



Electrical Reliability Services
3535 Emerson Parkway, Suite A
Gonzales, LA 70737
USA

T (225) 621-8760
F (225) 621-8761
www.electricalreliability.com

DATE: 9/25/2017

RE: Bid # 50-120506

Two year contract for Preventive Maintenance & Repair of Electrical Switchgear & related equipment for the Jefferson Parish Water Department

Dear Donna Reamey,

Electrical Reliability Services (ERS) is pleased to offer the attached proposal for your consideration.

We look forward to working with Jefferson Parish to successfully and safely complete this project. Should you have any questions regarding this proposal, please do not hesitate to contact me at 225-615-1050 or email me at Keith.Mayeux@vertivco.com.

Sincerely,

Keith Mayeux

A handwritten signature in black ink that reads 'Keith D. Mayeux'.

Keith Mayeux
Sr. Sales Engineer
Electrical Reliability Services

Emerson Service Center | 3535 Emerson Parkway | Suite A | Gonzales, LA 70737
C 225-615-1050 | O 225-647-0732 | F 225-647-0740



NICHOLAS SMITH
Associate General Counsel
Services, Americas
O +614 841 5619
E Nicholas.P.Smith@VertivCo.com

September 25, 2017

Jefferson Parish
1221 Elmwood Park Blvd.
Suite 411
New Orleans, LA 70123

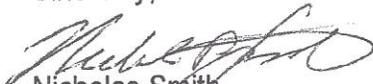
Subject: Electrical Reliability Services, Inc.'s Signature Authorization Letter
Bid # 50-120506

To Whom It May Concern:

Please be advised, Keith Mayeux, *Senior Sales Manager*, by and through his position, has the authority to act, bind and sign on behalf of Electrical Reliability Services, Inc., a Vertiv company, in all negotiations, concerns and transactions with the Parish of Jefferson, Louisiana or any of its agencies, departments, employees or agents.

Please contact me if you have any questions or need additional information.

Sincerely,


Nicholas Smith
Associate General Counsel



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
09/22/2017

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

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must 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
Aon Risk Insurance Services West, Inc.
Los Angeles CA Office
707 Wilshire Boulevard
Suite 2600
Los Angeles CA 90017-0460 USA

CONTACT NAME:
PHONE (A/C. No. Ext): (866) 283-7122 **FAX (A/C. No.):** (800) 363-0105

E-MAIL ADDRESS:

INSURED
Vertiv Intermediate Holding II Corporation
and all Subsidiary Companies
1050 Dearborn Avenue
Columbus OH 43085 USA

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A:	XL Insurance America Inc	24554
INSURER B:	XL Specialty Insurance Co	37885
INSURER C:	Greenwich Insurance Company	22322
INSURER D:	HDI Global Insurance Company	41343
INSURER E:	Allianz Global Risks US Insurance Co.	35300
INSURER F:		

COVERAGES **CERTIFICATE NUMBER:** 570068496262 **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. **Limits shown are as requested**

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
D	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> SIR Applies Per Policy <input checked="" type="checkbox"/> Terms & Conditions GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC <input type="checkbox"/> OTHER:			GLCD1440400	11/30/2016	11/30/2017	EACH OCCURRENCE	\$2,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$1,000,000
							MED EXP (Any one person)	Excluded
							PERSONAL & ADV INJURY	\$2,000,000
							GENERAL AGGREGATE	\$2,000,000
							PRODUCTS - COMP/OP AGG	\$2,000,000
C	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY			RAD5000483	11/30/2016	11/30/2017	COMBINED SINGLE LIMIT (Ea accident)	\$2,000,000
							BODILY INJURY (Per person)	
							BODILY INJURY (Per accident)	
							PROPERTY DAMAGE (Per accident)	
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION						EACH OCCURRENCE	
							AGGREGATE	
A	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY <input type="checkbox"/> ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			RWD3001212 (AOS)	11/30/2016	11/30/2017	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER	
B	<input type="checkbox"/> ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	RWR3001213 (AK, WI)	11/30/2016	11/30/2017	E.L. EACH ACCIDENT	\$1,000,000
							E.L. DISEASE-EA EMPLOYEE	\$1,000,000
							E.L. DISEASE-POLICY LIMIT	\$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
RE: Electrical Reliability Services, Inc., a Vertiv Co., is a Named Insured.

