extensive investigation. An incident that involves only first aid or very minor property damage shall be investigated, but may not require extensive investigation. An extensive investigation is warranted, however, when there was a potential for more serious consequences.

Investigation Objectivity

The objective of any incident investigation is to identify the contributing factors and recommend corrective actions that will eliminate or minimize them. Investigators should avoid any emphasis on identifying the individuals who could be blamed for the incident. Looking for someone to blame jeopardizes the investigators' credibility and effectiveness and will usually reduce the quantity and accuracy of the information received. This does not mean that relevant oversights or acts of omission or commission on the part of hourly employees, supervisors, or other management personnel should be ignored. Many incidents result from actions someone did or did not do, know about, or judge correctly.

The supervisor has a major role in every investigation, and is also likely to have a major role in carrying out the corrective actions. The supervisor may be the only investigator or may be a member of an investigation team. Most supervisors have the fortitude and objectivity needed to carry out good investigations in their own departments. But if the incident cannot, or won't,

be objective, the investigators or safety personnel should independently attempt to determine the facts and identify any supervisory and management system defects.

Investigation Team

The size and makeup of the investigation team should be dictated by the incident's seriousness or complexity. The supervisor, with the help of the employees involved, usually investigates cases resulting in minor injury or property damage. The team for a major investigation involving a serious injury, a fatality, or extensive property damage might include the employee(s) directly involved, the supervisor, safety personnel, technical specialists, and employees familiar with the process or operation. The team also might include members of upper management, such as an operations manager or crew manager. If there is a fatality or a major property damage incident, the team shall include legal counsel.

A team can add more members as the investigation uncovers complications, injury, or damage potential that was not recognized when the team was formed.

The qualifications needed by the members of the incident investigation team include:

- Technical knowledge.
- Objectivity.
- Inquisitiveness and curiosity.
- Familiarity with the job, process, or operation.
- Tact in communication with others.
- Intellectual honesty.
- An analytical approach to problems.

The Team Leader should be designated as soon as possible after the incident occurs. The Supervisor will designate, or approve the designation of the Team Leader and other members of the team. The Team Leader's duties shall include:

- Calling and presiding over meetings.
- Controlling the scope of team activities by identifying the line of investigation to be pursued.
- Assigning tasks and establishing a schedule.
- Assuring that no potentially useful data source is overlooked.
- Keeping interested parties advised of the investigation's progress.
- Overseeing the preparation of the final report.
- Arranging liaison with employee representative(s), government agencies, and news media.

Notification Procedure

Management shall adopt a formal notification procedure to assure that all appropriate persons receive prompt notification when an incident occurs. The procedure shall specify who is responsible for notifying each person involved.

The severity of the incident or injuries shall dictate how far the communication process should go. It also shall dictate when the information is to be communicated, e.g. at any time of the day

or night, or only during working hours. The notification procedures must be kept up to date; no one can predict when the team will be needed.

Supervisors are responsible for initiating communication to The Supervisor on incidents of all kinds. Line management with a vested interest may include the supervisors, crew managers, the operations manager or president of a division. Members who normally are to be notified include Safety and Health personnel and public relations personnel.

Immediate Actions

The Safety and Health of employees, visitors, and the public must be the primary concerns immediately after an incident. Activities related to the investigation are important, but they are secondary. The first responses must be:

- Take all steps necessary to provide emergency rescue and medical help for the injured.
- Take actions that will prevent or minimize the risk of further incidents, injury, or property damage.
- Most incidents will require one or more of the following actions as soon as possible:
- Secure, barricade, or isolate the scene.
- Collect transient or perishable evidence.
- Determine the extent of damage to equipment, material, or facility, and
- Restore the operating functions (if feasible).

Determining the Facts

As stated earlier, the level of effort involved in the investigation largely depends on the seriousness or complexity of the incident. Investigators shall perform only those tasks that are pertinent to identification of the contributing factors. For a major investigation, the incident investigation team shall:

- Visit the accident scene before the physical evidence is disturbed.
- Take samples of unknown chemical spills, vapors, residues, dusts, and other substance, noting conditions that may have affected the sample.
- Document environmental factors such as weather, illumination, temperature, noise, ventilation, and physical factors such as fatigue, age, and medical conditions.
- Make comprehensive visual records. No one can predict in advance which data will be useful, so photographs should be taken from many different angels and accurate and complete sketches or diagrams should be made before the incident scene is restored.
- Determine which incident-related items should be preserved. These may become critical evidence if there is litigation or regulatory intervention later.
- When the investigation reveals that an item may have failed to operate properly, or was damaged, arrangements shall be made either to preserve the item as it was found at the incident scene or to document carefully any subsequent repairs or modifications.
- Identify the people who were involved in the incident. Also identify all eyewitnesses, including those who saw the events leading to the incident, those who saw the incident happen, and those who came upon the scene immediately following the incident. Identify others who may have useful information. These people should be interviewed as soon as

possible. The validity of their statements is highest immediately after the incident. Immediate interviews minimize the possibility that witnesses will subconsciously adjust their stories to fit the interviewer's concept of what occurred or to protect someone involved. Witnesses should be interviewed individually and in private so the comments of one do not influence the responses of others.

- Conduct interviews with everyone who was involved or can provide information. Tactful, skilled investigators usually get uninhibited cooperation from employees by eliminating any apprehension they may have about incriminating themselves or others. Witnesses must be convinced that investigators want to find the cause of the incident and do not want to place blame. If witnesses provide misleading information, the purpose of the investigation is thwarted, and a similar incident may occur again. The need for follow-up interviews may be necessary to clarify certain facts.
- Carefully document the sources of information. This documentation avoids an unwarranted impression that information actually obtained from third parties is based on the investigator's own observations or analysis. Documentation of information sources can prove valuable if the incident investigation is expanded at some point or reopened later.
- Review all sources of potentially useful information. These may include original design; design specifications; drawings; operating logs; purchasing records; previous reports; procedures; equipment manuals; verbal instructions; maintenance, inspection, and test records; alteration or change of design records; design data; job safety analysis; records indicating the previous training and job performance of the employees and supervisors involved; computer simulations; and laboratory tests.
- Investigative tools may include writing equipment such as pens/paper, measurement equipment such as tape measures and rulers, cameras, small tools, audio recorder, PPE, marking devices such as flags, equipment manuals, etc.

Summary

Facts must be separated from opinions, direct evidence from circumstantial evidence, and eyewitness statements for hearsay testimony. Investigators must understand that the accuracy and thoroughness with which they obtain, and record data will largely determine the quality of the final root cause analysis and the effectiveness of corrective actions.

The Root Cause Report shall be prepared and include an incident report form and a detailed narrative statement concerning the events. The format of the report may include an introduction, methodology, summary of the incident, investigation team member names, narrative of the event, findings, and recommendations. Photographs, witness statements, drawings, etc. should be included.

Incident Reporting

Reference: OSHA 29 CFR; 1904

Purpose
The purpose of this section is to ensure that reporting of incidents in the workplace is done in a timely and accurate manner.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Work-related incidents
This includes all events that result in employee injury, property damage, or environmental impact.

In patient hospitalization
This is a formal admission to the inpatient service of a hospital or clinic for care or treatment.

Near misses
These are incidents that could have resulted in personal injury, property damage, or environmental impact.

OSHA Recordable cases
These are work-related injuries requiring more than first aid treatment, and all occupational illnesses.

First Aid
This consists of one-time treatment and subsequent observation of minor injuries.

Amputation
This is the traumatic loss of a limb or other external body part. Amputations include a part, such as a limb, appendage, that has been severed, cut off, amputated (either completely or partially); fingertip amputations with or without bone loss; medical, amputations resulting from irreparable damage; and amputations of body parts that have since been reattached.

Tier I
A minor incident and is investigated by the Supervisor.

Tier 2
An incident with the potential of being a major incident and is investigated by the Health and Safety Investigation Team.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
All injuries shall be reported to The Supervisor as soon as possible, but no later than 24 hours). For Tier I incidents, the Supervisor completes reporting and investigation using the Injury/Incident Report form. Tier 2 requires additional reporting, investigation and documentation that is initiated by the Supervisor and completed by an Investigation Team.

In addition to reporting the accident/incident to The Supervisor, it is also required to inform the Company Operations Management of the incident as soon as possible. Incidents must also be reported to the client in a timely manner (within 24 hours).

For near misses, the Supervisor completes the Near Miss Report and forwards it to The Supervisor for investigation and follow-up.

All URETEK's employee OSHA recordable injuries shall be reported to the Workmen's Compensation carrier. Within eight (8) hours after the death of any employee from a work-related incident, the Company of any affected shall orally report the fatality by telephone or in person to the OSHA office that is nearest to the site of the incident (Region), or by using the OSHA toll-free central telephone number. This requirement applies to each such fatality or hospitalization of one or more employees which occurs within 30 days of an incident.

Within twenty-four (24) hours after any inpatient hospitalization, amputation, or eye URETEK must report the incident to OSHA.

Each report required by this section shall relate the following information:
- Establishment name.
- Location of work-related incident.
- Time of the work-related incident.
- Type of reportable event (i.e., fatality, inpatient hospitalization, amputation, or loss of eye).
- Number of employees who suffered the event.
- Names of the employees who suffered the event.
- Contact person and his or her phone number.
- Brief description of the work-related incident.

URETEK does not have to report an event if it:
- Resulted from a motor vehicle accident on a public street or highway. URETEK must report the event if it happened in a construction zone.
- Occurred on a commercial or public transportation system (airplane, subway, bus, ferry,

streetcar, light rail, train).
- Occurred more than 30 days after the work-related incident in the case of a fatality or more than 24 hours after the work-related incident in the case of an inpatient hospitalization, amputation, or loss of an eye.

Individual responsibilities for reporting and investigation must be pre-determined and assigned prior to incidents.

URETEK's personnel must be trained as needed in their roles and responsibilities for incident response investigation techniques.

Environmental spills shall be reported to The Supervisor immediately. The Supervisor is responsible for documenting the spill using the Spill Report. Based on the quantity of the spill, there are reporting requirements to the city, state, and federal agencies. The Supervisor will also report these incidents to the proper jurisdiction and follow up with a written report, if required. Spills at a company facility may also trigger an action within the Storm water Pollution Prevention Plan.

Maintain spill reports and investigation information in a database or file.

Record Only — Descriptive Terminology
There are numerous terms used within the insurance industry to describe claim reporting where an insured and/or agent reports the possibility of a claim, but may believe or assume no claim will be made. These descriptions may include but are not limited to usage of words like:
- Notice only.
- Incident only.
- Report only.
- Record only.

For the purposes of these guidelines, URETEK uses the term "Record Only" as inclusive of these or any similar descriptions not mentioned.

Record Only — Claim Reporting

URETEK defines a "Record- Only" report as a third-party "property damage" or "bodily injury" for which:
- No claim is anticipated and foreseeable or.
- No medical treatment has been sought or furnished by a medical care provider or.
- No medical bills are known and submitted for reimbursement or.
- No damage claim has been made or repair bills incurred or.
- "Property damage" has been confirmed to be less than the OPD deductible, provided there is no aggregate involved.

The identity of the injured or damaged party is not known and cannot be determined.

For the purposes of these guidelines, URETEK uses the term “Record Only” as inclusive of these or any similar descriptions not mentioned.

Claims Not Qualified for Record Only

Certain types of loss notice descriptions will not be considered by URETEK as “Record Only” reports. The list below is not all-inclusive and may consist of other types of loss notices as deemed appropriate by the URETEK:

- All occurrences which likely will result in a claim.
- Questionable coverage regardless of complexity or severity of loss.
- Lawsuits of any type.
- All injuries where the injured party’s identity is known, and medical treatment has been sought.
- Serious injury regardless of known identity or liability, including fatalities.
- Notice of under a Claims Made policy.
- Personal and Advertising Injury.
- Sexual Abuse or Sexual Harassment.
- Professional Liability.
- Management Liability.
- Employee injuries.
- Environmental.
- Umbrella or excess.
- Reinsurance reportable.
- Surplus Lines.
- Any matter involving potential for spoliation of evidence.
- Any matter involving potential criminal activity or fraud, e.g. employee dishonest.

Injury and Illness Recordkeeping

Reference: OSHA 29 CFR; 1904

Purpose
The purpose of this section is to ensure OSHA injury and illness recordkeeping is maintained.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

OSHA Recordable
Criteria met to enter an injury or illness on the OSHA 300 log.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
Three forms are used for OSHA recordkeeping:

- OSHA 300 is a log of occupational injuries and illnesses on which the occurrence, extent, and outcome of cases are recorded during the year.
- OSHA 300A is a summary of occupational injuries and illnesses that is used to summarize the OSHA 300 at the end of each year.
- OSHA 301 or Injury Incident Report form that gathers equivalent information provides additional information on each case that has been recorded on the OSHA 300 log.

OSHA 300:

- When the occupation injury or illness occurred.
- To whom.
- What the injured or ill person's regular job was at the time of the injury or illness exposure.
- Where the event occurred.
- The department in which the person was employed.
- The kind of injury or illness.
- Was the injury or illness recordable.
- How much time was lost?
- Whether the case resulted in a fatality.
- Additional relevant information that may be needed.

OSHA 300A

- The 300A summary is prepared by totaling the column entries on the log, writing the totals on the log, and signing and dating the certification portion of the form at the bottom of the page.
- The 300A is posted each year by February 1st and must remain posted until April 30th of each year.

General Recording Criteria

- Death.
- Days away from work.
- Restricted work or transfer to another job.
- Medical treatment beyond first aid.
- Loss of consciousness.

Job Competency

Reference: URETEK's Policy

Purpose
The purpose of this section is to ensure that URETEK's employees are competent in their job roles.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Job Competency
An employee has the skills and personal characteristics needed to perform the tasks for the position currently held.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
- An organizational chart and list of jobs, titles and/or roles is used and will be maintained by the Human Resource Office.
- This program establishes that certain criteria for job competency and consideration for these criteria will have, but not limited to, for each role:
  - Education.
  - General work experience.
  - Specific experience.
- A procedure has been established in which URETEK's employees and potential URETEK's employees must provide verifiable documentation that demonstrates that they meet the qualifications for their job. Documentation is kept on file in the Employee Personnel file, Employee Training File and Driver Qualification File in the District and Corporate office.
- Each URETEK's employee will receive job-specific training, based upon the training requirements that address the roles and responsibilities for the job classification of the employee. Furthermore, this standard establishes that new or transferred employees must be trained on the tasks that they may perform on a regular basis.
- This program establishes that the competency of the employee is verified by the Office of Human Resources before the employee is permitted to perform their roles and responsibilities of a job or task independently.
- When a URETEK's employee changes job positions, an assessment is made to determine competency. This assessment is documented. Documentation is kept on file in the

Employee Personnel file.

- Should the assessment identify the need for more training, this information will be sent to The Supervisor or Operations Manager for the scheduling of the additional training.

Ladder and Stairway Safety

Reference: OSHA 29 CFR; 1910.27 & 1926.1050-1053

Purpose
The purpose of this section is to establish guidelines to be followed for employees using ladders or stairways in the workplace.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Portable Ladder
A ladder that can be readily moved or carried

Extension Trestle Ladder
This is a self-supporting ladder, adjustable in length, consisting of a trestle ladder base and a vertically adjustable extension section with a suitable means for locking the ladders together.

Fixed Ladder
This is a ladder that cannot be readily moved or carried because it is an integral part of a building or structure.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
Fixed Industrial Stairs are provided in our facilities in the following circumstances:

- For access from one structure level to another where operations necessitate regular travel between levels.
- For access to operating platforms at any equipment which requires attention routinely during operations.
- Where access to elevations is daily or at each shift for such purposes as gauging, inspection, regular maintenance, etc.
- Where such work may expose employees to acids, caustics, gases, or other harmful substances, or for which purposes the carrying of tools or equipment by hand is normally required.

All fixed industrial stairs are provided according to OSHA specifications for stair strength, stair width, angle of stairway rise, stair treads, stairway platforms, railings and handrails, and vertical

clearance.

Portable ladders provided by URETEK for use by employees are constructed according to OSHA specifications in order to ensure safety under normal conditions of usage.

Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced, when the ladder is in position for use.

For portable wood ladders, all wood parts are:

- Free from sharp edges and splinters.
- Sound and free from accepted visual inspection from shake, wane, compression failures, decay, or other irregularities.

Portable metal ladders chosen for use by the Company are:

- Designed without structural defects or accident hazards such as sharp edges, burrs, etc.
- Of sufficient strength to meet the test requirements.
- Protected against corrosion unless inherently corrosion resistant.

Fixed ladders shall be designed to meet the following load requirements:

- The minimum design live load shall be a single concentrated load of 200 pounds.
- The number and position of additional concentrated live-load units of 200 pounds each as determined from anticipated usage of the ladder.

Work Practices

When ascending or descending, the climber must face the ladder.

Portable ladders are designed as a one-man working ladder based on a 200-pound load and will be used accordingly. Ladders shall not be loaded beyond the maximum intended load for which they were built, or beyond the manufacturer's rated capacity.

Portable rung and cleat ladders will be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder (the length along the ladder between the foot and the top support).

The ladder will be so placed as to prevent slipping, or it will be lashed, or held in position. The ladder base section must be placed with a secure footing.

All portable rung ladders should be equipped with nonslip bases when there is a hazard of slipping. However, nonslip bases are not intended as a substitute for care in safely placing, lashing, or holding a ladder that is being used on oily, metal, concrete, or slippery surfaces.

The top of the ladder must be placed with the two rails supported, unless equipped with a single support attachment.

On two-section extension trestle ladders, the minimum overlap for the two sections in use will be according to OSHA specifications.

Portable rung ladders with reinforced rails will be used only with the metal reinforcement on the underside.

The bracing on the back legs of step ladders is designed solely for increasing stability and not for climbing.

Ladders will not be:

- Used in a horizontal position as platforms, runways, or scaffolds.
- Placed in front of door openings toward the ladder unless the door is blocked open, locked, or guarded.
- Placed on boxes, barrels, or other unstable bases to obtain additional height
- Tied or fastened together to provide longer sections.
- Used to gain access to a roof unless the top of the ladder extends at least 3 feet (0.9m) above the point of support, at eave, gutter, or roofline.
- Used as a brace, skid, guy or gin pole, gangway, or for other uses than that for which they were intended.

Ladders for which dimensions are specified should not be used by more than one man at a time or with ladder jacks and scaffold planks where use by more than one man is anticipated.

Ladders with broken or missing steps, rungs, or cleats, broken side rails, or other faulty equipment must not be used. Employees finding ladders with any of these conditions must report them to The Supervisor.

- Improvised repairs may not be made.
- Ladders made by fastening cleats across a single rail will not be used.
- Tops of the ordinary types of stepladders will not be used as steps.
- Middle and top sections of sectional or window cleaner's ladders will not be used for bottom section unless the user equips them with safety shoes.

Inspections and Maintenance

Ladders shall be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use.

Ladders will be inspected before each use by the person using the ladder to ensure safety and serviceability.

Ladders will be maintained in good usable condition at all times.
The joint between the steps and side rails is kept tight, all hardware and fittings are securely attached, and the movable parts operate freely without binding or undue play.

Metal bearings of locks, wheels, pulleys, etc., will be frequently lubricated.
Frayed or badly worn rope will be replaced.

Safety feet and other auxiliary equipment will be kept in good condition to ensure proper performance.

Ladders which have developed defects will be withdrawn from service for repair or destruction and tagged or marked as “Dangerous, Do Not Use”.

If ladders tip over, the supervisor will:

- Inspect the ladder for side rail dents or bends, or excessively dented rungs.
- Check all rung-to-side-rail connections.
- Check hardware connections.
- Check rivets for shear.

If ladders are exposed to oil and grease, equipment will be cleaned and kept free of oil, grease, or slippery materials.

Recordkeeping
Ladder inspections shall be conducted as part of the inspection, and records shall be maintained by The Supervisor.

Training
For all employees who work on ladders and stairways, training is provided via the training system by qualified instructors and media authorized by The Supervisor.

The Operations Manager responsible for providing the time and other resources to facilitate this training.

Elements included in the training program include the safe work practices and other requirements of this procedure.

Light Duty/ Return-To-Work Policy

Reference: URETEK Policy

Standard Practice Instruction
URETEK supports the practice of bringing injured employees back to work, as soon as they are medically able, to a position in our organization compatible with any physical restrictions they may have. We believe this practice serves the best interests of our employees and organization.

The prompt return of inured employees to positions within their medical restrictions will minimize the impact of work-related injuries. Coming back to work early helps employees remain functional as they recover while providing our organization with the valuable use of employees' talents. It also helps control workers' compensation costs.
If you are injured at work, report the injury to your supervisor immediately – no matter how minor the injury is. You and your supervisor will then call URETEK's insurance provider Work Injury Hotline to report the injury and get a treatment recommendation. Any questions concerning workers' compensation should be directed to the URETEK Safety Manager. Your supervisor or a Safety Manager will help arrange for medical treatment following an injury.

Current positions may be modified to fit the medical limitations of injured employees by modifying workstations, altering specific tasks, or working reduced hours. If this is not possible, temporary transitional jobs may be available either within your department or through a temporary assignment with another department.
This return-to-work program is an important part of our organization's commitment to manage work-related injuries in a way that is best for our employees and URETEK.

Written Program

URETEK will review and evaluate this standard practice instruction:
- On an annual basis.
- When changes occur that prompt revision of this document.
- When facility operational changes occur that require a revision of this document.
- When an accident or close call occurs, which relates to the topic.

Effective implementation requires a written program for job safety and health that is endorsed and advocated by the highest level of management within **URETEK** and that outlines our goals and plans. This written program will be communicated to all personnel. It encompasses the total workplace, regardless of number of workers employed or the number of work shifts. It is designed to establish clear goals, and objectives.

General Requirements
URETEK will establish return-to-work controls and operational procedures through the use of this document. Poor reintegration of employees after an extended illness or injury can result in further complications and delay getting an employee back to full work capacity.

Health Surveillance Upon Return-To-Work

Return-to-work health baseline. Prior to reassignment, all workers who are returning to work will be interviewed to determine their work limitations and strengths. Their physician may be consulted to establish a recommended list of duties, which should be avoided. These actions will provide an initial base against which changes in health status can be evaluated. These actions are not intended to preclude people from performing work.

Employee notification. Employees will be notified when they are restricted from job descriptions or duties where it is known or suspected that they will be exposed to duties that may aggravate their present medical condition. These positions will be identified through job and worksite analysis and from the list of known risk jobs or duties compiled by their health care provider.

Baseline health surveillance. The baseline health surveillance may include any or all of the following:

- A medical and occupational review and recommendation provided by a health care provider.
- A physical examination by a health care provider who is knowledgeable of the hazards associated with employees work duties.
- Conditioning Period Follow-up. Supervisors will ensure that employees returning to work are given a break in period to recondition their muscle-tendon groups prior to working at full capacity. A follow-up assessment of these workers after the break in period will be conducted to determine the following:
- If any duties are aggravating the previous illness or injury.
- If reconditioning of weak muscle-tendon groups has been successful.
- Whether any reported soreness, stiffness, or other problems is transient and consistent with normal adaptation to the job or whether it indicates the onset of stressors associated with the previous illness or injury.
- If problems are identified, what further follow-up action is required.

Periodic Health Surveillance

Periodic Health Surveillance. Periodic health surveillance (based on care giver recommendations) will be conducted on all employees who are assigned to positions involving exposure to duties that are known or suspected to aggravate an existing or preexisting condition.

- The content of this assessment will include the following:
- A medical and occupational review.
- A physical examination (if required by a care giver).
- A detailed update of the employee's medical and occupational status.

Documentation. Data gathered on employees as a result of health surveillance will be confidential and documented and filed in individual employee medical records.

Program Review and Evaluation
This program will be evaluated on a periodic basis. The purpose will be to evaluate the success of the program and to monitor the progress of affected employees. Senior company officers will review the program regularly to evaluate its success in meeting goals and objectives. The results of the review will be in the form of a written progress report and program update. The report will be shared with all responsible parties and communicated to employees. New or revised goals arising from the review will be provided to affected employees as needed. Any deficiencies identified will have corrective actions initiated. Evaluation techniques will include the following:

- Analysis of trends in injury/illness rates.
- Employee surveys.
- Before and after surveys/evaluations of return-to-work cases.
- Up-to-date records or logs of job improvements tried or implemented.

Worksite Analysis
Worksite analysis identifies existing hazards and conditions. Worksite analysis also identifies operations in the work environment that create hazards or aggravate previous injuries or illnesses. This also includes close scrutiny and tracking of injury and illness records to identify trends. The objectives of worksite analysis, will be to recognize, identify, and correct hazards. In addition to analyzing current workplace conditions, planned changes to existing and new facilities, processes, materials, and equipment may also be evaluated. Worksite analysis is divided into four main parts:

- Gathering information from available sources.
- Conducting surveys to determine which jobs/tasks are aggravating injuries or illnesses.
- Performing job hazard analyses of those jobs/tasks with identified risk factors.
- After implementing control measures, conducting periodic surveys and follow-up to.
- evaluate the success of implemented changes.

Information Sources
Records Analysis and Tracking. Existing medical, safety, and insurance records, including OSHA-300 logs, can be analyzed for evidence of aggravation of previous injuries or disorders associated an employees' typical job or work tasks. Health care providers may be requested to participate in this process to ensure confidentiality of patient records.

Screening Surveys. Baseline screening surveys will be conducted to identify jobs that put our employees at additional risk after return-to-work.

Job Hazard Analysis
URETEK will identify through the use of information sources and screening surveys, jobs that place employees at additional risk after return-to-work. After a worksite analysis has been completed, a job hazard analysis for each job so identified will be conducted. Job hazard analyses will be routinely performed by a qualified person(s) for jobs that put workers at risk after return-to-work. This analysis will help to verify lower risk factors at light duty or restricted

activity work positions and to determine if risk factors for a work position have been reduced or eliminated to the extent feasible.

The following personnel or job positions are qualified to perform job hazard analysis surveys for URETEK**.**

Work Practice Controls
An effective program for return-to-work includes procedures for safe and proper work that are understood and followed by managers, supervisors, and workers. Key elements of a good work practice program include proper work techniques, employee reconditioning, regular monitoring, feedback, modifications, and enforcement.

Proper Work Techniques. Supervisor awareness and control of proper work techniques will improve safety. The following includes ideas for appropriate training and work practice controls for our employees:

Proper work techniques, including work methods that improve posture and reduce stress and strain on previously injured body parts:

- Good tool care, including regular maintenance.
- Correct lifting techniques and work (proper body mechanics).
- Proper selection, use, of all tools associated with the job.
- Correct installation, and use of workstations and fixtures.

Employee Reconditioning Period. Supervisors will ensure that returning employees are allowed an appropriate reconditioning period. Returning employees will be gradually integrated into a full workload as appropriate for specific jobs and individuals. Employees will be assigned to an experienced trainer for job training and evaluation during the break in period. Employees who are returning to work and reassigned to new jobs should also have a reintegration period. Important - Supervisors will closely monitor employees that fall into this category throughout their reintegration period.

Monitoring. Regular monitoring at all levels of operation helps to ensure that employees continue to use proper work practices. This monitoring will include a periodic review of the techniques in use and their effectiveness, including a determination of whether the procedures in use are those specified; if not, then it should be determined why changes have occurred and whether corrective action is necessary.

Personal Protective Equipment (PPE). PPE used by employees of URETEK will be reviewed to ensure that the PPE is still appropriate after the employee returns to work. If significant weight gains or loss has occurred or other similar conditions have arisen the PPE will be reevaluated to determine if it still functions properly before the employee is allowed to resume duties where its use is required. Appropriate PPE will be provided in a variety of sizes, will accommodate the physical requirements of workers, and protect against the particular hazards associated with

the job. Supervisors will consider the following factors when evaluating PPE for personnel returning to work.

- Proper fit.
- Appropriateness to the task.

Administrative Controls

Company administrative controls may use to reduce the duration, frequency, and severity of exposures to work stressors that may aggravate previous illnesses or injuries. Examples of administrative controls include the following:

Reducing the total number of repetitions for suspect muscle groups or other bodily parts by such means as decreasing the work pace, limiting overtime work etc.

Providing rest pauses to relieve fatigued muscle-tendon groups. The length of time needed depends on the task's overall effort and total cycle time.

Increasing the number of employees assigned to a task to alleviate severe conditions.
Using job rotation, used with caution and as a preventive measure. The principle of job rotation is to alleviate physical fatigue and stress of a particular set of muscles and tendons or other body parts by rotating employees among other jobs that use different muscle-tendon groups. If rotation is utilized, the new job must be reviewed to ensure that the same muscle-tendon groups are not used when they are rotated.

Job enlargement. Having employees perform broader functions which reduce the stress on specific muscle groups while performing individual tasks.

Medical Management

Employees should have access to health care providers in order to facilitate treatment, surveillance activities, and recording of information relating to previous injuries or illnesses. The medical management program will as a minimum address the following issues:

- Injury and illness recordkeeping.
- Early recognition and reporting of aggravation of previous injuries or illnesses.
- Conservative return-to-work.
- Systematic monitoring.

Low risk jobs

URETEK will compile a list of light-duty jobs. Jobs will be analyzed to determine which could be used by employees being reintegrated into the work environment. This information will assist health care providers in recommending assignments to light or restricted duty jobs. The light duty job should therefore not increase stress. Supervisors should periodically review and update the list.

Training and Education
The purpose of training and education is to ensure that our employees are sufficiently informed about the hazards to which they may be exposed and thus are able to participate actively in their own protection.

Employees will be adequately trained about changes to or additional job hazards before being allowed to return-to-work. Proper training will allow managers, supervisors, and employees to understand the hazards associated with a job, their prevention and control, and their medical consequences.

Evaluation
The program will also include a means for adequately evaluating its effectiveness. This will be achieved by using combinations of:

- Employee interviews.
- Testing methods.
- Observation of work practices.

Training for affected employees will consist of both general and specific job training:

- General Training. Employees will be given formal instruction on the hazards associated with their jobs and with their equipment. This will include information on the varieties of hazards associated with the job, what risk factors cause or contribute to them, how to recognize hazards, and how to prevent them. This instruction will be repeated for each employee, as necessary.
- Job-Specific Training. Employees returning to work will receive a reorientation interview prior to being placed in a job. If additional training is required, the training will be provided before the employee is allowed to return-to-work.
- Training for Supervisors. Supervisors are responsible for ensuring that employees returning to work follow safe work practices and receive appropriate training to enable them to do this.
- Training for Managers. Managers will be made aware of their safety and health responsibilities and will receive sufficient training pertaining this program to effectively carry out their responsibilities.

LOTO (Lockout/Tagout Procedure)

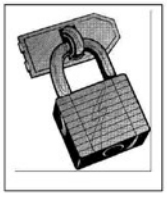
Reference: OSHA 29 CFR; 1910

PURPOSE
The purpose of the Lockout/Tagout policy is to prevent personal injury and property damage due to the unexpected energization or startup of machines and equipment or release of stored energy where repair and maintenance is underway.

It is to be used to ensure that the machine or piece of equipment is isolated from all potentially hazardous energy and locked out or tagged out. The isolated machine or piece of equipment must be free of all residual or accumulated energy before employees perform any servicing or maintenance activities when the unexpected startup or release of stored energy could cause injury.

Some sources of energy are:
- Electricity.
- Compressed Air.
- Gravity (Potential).
- Steam (Heat).
- Water Pressure.
- Moving Parts.
- Hydraulic.
- Natural Gas.
- Pneumatic.
- Springs Under Tension.
- Springs Under Compression.

At URETEK all energy sources must be evaluated and disabled before maintenance or service can be performed. In some cases, specific written LOTO / shutdown procedures are required. OSHA does allow some exceptions as indicated in the illustration provided:



Uretek USA, Inc

LOCKOUT / TAGOUT PROCEDURE

Required for all equipment, machinery, and / or processes that fails to meet the exceptions noted in 29 CFR 1910.147(C)(4)(i). Please refer to the **EXCEPTION** page at the front of this book. Failure to comply with these procedures will result in disciplinary action and may result in employee discharge. When the isolating devices are lockable, the isolating device must be locked out. Tagout may be used **ONLY** when lockout is not possible. The securing device on the tag must be capable of withstanding a force of 50 pounds without failure. All employees observing equipment locked or tagged out shall not attempt to start the equipment, use the equipment, or in anyway disturb the lock or tag.

EXCEPTION TO WRITTEN LOTO PROCEDURE REQUIREMENTS

A specific written shut-down or energy control procedure is required for each machine or piece of equipment that does not satisfy all of the following requirements:

1. There is no potential for stored, residual, or reaccumulation of stored energy after shutdown.
2. There is a single energy source that can be easily identified and isolated.
3. The locking out of this single energy source will completely deenergize and deactivate the machine or equipment.
4. The machine is isolated from this single energy source and locked out during servicing or maintenance.
5. A single lockout device will achieve a locked-out condition.
6. The lockout device is under the exclusive control of the authorized individual performing the servicing or maintenance.
7. The servicing or maintenance does not create a hazard to other employees.
8. The employer has experienced no accidents involving unexpected equipment startup during servicing or maintenance.

Whenever possible, LOTO must be used. The LOTO/Tagout Procedure Checklist at the end of this section may be used to evaluate the specific need for a written LOTO procedure.

A securely attached tag indicating the reason for the lockout is to be signed and dated. Tagout without lockout is permitted only when lockout is not possible.

RESPONSIBILITIES

The URETEK Safety Coordinator is responsible for all facets of this program and has full authority to make necessary decisions to ensure success of the program. The Safety Coordinator will see that written detailed instructions are developed covering each of the basic elements in this program. The Safety Coordinator or designee is authorized to amend these instructions.

Only authorized employees may lockout or tagout machines or equipment.

<u>Responsibility of Authorized Personnel</u>

Train employees on hazards of unexpected energization of machines, equipment, or the release of stored energy.

- Train employees on methods and uses of proper lockout/tagout procedures to reduce the possibility of employee injury.
- To identify hazardous energy sources.
- To safeguard all duplicate keys and locks from unauthorized use.

- When a locking device cannot be used to physically prevent the inadvertent release of energy, the authorized employee shall attach warning tags and use additional means of reducing the potential of injury to employees. In the event of tagout system only, the authorized individual will also brief all other personnel potentially exposed to the hazard in person. The procedures noted will be followed.

Responsibility of Employees

- The employee must notify the supervisor or other designated personnel that the machine or equipment needs locked and/or tagged out. The employee needs to clearly describe the problem / hazard.
- Do not attempt to operate any switch, valve, or other energy isolating device when it is locked and or tagged out and DO NOT re-energize the power source(s).

PREPARATION FOR LOCKOUT OR TAGOUT

- Before beginning repair or maintenance on a piece of equipment or machine, all hazardous energy sources must be identified. Obtain the proper Hazardous Energy Control Procedure for the equipment or machine to be locked out or tagged out.
- Identify all affected employees by name or their job title that may be involved in the impending lockout and/or tagout.

SEQUENCE OF LOCKOUT OR TAGOUT PROCEDURE

- Notify all affected employees that a lockout or tagout system is going to be utilized and the reason thereof. The authorized employee shall know the type and magnitude of energy that the machine or equipment utilizes and shall understand the hazards thereof.
- Shutdown the equipment by normal stopping procedures. Operate the equipment to be sure it is off. Ensure that all stored energy is dissipated or properly restrained.
- Operate the switch, valve, or other energy isolating device(s) so that the equipment is isolated from its energy source(s). Stored energy must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, etc. A COMBINATION OF ENERGY SOURCES AND ANY STORED ENERGY WILL REQUIRE A SPECIFIC PROCEDURE. Lockout and/or tagout the energy isolating devices with assigned individual lock(s) or tag(s). NOTE: If the machine will accept locks, locks must be used. Tags may only be used when the machine does not have lockout capability.
- In this case, a specific procedure must be developed. When tags only are used, in addition to informing the Affected Employees, all other employees having access to the plant must be briefed on the tagout.
- After ensuring that no personnel are exposed, and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate. CAUTION: Be sure to return operating controls to the neutral or off position after the test.

The equipment is now locked out or tagged out.

RESTORING EQUIPMENT TO NORMAL OPERATION
After servicing and/or maintenance is completed and equipment is ready for normal production operations, check the area to make sure none is exposed.

- Be sure all tools have been removed and all guards replaced.
- Remove lock & tag devices and operate the energy isolating devices to restore energy to the machine or equipment.

LOCKOUT/TAGOUT PROCEDURES FOR SINGLE POWER SOURCES
This procedure states the minimum requirements for the lockout or tagout of energy isolating devices. It shall be used to ensure that the machine or equipment is isolated from all potentially hazardous energy, and locked out or tagged out before employees perform servicing or maintenance activities where the unexpected energization, startup or release of stored energy could cause injury.

Machinery, equipment, and/or processes without lockout capability requires specific procedures for lockout/tagout of subject energy sources. Obtain a copy of the specific procedure and follow the procedure.

Machinery, equipment, and/or processes with more than one hazardous energy source and/or means of disconnect (electrical, mechanical, others) must have a specific written procedure for lockout/tagout of its energy sources. Obtain a copy of the specific procedure and follow the procedure.

If machinery, equipment, and/or process require a specific written procedure for lockout/tagout of its energy sources and the procedure is not available, no work can proceed until the specific procedure has been prepared and the authorized employees trained on its specific requirements.

GROUP LOCKOUT/TAGOUT PROCEDURES
One authorized employee will coordinate the lockout/tagout procedure for all group lockout/tag outs.

Each authorized person will affix his/her lock or tag to the equipment being serviced or having maintenance performed. No person will be allowed to remove another person's lock or tag. Each person will remove their own lock or tag when their part of the operation is completed.

When servicing or maintenance will involve more than one shift, the off going shift will remove their locks and/or tags after the oncoming shift applies their locks and/or tags.

When equipment has only room for one lock, the coordinator of the procedure will place the lock on the equipment and place the key in a cabinet or box and each employee will affix their lock to the cabinet or box. As each person no longer needs to maintain lockout protection, that person will remove their lock from the box or cabinet.

REMOVING LOCKOUT OR TAGOUT DEVICES
Each lockout or tagout device shall be removed from each energy isolating device by the employee who applied the device.

When the authorized employee who applied the lockout or tagout device is not available to remove it, that device may be removed under the direction of the Safety Coordinator, provided that specific procedures and training for such removal have been implemented to assure equivalent safety to the removal of the device by the authorized employee who applied it. The specific procedure shall include at least the following elements:

- Verification that the authorized employee who applied the device is not at the facility.
- Making all reasonable efforts to contact the authorized employee who applied the device to inform of removal of the lockout or tagout device.
- Ensuring that the authorized employee has this knowledge before resuming work.

OUTSIDE SERVICE OR CONTRACTOR PERSONNEL
Outside personnel or contractors that may be affected by the lockout/tagout procedures must submit their energy control procedures to the Safety Coordinator.

Affected employees will be trained and notified of the proper procedures by the Safety Coordinator or the area supervisor.

TRAINING
Authorized and Affected employees will be given training at the time of hiring and before beginning work in the shop. This training to include:

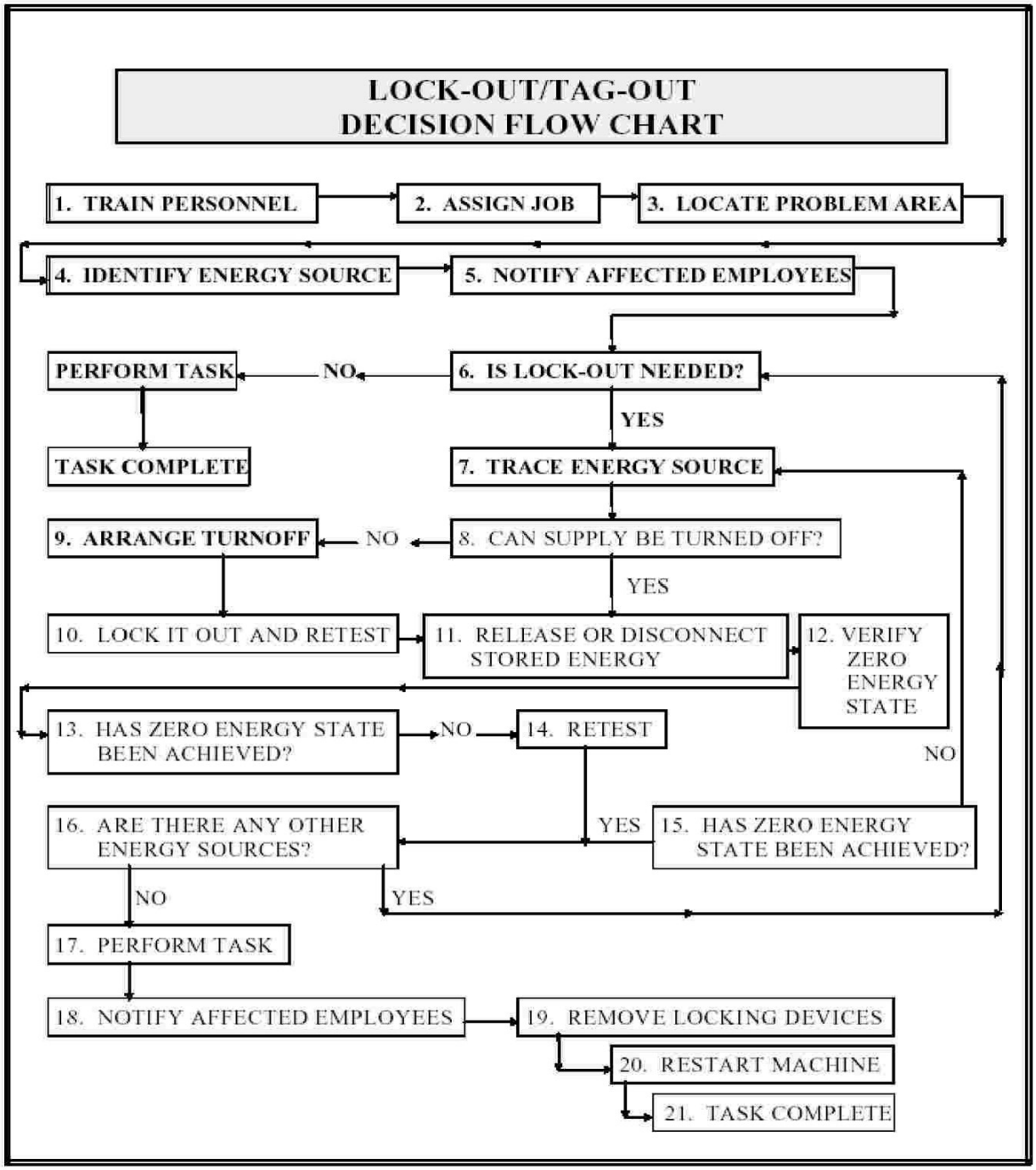
- Reviewing requirements of 29 CFR 1910.147, Control of Hazardous Energy and Company Lockout/Tagout procedures.
- Types and magnitude of energy sources.
- The limitations of Tagout.
- The lockout and/or tagout procedures for the isolation of energy sources.
- Procedures for removing locks and/or tags.
- Procedures for restoring energy.
  Authorized employees will be given training prior to any initial involvement in Lockout/Tagout Procedures.
  Retraining will be given when:
- There is a change in job assignment.
- There is a change in equipment or processes that would create a new hazard.
- A change occurs in the Hazardous Energy Control Procedures.