CERTIFICATE HOLDER
Jefferson Parish Purchasing
General Government Building
200 Derbigny Street, Suite 4400
Gretna LA 70053 USA

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
Aon Risk Insurance Services West, Inc

Holder Identifier :
Certificate No : 570068496262



ADDITIONAL REMARKS SCHEDULE

AGENCY Aon Risk Insurance Services West, Inc.		NAMED INSURED Vertiv Intermediate Holding II	
POLICY NUMBER See Certificate Number: 570068496262			
CARRIER See Certificate Number: 570068496262	NAIC CODE	EFFECTIVE DATE:	

ADDITIONAL REMARKS

**THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
 FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance**

Named Insured and Business Units

Named Insured

- PE Vertiv Holdings, LLC
- Vertiv JV Holdings, LLC
- Vertiv Holdings, LLC
- Vertiv Holding Corporation
- Vertiv Intermediate Holding Corporation
- Vertiv Intermediate Holding II Corporation
- Vertiv Group Corporation

Business Units

- Alber Corp., a Vertiv Company, is a named insured
- ASCO Power Technologies, L.P., a Vertiv Company, is a named insured
- ASCO Services, Inc., a Vertiv Company, is a named insured
- Avocent Corporation, a Vertiv Company, is a named insured
- Avocent Fremont, LLC, a Vertiv Company, is a named insured
- Avocent Huntsville, LLC, a Vertiv Company, is a named insured
- Avocent Redmond Corp., a Vertiv Company, is a named insured
- Avocent Texas Corp., a Vertiv Company, is a named insured
- Electrical Reliability Services, Inc., a Vertiv Company, is a named insured
- Emerson Network Power Solutions, Inc., a Vertiv Company, is a named insured
- Emerson Network Power, Energy Systems, North America, Inc., a Vertiv Company, is a named insured
- Emerson Network Power, Liebert Services, Inc., a Vertiv Company, is a named insured
- High Voltage Maintenance Corporation, a Vertiv Company, is a named insured
- Liebert Corporation, a Vertiv Company, is a named insured
- Liebert Field Services, Inc., a Vertiv Company, is a named insured
- Liebert North America, Inc., a Vertiv Company, is a named insured
- U P Systems, Incorporated, a Vertiv Company, is a named insured
- Vertiv Solutions, Inc., a Vertiv Company is a named insured
- Vertiv Energy Systems, Inc., a Vertiv Company is a named insured
- Vertiv Co. Holding, LLC, a Vertiv Co. is a named insured
- Vertiv Services, Inc., a Vertiv Co. is a named insured
- ASCO Power Services, Inc., a Vertiv Co. is a named insured

From: Dedert, Lisa M. <LDEDERT@travelers.com>
Sent: Monday, September 25, 2017 2:39 PM
To: Choren, Cynthia L; Ham, Sandra L
Subject: Emailing: Surety 2000.htm



St. Louis Branch - William E. Knoblauch

Bond Number: SLA17117891

Contractor Information

Principal: Electrical Reliability Services, Inc. 225-615-1050
Address: 3535 Emerson Pkwy Gonzales Louisiana 70737 United States

Owner/Obligee Information

Bond Form: Bid Bond in accordance with Contract Specifications
Owner/Obligee: Jefferson Parish
Address: 200 Derbigny Street Gretna Louisiana 70053 United States

Bond Information

Bid Date: 9/26/2017
Surety: Travelers Casualty and Surety Company of America
Rider Present: [Click here to view](#)
Estimated Contract Price:
Time For Completion:
Liquidated Damages:
Estimated Work On Hand:
Amount of Bid Security: 5%
Contract ID Number: 5000120506
Description of Job: Two Year Contract for preventative maintenance & repair of electrical switchgear & related equipment for Jefferson Parish Water Department
Job Breakdown:

Electronic Bidding Information

Bid Security Percentage: 5
Bid Security Maximum:
Contractor's State Vendor ID Number: 14787

Bond Written by Surety

Executed

Bond Entered By: William E. Knoblauch - 9/25/2017 3:27:20 PM ET

Bond Approved & Executed By: William E. Knoblauch - 9/25/2017 3:38:36 PM ET

Non-Public Works Bid

AFFIDAVIT

STATE OF Louisiana

PARISH/COUNTY OF Ascension Parish

BEFORE ME, the undersigned authority, personally came and appeared: Keith D. Mayeux, (Affiant) who after being by me duly sworn, deposed and said that he/she is the fully authorized Salesman of Electrical Reliability Services, Inc (Entity), the party who submitted a bid in response to Bid Number 50-120506, 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.