A list of employees trained, and dates of such training will be maintained.

ANNUAL INSPECTION
Each year an authorized employee, who is not involved with the procedure being inspected, will conduct a review of the Hazardous Energy Control Procedures for all machines and equipment.

The date of the inspection/evaluation will be documented and maintained until the next annual evaluation replaces it. This annual review will be made by Safety Coordinator.

4.L. LOCKOUT/TAGOUT DECISION FLOW CHART:



ANNUAL EVALUATION REPORT

Date(s) of Evaluation: _____ Evaluation was made by: _____

General Policy has been reviewed: Yes / No (Circle one)

Comments on general policy:

_____

_____

_____

_____

The following specific procedures have been reviewed and includes review of procedure with all employees authorized to use the procedure (list below):

_____

_____

_____

_____

The following specific procedures were added (list below):

_____

_____

_____

_____

The review included the log of occupational injuries and illnesses (OSHA Form 300) and the associated accident reports and injury/illness reports (OSHA Form 301 or equivalent):

Yes / No (Circle one)

The following injuries resulted from lockout/tagout (list below):

_____

_____

_____

LOCKOUT /TAGOUT PROCEDURE/ CHECKLIST

IS WRITTEN LOTO PROCEDURE REQUIRED?

DATE: _____ CONDUCTED BY: _____

Equipment: _____

Energy Sources: (Place a check mark "✓" or "x" in the provided space for this equipment energy sources.)

Electrical _____
Mechanical _____
Pressure / Tension _____
Hydraulic _____
Pneumatic _____
Nuclear _____
Kinetic _____
Potential / Gravitational _____
Other _____ DESCRIPTION: _____

Chemical
Corrosive _____
Flammable _____
Reactive _____
Radiation
Ionizing _____
Non-Ionizing _____
Thermal _____

Exception to written LOTO procedure requirements:

No.	Description	Yes	No
1	There is no potential for stored, residual, or reaccumulation of stored energy after shutdown.		
2	There is a single energy source that can be easily identified and isolated.		
3	The locking out of this single energy source will completely deenergize and deactivate the machine or equipment.		
4	The machine is isolated from this single energy source and locked out during servicing or maintenance.		
5	A single lockout device will achieve a locked-out condition.		
6	The lockout device is under the exclusive control of the authorized individual performing the servicing or maintenance.		
7	The servicing or maintenance does not create a hazard to other employees.		
8	The employer has experienced no accidents involving unexpected equipment startup during servicing or maintenance.		

The comments section can be used for notes relating to similar equipment, information that may be helpful in preparing the written LOTO procedure for this equipment, and other information as may be appropriate / useful.

Comments & Notes for Preparing Required Written LOTO Procedures:

_____

_____

_____

_____

_____

If "No" is checked for any of the above "8" exceptions, a specific written LOTO procedure is required for this equipment.

Please select "Yes" or "No":

A specific written LOTO procedure is required for this equipment: ____Yes ____No

General Machine-Guarding Requirements for all Machines

Reference: OSHA 29 CFR; 1910

GENERAL

URETEK will ensure that all potential machine-guarding hazards within our facility(s) are evaluated. This standard practice instruction is intended to address comprehensively the issues of evaluating and identifying potential guarding deficiencies, evaluating the associated potential hazards, communicating information concerning these hazards, and establishing appropriate procedures, and protective measures for employees.

Written Program

URETEK will review and evaluate this standard practice instruction:

- On an annual basis.
- When changes occur to 29 CFR that prompt a revision.
- When changes occur to any related regulatory document that prompts a revision of this document.
- When facility operational changes occur that require a revision of this document.

Methods of Guarding

One or more methods of machine-guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, in-going nip points, rotating parts, flying chips and sparks. Examples of guarding methods are; barrier guards, two-hand tripping devices, electronic safety devices, etc.

General Requirements

URETEK will establish machine-guarding operational procedures through the use of this document. After machine evaluation, guards will be affixed to the machine where possible and secured elsewhere if for any reason attachment to the machine is not possible. The guard shall be such that it does not offer an accident hazard in itself.

Point of Operation Guarding

Point of operation is the area on a machine where work is actually performed upon the material being processed.

- The point of operation of machines, whose operation exposes an employee to injury, will be guarded.
- The guarding device will be in conformity with any appropriate standards. In the absence of applicable specific standards, shall be so designed and constructed as to prevent the operator from having any part of his body in the danger zone during the operating cycle.
- Special hand tools for placing and removing material shall be such as to permit easy handling of material without the operator placing a hand in the danger zone. Such tools will not be used in lieu of other guarding required.

Training
Once guards are installed on a machine. Operators will not be allowed to operate a machine until they are thoroughly familiar with the installation, operation, and removal of installed guards. URETEK shall provide training to ensure that employees understand the purpose and function of the guarding program and that employees acquire the knowledge and skills required for the safe application, usage, and removal of guards. The maintenance department will be the focal point for machine-guarding and training. The person who designs the guard will be the principal person to train the supervisor or additional trainers of personnel working in the department where the guard installation occurred. This standard practice instruction shall be provided to, and read by all employees receiving training.

Facility/Department Evaluation
URETEK shall evaluate our facility(s) by department to determine which machines or pieces of equipment require guarding to control workplace hazards. A complete listing of machines/equipment having guards will be maintained.

Periodic Inspections and Certifications
Inspections. URETEK shall conduct a periodic inspection of each machine guard for each machine or piece of equipment at least annually to ensure that the procedures, guarding techniques, and the requirements of this instruction are being followed.

- The periodic inspection shall be performed by an authorized employee other than the ones(s) utilizing the equipment guards being inspected.

Material Handling

Reference: OSHA 29 CFR,1926.250, 251, 950, 602

Purpose
The purpose of this section is to ensure all URETEK's employees who are involved in material handling operations fully understand and comply with their responsibilities in protecting the health and safety of themselves and others.

Scope
This section applies to all URETEK's employees and contractors.

Notice
The personal safety and health of our employees is our first concern. The following procedures are **ABSOLUTELY MANDATORY**. You are required to follow these procedures to the letter of the instruction. No deviations or exceptions can or will be allowed. Willful violation or any repeated instance of non-conformance will result in termination of your employment. Your safety and health, our business, and our Company's future depend on proper handling of these chemicals. We expect your full cooperation in safely carrying out these material-handling procedures.

TRANSPORTING:
1. Safety straps shall be used when lifting or transporting totes at all times. Forklift usage requires straps at all times both in Houston and on the road. Also, safety straps shall be used to secure all totes while in transport in a Company vehicle.
2. Special care shall be utilized when unloading from trucks to storage facilities and safety straps shall be used while totes are on a forklift for any reason.
3. Totes shall be pulled to the edge of the vehicle before a forklift is used to complete loading.

RELOADING PRODUCTION UNITS:
1. When loading chemical products onto production units, the totes shall be strapped to the forklift during all phases of the operation.
2. While totes are on a forklift, they shall not be elevated to a height greater than that which is necessary to effect gravity flow of the materials.
3. While on a forklift, totes should not be tilted except when it is necessary to drain the last fluid from the near empty container.
4. Hoses used for the reloading of materials shall be securely attached to both tanks except in emergency situations. The reloading operations shall always be completed by at least two people.

During the process of unloading and reloading, personnel shall wear Personal Protection Equipment (PPE) as follows:
   a. Eye goggles/safety glasses with side shields.
   b. Long sleeved shirts or coveralls.
   c. Rubberized, latex, or plastic gloves.

Reloading shall be conducted in an area of good ventilation. *No reloading shall occur indoors.

OPERATING PRODUCTION UNITS:

1. Within our production units, large quantities of chemicals are stored, transported, loaded, unloaded, pumped, valved, heated, mixed, tested, and safely cleaned from the equipment in use.
2. Do not operate production unit equipment (and the chemicals within) until you have been fully trained to do so! Your training will include all safety procedures which are necessary to protect your personal safety and prevent production unit accidents.
3. Equipment leaks and chemical leaks/spills within a production unit are to be eliminated and contained promptly. Report any leak condition to your supervisor. Follow SDS clean up instructions.
4. Remember that all production units use:
    a. Large quantities of heated and pressurized chemicals (**spill and leak hazard**).
    b. Large electric generators, electric breaker boxes, wiring, switches, outlets (**electric shock hazard**).
    c. Large air compressors (**high pressure air hazard**).
    d. Reciprocating pumps (**high pressure chemical hazard**).
    e. Hoses, hose connectors, mixing guns and components (**high pressure chemical hazard**).
    f. High temperature containers (pre-heaters) and heating elements for these containers. (**severe burn and electric shock hazard**).
    g. High temperature line hose-heat elements (**severe burn and electric shock hazard**).

Any of these items in number (4) above can and will seriously injure you or someone else if they are not operated safely and properly maintained. Safe operation and maintenance require training and experience. UNTIL YOU HAVE SUCH TRAINING AND EXPERIENCE, DO NOT ATTEMPT TO OPERATE OR SERVICE THESE SYSTEMS WITHOUT SUPERVISION.

CHEMICAL SPILL PROCEDURES

***In the event of a chemical spill or leak, immediately read the SDS sheet pertaining to that chemical.**

All URETEK employees handling chemicals should be protected by their Personal Protection Equipment (PPE), including safety goggles, latex gloves, and clothing in the event there is a spill. Remove any contaminated clothing and thoroughly wash any areas of the body which may have contacted the chemical. If anyone was not wearing the proper protection and came into contact with the chemical, IMMEDIATELY consult the SDS Sheet pertaining to the chemical involved. Follow the relating instructions for contact with skin, eyes, ingestion, or inhalation. Call for emergency medical help if necessary.

IN THE EVENT OF ANY SIZED SPILL OR LEAK, CONTACT YOUR SUPERVISOR IMMEDIATELY.

1. In the event of a minor spill or leak (10 gallons or less) of the polyurethane components:

a. The leak must first be contained or repaired. If the chemical's container is damaged, it may be necessary to move the chemical to a new container.
   (**NOTE:** Before you attempt containment, be sure you are wearing proper hand, face, and body protection.)
b. Always consult the SDS for the chemical involved before attempting to handle it. (**See Appendix SDS Section**)
   Once the spill or leak is controlled, "oil-dry" or a similar absorbent should be used to absorb the spilled chemical and decontaminate the site.
c. The absorbent/decontaminant mixture shall be removed, treated, and discarded at an appropriate facility. Disposal methods for each chemical differ slightly, so consult the SDS for the chemical involved for the acceptable disposal methods. (**See Appendix SDS Section**)

2. In the event of a major spill or leak of the polyurethane components:
   a. Evacuate and ventilate the spill area.
   b. Remove or deactivate any ignition sources in the area.
   c. Contain or dike any flow of the chemical to prevent it from entering a drain or water system.
      (**NOTE:** Before you attempt containment, be sure you are wearing proper hand, face, and body protection.)
   d. Contain or dike the spill at the spill source and on the ground to prevent further spread.
   e. Contact the Commercial HazMat authorities (ChemTrec at 1-800-424-9300) and other necessary authorities, such as Police Department, Fire Department, or the Chemical Manufacturer.
   f. Consult the SDS for the chemical involved for contamination procedures recommended by the manufacturer. (**See Appendix SDS Section**)
   g. The chemicals may release a vapor into the air, which is unsafe for breathing, so vapor control may be required. Consult the SDS for the chemical involved for instructions. (**See Appendix SDS Section**)
   h. Begin absorption/decontamination procedures.
   i. Clean up and disposal methods for each chemical differ slightly, so consult the SDS for the chemical involved, and follow the directions. (**See Appendix SDS Section**)

Mechanical Lifting

Reference: OSHA 29 CFR; 1910.67, 68, .178, .179, .180, .184, & 1926.453

Purpose
The purpose of this section is to ensure all URETEK's employees who are involved in mechanical lifting operations fully understand and comply with their responsibilities in protecting the health and safety of themselves and others.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Contract Lift
Contractor is fully responsible for all aspects of the lift.

Lifting Equipment
Any equipment and accessories used for the purpose of lifting or lowering a load.

Routine Lift
A lift repeated frequently under identical or very similar conditions.

Non-Routine Lift
A lift only performed infrequently (once a year) where conditions or circumstances are unusual.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the process within their division.

General Requirements
As with all hazards, when lifting operations will be conducted personnel must ensure that adequate controls are put in place to minimize the risk of anyone being harmed.

Managers (who are responsible for managing any lifting operation):
- Managers must be briefed on the lifts that could be made in the yard or on job sites. This will include the type of equipment used to make lifts such as forklifts, pallet jacks, winches, overhead cranes, or truck cranes.
- They must familiarize themselves with the lifting assessment process.

Supervisors are key personnel in holding crews to the mechanical lifting standard.
- Supervisors will inspect lifting devices to ensure that they are safe to use. Training, operator

manuals, and manufacturer's specifications are essential in maintaining mechanical lifting devices or their accessories (rigging).

- Supervisors will ensure the lifting checklist has been completed for non-routine lifts involving forklifts, overhead cranes, or manlifts in their area of responsibility.
- Truck cranes are governed by a different set of requirements involving authorized operators, riggers, and signalpersons. Supervisors will ensure that these requirements are met. Refer to the Crane Safety section of this manual.

Forklift Operators/Mechanical Device Operators

- Forklift Operators/Mechanical Device Operators shall be authorized by their Manager and must have successfully completed specific training on the type equipment they will operate.

Written authorizations for operating and maintaining mechanical lifting devices should be issued and reviewed yearly by the employees' manager. The requirements for authorization to be given are:

- Managers' own satisfaction with the persons' demonstrated ability.
- Satisfactorily assessment of knowledge and application of the hierarchy of lifting controls (where applicable). Refer to the Forklift Operator Assessment.

Authorizations shall be withdrawn from people who have not put training into practice on a regular basis.

Controlling the Risk

- Risk assessment is a fundamental part of URETEK's approach to ensuring that the risks associated with mechanical lifting are fully identified and controlled.
- The task risk assessment for mechanical lifting identifies in general terms the required control measures to be implemented to ensure safe lifting.
- Only lifting equipment that has passed an inspection and is within inspection date may be used. Inspections must be performed by a competent person.
- The Mechanical Lifting Checklist must be completed for **non-routine lifts** to adequately plan the lifting operations; a site-specific risk assessment (second part of the Checklist) may be required. If the lift requires competencies beyond those of Company personnel, then a contract lift must be organized.
- All equipment selected to perform the lift must be suitable for the lifting operation and of sufficient strength. Equipment must be visually inspected prior to use.
- Where there is the potential for forces to be exerted that are additional to the weight of the item being lifted (e.g. side load or frictional forces) suitable controls must be implemented to control the risk of exceeding the Working Load Limit (WLL) of the lifting equipment.
- Damaged equipment and accessories must be taken out of service immediately.

Maintenance of Equipment

- All equipment must be regularly serviced in accordance with the manufacturer's instructions. For periodic inspection, see Daily Forklift Inspection, Monthly Overhead Crane

Inspection, and Truck Crane Inspection forms.

- Copies of all test certificates, details of any modifications or repairs and thorough examination certificates for all equipment must be held by URETEK.
- Synthetic slings and ropes cannot be repaired or maintained and must be disposed of. If there is doubt as to their continued fitness for use, inform the Supervisor.
- All synthetic slings, ropes and straps will have a maximum working lifespan of 5 years from first use (they may be stored in their original packaging for a maximum of 2 years).

Personal Protective Equipment

- Safety footwear must be worn when lifting heavy objects.
- Safety hardhats must be worn for all lifting operations.
- Whenever possible, suitable gloves for the type of load should be worn especially if the load has sharp edges, slippery surfaces or has any attribute that has the potential to weaken a person's grip or injure the hands.
- URETEK Mechanical Lift Checklist

Staff Name: _____ Date: _____ Observed By: _____

YES	NO	Mechanical Lift Pre-Operations Check
		Understands why resident needs this lift.
		Demonstrates how to charge lift/locate batteries.
		Demonstrates ability to lower resident after lift has failed.
		Locate emergency stop button and its purpose.
		Checks to ensure the sling is in good working condition, no torn or ripped areas, etc.
		Able to locate and read battery charge indicator.
YES	NO	Mechanical Lift Operation
		Ensures two caregivers are present.
		Adjust bed to height that promotes good body mechanics.
		Visually inspects sling for signs of wear and tear. Does not use any sling that is visually damaged.
		Verbally prepares resident for transfer.
		Positions resident on the appropriate sling size and style as per resident's Care Plan.
		Positions lift with spreader bar always perpendicular to the resident's shoulders and hovering over the chest.
		Attaches the sling straps without pulling or tugging to the desired setting. Considers elevating the head of bed to facilitate ease in completion.
		Gently raises resident minimally from surface. Unweight resident from bed. Performs a safety check.
		Turn resident's legs toward the perpendicular support bar of the lift during the move.
		Gently lowers resident into chair in proper position.
		Removes sling from under resident. Only leaves sling on resident if Care Planned.

Employee's Signature: _____ Date: _____

Print Name: _____

Personal Protective Equipment (PPE)

Reference: OSHA 29 CFR; 1910.132-138

Purpose
The purpose of this section is to enable personnel to effectively respond to actual or potential hazards and to minimize exposure to injury. Any URETEK's employee encountering hazardous conditions must be protected against potential hazards. The purpose of PPE is to shield or isolate individuals from chemical, physical, biological, or other hazards that may be present in the workplace.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Head Protection
Hardhats shall meet or exceed all requirements of ANSI Z89.1.

Foot Protection
Safety footwear shall meet or exceed all requirements of ASTM F2413-05.

Eyes and Face Protection
Protective eye and face devices shall meet or exceed all requirements of ANSI Z87.1.

Hearing Protection
Hearing protection shall meet or exceed all requirements of OSHA 29 CFR 1910.95 for all employees regularly working in areas with a Time-Weighted Average (TWA) of 90 dB or higher.

Hand Protection
Hand protection shall meet or exceed all requirements of OSHA 29 CFR 1910.138 where employees are exposed to actual or potential hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.

Clothing Protection
Clothing protection shall meet or exceed all URETEK requirements where employees are exposed to hazards in the workplace. Field work clothing shall be Fire Retardant Clothing (FRC).

Fall Protection
Fall protection shall meet or exceed all requirements of ANSI Z359 and/or OSHA 29 CFR 1926.501-502.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the process within their division.

General Requirements
URETEK will ensure that adequate controls are put in place to minimize the risk of anyone being harmed; thus:

- URETEK's employees are prohibited from performing work without donning appropriate PPE to protect them from the hazards they will encounter in the course of that work.
- URETEK's PPE program requires that PPE, whether provided by the company or personally provided, must be used, and maintained in a sanitary and reliable condition. All PPE shall be cleaned and properly maintained by the employee to whom it was assigned. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision. Supervisors are responsible for ensuring compliance with cleaning responsibilities by employees.
- Additionally, URETEK will oversee **employee-owned** PPE equipment and is responsible for the assurances of its adequacy, maintenance & sanitation.
- Defective and damaged equipment **WILL NOT** be used. If PPE is inspected and needs repair or replacement, it is the responsibility of the employee to bring it to the immediate attention of his or her supervisor. Using PPE that is in a state of disrepair or not able to perform the intended function is prohibited.
- Contaminated PPE that cannot be decontaminated will be disposed of in a manner that protects URETEK's employees from exposure to hazards. Disposal will comply with all federal, state, and local regulations.

Employee Training
URETEK provides training for each employee who is required to use PPE. Training will occur:

- Prior to assignments to the job requiring specific PPE.
- Changes in the types of PPE.
- When an employee demonstrates lack of proficiency.

URETEK's employees must demonstrate an understanding of when PPE is necessary, what PPE is necessary, how to properly don, doff, adjust, and wear PPE; the limitations of the PPE; and the proper maintenance, useful life, and disposal of the PPE.
All PPE training shall be documented.

Specific PPE Requirements

Hand Protection
Gloves are to be worn at all field sites, yard, shop, and any other location where the potential for damage to the hands may exist. Approved gloves for specific job tasks shall be provided by

the Company.

Head Protection
Approved hardhats shall be provided by the Company:
- Hardhats are to be worn at all field sites, yard, shop, and any other location where the potential for falling objects may exist.
- All visitors to the shop or yard must utilize an approved hardhat and safety glasses while visiting, touring, or inspecting any facility.
- Hardhats shall be visually inspected before wearing to verify that they are in good condition. If a hardhat becomes broken or damaged, it must be replaced immediately.

Foot Protection
Safety footwear that meets ANSI Z41.1 is to be worn by all personnel working in a field or shop environment. The footwear is required to be higher than the ankle. Footwear must also have a well-defined heel. Visitors to field job sites shall wear safety footwear.

Eye and Face Protection
Approved safety glasses, goggles and face shields shall be provided by the Company.
- Safety glasses that meet ANSI Z87.1 standards bear a trademark identifying the manufacturer and shall be marked "Z87" on the temple bar to indicate compliance with the standard. Safety glasses that do not meet the criteria will not be used in the workplace.
- Contact lenses do not provide eye protection, but increase the need for eye protection. Contact lenses should not be worn in the field by any employee due to the risk of spray from chemicals or hydrocarbons and blowing dust or sand.
- Safety eyewear and a face shield must be worn when engaged in any activity which involves hazards to the unprotected eye from chipping, grinding, scraping, buffing, etc.
- All URETEK's employees using, or in the vicinity of, hazardous chemicals must wear splash-proof goggles and/or a face shield.
- Welding must not be watched by personnel without proper eye protection.
- Goggles with number 5 or 6 shade lenses must be worn when material is cut using an acetylene torch.
- Electric arc welding requires a welding helmet or hand-held shields fitted with number 10 or darker shade lenses.
- Prescription safety glasses must be ANSI Z87.1 approved with permanent side shields.
- Visitors to field job sites shall wear safety eyewear.