Debt Disclosures

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

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

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

Affiant further said:

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

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

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.

Keith D. Mayeux
Signature of Affiant

Keith D. Mayeux
Printed Name of Affiant

SWORN AND SUBSCRIBED TO BEFORE ME
ON THE 25 DAY OF SEPTEMBER 2017.

Venetia K. Babin
Notary Public

Venetia K. Babin
Printed Name of Notary

068114
Notary/Bar Roll Number

My commission expires at death.

Request for Taxpayer Identification Number and Certification

Give Form to the
 requester. Do not
 send to the IRS.

Print or type
 See Specific Instructions on page 2.

Name (as shown on your income tax return) Electrical Reliability Services	
Business name/disregarded entity name, if different from above	
Check appropriate box for federal tax classification: <input type="checkbox"/> Individual/sole proprietor <input checked="" type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ <input type="checkbox"/> Other (see instructions) ▶ _____	
<input type="checkbox"/> Exempt payee	
Address (number, street, and apt. or suite no.) 3535 Emerson Parkway, Suite A	Requester's name and address (optional)
City, state, and ZIP code Gonzales, LA 70737	
List account number(s) here (optional)	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I Instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Social security number								

Employer identification number								
94	-	174	2896					

Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Part II Certification

- Under penalties of perjury, I certify that:
- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
 - I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
 - I am a U.S. citizen or other U.S. person (defined below).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 4.

Sign Here	Signature of U.S. person ▶ Venetia Babin	Date ▶ _____
------------------	---	--------------

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

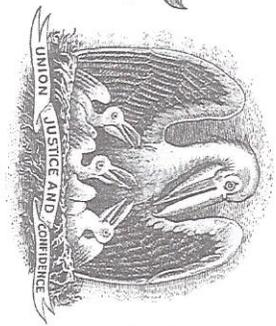
Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

State of Louisiana



State Licensing Board for Contractors

This is to Certify that:
ELECTRICAL RELIABILITY SERVICES, INC.
6900 Koll Center Parkway, Suite 417
Pleasanton, CA 94566

is duly licensed and entitled to practice the following classifications

ELECTRICAL WORK (STATEWIDE)



Expiration Date: June 19, 2020
License No: 32920

Witness our hand and seal of the Board dated,
Baton Rouge, LA 20th day of June 2017

Willis Mack
Director

Joe Madgett
Chairman

This License Is Not Transferrable
Andy Shaw
Treasurer

CERTIFICATE OF ACCREDITATION

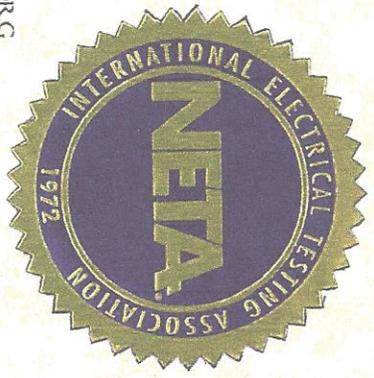
NEA

is hereby granted to
Electrical Reliability Services
Westerville, OH

AS RECOGNIZED BY THE
INTERNATIONAL ELECTRICAL TESTING ASSOCIATION
01/01/2017 – 01/31/2018

Ken Bassett
Ken Bassett
Membership Chair

INTERNATIONAL ELECTRICAL TESTING ASSOCIATION
3050 OLD CENTRE - SUITE 102 - PORTAGE, MI 49024 - WWW.NEIAWORLD.ORG



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

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

Are you requesting an escalation provision?

YES _____ NO X

MAXIMUM ESCALATION PERCENTAGE REQUESTED _____%

INITIAL BID PRICES WILL REMAIN FIRM THROUGH THE DATE OF 30 NOV 17

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

DELIVERY: FOB JEFFERSON PARISH

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) 32920

THIS SECTION MUST BE COMPLETED BY BIDDER:

FIRM NAME: Electrical Reliability Services, Inc.