Hearing Protection
Approved ear plugs and earmuffs will be provided by URETEK Hearing protection will be worn in posted and non-posted areas that are have the potential of excessive noise. Release of high-pressure gases is an example of excessive noise.

Clothing Protection
Fire Retardant Clothing (FRC), is currently interpreted and required by OSHA for work in the Oil

and Gas Fields, where "**any** possible exposure to flash fire or flammable atmospheres might possibly exist on location". Standard work sets of FRC uniforms will be provided to the Field employees in sufficient quantity for a reasonable time period. URETEK's employees will wear FRC suitable to weather conditions (i.e., FRC overcoats for winter and lighter weight FRC for summer) and the job being performed. The outermost layer of clothing shall be FRC. Visitors to field job sites shall wear FRC.

Fall Protection
URETEK will provide fall protection for eligible employees to perform their assigned job duties.

Respiratory Protection
URETEK will provide respiratory protection and ensure fit testing to eligible employees to perform their assigned job duties.

Hazard Assessment
PPE devices are not to be relied on as the only means to provide protection against hazards, but are used in conjunction with guards, engineering controls, and sound manufacturing practices. If possible, hazards will be abated first through engineering controls, with PPE to provide protection against hazards that cannot reasonable be abated otherwise.

The basic element of any PPE program is an in-depth evaluation of the equipment needed to protect against the hazards at the workplace; this is the initial hazard assessment for which written documentation is required (refer to the PPE Assessment Certification). Written and signed PPE hazard assessments will be conducted on tasks assigned to Company personnel. Hazard assessments will be conducted as follows:

- Corporate Safety Department, along with operational personnel, identify areas where exposures occur or could occur. Corporate Safety Department or their designee such as The Supervisor will examine the following records to identify and classify jobs according to exposure risk:
    - Injury/illness records.
    - First aid logs.

Corporate Safety Department conducts a walk-through survey of workplace areas where hazards exist or may exist to identify sources of hazards to employees. They consider these basic hazard categories:

- Impact.
- Heat.
- Penetration.
- Harmful dust.
- Compression (roll over).
- Light (optical) radiation.
- Chemical.

During the walk-through survey, The Supervisor observes and records the following hazards along with PPE currently in use:

- Sources of motion, e.g. machinery or processes where any movement of tools, machine elements or particles could exist or movement of personnel that could result in collision with stationary objects.
- Sources of high temperatures that could result in burns, eye injury or ignition.
- Types of chemical exposure.
- Sources of harmful dust.
- Sources of light radiation.
- Sources of falling objects or potential for dropping objects.
- Sources of sharp objects that might pierce the feet or cut the hands.
- Sources of rolling or pinching objects that could crush the feet.
- Layout of workplace and location of co-workers.
- Certain electrical hazards.

Following the walk-through survey, The Supervisor organizes the data and information for use in the assessment of hazards to analyze the hazards and enable proper selection of PPE.

An estimate of the potential for injuries is then made. Each of the basic hazards is reviewed and a determination made as to the frequency, type level of risk, and seriousness of potential injury from each of the hazards found. The existence of any situations where multiple exposures occur or could occur is considered.

The Supervisor or designee will complete the assessment via a written certification that identifies the workplace evaluated, the person certifying that the evaluation has been performed, the date(s) of the hazard assessment, the service line, and that the document is a certification of hazard assessment. A copy of the certification will be submitted to Corporate Safety Department. Corporate Safety Department will communicate the hazard assessments to all affected employees.

Hazard Reassessment

It is the responsibility of the Supervisor to reassess the workplace hazard situation as necessary, to identify and evaluate new equipment and processes, to review accident records, and reevaluate the suitability of previously selected PPE. This reassessment will take place as needed, but at least annually (Refer to the PPE Reassessment Certification). Elements that should be considered in the reassessment include:

- Adequacy of PPE program.
- Accidents and illnesses.
- Levels of exposure.
- Adequacy of equipment selection.
- Adequacy of training/fitting of PPE.
- The adequacy of program records.
- Recommendations for program improvement and modification.
- Coordination with overall safety and health program.

PPE Assessment and Reassessment Certifications
The Supervisor or designate will conduct routine PPE assessments and reassessments at the workplace to ensure the adequacy of selected PPE equipment and relevant Standards. Refer to the PPE Assessment Certification and PPE Reassessment Certification forms.

PPE Selection Guidelines
Once any hazards have been identified and evaluated through the hazard assessment, the PPE is selected by:

- Becoming familiar with the potential hazards and the type of PPE that are available and what they can do.
- Comparing types of equipment to the hazards associated with the environment.
- Selecting PPE that ensures a level of protection that meets or exceeds the minimum required to protect employees from the hazards.
- Fitting the user with proper, comfortable, well-fitting protection and provide essential information to employees on care and use of the PPE.

PPE Reassessment Certification Form

Name of workplace: _____

Assessment conducted by: _____

Workplace address: _____

Date of assessment: _____/_____/_____

Work area(s): _____

PPE selected by: _____

Job/Task(s): _____

Effective date: _____/_____/_____

Eyes/Face ☐ Negligible Hazard Can hazard be eliminated without the use of PPE? ☐ Yes ☐ No		
Work related exposure to: ☐ Airborne Dust ☐ Flying Particles ☐ Hazardous Liquids/Chemicals ☐ Intense Light ☐ Blood Splashes ☐ Other: _____	PPE required to manage hazard: ☐ Safety Glasses ☐ Safety Goggles ☐ Face Shields ☐ Shading/Filter (#_____) ☐ Welding Shield ☐ Other: _____	Comments:
Head ☐ Negligible Hazard Can hazard be eliminated without the use of PPE? ☐ Yes ☐ No		
Work related exposure to: ☐ Beams ☐ Pipes ☐ Falling Objects ☐ Exposed Electrical Wiring or Component ☐ Machine Parts ☐ Other: _____	PPE required to manage hazard: ☐ Protective Helmet ☐ ”Type A” (Low Voltage) ☐ ”Type B” (High Voltage) ☐ ”Type C” ☐ Hair Net/Soft Cap ☐ Other: _____	Comments:
Hands/Arms ☐ Negligible Hazard Can hazard be eliminated without the use of PPE? ☐ Yes ☐ No		
Work related exposure to: ☐ Hazard Liquids/Chemicals	PPE required to manage hazard: ☐ Gloves	Comments:

☐ Scrapes, Bruise or Cuts ☐ Injuries from Tools ☐ Extreme Heat/Cold ☐ Blood (OPIM) ☐ Other: _____	☐ Chemical Resistance ☐ Liquid Leak Resistance ☐ Temperature Resistance ☐ Cut Resistance ☐ Gauntlet or Long Necked ☐ Work Gloves ☐ Chemical Protection Sleeves ☐ Long Sleeves ☐ Other: _____	
Feet/Legs ☐ Negligible Hazard Can hazard be eliminated without the use of PPE? ☐ Yes ☐ No		
Work related exposure to: ☐ Hazard Liquids/Chemicals ☐ Heavy Falling/Rolling Objects ☐ Heavy Equipment ☐ Exposed Electrical Wiring or Component ☐ Slippery Surface ☐ Explosive Atmosphere ☐ Tools ☐ Other: _____	PPE required to manage hazard: ☐ Closed Shoes (e.g. No Opened Toes or Sandal(s) ☐ Long Pants ☐ Safety Shoes/Boots ☐ Toes Protection ☐ Metatarsal Protection ☐ Electrical Protection ☐ Heat/Cold Protection ☐ Anti-Slip Sholes ☐ Chemical Resistance ☐ Leggings or Chaps ☐ Foot-Legs Guards ☐ Other: _____	Comments:
Body/Skin ☐ Negligible Hazard Can hazard be eliminated without the use of PPE? ☐ Yes ☐ No		
Work related exposure to: ☐ Hazardous Liquids/Chemicals ☐ Sharp or Rough Edges ☐ Extreme Heat/Cold ☐ Other: _____	PPE required to manage hazard: ☐ Lap Coat ☐ Raingear ☐ Coveralls, Body Suit ☐ Apron ☐ Welding Leather ☐ Abrasion/Cut Resistance ☐ Other: _____	Comments:
Work related exposure to: ☐ Working from Heights of 4 feet or more ☐ Working Near Water	PPE required to manage hazard: ☐ Fall Arrest/Restrain: Type _____	Comments:

☐ Other: _____	☐ PFD: Type _____ ☐ Other: _____	
Lungs/Ears ☐ Negligible Hazard Can hazard be eliminated without the use of PPE? ☐ Yes ☐ No		
Work related exposure to: ☐ Irritating Dust or Particular	PPE required to manage hazard: ☐ Respirator (Cartridge type: _____)	Comments:

Respiratory Protection Program

Reference: OSHA 29 CFR; 1926.103 & 1910. 134-.139

Applicability

This program defines responsibilities and procedures and is applicable to operations that may require the use of respiratory protection including routine, Immediately Dangerous to Life and Health (IDLH) and emergency conditions. This program also addresses the voluntary use of respirators.

Purpose and Scope

The purpose of this procedure is to protect those employees performing operations for which exposures cannot be controlled by use of conventional engineering or administrative controls and prior to establishing a negative air exposure assessment, and to require that respiratory protective equipment is selected, used, maintained, and stored in accordance with acceptable practices.

Implementation

Implementation of this program is the responsibility of the Area Manager. The Health and Safety Manager will have the responsibility of Program Administrator and is responsible to ensure that the program is reviewed annually.

1.0 Requirements

A. Determine if respirators are needed or are going to be used for hazardous jobs before assigning that job to an employee.
    1. Refer to appendix A regarding activities requiring the use of respiratory protection.
    2. Assign respirators accordingly.
    3. Follow all the requirements of this procedure for employees who wish to voluntarily use tight-fitting, e.g., air purifying, respirators.

B. Require employees who will use respirators to be medically qualified prior to assigning them a respirator and fit testing.

C. Require respirator users to receive appropriate training.
    1. All respirator users must be trained:
        a. Before they are assigned a respirator.
        b. Annually thereafter.
        c. Whenever a new hazard or job is introduced.
        d. Whenever employees fail to demonstrate proper use or knowledge.
    2. Training must address, at a minimum, the following:
        a. Why the respirator is necessary, and what conditions can make the respirator ineffective.
        b. What the limitations and capabilities of the respirators are.
        c. How to use respirators effectively in emergency situations.
        d. How to inspect, put on and remove, and check the seals of the respirator.
        e. What the respirator maintenance and storage procedures are.

    f. How to recognize medical signs and symptoms that may limit or prevent effective use of the respirator.

D. Require respirator users to be fit tested.
   1. Any employee who has been assigned a reusable respirator must be fit tested either on an annual basis (no more than one year may elapse between fit tests), or when an employee is assigned a respirator of a different make, type or size from that previously tested.
   2. Fit testing can be performed by contract or in-house personnel.
   3. Obtain a signed written copy of the fit test results. They should include:
      a. Employee's name and social security number.
      b. Respirator brand, model and size fitted for.
      c. Date fit tested.
      d. Method of fit testing used.
      e. Name and signature of fit tester.
      f. Statement that fit test protocol met the applicable requirements.
      g. Manufacturer and serial number of fit testing apparatus (for quantitative fit test).

- Use appendix D to document fit test results.

E. Provide qualified employees with respirator(s) and adequate amounts of parts and cartridges.
   1. Assign employees whose duties require respirators their own respirator for which they have been fit tested.
   2. Provide special eyeglass inserts designed for the respirator if an employee must wear eyeglasses with a full facepiece respirator. Contact lenses may be worn when wearing a full-face respirator.

F. Require respirators to be used properly.
   1. Prohibit facial hair where the respirator-sealing surface meets the wearer's face.
   2. Require employees to thoroughly inspect the respirator prior to each use.
   3. Employees are to perform a positive and negative fit check every time the respirator is put on.
   4. Employees will leave the area where respirators are being used:
      a. Before removing the face piece for any reason.
      b. To change cartridges.
      c. If any of the following is detected:
         - Vapor or gas breakthrough.
         - Leakage around the face piece.
         - Changes in breathing resistance.
   5. Use cartridges with End of Service Life Indicators or determine the respirator cartridge change-out schedule. See appendix C for guidance.

G. Require respirators to be cleaned and stored properly.
   1. Clean and disinfect respirators after each use.
   2. Store respirators in a plastic bag or case and in a clean location.
   3. Inspect respirators before use and after each cleaning.

H. Address issues associated with special use respirators (self-contained breathing apparatus; air supply respirators; emergency use respirators).

1. Self Contained Breathing Apparatus
    a. Inspect self-contained breathing apparatus and other emergency use respirators monthly and after each use in accordance with manufacturer's instructions.
    b. Air Supplied Respirators
        1. Air used for atmosphere-supplying respirators must meet or exceed the requirements for Type 1 - Grade D breathing air.
        2. Never use pure oxygen.
            - A certificate of analysis must accompany bottled air.
            - Compressors used to supply breathing air must:
                - Prevent entry of contaminated air into the air supply.
                - Minimize moisture content.
                - Have suitable in-line sorbent beds and filter to provide appropriate air quality.
                - Have a high carbon monoxide alarm that sounds at 10 ppm.
    c. Couplings on air hose lines must be incompatible with other air and gas systems.

I. Require follow up training and medical surveillance to be provided as directed.
    1. Provide follow-up physicals as directed by the Occupational Health Physician.
    2. Provide annual refresher training.
    3. Provide annual fit testing.

2.0 Documentation Summary

A. File these records in the Safety Filing System:
    a. Employee Medical Clearances for Respirator Use.
    b. Employee Fit Test Records.
    c. Employee Respirator Training Records.
    d. Completed "Voluntary Use of Respirators" form – appendix B.

B. The Risk Management Center is to be used to document all information including the following:

Documents	Risk Management Center Location
Written Respiratory Protection Program	My Content™
Training Documentation including: Classroom training and training course completed - Sign-in sheets - Quizzes - Skills evaluations - Operator Certificates	Training Track™ application
Pre-shift Inspection Checklists	My Content™
Safety Observations	Job Hazard Analysis/ Safety Observation Tool™
Near misses	Incident Track™
Accidents and claims	Incident Track™
Supplier and manufacturer Certificates of Insurance	COI Track™
Safety Data Sheets	SDS Track™

Safety Meetings

Reference: URETEK's Policy

Purpose
The purpose of this section is to provide a high level of safety awareness during work operations.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Safety Meeting
This is an opportunity to get everyone together and talk about the job, the task, or the goals to be achieved; a routine and platform for feedback from employees to make the workplace as safe as possible.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
Safety meetings are essential to the success of any safety program. By having regularly scheduled meetings and creating a high level of safety awareness, URETEK can directly reduce the number of incidents and injuries.

It is the responsibility of The Supervisor of every location to conduct monthly safety meetings. The local manager or the acting Safety Coordinator for each location is responsible for scheduling the meetings, helping to choose the topics, gathering information, creating handouts, etc. Safety meetings should be designed to encourage feedback and discussion from the participants.

The frequency of safety meetings besides those mandated by the following schedule is at the discretion of the local manager and should be conducted in order to address problems or concerns not only after an incident, but before they become an incident. This schedule applies to URETEK's offices and operations unless otherwise notified.

- District Offices: monthly.
- Field Operations: daily "tailgate" meetings.

Attendance of all scheduled safety meetings is mandatory. Approval of excused absences is at the discretion of the local manager.

It is imperative that the minutes of these safety meetings are recorded. Document the meetings by completing the Safety Meeting form. The information on the document will include:

- Date.
- Topics discussed.
- Signed by all attendees.
- Name of employee who led the safety meeting.
- Refocus on recent incidents of non-conformity.
- Hazards discussed on the JSA (for field operations).
- Discuss recent Safety Alerts.

Safety Meeting Record

Person Conducting: _____ Department/Area: _____

Date/Time: _____ Number Attending: _____

Attendees:

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

Content

What was the main topic? _____

What were the subtopics? _____

What questions or concerns were expressed?

_____
_____
_____
_____
_____
_____
_____
_____
_____

Safety rules reviewed

Monthly Safety Committee Meeting Minute

Organization:

Location: _____ Chairperson: _____

Meeting Time: _____

Members Present (please print legibly):	Members Absent (please print legibly):

Previous Meeting Minute Form _____ were read. (Date)

Review Previous Meeting Minutes:

_____

_____

_____

Review Status of all Previous Recommendations:

_____

_____

_____

Safety Inspection Follow-up Items and Person(s) Responsible:

_____

_____

_____

_____

Next Scheduled Safety Inspection: _____ (Date)

Inspector(s): _____ _____

_____ _____

_____ _____

Review of Previous Incidents, Near Misses and Status of Corrective Actions:

_____
_____
_____
_____

Review of New Incidents, Near Misses, Corrective Action Recommendations and Committee Member(s) Responsible for Ensuring That Corrective Action Is Implemented:

_____
_____
_____
_____

Employee Suggestions or Comments and Recommended Action(s):

_____
_____
_____
_____

Safety Training That Has Occurred:

_____
_____
_____
_____

Future Safety Training Ideas:

Additional Items for Discussion:

_____
_____
_____

Next Scheduled Safety Committee Meeting: _____ (Date)

Scaffolding Safety

Reference: OSHA 29 CFR; 1926.450 - .452

Purpose
The purpose of this section is to provide guidelines that promote safe scaffolding use and operations.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Brace
This is a rigid connection that holds one scaffold member in a fixed position with respect to another member, or to a building or structure.

Guardrail System
A vertical barrier, consisting of, but not limited to, top-rails, mid-rails, and posts, erected to prevent employees for falling off a scaffold platform or walkway to lower levels.

Platform
This is a work surface elevated above lower levels. Platforms can be constructed using individual wood planks, fabricated planks, fabricated decks, and fabricated platforms.

Qualified
One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
A scaffold must be designed by a qualified person. Supported scaffolds must be able to support their own weight and at least four (4) times the maximum intended load.

Competent person must inspect a scaffold before each work shift and after any action that could affect the structure. The competent person should be trained in scaffold safety. A competent person must supervise if a scaffold is assembled, changed, moved, or taken apart. If defects are found, the competent person should tag out the unsafe equipment (and let all

affected employees know of the change).

Keep scaffolds 10 feet or more from power lines (or 3 feet if lines are less than 300 volts).

Employees cannot work on a scaffold in high winds or a storm unless a competent person states it is safe and a personal fall arrest system or a windscreen is used (if a screen is used, the scaffold must be secured against the expected wind force). Company employees must not work on a scaffold that has snow or ice on it – except to get ice or snow off the scaffold.

If a scaffold is more than 2 feet above or below a level, there must be a way to get on and off – such as a ladder, ramp, or personal hoist. The access must not be more than 14'' from the scaffold.

Put a standing scaffold on a firm foundation (with base plates attached to the feet).
Uprights must be vertical and braced to prevent swaying; platforms must be level.
A platform that is more than 4 times higher than its base is wide must be tied to supports.

Most scaffold platforms and walkways must be 18'' wide or more. If a work area is less than 18'' wide, guardrails and / or personal fall arrest systems must be used.

Ten-foot planks must extend at least 6'' past the end supports, but not more than 12''; no more than 1'' between planks and uprights.

Wood planks must be unpainted, so any cracks will show.

For supported scaffolds, check at least these points:
- Completely planked platforms.
- Proper access.
- Complete guard rails.
- Proper ties to buildings, where required.

Suspended Scaffolds
Supporting outrigger beams must be able to support at least 4 times the intended load. To keep a scaffold from falling to the ground, it must be attached to the roof, tied to a secure anchorage, or secured with counterweights. The suspension ropes and rigging must support at least 6 times the intended load.

Counterweights must be attached to secure and strong places on a building, so they won't move. Do not use bags of sand and gravel, masonry blocks, or roofing material that can flow or move.

Do not use gas-powered equipment or hoists. Hoists must have automatic brakes for emergencies.

A 1-point or 2-point suspended scaffold must be tied or secured to prevent swaying.

Fall Protection
A competent person must decide if fall protection is feasible when a scaffold is assembled or taken apart.

On most scaffolds, guard rails must be on all open sides and ends. On supported scaffolds and some other scaffolds, guard rails or personal fall protection is enough. On most suspended scaffolds, both guard rails and fall protection are needed. Use a harness, not a body belt for personal fall protection.

A guard rail is not needed on the working side when the platform is less than 14'' from the work. The open side of an outrigger must never be more than 3'' from the face of the building.

On supporting scaffolds, most of the time, the top rail must be 38'' to 45'' above the platform. A top rail must be strong enough to hold 200 lb. (or 100 lb. on single point or 2-point suspension scaffolds). A mid rail must be about halfway between the platform and the top rail; most mid rails must be able to hold 150 pounds. If mesh, screens, or panels are used, a top rail is needed (unless mesh was designed and installed to meet guardrail requirements.)

Scaffold walkways must have no more than a 9.5'' gap between planks and a guardrail.
Do not let junk collect on the scaffold; employees can trip and fall.

Training
URETEK will have a qualified person provide safety training for each worker who uses a scaffold. The training will address fall hazards, electrical hazards, falling objects, fall protection, use, and load capacity.

A competent person must give safety training to any workers who may assemble, take apart, move, operate, repair, maintain, or inspect scaffolds. Workers using scaffolds must be retrained if the worksite changes or the type of scaffold or safety equipment changes.

Silica Dust

Reference: URETEK's Policy

URETEK recognizes that exposure to silica dust can cause silicosis (a deadly lung disease) and may cause lung cancer. URETEK takes responsibility for protecting the safety and health of its employees.

The Occupational Silica Dust Control Program includes the following parts:
1. Hazard Identification.
2. Worksite Air Monitoring.
3. Employee Training.
4. Housekeeping Procedures.
5. Engineering Controls.
6. Personal Hygiene.
7. Personal Protective Equipment.
8. Medical Examinations and Evaluation.
9. Record Keeping.
10. Emergency First Aid Procedures for Silica Dust.
11. Spill and Disposal Procedures.

Hazard Identification
URETEK recognizes that the following job/task can produce silica dust at our workplace (Sandblasting, concrete cutting, determine hazards for each job site)

When any of these jobs/tasks are performed by a worker employed by URETEK they will be protected by the Occupational Silica Dust Exposure Control Program.

The Supervisor is responsible for identifying silica dust exposure hazards.

Worksite Monitoring
When a job/task is identified as a silica dust hazard the process and the worker's breathing zone will be monitored for silica dust concentrations. Employee exposure measurements must represent actual breathing zone exposure conditions for each employee.

Each job/task identified in part one will be monitored every four months and whenever a change is made to the process. Engineering controls will be monitored immediately after implementation and quarterly thereafter.

Employees will be able to view all air monitoring records. The Supervisor is responsible for the worksite monitoring program.

Employee Training
All employees working in the job/tasks identified in part one are required to complete a training course prior to working in the exposure area. Workers will be trained when first assigned to the job/task and annually thereafter.

Training for the Occupational Silica Dust Exposure will include the following topics:
1. Health hazards of silica dust exposure (including signs and symptoms of silicosis).
2. Operations and materials that can produce silica dust exposure.
3. Engineering and work practice controls used to protect them from exposures.
4. The importance of proper equipment and control maintenance.
5. Housekeeping procedures.
6. Proper use of respirators and the respirator standard.
7. Personal Hygiene procedures to reduce exposures.
8. How smoking increases the risk of developing silicosis and other lung damage.
9. The details of the Occupational Silica Dust Exposure Control Program.

Training will be performed by _____.

Records of attendance, dates of training, and training materials will be documented and located at _____.

Additional training or reference material on silica dust exposure will be made available upon request to employees.

Housekeeping Procedures
Dry sweeping and the use of compressed air are **prohibited** for removing dust in jobs/task identified in part one. Work areas and equipment covered by dust will be cleaned at the end of every shift by using a HEPA filter vacuum. Vacuums are stored at
_____.

Wet clean up may also be used to remove dust.

Waste materials will be stored at _____ and will be removed at least weekly.

Supervisors are responsible for ensuring that work areas are free from dust at the end of each shift.

Engineering Controls
URETEK will use engineering controls whenever possible to control silica dust exposures. Ventilation systems will be inspected and maintained by
_____.

Ventilation systems will be checked at least weekly to determine if they are functioning properly. URETEK will not use abrasives that contain more than 1% crystalline silica during blasting options.

_____ is responsible for inspecting and maintaining engineering controls on all jobs.

Personal Hygiene
Employees working at the job/tasks identified in part one will change out of contaminated clothing and work boots before leaving the jobsite. Contaminated clothing will be vacuumed with the HEPA filer vacuum to remove silica dust. Vacuums will be located at _____.

Lockers or container will be provided to store clean clothes at the jobsite. Employees are required to wash their hands and shower (when feasible) before leaving the worksite. Showers are located at _____; hand washing facilities are located at _____.

When worksites are located in the field away from normal operation, URETEK will provide portable containers to hand washing.

Employees will not eat, smoke, or use smokeless tobacco in the areas identified in part one.

Personal Protective Equipment
When respirators are required to protect employees for silica dust exposure, URETEK Respirator Program will be strictly followed. Copies of the Respirator Program are located at _____.

Medical Surveillance
All workers working in jobs/tasks identified in part one will be given medical examinations to prevent the development of silicosis. Medical examinations will be conducted once a year for employees working in jobs/tasks that expose them to silica dust.

Medical examinations must include (1) Chest X-rays, (2) Pulmonary function tests, and (3) tuberculosis evaluation.

Employees whose chest X-rays show changes consistent with the development of silicosis are customary removed from job/tasks that expose them to silica dust. Input from the attending physician will be considered in making this decision.

Medical records will be made available at _____.

Recordkeeping

Training, medical records, air monitoring, engineering control maintenance records, and injury records will be kept and located at
_____.

_____ is responsible for the recordkeeping program.

Emergency First Aid Procedures for Silica Dust

1. Eye Exposure

If crystalline silica dust gets into the eyes, wash immediately with large amounts of water, lifting the lower and upper lids occasionally. If irritation is present after washing, get medical attention. Portable eyewashes will be kept at jobsites in the field away from the company locations.

2. Breathing

If a person breathes in large amounts of crystalline silica dust, move the exposed person to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get medical attention as soon as possible.

Spill and Disposal Precautions

If crystalline silica is spilled or released in hazardous concentrations, the following steps must be taken:

1. Ventilate the area of the spill or release.
2. Persons doing the clean-up are required to wear appropriate respirators.
3. Collect spilled material in the most convenient and safe manner for reclamation or disposal in a secured sanitary landfill.

I have read and understand the requirements of this program and will participate in all training and safety precautions.

Vehicle Safety

Reference: URETEK's Policy

Purpose
The purpose of this section is to provide URETEK's employee safety throughout vehicle operations.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Defensive Driving
Driving to save lives, time, and resources, in spite of conditions surrounding the driver and the actions of others.

Non-Preventable Vehicle Incidents
An unforeseen and unplanned event or circumstance involving vehicle operator, often with lack of intention or necessity that was beyond the driver's control.

Preventable Vehicle Incidents
An unforeseen and unplanned event or circumstance involving vehicle operator, often with lack of intention or necessity. It usually implies a generally negative outcome which could have been avoided or prevented had circumstances leading up to the incident been recognized, and acted upon, prior to its occurrence.

Company Vehicle
A company-owned/leased vehicle or a personal vehicle used by an employee on approved Company business.

Contraband
This is anything that is prohibited on company premises or in company vehicles such as unauthorized drugs, alcohol, weapons, or drug paraphernalia.

Weapons
These are explosives, firearms, bows, knives with blades longer than 3 inches, and other unauthorized items that could be used as a weapon.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements

URETEK requirements for vehicle safety are:

- Seat Belts shall be worn at all times by all occupants in the vehicle when the vehicle is in motion – failure will result in discipline up to and including termination.
- Only those employees specifically authorized and who possess a valid license for the equipment being used shall operate motor vehicles on URETEK business.
- Drivers should be appropriately assessed, licensed, and trained to operate the vehicle.
- Drivers will know and obey all state and local motor vehicle laws applicable to the operation of their vehicle.
- Any citations or penalties issued against URETEK vehicle are the responsibility of the driver. If the driver cannot be determined, responsibility for the penalty resides with whomever the vehicle is assigned to at the time.
- Fuel cards are limited to fuel only. Tires, oil, maintenance, or repairs are to be paid by company credit card or direct bill to the Company.
- A driver shall not permit unauthorized persons to drive, operate or ride in or on a URETEK vehicle.
- URETEK's employees will not permit anyone to ride on the running boards, fenders, or any part of the vehicle except on the seats.
- Passengers shall not stand in moving vehicles.
- URETEK's employees will not ride on trailers.
- URETEK's employees will not jump on or off vehicles in motion.
- Authorized drivers will report any collision or traffic violation while driving on company duties to the appropriate personnel.
- Handheld cell phone use is prohibited while driving.
- Texting while driving is prohibited.
- Do not manipulate radios or other equipment which may cause distraction while driving.
- Do not exceed the posted speed limit.
- Maintain a safe distance between other vehicles.
- To ensure that no unsafe conditions exist and that no persons or other vehicles are in the direct path of the vehicle to be driven, drivers are required to conduct a walk-around of the vehicle prior to moving the vehicle.
- URETEK vehicles are not to be used for vacation or any personal recreational use unless otherwise authorized by the employee's management.
- URETEK vehicles will not be used for the transportation or consumption of alcohol, drug, or controlled substances.
- URETEK vehicles will not be operated by anyone while under the influence of alcohol, drugs, or controlled substances. Definition of "under the influence" will be established by the local, state, or federal limits within the jurisdiction of the operation. The more restrictive limit will apply.
- Contraband will not be transported in a Company vehicle.
- Firearms or weapons will not be transported in a Company vehicle unless approved by management (Sporting Event Permit).
- Personal recreational items, including snowmobiles, all-terrain vehicles, motorcycles,

holiday campers and trailers, and boats are not to be transported in or towed by a URETEK vehicle, unless approved by management (documented).

Leasing of Company Vehicles
Authorization to lease a vehicle as opposed to being provided a company-owned or leased vehicle must be approved by Senior Management.

URETEK's employees will be issued a company fuel card, limited to fuel only.

URETEK's employees are obligated to keep the vehicle clean and in good repair.

Company Vehicle Operators
The driver of a vehicle will be courteous toward other drivers and pedestrians. Drivers shall operate the vehicle in a safe manner and shall yield the right of way to pedestrians and other vehicles when failure to do so might endanger any persons or other vehicle.

Upon a signal from a vehicle approaching from the rear, the driver of a URETEK vehicle shall yield the right of way.

Drivers shall be prepared to stop, and the right of way shall be yielded in all instances where necessary to avoid an accident.

Drivers shall exercise added caution when driving through residential and school zones. When entering or leaving any building enclosure, alley or street where vision is obstructed, a complete stop shall be made, and the driver shall sound the horn and then proceed with caution.

Company Vehicle Inspection
The driver shall determine that his/her vehicle is in a safe operating condition before operating the vehicle. Drivers shall report any defects that may have developed during the day. All items that affect safety will be repaired prior to continued vehicle operation. Maintain a current state inspection sticker if applicable.

As a minimum, vehicle operators shall check the following: windshield wipers, windshield visibility, lights and reflectors, brakes, horn, and mirrors.

Company Vehicle Backing
Whenever possible, the vehicle shall be positioned to avoid the necessity of backing later.

When backing a vehicle which has an obstructed view to the rear:
- A back up audible alarm shall be used (if installed).
- Remain alert and observe all surroundings.
- Constantly check for blind spots.
- Back slowly.

- Do not depend solely upon mirrors. Keep a visual of surrounding area.
- When necessary, enlist the assistance of another person as a guide.
- Use extreme caution when backing a vehicle in order to avoid any injuries or damage.

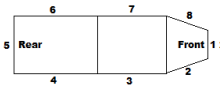
Company Vehicle Incident Reporting
Incidents shall be reported to The Supervisor immediately, and then documented as soon as possible using the Vehicle Incident Report form.

The incident will be determined to be preventable or non-preventable by Management; the driver will be notified of follow-up actions.

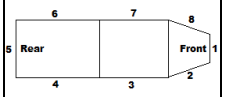
Vehicle Accident/Incident Form
Instructions: In case of an accident involving a Company Owned Vehicle, the driver of the vehicle must:

1. Report the incident promptly to the local law enforcement agency and obtain a copy of the officer's report.
2. Contact your supervisor and fleet manager as soon as practical to report the accident.
3. Within 24hours of the accident, submit this Completed and Signed form to your supervisor.
4. Submit this completed form, signed by your supervisor to the appropriate Fleet Office within 48hours.
5. If the police do not respond or complete the accident report and the accident has caused bodily injury, vehicle damage is $1000.00 or more and/or government property is $200.00 or more the driver must submit a complete MV-4002 Driver's Report or Accident to the Department of Transportation within 10 days. Forward a copy to the Fleet Office.

Agency/Dept. Location	Agency/Department Name:	Division/Institute/Campus	Agency/Dept. Number
	Supervisor's Name:		Phone Number:
	Street Address:	City:	Zip:
Location of the Accident	Street/Highway:		Accident Date:
	City & Country:	State:	Accident Time: ☐AM ☐PM

Vehicle Information ☐ **Assigned** ☐ **Pool/Functional**	Vehicle Owner Agency/Dept. Name:		Reason for Vehicle Use:		
	Year:	Make/Model:	Body Type:	Mileage:	Color:
	Fleet Number:		Vehicle Identification Number:	License Plate Number:	
	Describe Parts Damaged: Circle number areas of Vehicle Damage: 				

Information on Driver of Vehicle	Driver's Name:	☐ Driver Injured ☐ Wearing Seatbelt	Home Phone:	Work Phone:
	Email Address:	Date of Birth:		Driver's License Number:
	Work Address:	City:	State:	Zip+4:
	Home Address:	City:	State:	Zip+4:
	Were Passengers in the vehicle? ☐ YES ☐ NO If Yes, List Names: _____ _____		Injuries: ☐ YES ☐ NO ☐ YES ☐ NO	Wearing Seat Belt: ☐ YES ☐ NO ☐ YES ☐ NO

Other Party(s)	(Please indicate what type of property was damaged.)	Describe Parts Damaged:	If Automobile, circle numbered of areas of vehicle damage: 

I acknowledge that all information provided is true in this report, I also acknowledge that all information provided is true and accurate to the best of my knowledge.

<u>Scope of Employment Statement</u>
As supervisor of this position, I affirm that the individual named driver was operating the vehicle within his or her authorization

Signature: _____

Date: _____

Supervisor Signature: _____

Date: _____

Walking, Working Surfaces

Reference: OSHA 29 CFR; 1910.21 - .30 and 1910.119

Purpose
The purpose of this section is to prevent slips, trips, and falls by good housekeeping practices for walking surfaces and the entire workplace.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Stairs or Stairway
A series of steps leading from one level or floor to another, or leading to platforms, pits, boiler rooms, crossovers, or around machinery, tanks, and other equipment that is used more or less continuously or routinely by employees, or only occasionally by specific individuals.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division.

General Requirements
- All places of employment, passageways, storerooms, and services rooms shall be kept clean and orderly and in a sanitary condition.
- The floor of every workroom shall be maintained in a clean and, so far as possible, a dry condition. Where wet processes are used, drainage shall be maintained and false floors, platforms, mats, or other dry standing places should be provided where practicable.
- To facilitate cleaning, every floor, working place, and passageway shall be kept free from protruding nails, splinters, holes, or loose boards.
- Aisles and passageways:
  - Where mechanical handling equipment is used, sufficient safe clearances shall be allowed for aisles, at loading docks, through doorways and wherever turns or passage must be made.
  - Aisles and passageways shall be kept clear and in good repairs, with no obstruction across or in aisles that could create a hazard (this includes breaker boxes and fire extinguisher placements).
  - Permanent aisles and passageways shall be appropriately marked.

- Combustible material, such as oily rags, waste and shavings shall be kept in approved metal containers with a metal lid.
- Mud, grease, oil, and fuel should be kept from floors, walkways, and stairways.

- Good organization of stored materials is essential for overcoming material storage problems whether on a temporary or permanent basis. There will also be fewer strain injuries if the amount of handling is reduced, especially if less manual materials handling is required. The location of the stockpiles should not interfere with work, but they should still be readily available when required. Stored materials should allow at least three feet of clear space under sprinkler heads. Stored materials should not obstruct aisles, stairs, exits, fire equipment, emergency eye wash stations, emergency showers, or first aid stations.
- The Supervisor or designate shall conduct random facilities inspections to ensure OSHA compliance using the Facility Inspection form. Completed forms shall be forwarded to the Operations Manager for necessary corrective actions, and then re-inspection will be conducted.

Welding, Cutting and Hot Works

Reference: OSHA 29 CFR; 1910.252

Purpose
The purpose of this section is to provide fire and personal protection for employees and URETEK property from welding and cutting operations.

Scope
This section applies to all URETEK's employees and contractors.

Definitions

Welder and Welding Operator
This is any operator of electric or gas welding and cutting equipment.

Procedure

Responsibility
It is the responsibility of the respective Manager or designee to monitor and maintain the processes within their division.

General Requirements
For welding and cutting on the well site, a written permit system has been developed to assist in maintaining adequate fire prevention precautions during these operations. This program provides comprehensive procedures that will protect against injury and loss of property from fire. This program will apply to all job classifications, tasks, and procedures that require employees and contractors to conduct hot work.

Duties of the Supervisor
The Supervisor is responsible for the safe handling of the cutting and/or welding equipment and for the safe use of the cutting process.

The Supervisor will verify that the employee who will be conducting hot work is an approved welding/cutting employee. The combustible materials and hazardous areas present or likely to be present in the location must be determined.

The Supervisor will protect combustibles from igniting by the following:
- Have the work moved to a location free from dangerous combustibles.
- If the work cannot be moved, have the combustibles moved a safe distance from the work or have the combustibles shielded against ignition.
- Ensure that work which might expose combustibles moved a safe distance from the work or have the combustibles shielded against ignition.

The Supervisor determines that the cutter or welder has obtained approval that the work area

is safe.

The Supervisor determines that adequate fire protection and equipment are available at the work site. Where fire watchers are required, the supervisor must ensure that they are present at the site. Where a fire watcher is not required, a final check-up shall be made by the department supervisor one-half hour after the completion of cutting or welding operations to detect and extinguish possible smoldering fires. Refer to Fire Safety section of this manual.

Duties of the Cutter or Welder

Handle the equipment safely and use it so as not to endanger lives and property, as follows:

- If hot work will take place outside of the designated welding/cutting area, cutter or welder must have an approved hot work permit.
- Cutting or welding is permitted only when safe.
- Continue to cut or weld only so long as conditions are unchanged from those under which approval was granted.

Wear proper PPE, including the following:

- Brazing Glasses during cutting operations.
- Welding Hood.
- Welding Gloves.
- Welding Sleeves for overhead work.
- Safety footwear.

Hot Work Precautions

Cutting will be permitted only in the designated area (i.e. weld shop) or in areas that have been made fire safe. Within the confines of most production areas are “approved welding and hot work” locations. Refer to the Hot Work Precautions chart to follow.

When work cannot be moved practically, the area must be made fire safe by removing combustibles or protecting combustibles from ignition sources.

Cutting or welding will not be permitted in the following situations:

- In areas not authorized by management.
- In the presence of explosive atmospheres (mixtures of flammable gases, vapors, liquids, or dusts in the air) or explosive atmospheres that may develop inside improperly prepared drums, tanks, and equipment or confined spaces which have previously contained such materials or that may develop in areas with an accumulation of combustible dusts.
- In areas near the storage of large quantities of exposed, readily ignitable materials such as bulk wood, paper, cardboard, etc.

HOT WORK PRECAUTIONS		
Steps to task Prior to work check for Methane & H2S	Potential or actual hazards Wellhead, choke, flow line, separator, BOP's, flow back tester, tubulars used in well, cellar, coiled tubing reel, stripper assembly, equalizing loop, stuffing box, pump iron & produced fluid leaks	Mitigation Actions Use multi-gas detector to check for leaks or the presence of the gas. Bleed off pressure and fix leak.
If a presence is detected, fix leak if possible	If the LEL is reached, no hot work can take place until the leak is fixed	Use multi-gas detector to check for leaks or the presence of the gas. Bleed off pressure and fix leak.
Does the employee have the proper PPE for the task	Potential of eye damage from glare & burn potential from heated metal, sparks, etc.	Be sure to wear the appropriate PPE for the task such as eye wear, gloves, & leather apron, sleeves, etc.
If oxygen & acetylene are used are they safe	Potential of cylinders falling over if not secured properly. Potential of leaks in the hoses or valves.	Make sure the cylinders are secured & separated as required. When not in use, store properly.
If arc welding is used, are employees protected from glare	Potential of glare to welder & employees in the general vicinity of the welding	Proper eye protection for welder. Welding curtains may be needed to shield employees from glare while working close to the welding operation
Is adequate fire protection provided	Potential of heated materials to catch something on fire.	Maintain a fire watch during the operation and 30 minutes after operation
During the hot work, monitor for LEL's	Potential of leaks from areas identified above	If a leak is detected, shut down hot work until it can be fixed.
During work watch for metal separating from metal object	Potential of bits of slag or bits of hot metal that could contact personnel	Wear fire retardant protection & be aware of the path of exposure to hot metal
Once the hot work is completed, be sure to allow enough time for metal to cool before exposing employees to it	Potential of burns to personnel that are not expecting the metal to be hot	Communicate with affected personnel of the burn hazard and prevent the handling of it until cool.

Hot Work Permit
Before cutting or welding is permitted on the well site, the area must be inspected by the individual and by the supervisor responsible for authorizing cutting and welding operations to ensure that it is a fire safe area. This individual must designate precautions to be followed in granting authorization to proceed in the form of a written permit. The Supervisor completes either the URETEK's Hot Work Permit or a client's permit. The permit must be posted in a visible location near the area where hot work is being conducted. This individual must also sign the permit and verify the following:

- Cutting and welding equipment to be used must be in satisfactory operating condition and in good repair.
- Where combustible materials such as paper clippings, wood shavings or textile fibers are on the floor, the floor must be swept clean for a radius of 35 feet. Combustible floors (except wood on concrete) must be kept wet or protected by fire resistant shields.
- Openings or cracks in walls, floors, or ducts with 35 feet of the work site must be tightly covered to prevent the passage of sparks to adjacent areas.
- Screens must be placed to protect bystanders from glare or debris due to welding or cutting operations.

Upon completion of the hot work, the completed permit must be returned to the Safety department for recordkeeping. The permits will be kept on file for 30 days after completion of the hot work.

Fire Watchers
Fire watchers will be required whenever cutting or welding is performed in locations where other than a minor fire might develop.