ADDRESS: 3535 Emerson Parkway, Suite A

CITY, STATE: Bronxales ZIP: 70737

TELEPHONE: (225) 615-1050 FAX: (225) 647-0740

EMAIL ADDRESS: Keith.Mayeux@VertivCo.com

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

Acknowledge Receipt of Addenda: NUMBER: 1
NUMBER: _____
NUMBER: _____
NUMBER: _____

TOTAL PRICE OF ALL BID ITEMS: \$ 334,125.00

AUTHORIZED SIGNATURE: Keith Mayeux

Keith Mayeux
Printed Name

TITLE: Sr. Sales Engineer

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

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

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00120506

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
1	1.00	ONLY	<p>TWO (2) YEAR CONTRACT FOR PREVENTATIVE MAINTENANCE & REPAIR OF ELECTRICAL SWITCHGEAR RELATED EQUIPMENT FOR JEFFERSON PARISH DEPARTMENT OF PUBLIC WORKS - WATER.</p> <p>0010 - MAJOR PREVENTATIVE MAINTENANCE PROGRAM ON EXISTING ELECTRICAL SWITCH-GEAR SYSTEMS AT EAST JEFFERSON WATERWORKS, TO BE APPLIED ONLY AT EAST JEFFERSON WATERWORKS, (AS PER SPECIFICATIONS AND THE RELATED SINGLE LINE DIAGRAM).</p> <p>***PDF OF DRAWINGS ARE AVAILABLE*** PLEASE CONTACT: JEROME WOOL 504-736-6747</p> <p>SUPERINTENDENTS: EASTBANK - MERVIN GRAVES 504-838-4398 WESTBANK - DAVID MAHNER 504-349-5085</p>		
				\$197,359.00	\$197,359.00
2	1.00	ONLY	<p>0020 - MAJOR PREVENTATIVE MAINTENANCE PROGRAM ON EXISTING ELECTRICAL SYSTEMS AT WEST JEFFERSON WATERWORKS, TO BE APPLIED ONLY AT WEST JEFFERSON WATERWORKS, (AS PER SPECIFICATIONS AND THE RELATED SINGLE LINE DIAGRAM).</p>		
				\$111,066.00	\$111,066.00
3	8.00	ONLY	<p>0030 - INSPECTION OF GROUNDING SYSTEM AT ELEVATED WATER STORAGE TANKS.</p> <p>EASTBANK 3 WESTBANK 5</p>		
				\$750.00	\$6,000.00
4	2.00	EA	<p>0035 - INSPECTION OF GROUNDING SYSTEM AT ELEVATED WATER STORAGE TANKS. (FOR GRAND ISLE ONLY)</p> <p>GRAND ISLE 2</p>		
				\$1,250.00	\$2,500.00
5	30.00	EA	<p>0040 - RELATED MANHOLE WORK AND INSPECTIONS AS DESCRIBED IN SUB-PARAGRAPHS NOS. 4.7.8 & 4.7.9</p>		
				\$130.00	\$3,900.00
6	40.00	HR	<p>0050 - COST PER ONE (1) MAN-HOUR FOR ENGINEERING SERVICES</p> <p>(ALL ASSOCIATED COSTS SHALL BE INCLUDED IN THE UNIT PRICE BID)</p>		
				\$128.75	\$5,150.00
7	40.00	HR	<p>0060 - COST PER ONE (1) MAN-HOUR FOR TECHNICIAN SERVICES</p>		
				\$118.75	\$4,750.00

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00120506

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
			(ALL ASSOCIATED COSTS SHALL BE INCLUDED IN THE UNIT PRICE BID)		
8	40.00	HR	0070 - COST PER ONE (1) MAN-HOUR FOR ELECTRICIAN SERVICES		
			(ALL ASSOCIATED COSTS SHALL BE INCLUDED IN THE UNIT PRICE BID)		
9	1.00	ONLY	9999 PARTS AND MATERIALS THIS IS A NON-BIDABLE ITEM. THIS ITEM IS FOR PARTS NEEDED TO COMPLETE A REPAIR UP TO \$5,000.00 PER JOB, WITH THE APPROVAL FROM THE REQUESTING DEPARTMENT. INVOICES SHALL BE SUBMITTED AT COST ONLY (WITH NO MARKUP)	\$85. ⁰⁰	\$3,400. ⁰⁰
				N/A	N/A