Fire watchers must have fire extinguishing equipment readily available and must be trained in its use. In the event of a fire, the fire watcher shall call the supervisor. All other persons should evacuate the area.

Fire watchers must watch for fires in all exposed areas, and try to extinguish them first only when obviously within the capacity of the equipment available. Otherwise, call the supervisor.

A fire watch must be maintained for at least 30 minutes after completion of the cutting or welding operations to detect and extinguish smoldering fires.

Compressed Gas Cylinders
Gas identification should be stenciled or stamped on the cylinder or affixed with a label. No compressed gas cylinder should be accepted for use that does not legibly identify its content by name.

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.

Visual and other inspections shall be conducted to determine that compressed gas cylinders are in a safe condition.

Cylinders must be equipped with the correct regulators. Regulators and cylinder valves should be inspected for grease, oil, dirt, and solvents.

Only tools provided by the supplier should be used to open and close cylinder valves.

Cylinders must be secured at all times in such a way as to avoid them being knocked over or damaged, must be stored in a vertical position, not stored in public hallways, and segregated based upon contents. 20 feet should be maintained between oxidizers and flammables or firewalls erected at least 5 feet high and with a fire rating of 30 minutes. Cylinders must be protected from damage, corrosion, sunlight and kept away from heat sources. Cylinders should be capped when they are not being used.

Inside of buildings, cylinders shall be stored in a well-protected, well-ventilated, dry location. Cylinders will not be kept in unventilated enclosures such as lockers and cupboards.

Storage areas for full and empty cylinders must be designated and labeled. Cylinders should be stored in definitely assigned places away from elevators, stairs, or gangways.
Cylinders must be transported in a vertical secured position using a cylinder basket or cart, and must not be rolled. Regulators should be removed, and cylinders capped before movement. Cylinders should not be dropped or permitted to strike violently, and protective caps are not used to lift cylinders.

URETEK employees will be trained on the proper use, handling, and storage of compressed gas cylinders.

Leaking cylinders should be moved to an isolated, well-ventilated area, away from ignition sources. Soapy water should be used to detect leaks. If the leak is at the junction of the cylinder valve and cylinder, do not try to repair it. Contact the supplier and ask for response instructions. Cylinders should be marked as “MT” and dated when empty. Never mix gases in a cylinder and only professionals should refill cylinders. Empty cylinders must be handled as carefully as full cylinders.

Hoses and connections should be inspected regularly for damage. Hoses should be stored in cool areas and protected from damage.

Work Zone Traffic Control

Reference: DOT / MUTCD / OSHA 29 CFR

Purpose
The purpose of this Policy is to verify and ensure that work Zone safety Practices and being followed and are being complied along with state and federal regulatory requirements. To establish traffic control plans which provide the best protection for employees exposed to the hazards of working around vehicle traffic involving the traveling public

Scope
This section applies to all URETEK's employees and contractors.

Definitions

ATSSA: American Traffic Safety Services Association.

Attenuator: An impact attenuator, also known as a crash cushion or crash attenuator is a device intended to absorb the energy of a crash. Types of attenuators include a plastic barrel filled with sand, usually yellow colored with a black lid or truck mounted versions which can be deployed on vehicles that are prone to being struck from behind, such as road construction or maintenance vehicles.

MUTCD (Manual of Uniform Traffic Control Devices): The MUTCD contains the national standards governing all traffic control devices. All public agencies across the nation rely on the MUTCD to bring uniformity to the roadway. The MUTCD plays a critical role in improving safety and mobility of all road users. The MUTCD is the law governing all traffic control devices.

Temporary Traffic Control Zone (TTCZ): An area of a highway where road user conditions are changed because of a work zone or incident by the use of temporary traffic control devices, flaggers, uniformed law enforcement officers, or other authorized personnel.

Traffic Control**:** Traffic control is a process of advising motorist of requirements or conditions affecting road use at specific places so that proper action may be taken, and accidents or delays avoided. Work site traffic control applies to maintenance and construction requirements or other special temporary conditions affecting road use at specific places and times.
Traffic Control Device (TCD) A sign, signal, marking, or other device used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, pedestrian facility, or shared-use path by authority of a public agency having jurisdiction. They are used to regulate, warn, and guide motorist and pedestrians through or around the work site safely, efficiently and satisfy the following requirements:

- Fulfill a need.
- Command attention.
- Convey a clear and simple meaning.

- Command respect of road users.
- Permit adequate time for response.

Traffic Control Plan (TCP): A traffic control plan is a plan for handling traffic through a specific highway, street work zone or project. These plans may range in scope from a very detailed TCP designed solely for a specific project, to a reference to standard plans, a section of the manual on uniform traffic control devices (MUTCD), or a standard highway agency manual. The degree of detail in the TCP will depend on the project complexity and traffic interference with construction activity.

Traffic Control Zone (TCZ): A traffic control zone is the entire area of the roadway which encompasses all traffic control devices used to regulate, warn, or guide motorists' behavior. Such a zone must be inspected after the traffic control plan has been implemented to ensure that the zone has not unexpectedly expanded to include other streets adjacent to the zone.

Variable Message Sign (VMS) or Changeable Message Sign: A sign that is capable of displaying more than one message, change manually, by remote control, or by automatic control. Normally, these signs are trailer able, powered by either a gasoline or diesel engine or by batteries using solar panels. They are generally used to display changes in traffic conditions or for announcements.

Work Zone: The area itself that is set apart and delineated for use by workers to include the machinery and supplies needed to perform the immediate operation.

Procedure

Responsibility
It is the responsibility of The Supervisor or designee to monitor and maintain the processes within their division and ensure that safety policies are being followed.

URETEK is responsible to provide sound principles of safety, training, inspection, maintenance, application, and operations consistent with all resource data available from the manufacturer, OSHA, and ANSI.

Project Management is responsible for the implementation and execution of these standards.

The safety of all personnel in and around the vehicles is dependent on safe use and operation by the operator.

The Supervisor or designee is responsible for providing approval for deviations from this policy.

The top URETEK manager of the job site is responsible for the implementation of this policy on the project.

The Supervisor or designee is responsible for maintaining this document.

Work Zone Traffic Control Index

- Project Specific Traffic Control Plan.
- Traffic Control Plan.
- Work Site Vehicle Use.
- Roadway Crossing for Workers (TMs).
- Flaggers.
- Training.
- Appendix A Suggested Guidelines.
- Appendix B Computed Roll-Ahead Distances.
- Appendix C Flagger Control.

Project Specific Traffic Control Plan

Project specific traffic control plans shall provide the best protection for the:

- Work force.
- Motorist (traveling public).
- Pedestrians.
- Equipment.
- Facilities.
- Emergency Personnel.

Traffic Control Plan

- Site specific written traffic control plans shall be developed for all work activities which involve working within 15' from the outside shoulder edge of all public and private ways where the traveling public are driving vehicles. These plans may be incorporated into URETEK activity plans or on a separate attachment. The plan must be specific, to address all hazards and should include drawings which detail locations of traffic control devices, controlled access ways, team member/equipment parking, etc. Site specific traffic control plans should be owner approved, per the written contract, if applicable.
- Work zone traffic control plans developed shall at a minimum follow the guidelines developed in part VI of the Manual on Uniform Traffic Control Devices (MUTCD) and any applicable state or local standards.
- A competent individual at each work location shall be identified in all plans and be responsible to ensure plans are established, followed, and maintained for the duration of the work being performed.

Police support, when possible, will be used to set up traffic control systems/devices and will be present during time of ongoing and/or special hazard sensitive situations if determined by the competent person responsible for plan approvals. It is especially important that police support is provided when establishing significant/major long-term traffic control pattern changes with barriers and devices.

All traffic control plans shall be reviewed and approved by competent/certified person prior to the start of the activities. All plan changes will also require the review and approval by the ATSSA or equivalent trained supervisor.

Work Site Vehicle Use

Specially equipped URETEK Vehicles (rack truck, or other truck) will be used as a barrier between oncoming traffic and workers when other solid mass type barrier devices are not feasible. Vehicles should be offset at least four feet from workers into traffic. Trucks equipped with attenuators in excessive speed zone areas, will have flashing arrow boards, traffic control checklist for reference, storage compartment for traffic vests, etc. and a supply of traffic cones in the back bed of the truck. The style type and size of the attenuators used shall be specified for the posted traffic speed. Depending on the traffic control plan (TCP) some truck mounted attenuators (TXDOT) require that the driver must have a CDL license. Drivers and passengers shall exit and enter the vehicle from the opposite side of moving traffic. When possible, use trucks having a crew cab so that both doors on the opposite side of traffic is used to expedite traffic setups and pick up of traffic control (personal and work crews). Wheel chocks shall be positioned under the curbside wheels when needed. Avoid working from the rear of traffic control truck when setting out or picking up the traffic control devices.

Personal vehicles

- The use of team member personal vehicles must be restricted as much as possible. Off road parking areas should be identified and included in activity plans and areas located such that team members are not required to walk across traffic to access work areas. Should it be absolutely necessary to use personal vehicles as a last resort they must be pulled off the roadway as far as possible into the shoulders, put flashers on, turn vehicle off, in gear, with brakes on. Exit/enter vehicle on shoulder side when possible or skew so that no part of the open door is in the traffic lane. Immediately utilize the provided barrier protection devices in the work areas.
- Multiple lane closures may require more specific planning considerations of these issues for the safest alternatives.

Roadway Crossing for Workers (TMs)

- When no other options are feasible and team members (other workers, visitors, owner reps etc.) have to cross an active roadway, as few as necessary designated crossing points shall be identified and used. Crosswalk striping of roadway done; flashing lights placed at both sides of the road at the entry of the crosswalk with buttons/switches that can be activated as needed before crossing whenever possible. Signs posted for crosswalk. Only crossroad when there is significant time to safely walk across the road. A distance marker/post can be out to estimate oncoming vehicle speed for safe crossing.
- State, federal, or local jurisdiction approval may be required to establish specific crosswalks for workers.

Flaggers
The use of flaggers must be approved by the competent/certified person in the control of slow-moving traffic only, as defined in the (M.U.T.C.D). In addition, flaggers must be protected by barriers if it is feasible. All flaggers must be trained in accordance with M.U.T.C.D. standards or state required laws. Some owner/client contracts may call for the use of flaggers in those cases alternative measures should still be considered if feasible, and changed with the owner's approval.

Training
ATSSA or equivalent trained supervisor shall have more than two years' experience and be certified by the American Traffic Safety Services Association (ATSSA) or equivalent certifying body.

Project competent person
Competent person designated to develop traffic control plans, establish traffic control patterns and monitor operations may or may not be the safety specialist, but someone who has the knowledge of traffic control processes experience, training and the ability to recognize hazardous conditions and has the authority to take corrective actions.

Truck/vehicle drivers
- All URETEK Classified truck drivers shall receive site specific traffic control training in routing driving operations in and around traffic control zones.
- Other truck/vehicle drivers assigned to operate at a project in traffic control zones shall receive a minimum of 2 hours of training in traffic control.

Project team member training
All URETEK Employees who are required to work in and around traffic control zones shall receive training. This training must be updated when conditions change and include as a minimum those hazards identified in activity plans and site-specific traffic control documents.

Other training
- Project management shall ensure that all subcontractors and other persons working or present in a traffic control zone/work areas are given traffic control awareness training specific to their jobsite. Usually completed on a JSA for the site.
- General traffic control training will be incorporated into URETEK regular training programs like the 10 hours OSHA outreach program.

Related Documents and References
See attachments for related documents

Related References
- Manual on Uniform Traffic Control Devices (MUTCD) 2009 (Next Edition not available).

(Electronic Version Online: www.mutcd.fhwa.dot.gov/)

- American Association of State Highways and Transportation Officials (AASHTO).
- Institute of Transportation Engineers (ITE).
- Standard Highways Signs (SHS) 2004

Electronic Version from FHWA on the MUTCD Web site (see 9.3)
Hard Copy Version from ATSSA (see 9.8).

- Federal Highway Administration (FHWA).
  - American Traffic Safety Services Association (ATSSA) (www.atssa.com)
    (Offer classes in Traffic Control Supervision Certifications and Flagger Certification).
- U.S. Road Symbol Signs; Publication No. FHWA- OP- 02- 084.
- Highlights of Major Changes to the 2003 MUTCD Publication No. FHWA-HOP- 4- 042.
- Quality Standards for Work Zone Traffic Control Devices – (Contact ATSSA).

Suggested Guidelines for TMA Barrier Vehicle Placement					
				Max. Distance from TMA to the end of a work area	
Speed M.P.H.	Min. Distance from TMA to work area	Max. Distance on Tangents	Max. Curves	Max. On/Off Ramp Areas	Max. Traffic Back Up Area
25	35’	50’	45’	40’	25’
30	35’	60’	50’	50’	30’
35	35’	70’	60’	60’	35’
40	50’	80’	70’	70’	40’
45	50’	90’	80’	80’	45’
50*	75’ *	100’ *	90’ *	90’ *	50’ *
55	75’	110’	90’	90’	55’
60	100’	120’	110’	110’	60’
65	100’	130’	110’	110’	65’
70	100’	140’	110’	110’	70’
75	100’	150’	110’	110’	75’
80	100’	160’	110’	110’	80’

Notes:
(1.) * For Speeds 50 mph or greater it is recommended that a second traffic control vehicle is place after the crew working in front of the TMA to keep traffic from entering the work area once they pass the TMA. The number and spacing of traffic cones or barrels between the TMA barrier vehicle thru the work area to the second traffic control vehicle should be doubled this will also help prevent vehicles from entering the work area.

(2.) This Guideline is for TMA Barrier Vehicles weighting 24,000 lbs. or more.

(3.) While working in the areas where there are On/Off Ramps special care needs to be taken. The distance from the TMA to the work area may need to shorten because of vehicles trying to cross in front of the TMA and thru the work area to reach the Off Ramp or enter from an On Ramp. Cone and Barrel spacing should be closer in the On/Off Ramp areas.

(4.) Traffic backups may occur, when this happens it may be necessary to shorten the distance from the TMA to the work area and add more cones or barrels to tighten up the space between them to prevent vehicles from entering the work area.

Computed Roll-Ahead Distances for Protective Vehicles

Vehicle Weight (lb)	**Prevailing Speed (mph)**	**Weight of Impacted Vehicle to be Contained (a)**			
		4,500 lb (in ft)	10,000 lb (in ft, [c])	15000 lb(in ft)	24,000 lb(in ft)
Protection Moving Vehicle					
10,000	60-65	100	175[c]	225	275
	50-55	100	150[c]	175	200
	45 or less	75	100[c]	125	150
15,000	60-65	75	150	175	225
	50-55	75	125	150	175
	45 or less	50	100	100	100
24,000	60-65	75	100	150	175
	50-55	50	75	100	150
	45 or less	50	75	75	100
Barrier Vehicle (Stationary)					
10,000	60-65	50	100[c]	150	200
	60-66	25	75[c]	100	150
	60-67	25	50[c]	75	100
15,000	60-65	25		75	100
	50-55	25	50	75	100
	45 or less	25	50	50	75
24,000	60-65	25	50	75	100
	50-55	25	25	50	75
	45 or less	25	25	25	50

Notes:
[A] Weights of typical vehicles: mid-size auto, 2,250 lb.; full-size auto, 3,500 lb.; loaded ¾ ton pickup truck, 6,000 lb.; loaded 1-ton cargo truck, 10,000 lb.; loaded 4-yard dump truck 24,000 lb.

[B] Distances are appropriate for shadow vehicle speeds up to 15 mph.

[C] Values suggested as the appropriate buffer distance for vehicles equipped with TMA's.

Sources:
J.B. Humphreys and T.D. Sullivan, "Guidelines for the use of Truck-Mounted Attenuators," Proceedings of the Symposium on Work Zone Traffic Control, Federal Highway Administration, June 1991.

Appendix C Flagger Control

Flagger Control
Qualifications for Flaggers: Most states require a flagger to be certified. Look into what is required for your project.
A flagger shall be a person who provides Temporary Traffic Control (TTC).
Guidance: Because flaggers are responsible for public safety and make the greatest number of contacts with the public of all highway workers, they should be trained in safe traffic control practices and public contact techniques. Flaggers should be able to satisfactorily demonstrate the following abilities:

A. Ability to receive and communicate specific instructions clearly, firmly, and courteously.
B. Ability to move and maneuver quickly in order to avoid danger from errant vehicles.
C. Ability to control signaling devices (such as paddles and flags) in order to provide clear and positive guidance to drivers approaching a TTC zone in frequently changing situations.
D. Ability to understand and apply safe traffic control practices, sometimes in stressful or emergency situations; and
E. Ability to recognize dangerous traffic situations and warn workers in sufficient time to avoid injury.

Use of Hand-Signaling Devices by Flaggers

To Stop Traffic

Traffic Proceed

To Alert and
Slow Traffic

Signaling with Paddles

A. To stop road users, the flagger shall face road users and aim the STOP paddle face toward road users in a stationary position with the arm extended horizontally away from the body. The free arm shall be held with the palm of the hand above shoulder level toward approaching traffic.
B. To direct stopped road users to proceed, the flagger shall face road users with the SLOW paddle face aimed toward road users in a stationary position with the arm extended horizontally away from the body. The flagger shall motion with the free hand for road users to proceed.
C. To alert or slow traffic, the flagger shall face road users with the SLOW paddle face aimed toward road users in a stationary position with the arm extended horizontally away from the body.

Option: To further alert or slow traffic, the flagger holding the SLOW paddle face toward road users may motion up and down with the free hand, palm down.

Note: Signaling with a Flag is not allowed by URETEK. A stop/slow paddle must be used.

Flagger Stations: Flagger stations shall be located such that approaching road users will have sufficient distance to stop at an intended stopping point.

To stop traffic

To let traffic proceed

To alert and slow traffic

Preferred Method
Stop/Slow Paddle

Stopping Sight Distance as a Function of Speed

Speed* (mph)	Distance (ft)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

Standard:
* Except in emergency situations, flagger stations shall be preceded by an advance warning sign.
* Except in emergency situations, flagger stations shall be illuminated at night.
Guidance: The flagger should stand either on the shoulder adjacent to the road user being controlled or in the closed lane prior to stopping road users. Whenever feasible a barrier must be provided. A flagger should only stand in the lane being used by moving road users after road users have stopped. The flagger should be clearly visible to the first approaching road user at all times. The flagger also should be visible to other road users. The flagger should be stationed sufficiently in advance of the workers to warn them (for example, with audible warning devices such as horns or whistles) of approaching danger by out-of-control vehicles. The flagger should stand alone, never permitting a group of workers to congregate around the flagger station.
Option: At a spot constriction, the flagger may have to take a position on the shoulder opposite the closed section in order to operate effectively.

Acknowledgment Form

SAFETY MANUAL ACKNOWLEDGMENT

I, the undersigned employee, have read, understand, and agree to abide by the company policies and procedures. I further understand that compliance with all policies and procedures is a condition of continued employment with URETEK.

If unable to read, these policies and procedures have been explained to me.

_____ _____

Signature Date

THIS COPY OF THE FORM IS FOR THE EMPLOYEE

Acknowledgment Form (Office Copy)

SAFETY MANUAL ACKNOWLEDGMENT

I, the undersigned employee, have read, understand, and agree to abide by the company policies and procedures. I further understand that compliance with all policies and procedures is a condition of continued employment with URETEK.

If unable to read, these policies and procedures have been explained to me.

_____ _____

Signature Date

THIS COPY OF THE FORM IS TO BE PLACED IN THE EMPLOYEE'S PERSONNEL FILE

Appendix

Appendix: New Employee Safety Orientation Form

NEW EMPLOYEE SAFETY ORIENTATION – TRAINING LIST		
Employee's Name:	Date Assigned:	Department:
Job Title:		
Supervisor's Name:	Date of Review:	Signature:

INSTRUCTIONS TO SUPERVISOR: Check all boxes that apply. Review the duty requirements of the new employee and select the safety topics that the employee must be trained on.

	SAFETY TOPIC		SAFETY TOPIC
☐	Accident Reporting Procedures	☐	Hazard Marking/Labeling
☐	Accident Prevention Plan	☐	Hazard Communication
☐	Accident Investigation Procedures	☐	Hazard Signage
☐	Back Safety	☐	Hearing Conservation
☐	Bloodborne Pathogens Exposure	☐	Housekeeping Requirements
☐	Burn Safety	☐	Job Hazard Analysis Awareness
☐	Chemical Safety Awareness	☐	Lock Out/Tag Out Awareness
☐	Compressed Gas Safety	☐	Machine Guarding Awareness
☐	Confined Spaces Awareness	☐	New Products Safety
☐	Crane and Sling Safety	☐	OSHA Recordkeeping
☐	Drug and Alcohol Abuse	☐	Personal Protection Equipment (PPE)
☐	Disciplinary Actions for Unsafe Acts	☐	Crystalline Silica Awareness
☐	Electrical Safety Awareness	☐	Respiratory Protection – Dust (Appendix **)
☐	Emergency Action Plan	☐	Hand and Power Tool Safety
☐	Eye and Face Protection	☐	Sling Safety and Material Handling
☐	Fall Protection Awareness	☐	Slips, Trips, and Falls Safety
☐	Fire Extinguisher Safety	☐	Smoking Restrictions
☐	Fire Prevention	☐	Spill Prevention and Control
☐	Flammable/Combustible Liquids	☐	Violent Acts
☐	Food/Beverage Consumption on Duty	☐	Waste Disposal Procedures
☐	Forklift Safety Awareness	☐	NOTICE OF NON-COVERAGE (Initials _____)
☐	General Safety Rules and Policies	☐	

I, the undersigned employee, have read, understand, and agree to abide by the company policies and procedures. I further understand that compliance with all policies and procedures is a condition of continued employment with URETEK. If unable to read, these policies and procedures have been explained to me.

_____	_____	_____
Signature	Date	Social Security No.
COMPLETED AND SIGNED FORM TO BE PLACED IN EMPLOYEE PERSONNEL FILE		

Appendix: Supervisor's Safety Orientation Form

URETEK SUPERVISOR'S SAFETY ORIENTATION
Name of Supervisor:
1. INTRODUCTION: You are expected to make safety an ongoing part of your job. This is not an additional duty, but a part of your everyday job. You are to inspect, survey, or monitor all your work areas daily. To determine if there are any operating hazards, unsafe work practices or special safeguards needed. Production and cost are important, but your safety responsibilities to your employees and our company are just as important.
2. RESPONSIBILITIES: You are the most important persons on this site when it comes to a good safety performance. Both management and your employees depend on you to pass on safety information that helps them perform work without injury to themselves or others. You can get the results you desire if you work at it. Safety is not something that just happens. A lot of injuries or no injuries; these are a part of your results. Let you employees know your concern about their safety and that you are serious about enforcing employee safety requirements and the prevention of **ALL** employee injuries. Use your ideas and knowledge but don't forget your employees have good ideas too. Compliment them on a good safety performance, as well as correct them on bad ones.
3. PLANNING FOR SAFETY The best way to prevent an accident is by not giving it a place to happen. This requires planning. Give specific and thorough instructions to prevent uncertainty and confusion that could result in a serious accident. Often it is helpful to give instructions at the actual work location, so you can physically point out areas of concern. Always follow up these instructions and directions to make sure they are being followed.
4. FIRST AID AND INJURIES You must send your employees for first aid as soon as you learn of their injury. Stress the importance of reporting all injuries when they occur and the filling out of all necessary paperwork. Our goal with the paperwork is to document what happened so that we can better identify the employee hazards and take appropriate action to prevent further injuries. Know the site Emergency Procedure and instruct your employees in the procedures. For more

serious injuries, help should be summoned so that the treatment comes to the injured employee.
5. FORMS AND INSTRUCTIONS Forms and instructions for company reports and procedures are provided in the Safety and Health Manual.
By my signature below, I acknowledge understanding of the safety and health policies of URETEK and the very important role I play as a supervisor in the prevention of incidents and employee injuries. I will work hard in accomplishing the safety and health goal of “Zero” employee injuries in areas under my supervision. _____ _____ _____ Supervisor Signature Trainer Signature Date

Appendix: Self Inspection Form

SELF INSPECTION FORM		
Location or Department Inspected:_____ Inspection Date:_____ Signature: _____		
1. Housekeeping – Is the work area clean and orderly?	Yes	No
2. Floors – Are floors in good condition (smooth, clear surfaces without holes, cracks, or humps)?		
3. Aisles – Are aisles and passageways clear, dry, and free of tripping hazards?		
4. Stairways – Are stairs in good condition, with handrails, and adequate lighting?		
5. Storage – Are materials, products, or supplies properly and safely piled to a workable height?		
6. Ladders – Are ladders provided where needed, of standard construction, and in good physical condition?		
7. Machines & Equipment – Are machines and equipment in safe operating condition? Are the necessary guards provided and used?		
8. Hand Tools – Are the right tools for the job being used? Are they in good condition?		
9. Electrical – Are all required grounds provided on power tools and extension cords? Is equipment in good operating condition?		
10. Lighting – Is adequiate lighting provided in all work areas?		
11. Eye Protection – Are all employees provided with suitable eye protection when around operations that produce flying particles?		
12. First Aid – Are first aid supplies provided if needed?		
13. Fire Extinguishers – Are fire extinguishers easily accessible and properly serviced?		
14. Entrances – Are entrances kept dry or provided with nonskid mats?		
15. Exits – Are emergency exits marked, clear and easily accessible? Are exit doors unlocked and do they swing toward the outside?		
16. Exterior (sidewalks, parking lots, etc.) – Are sidewalks and parking lots smooth and free of cracks holes and tripping hazards?		

17. Training – Are all employees trained in proper lifting techniques for material handling?		
18. Signs – Are safety instructions and warning signs posted where needed?		

Appendix: Personal Protective Equipment Form

Personal Protective Equipment =*= Employee Training Records

Company Name: _____

Employee Name: _____

Work Location: _____

Certification

This is the certification required by OSHA Standard 29 CFR 1910.132(f)(4).

Signed: _____

Type of Equipment	Tng. Date	Inst. Initials	Type of Equipment	Tng. Date	Inst. Initials

Appendix: Employer's First Report of Injury or Illness, DWC Form-1

DWC FORM-1
(Employer's First Report of Injury or Illness)

The **employer** is required to file an **Employer's First Report of Injury or Illness** [DWC FORM -1 (Rev. 10/05)] with the injured worker's insurance carrier, and the injured claimant or the claimant's representative within 8 days after the employee's absence from work or receipt of notice of occupational disease.

The **Employer's First Report of Injury or Illness** provides information on the claimant, employer, insurance carrier and medical practitioner necessary to begin the claims process. Details of the claimant's employment and circumstances surrounding the injury or illness are also requested.

Send the specified copies to your **Workers' Compensation Insurance Carrier** and the injured employee. ***Employers - Do not send this form to the Texas Department of Insurance, Division of Workers' Compensation, unless the Division specifically requests a direct filing.**

[Workers' Compensation Rule 120.2]

DWC FORM-1 (Rev. 10/05) Page 1

DIVISION OF WORKERS' COMPENSATION

Appendix: Supervisor's Accident Investigation Form

Supervisor's Accident Investigation Form

Name of Injured Person _____

Date of Birth _____ Telephone Number _____

Address _____

City _____ State_____ Zip _____

(Circle one) Male Female

What part of the body was injured? Describe in detail. _____

_____

What was the nature of the injury? Describe in detail. _____

_____

_____

Describe fully how the accident happened? What was employee doing prior to the event? What equipment, tools being using? _____

_____

_____

Names of all witnesses:

_____ _____

_____ _____

Date of Event _____ Time of Event _____

Exact location of event: _____

What caused the event? _____

_____

_____

Were safety regulations in place and used? If not, what was wrong? _____

_____

Employee went to doctor/hospital? Doctor's Name _____

Hospital Name _____

Recommended preventive action to take in the future to prevent reoccurrence.

_____

_____

_____

_____ _____

Supervisor Signature Date

2

Appendix: Powered Industrial Truck Operator Evaluation

URETEK USA, INC
POWERED INDUSTRIAL TRUCK
OPERATOR PERFORMANCE EVALUATION

Operator Name: _____ Date: _____

Powered Industrial Truck (Type): _____

PLACE A CHECKMARK BESIDE EACH ITEM WHEN PROPERLY COMPLETED. PLACE AN N.A. IF THE TASK WAS NOT APPROPRIATE FOR THE SPECIFIC EQUIPMENT BEING OPERATED.

( ) Understands need to inspect equipment both before and after each use.
( ) Demonstrates how each control is used.
( ) Demonstrated an understanding of the motor / engine operation.
( ) Understands steering and maneuvering concerns
( ) Understands vehicle capacity and vehicle stability
( ) Understands the need for good visibility (including restrictions due to loading)
( ) Negotiates typical terrain with a "high" load.
( ) Proper placement of forks-spaced as wide as possible or bucket properly positioned.
( ) Understands operation and use limitations.
( ) Load approached properly. Load is lifted squarely and smoothly. Maneuvered properly. Stopped smoothly.
( ) Understands need to use horn at intersections & blind corners.
( ) Slows down at blind corners and all intersections.
( ) Places dock plate in proper position & understand need for wheel chocks. (If forklift may enter trailers.)
( ) Understands the need / requirement to wear seatbelts.
( ) Load is conveyed at a minimal distance above the terrain / ground / floor.
( ) Enters and exits a trailer with (without) a load.
( ) Turns key to OFF position, forks dropped to minimum distance from floor with mast tilted forward when parking.
( ) Understands that LP control valves are turned off when parking forklift for any length of time.
( ) Refueling/recharging procedures are performed safely.
( ) Understands vehicle inspections and maintenance requirements.
( ) Understands instructions, warnings, or precautions listed in the operator's manual.
( ) Forklift does not block pedestrian egress areas or fire fighting equipment when parked.
( ) Maintains a safe distance from the edge of the drop offs or other limiting operational situations.
( ) Maintains arms and legs within the running lines of the equipment.
( ) Operator's hands were not placed between the uprights of the mast.
( ) Shows an understanding of surface conditions
( ) Understands how to setup the load being carried to maintain load stability.
( ) Understands load manipulation including the properly procedures for stacking and unstacking
( ) Understands that ramps and other sloped surfaces can affect vehicle stability.
( ) Understands the potential hazards created by closed environments and other areas with insufficient ventilation
( ) Understands that if the load being carried obstructs the forward view, the operator is required to travel in reverse.
( ) Operator has successfully demonstrated competence to safely operate this equipment.

OPERATOR: _____ DATE: _____

EVALUATOR: _____

Appendix: Preliminary Auto Accident Report

PRELIMINARY AUTO ACCIDENT REPORT

(Fax to: 1-866-883-9996 *or* E-mail to: claims@ib-tx.com)

Insured:_____

Date:_____ Time:_____ City, State:_____

Where did the accident happen:?_____

_____

Completed by:_____ Phone Number:_____

DAMAGE TO PROPERTY OF *OTHERS*

Make of Vehicle:_____ Year:_____ Model:_____ Plate:_____

Name of Owners:_____ Date of Birth:_____

Name of Driver:_____ License# & State:_____

Address:_____ Phone Number:_____

Description of Damage:_____

INJURED

Was anybody injured? ❑Yes ❑No *If the answer is Yes, complete the following:*

Name:_____

Address:_____ Phone Number:_____

WITNESSES

Were there any witnesses? ❑Yes ❑No *If the answer is Yes, Please ask them to complete a Witness Information card and enter their names below:*

Name:_____ Address:_____ Phone:_____

Name:_____ Address:_____ Phone:_____

POLICE REPORT INFORMATION

Was a police report made? ❑Yes ❑No Officer & Report:_____

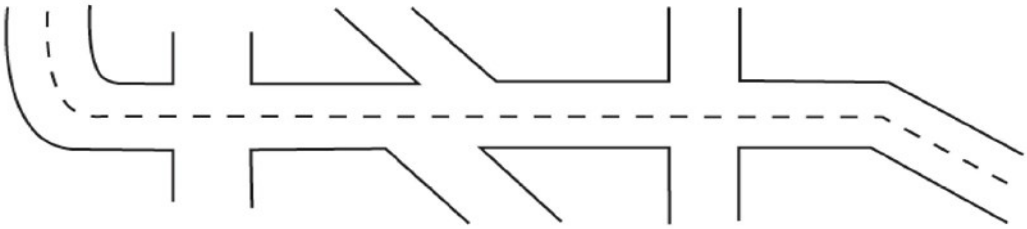
Were there any arrests? ❑Yes ❑No Who?:_____

Were any tickets issued? ❑Yes ❑No Who & Charge?:_____

PRELIMINARY AUTO ACCIDENT REPORT *(PAGE 2)*

ACCIDENT DIAGRAM

Show location and direction of travel of all vehicles; street names; skid marks with exact measurements if possible. Indicate vehicle and direction of travel with an arrow (➔).



BRIEF DESCRIPTION OF ACCIDENT

In your own words, give a brief description of the accident. Where were you going? What was the other vehicle doing? What speed were you going? Estimated speed of other vehicles? Etc.

DAMAGE TO *YOUR* VEHICLE OR PROPERTY

Vehicle Involved:_____Plate#:_____

Driver:_____ Date of Birth:_____

Address:_____

Driver's License #:_____ State:_____

Describe Damage:_____

WITNESS INFORMATION CARD

Your cooperation in filling out this card and giving it to the driver will allow this accident to be handled in the fairest manner possible to all parties concerned.

Did you see the accident?:_____

_____

Were you involved?:_____

_____

Was anyone hurt? ❑ Yes ❑ No

Where were you seated?:_____

_____

Where were you in relation to the accident?:_____

_____

As you saw it – What happened?:_____

_____

_____

_____

_____

_____

Name:_____ Phone Number:_____

Address:_____

Appendix: Daily Vehicle Inspection Report

DAILY VEHICLE INSPECTION REPORT

Driver Name:		
Unit Number:	Inspection Date:	Odometer Reading:
QUICK WALK AROUND	**Satisfactory**	**Unsatisfactory**
LIGHTS:		
Headlights, Taillights		
Brake Lights		
Turn Signals		
Clearance Lights		
Hazards		
Horn		
TIRES:		
Visual Check		
Inflation		
Tread Depth		
Visual Defects		
Spare		
TRAILERS:		
Load Secure		
Clear of Dirt and Debris		
HITCH:		
Latch Pin in Place		
Mounting Bolts, Visual Check		
Safety Chains, Hooks, Latches		
Emergency Brake Chain and Latch		
Light Plug		
LIGHTS:		
Taillights		
Clearance Lights		
Brake Lights		
Turn Signals		

Appendix: Weekly Vehicle Inspection Report

WEEKLY VEHICLE INSPECTION REPORT

Unit Number:			Inspection Date:	
Driver Name:			Odometer Reading	
TIRES:				
Tread Depth:	RF:	LF:	RR	LR
Air Pressure:	RF:	LF	RR	LR
TIRES:	**Satisfactory**		**Unsatisfactory**	
Side Walls				
Visual Defects				
Spare				
BRAKES: Test Conducted:				
Squeaking				
Pulsating				
LIGHTS:				
Headlights				
Brake Lights				
Turn Signals				
Clearance Markers				
ENGINE – FLUID CHECKS:				
Brakes				
Battery				
Power Steering Fluid				
Windshield Wash				
SAFETY EQUIPMENT:				
Fire Extinguisher – properly mounted and charged				
Flares/Hazard Triangles				
First Aid Kit				
Emergency Tools				
Jack, Lug Wrench				

RF: Right Front, LR: Left Rear, LF: Left Front, RR: Right Rear

Appendix: Driver's Seeing Habits

DRIVER'S NAME:	DATE:		
DRIVER'S SEEING HABITS			
THE STEERING GLANCE:	**GOOD**	**AVERAGE**	**POOR**
1. Lane Position: RATE: GOOD=6; AVERAGE=3; POOR=0			
Does he hug the edge of lane for no reason?			
Does he steer out of passing lane when passing vehicle ahead?			
Does he repeatedly fail to use right-hand lane on wide roadway when that lane is open and safe to use?			
2. Making Turns: RATE: GOOD=8; AVERAGE=4; POOR=0			
Does he start right-hand turns close enough to right curb?			
Does he cut left turns short?			
Does he make turns so fast that he may need quick stop if path around turn is blocked?			
Does he make extra slow turns?			
THE TIMING GLANCE			
3. Eye Movement: RATE: GOOD=8; AVERAGE=4; POOR=0			
Does he stay far enough behind vehicles ahead to be able to watch beyond them?			
Does he have ground viewing habit and notice speed or veering of other vehicles?			
Does he see problems that face other drivers so he knows what they will do without continued staring?			
Does he move his eyes every two seconds, smoothly and easily?			
4. Smoothness of Operation: RATE: GOOD=8; AVERAGE=4; POOR=0			
Does he avoid harsh braking while slowing or stopping?			
Does he make turns smoothly?			
Does he accelerate slightly while in turns?			
Does he start out smoothly, including proper clutching and not rolling backward?			
THE DETECTION GLANCE			
5. Glance Far Ahead: RATE: GOOD=12; AVERAGE=6; POOR=0			

Does he rush up to red lights?			
Does he recognize stale green lights?			
Does he run amber lights?			
Does he change lanes repeatedly for no apparent reason?			
Does he change lanes if another lane offers a better view or less chance of conflict?			
6. Side and Rear Glances: RATE: GOOD=8; AVERAGE=4; POOR=0			
Does he look to both sides before starting up on green light or other signs?			
Does he look to both sides when crossing one-way streets?			
Does he check parked cars for drivers, brake lights or exhaust?			
Does he glance in mirrors before any sudden slow-down in traffic that may surprise the driver behind?			
Does he glance in mirrors one every five seconds in traffic?			

Appendix: Driver's Responding Habits

DRIVER'S NAME:	DATE:		
DRIVER'S RESPONDING HABITS			
THE SPACE-CUSHION RESPONSE	**GOOD**	**AVERAGE**	**POOR**
7. Lane Position: RATE: GOOD=8; AVERAGE=4; POOR=0			
Does he move up or drop back to try to ride alone?			
Does he, if driver behind wants to pass, let him pass?			
Does he maintain proper following distance and extra space when vehicle behind is too close?			
Does he stop at proper distance behind other vehicles?			
8. Beside Another Driver: RATE: GOOD=8; AVERAGE=4; POOR=0			
Does he pass the driver ahead quickly?			
Does he pass the vehicle ahead when he should?			
Does he blend with speed of traffic when merging on expressway?			
Does he maintain proper speed for conditions?			
THE VISIBILITY RESPONSE			
9. Curb Lane Speed (Near Parked Cars): RATE: GOOD=6; AVERAGE=3; POOR=0			
Does he Reduce speed in lane near parked cars?			
Does he watch for pedestrians?			
Does he try to avoid curb-lane when practical?			
10. Blind Intersections: RATE: GOOD=8; AVERAGE=4; POOR=0			
Does he, when starting up with side view blocked, creep ahead slightly and halt for second look?			
Does he approach all intersections at the proper speed?			
Does he have foot on brake pedal at all blind intersections?			
Does he turn head left and right at intersections?			
THE WARNING-SIGNAL RESPONSE			
11. Use of Horn: RATE: GOOD=8; AVERAGE=4; POOR=0			
Does he, unless sure that a driver or pedestrian along his path will stay put, tap horn early?			
Does he have foot on brake pedal when he taps horn?			

Does he use headlights when visibility is limited?			
Does he use warning devices unnecessarily?			
12. Use of Turn Signal at Stop Lights: RATE: GOOD=6; AVERAGE=3; POOR=0			
A. Does he give an early turn signal before turn or lane change?			
B. Does he check mirror before signaling?			
C. Does he have brake light on when necessary?			
13. Operational Skills: RATE: GOOD=8; AVERAGE=4; POOR=0			
A. Does he give vehicle pre-trip inspection?			
B. Does he familiarize himself with controls?			
C. Does he handle steering properly?			
D. Does he use right foot for braking?			
E. Does he ride clutch or hold vehicle on grades with clutch?			
AVERAGE RESPONDING HABITS = 27	SUBTOTAL:		
	GRAND TOTAL:		
LEGEND: Good= Better than average = 2 Points Average=Average driver = 1 Point Poor=Worse than average = 0 Points	SCORER NAME:		

Appendix: Commercial Driver Orientation Checklist

SAMPLE-COMMERCIAL DRIVER ORIENTATION CHECKLIST

Subject		Trainer	Date
Introductions	Management Personnel Supervisor co-workers		
Reporting to Work	Locations Hours Signing In		
Work Standards	Duties & Responsibilities Benefits Motor vehicle Record Review Procedure Performance Evaluation Incentive Programs Disciplinary Procedures Vehicle Accident Reporting and Review Procedures		
PR-Trip, On the Road and Post Trip Inspections	Inspection Procedures Equip. Condition Reports Correcting Defects		
Emergency Procedures	Vehicle Accident Reporting and Review Procedures Breakdowns		
Rules & Regulations	Safety Rules Local Regulations State Regulations Fed. Motor Carrier Safety Regulation		
Routes & Schedules	Road conditions Hazardous or Congested Routes Height and Widhs Clearances		
Equipment Familiarization	Operator controls Emergency Equipment Air Brakes		
Handling of cargo	Shippers & Consignees Bills & Manifests Safety Security Precautions Hazardous Materials		
Special Equipment	Load Tie-downs Winches or Hoists Pumps & Hoses Specialized Safety Equipment		
Completion Trip	Parking and Refueling Completing Reports Post Trip Inspections		

Driver Name _____ Signature_____ Date_____

Appendix: Fire Safety Guidelines for Use of Rigid Polyurethane

ALLIANCE FOR THE POLYURETHANES INDUSTRY
A BUSINESS UNIT OF THE AMERICAN PLASTICS COUNCIL

technical bulletin

March 2003 AX230

Fire Safety Guidelines for Use of Rigid Polyurethane and Polyisocyanurate Foam Insulation in Building Construction

contents

Polyurethane or Polyisocyanurate Foam Insulation & Combustibility

Rigid polyurethane or polyisocyanurate foams are effective insulation materials for the construction industry[1]. Depending on the chemical formulation and other product composition factors, combustibility characteristics of polyurethane or polyisocyanurate foams vary widely, as do those of other organic materials.

All organic foam insulations, regardless of whether they contain fire retardants, should be considered combustible and handled accordingly. Certain precautions must be taken to minimize any potential for fire through accidental ignition in handling, storage, and use. How polyurethane or polyisocyanurate foams are used in a building ultimately determines their fire safety. In many cases, type of occupancy and type of construction also may require the addition of sprinkler protection and/or smoke detectors.

The model building codes require that all foam insulation be separated from the interior of a building by an approved thermal barrier such as ½-inch gypsum wallboard. Under specific conditions, such as those discussed in this bulletin, this requirement may be waived. The model building codes provide for evaluation of the fire performance of new or improved products and systems of building construction through the use of "diversified" testing such as ANSI/UL 1256, FM 4450, UBC Standard 26-3, and FM 4880 fire tests. Thus, some polyurethane and polyisocyanurate foam insulations and systems have earned various building code acceptances for certain applications without a thermal barrier through these fire tests. Examples include (1) polyisocyanurate roof insulation and spray polyurethane foam roofing systems directly applied to steel roof decks, (2) some metal-faced polyurethane and polyisocyanurate laminate panel products, and (3) some polyurethane foam sealant applications. Always check applicable building codes for local area requirements. Consult the manufacturer for further information regarding specific code acceptance.

(1) For information about the performance features and applications of commercially available polyurethane and polyisocyanurate insulation products, consult the following publication by the Alliance for the Polyurethanes Industry: *Polyurethane and Polyisocyanurate Foams: Inch for Inch One of the Most Efficient Insulators* (AX106).

Appendix: Fire Safety Guidelines for Use of Rigid Polyurethane

ALLIANCE FOR THE POLYURETHANES INDUSTRY
A BUSINESS UNIT OF THE AMERICAN PLASTICS COUNCIL

technical bulletin

October 2002 AX228

Polyol Resin Blends Safety and Handling Guidelines

Foreword

The Alliance for the Polyurethanes Industry (API) has prepared this guide to provide important health and safety considerations associated with working with polyol resin blends.

Polyurethane foams are often made using "systems," sometimes called "A-side" and "B-side," or "iso-side" and "resin-side." It is important to know which side of the system ("A-side" or "B-side") is the diisocyanate and which is the polyol resin blend. The hazards of the polyol resin are different from those of the diisocyanates, and different precautions should be taken when handling the individual components. This Technical Bulletin gives a brief summary of the hazards that may be associated with the "resin-side" of systems and addresses important issues in the safe handling of these chemicals.

This brochure does not provide guidelines on handling the "iso-side." That information is contained in other documents produced by API. (See "Additional Information," page 4.) Similarly, this brochure does not contain information on either the hazards associated with solvents used for equipment cleanup or the hazards associated with specific polyol formulations. For that information, refer to the product-specific Material Safety Data Sheet (MSDS), or consult the supplier.

contents

Chemical Composition of Polyol Resin Blends

To make a polyurethane, one reacts a polyol with a diisocyanate. A number of additional ingredients are required to achieve the desired properties in a polyurethane foam. These additional ingredients are typically blended with the polyol to form what we call a "polyol resin blend." These ingredients may include catalysts, surfactants, colorants (pigments or dyes), blowing agents, and flame-retardants.

Customers who purchase polyurethane foam systems receive a two-part package, consisting of a diisocyanate and a polyol resin blend. To make polyurethane foam, the user meters the "A-side" and "B-side" in the proper ratio, using a proportioning pump to a mix head or spray gun, where the ingredients are mixed and dispensed.

Acute Health Hazards and Handling Precautions

Acute health hazards associated with the typical ingredients in a polyol resin blend are summarized below. General recommendations to minimize exposure to these ingredients also are provided.

If your skin is irritated or burned, seek medical attention. Any clothing contaminated with MDI must be removed and small amounts can be decontaminated by soaking them in an 8% ammonia solution for one hour before washing with detergent and hot water. Leather items cannot be decontaminated. Any contaminated leather items, including shoes, belts, and watchbands or clothing which has been exposed to large amounts of MDI, should be properly discarded.

Ingestion: Swallowing MDI can cause irritation, burns or sores in your mouth, throat and stomach. If you swallow MDI, drink two to three glasses of water or milk. Do not try to vomit. See a physician immediately.

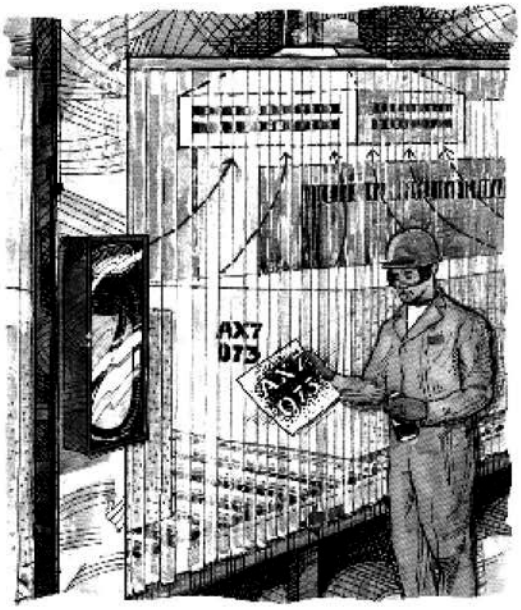
3. Protecting Yourself from MDI Overexposure

With proper precautions, you can use MDI safely by protecting yourself from overexposure. Where there is adequate ventilation and potential for overexposure to MDI liquid or vapor is minimal, you should use:

- Safety glasses or chemical worker's goggles
- MDI-resistant chemical gloves[1]
- Long-sleeve coveralls (Heavy cotton preferred)
- Safety shoes or boots

Where there is a risk of exposure to MDI liquid or vapor above allowable exposure limits, you should use:

- An approved respirator, either air-supplied or air-purifying (consult your company safety professional or the product MSDS for guidance)
- Chemical worker's goggles
- MDI-resistant long-sleeve coveralls or full body suit
- MDI-resistant fitted boots and
- Head protection, such as a close-fitting hood



4. Understanding Potential Reactivity Hazards

MDI is a very reactive chemical. Reactions with buildup of heat or pressure can result from improper mixing with:

- Acids, inorganic bases (such as sodium hydroxide), ammonia, and amines;
- Magnesium, aluminum and their alloys
- Other metal salts, especially halides (such as tin, iron, aluminum and zinc chlorides)
- All strong oxidizing agents (such as bleach or chlorine)
- Polyols
- Water

Caution: Resealing MDI containers contaminated with any of the above materials can cause a buildup of pressure in the container and cause it to explode. All forms of MDI can also self-react in a fire or at very high temperatures, releasing carbon dioxide and causing the buildup of pressure in sealed containers sufficient to cause explosion.

[1] See API Technical Bulletin AX-178

Appendix: Exposure Controls/Personal Protection for ISO

8. Exposure Controls/Personal Protection

4,4'-Diphenylmethane Diisocyanate (MDI) (101-68-8)

US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 0.005 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Ceiling Limit Value: 0.02 ppm, 0.2 mg/m3

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

Industrial Hygiene/Ventilation Measures
Local exhaust should be used to maintain levels below the TLV whenever MDI is heated, sprayed, or aerosolized. Standard reference sources regarding industrial ventilation (e.g., ACGIH Industrial Ventilation Manual) should be consulted for guidance about adequate ventilation. To ensure that published exposure limits have not been exceeded, monitoring for airborne diisocyanate should become part of the overall employee exposure characterization program. NIOSH, OSHA, Covestro, and others have developed sampling and analytical methods. Covestro methods can be made available, upon request.

Respiratory Protection
Airborne MDI concentrations greater than the ACGIH TLV-TWA (TLV) or OSHA PEL-C (PEL) can occur in inadequately ventilated environments when MDI is sprayed, aerosolized, or heated. In such cases, respiratory protection must be worn. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). The type of respiratory protection available includes (1) an atmosphere-supplying respirator such as a self-contained breathing apparatus (SCBA) or a supplied air respirator (SAR) in the positive pressure or continuous flow mode, or (2) an air-purifying respirator (APR). If an APR is selected then (a) the cartridge must be equipped with an end-of-service life indicator (ESLI) certified by NIOSH, or(b) a change out schedule, based on objective information or data that will ensure that the cartridges are changed out before the end of their service life, must be developed and implemented. The basis for the change out schedule must be described in the written respirator program. Further, if an APR is selected, the airborne diisocyanate concentration must be no greater than 10 times the TLV or PEL. The recommended APR cartridge is an organic vapor/particulate filter combination cartridge (OV/P100).

Hand Protection
Gloves should be worn., Nitrile rubber showed excellent resistance., Butyl rubber, neoprene and PVC are also effective.

Eye Protection
When directly handling liquid product, eye protection is required. Examples of eye protection include a chemical safety goggle, or chemical safety goggle in combination with a full face shield when there is a greater risk of splash.

Skin Protection
Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact., Animal tests and other research indicate that skin contact with MDI can play a role in causing isocyanate sensitization and respiratory reaction., This data reinforces the need to prevent direct skin contact with isocyanates.

Medical Surveillance
All applicants who are assigned to an isocyanate work area should undergo a pre-placement medical evaluation. A history of eczema or respiratory allergies such as hay fever, are possible reasons for medical

Material Name: MONDUR MR LIGHT | Material Number: 3801792
Page: 7 of 15

Appendix: JHA Job Hazard Analysis

JOB HAZARD ANALYSIS	JOB:	DATE:	Page ____ of _____ pages	☐ NEW ☐ REVISED
Instructions on Reverse Side	Title of Person Who Does Job:	Supervisor:	Analyzed By:	
Organization:		Approved by Activity Director/Commander:		
Recommended Personal Protective Equipment:				

SEQUENCE OF BASIC JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE

Appendex

JOB HAZARD ANALYSIS	JOB: New High Land Project	DATE: 12-12-1920	Page __1__ of __1___ pages	x NEW ☐ REVISED
Instructions on Reverse Side	Title of Person Who Does Job: Foreman	Supervisor: John White	Analyzed By:	
Organization:		Approved by Activity Director/Commander:		

Recommended Personal Protective Equipment:
Hard Hats, Safety Glasses, Gloves, Safety Boots, Safety Harness

SEQUENCE OF BASIC JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE
Morning Tailgate Meeting	Employees not aware of activity and Potential danger that may occur.	Have all employees attend all morning tailgate meeting before any job activity.
Off Load Equipment	Load shift and fall, Crush employee, Cause Death.	Inspect Equipment & Straps before use, Watch for pinch points, Never walk under loads, Clear Communication.
Dismantle & Remove Old Structure	Cuts and bruises, Trips-Slips & Falls, Crushed, Dust	Wear all PPE while dismantling, Pick up all depri as you work, Watch pinch point, and wear dust mask for dust.
Clean up and Prepare for tomorrow	Overheat, Trips-Slips & Falls, Crushed	Drink plenty of water, Watch for pinch points and equipment, Look at path you will be walking.

Appendix: Tasks for Which Respiratory Protection is Required

DRAFT- MUST BE REVIEWED FOR TASKS PERFORMED

The following table designates the requirements for the use of respiratory protection.

Tasks	Type of Respirator Required
Abrasive Blasting Outdoors. Indoors. Confined spaces.	 Full face air purifying respirator with HEPA cartridges. Supplied air with abrasive blasting hood. Supplied air respirator with pressure demand full face piece and adequate escape air supply as needed.
Acids (Liquid or powder acids used in a situation where acid vapors, mists or dust may be breathed.) Outdoors. Indoors. Confined spaces.	 Full face air purifying respirator with combination acid gas/HEPA cartridges. Supplied air with pressure demand full face piece. Supplied air respirator with pressure demand full face piece and adequate escape air supply as needed.
Adhesives Aerosol-propelled adhesives used outdoors. Two-part or any use of adhesives in confined spaces.	 Half face air purifying respirator with combination Organic Vapor/HEPA cartridges. Supplied air respirator with pressure demand full face piece and adequate escape air supply as needed.
Alkalis/Bases/Caustics Powdered alkalis used in a situation where an airborne dust may be breathed.	 Half face air purifying respirators with HEPA cartridge.
Cleaning Compounds Organic degreasers or carbon removers used in areas where local exhaust ventilation is not provided. Aerosol propelled cleaning compounds will be used in areas where there is no local exhaust ventilation. Degreasers or carbon removers will be used in voids, tanks, or other confined spaces.	 Half face air purifying respirator with organic vapor cartridge. Half face air purifying respirator with organic vapor cartridges. Supplied air respirator with pressure demand full face piece and adequate escape air supply.

Tasks	Type of Respirator Required
Chlorine Work in Paper Mills or other facilities where chlorine releases are possible and emergency protection is required.	Bite type chlorine escape respirators unless client has a more stringent requirement.
Fuels (including regular or unleaded gasoline, kerosene, diesel fuel, JP-5) Employees inside unventilated fuel cells or other confined spaces containing fuels.	Supplied air respirator with pressure demand full face piece and adequate escape air supply.
Grinding, Cutting, Sanding Cutting, grinding or sanding surfaces that have coatings containing lead, cadmium, chromium, zinc or beryllium. Cutting, grinding or sanding surfaces that are concrete or glass without use of ventilation or water.	Requires initial exposure assessment (see SMS for Lead in Construction). Full face air purifying respirator with HEPA cartridges required until air monitoring deems otherwise. Full face air purifying respirator with HEPA cartridges.
Paint Materials (including paints, primers, thinners, enamels, lacquers, strippers, coatings and varnishes) Paint materials spray applied outside of spray finishing booth. Two part (mix Part A with Part B; let set; then apply) polyurethane or epoxy polyamide paints will be brush or spray applied. Paints containing lead, chromium, cadmium, beryllium, and zinc (refer to the SDS). Paint materials will be applied in confined spaces.	Half face air purifying respirator with combination organic vapor/HEPA cartridges. Full face supplied air respirator. Requires initial exposure assessment (see SMS for Lead in Construction). Full face supplied air respirator with adequate escape air supply.
Solvents	See Fuels above.

Tasks	Type of Respirator Required
Welding/Brazing/Torch Cutting	Minimum 2000 cfm exhaust ventilation as per confined space standard for each welder/hot operation
Welding will be performed in confined spaces.	Half face air purifying respirator with HEPA cartridge unless otherwise determined by air monitoring.
Welding galvanized metal or stainless steel.	Half face air purifying respirator with HEPA cartridge unless otherwise determined by air monitoring.
Brazing or silver soldering with cadmium or lead.	Requires initial exposure assessment (see SMS for Lead in Construction). Full face air purifying respirator with HEPA cartridges required until air monitoring deems otherwise.

In addition, respiratory protection will be required for any of the above listed activities where any of the following applies:

- An employee will be in the immediate area, i.e., within 10 feet of the job or operation.
- The employee will be inside a confined space where activities are taking place.
- The employee will be inside a "controlled area" such as found in asbestos abatement, lead abatement, radiation control area, or a hazardous waste site.

Respirators will also be required whenever required by:

- A Material Safety Data Sheet.
- A product label.
- A product use instruction.
- A Standard Operating Procedure.

Appendix: Voluntary Use of Respirators

Instructions: Have the employee that is opting to use a respirator for non-overexposure conditions read this page, and then sign on the bottom of the page. Forward a copy of the signed form to the Division Training Records Administrator, and maintain a copy in the employee's personnel file.

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for employees. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the employee.

Sometimes employees may wear respirators to avoid exposures to hazards, even if the amount of the hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your own voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not pose a hazard.

You should do the following:

1. Read and follow all instructions provided by the manufacture on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety & Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear o the respirator or respirator packaging. It will tell you what the respirator is designed for and how it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, fumes, smoke, or very small solid particles.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.
5. If you have any health conditions (e.g., asthma, high blood pressure, emphysema, heart disease) that could be aggravated by using a respirator, you should check with your doctor before using one.

I have read and understand this information on:_____ (date)

Employee's name:_____

Employee's signature:_____

Appendix: Respirator Cartridge Change Schedule

1.0 Cartridge change schedule

A. A cartridge change schedule must be developed for cartridges or canisters used with air purifying respirators that do not have an End of Service Life Indicator (ESLI).
   1. The purpose of this is to prevent contaminants from breaking through the respirator's sorbent cartridge(s), and thereby over-exposing employees.
      a. NIOSH has approved ESLIs for only four cartridges or canisters:
         - Mercury vapor.
         - Carbon monoxide.
         - Ethylene oxide.
         - Hydrogen sulfide.
   2. Historically we have relied on the warning properties such as odor or irritation of a contaminant to dictate cartridge change.
      a. OSHA no longer allows this as the sole basis for changing respirator cartridges.

B. In developing a change schedule, the following factors should be considered:
   1. Contaminants.
   2. Concentration.
   3. Frequency of use.
      a. Continuously or intermittently throughout the shift
   4. Temperature and humidity.
   5. Work rate.
   6. The presence of potentially interfering chemicals.
   7. Multiple chemical exposures.

C. The worst-case conditions should be assumed to avoid early breakthrough.
   1. This must be documented in the project health and safety plan or, in the cases of office or labs, in the site-specific Respiratory Protection Program.

2.0 Sources of Help

A. Manufacturers
   1. 3M has an interactive “Cartridge Service Life” program that can be downloaded for free.
      a. http://www.mmm.com/market/safety/ohes2/index.html.
   2. This program will estimate cartridge service life only for 3M products against many contaminants.
   3. The program does not evaluate the service life against mixtures (multiple contaminants).
   4. Other respirator manufacturers have similar tools for their cartridges.

B. Because of the complexity in evaluating mixtures, OSHA offers the following guidance:

1. When the individual compounds in the mixture have similar breakthrough times (i.e., within one order of magnitude), service life of the cartridge should be established assuming the mixture stream behaves as a pure system of the most rapidly migrating component with the shortest breakthrough time (i.e., sum of the concentration of the components).
2. Where the individual compounds in the mixture vary by 2 odors of magnitude or greater, the service life may be based on the contaminant with the shortest breakthrough time.

3.0 Rule of Thumb

A. The Occupational Environment: Evaluation and Control
   1. If the chemical's boiling point is >70°C and the concentration is less than 200 ppm you can expect a service life of 8 hours at a normal work rate.
   2. Service life is inversely proportional to work rate.
   3. Reducing concentration by a factor of 10 will increase service life by a factor of 5.
   4. Humidity above 85% will reduce service life by 50%.

B. **OSHA Interpretation**
   1. The OSHA inspection procedures for the respiratory protection standard specify that:
      a. Where contaminant migration is possible, respirator cartridges/canisters should be changed after each work shift where exposure occurs unless there is objective data to the contrary (desorption studies) showing the performance in the conditions and schedule of use/non-use found in the workplace.

Appendix: Respiratory Protection

Fit Test Worksheet

Employee name: _____ Employee Number: _____

Office location: _____ SSN: _____

Last medical exam: _____ Corrective lenses? _____

INFORMATION	RESPIRATOR 1	RESPIRATOR 2	RESPIRATOR 3
Equipment type			
Manufacturer			
Model			
Size			
Material			

TEST RESULTS	RESPIRATOR 1	RESPIRATOR 2	RESPIRATOR 3
Negative pressure check	Pass ☐ Fail ☐	Pass ☐ Fail ☐	Pass ☐ Fail ☐
Positive pressure check	Pass ☐ Fail ☐	Pass ☐ Fail ☐	Pass ☐ Fail ☐
Qualitative Fit Test			
Isoamyl acetate	Pass ☐ Fail ☐	Pass ☐ Fail ☐	Pass ☐ Fail ☐
Saccharin mist	Pass ☐ Fail ☐	Pass ☐ Fail ☐	Pass ☐ Fail ☐
Irritant smoke	Pass ☐ Fail ☐	Pass ☐ Fail ☐	Pass ☐ Fail ☐
Quantitative Fit Test			
Overall fit factor achieved			
Printout/strip chart attached (include mfg. and serial no. of unit)			
the Employee:			
Briefed on fundamental principles of respiratory protection, use, inspection, cleaning, maintenance, and storage of equipment?			☐ No ☐
Briefed on the procedure for obtaining a lens kit for use with a full face respirator?			Yes ☐ No ☐ N/A ☐

I hereby certify that the subject employee has been FIT tested according to procedures specified in SMS 25, "Respiratory Protection" and in accordance with 29 CFR 1910.134, App. A. The results of the test indicate that the subject employee attains a satisfactory fit on the above respiratory protective equipment.

_____ _____

Examiner's Name (print) **Examiner's Signature** **Date**

_____ _____

Employee's signature **Date**

Distribution: (1) Employee (2) Project/Shop Health and Safety File

Appendix: Drug & Alcohol Policy

The policy of URETEK USA, INC. is to provide our customers with a competent, resourceful, safe, and alert work force of men and women to perform the services identified in our contracts. This policy requires that we ensure that every employee is alcohol and drug free while performing duties required to complete our jobs. Therefore, it is imperative that we screen every employee on a periodic basis.

The following rules and regulations shall control this program:

1. No employee will report for work under the influence of alcohol or drugs, nor will any employee use any substances of a mind-altering nature while on duty, in any capacity, for URETEK USA, INC.
2. Any employee on medication prescribed by a physician shall advise his immediate supervisor. A physician's statement is then required clearing the employee for normal work duty while taking the prescription.
3. As a condition of continued employment, all employees shall submit to periodic testing for use of any illegal drug.
4. As a condition of continued employment, all employees shall submit to periodic testing for consumption of alcohol that may exceed a blood/alcohol level of 0.08%.
5. URETEK USA, Inc. has a "ZERO TOLERANCE" policy regarding drug and alcohol abuse by its employees. IF AN EMPLOYEE FAILS DRUG SCREENING AND/OR ALCOHOL SCREENING, HE WILL BE IMMEDIATELY TERMINATED FROM COMPANY EMPLOYMENT.
6. Unannounced drug and/or alcohol screening may be required by the company at any time for any employee. Refusal to take such required screening or avoiding such screening by unaccounted absence or delay will be treated as sufficient cause for termination from company employment.
7. All applicants for employment shall submit to drug testing as a condition of employment. Testing results and all other voluntary information concerning the use of alcohol and/or drugs submitted with the application for employment shall be used as an important part of URETEK's hiring decisions.
8. When any accident resulting in bodily injury or property damage occurs, the participants will be subject to immediate drug and alcohol screening. When any "near miss" occurs, participants may be subject to similar screening. A "near miss" is defined as an event which would likely have caused bodily harm or property damage if it had continued uninterrupted.
9. All employees will sign the Company Drug and Alcohol Abuse Policy "Acknowledgement and Consent form.