Proposal for Service

Vertiv | Electrical Reliability Services

September 22, 2017

East Jefferson Parish 2 Year Electrical Preventive Maintenance Contract

Proposal No. **VRT-17015451**

Version No. 1

Jefferson Parish Purchasing Department

Donna Reamey

200 Derbigny Street, Suite 4400

Gretna, LA 70053



September 22, 2017

Dear Donna Reamey,

Thank you for your interest in Electrical Reliability Services (ERS). We are pleased to offer the attached proposal for your consideration. ERS will furnish personnel, materials and equipment necessary to complete the project outlined in this proposal. This proposal does not include any state or local taxes that may apply.

1.0 SCOPE OF WORK

- 1.1 For the Maintenance Testing portion of the project scope of work, the following equipment will be tested or evaluated in accordance with the included Maintenance Testing Specifications.

Item	Qty	Device Summary
1		<u>River Road Switching Station DWG E-1</u>
1.1	2	Bus: Clean, Inspect, Megg
1.2	2	Medium Voltage Vacuum Circuit Breaker, Rating: 1200A
1.3	2	Ammeter
1.4	7	51 - Time Over-Current Relay
1.5	7	Current Transformer
1.6	1	Medium Voltage Switchgear Lineup, Rating: 15KV Main 13.8KV Switchgear
1.6.1	1	Bus: Clean, Inspect, Megg
1.6.2	3	Medium Voltage Surge Arrestor, Rating: 15KV
1.6.3	13	Main Circuit Breaker, Rating: 1200A Mains/Tie And Feeder Breakers
1.6.4	13	GE UR-F60 - Feeder Management Relay
1.6.5	5	27 - Under voltage (UV) Relay
1.6.6	6	Control Power Transformer
1.6.7	16	Potential Transformer
1.6.8	57	Current Transformer
2	1	Test Location for DC Cable Testing
2.1	13	Three-Conductor Medium Voltage Cable Megger Test, Rating: 15KV
3		<u>MCC East and MCC West DWG E-2</u>
3.1	1	Oil Switch, Rating: 15KV
3.2	1	Oil Switch: Drain Clean Contacts, Perform Contact Resistance, Megg
3.3	1	Secondary Substation Transformer - Liquid-Filled, Rating: 1500KVA
3.4	1	Transformers, Liquid-Filled, Oil Analysis, Rating: Medium-Voltage

3.5	1	High Resistance Grounding Unit
3.6	2	Low Voltage Motor Control Center, Rating: 208V-600V
3.7	2	GE Multilin PQM - Power Quality Meter
3.8	2	Auto-Transfer Switch, Rating: 480V
3.9	6	Current Transformer
3.10	2	FVNR Starter w/ Fused Switch, Rating: SZ.4 Various Sizes
3.11	8	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.4 Various Sizes
3.12	6	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 400A Various Sizes
3.13	2	Dry-Type Low Voltage Distribution Transformer
3.14	7	Fused Disconnect Switch, Rating: 400A
3.15	6	AC Induction Motor, Rating: >100HP Measure PI

4 **Panels HIPA, H21A, and I1PA DWG E-3**

4.1	3	Distribution Panel Board, Rating: 480V
4.2	14	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 100A Various Sizes
4.3	3	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.2
4.4	3	Dry-Type Low Voltage Distribution Transformer
4.5	5	Lighting Panel, Rating: 240V
4.6	7	Non-Fused Disconnect Switch, Rating: 100A Various Sizes

5 **Panels H2, PGV, and MOV-DP2 DWG E-4**

5.1	3	Distribution Panel Board, Rating: 480V
5.2	10	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 100A Various Sizes
5.3	1	Dry-Type Low Voltage Distribution Transformer
5.4	2	Non-Fused Disconnect Switch, Rating: 100A Various Sizes

6 **Substation 3N and 3E DWG E-5**

6.1	3	Non-Fused Load Break Switch, Rating: 15KV
6.2	2	Secondary Substation Transformer - Liquid-Filled, Rating: 2500KVA
6.3	2	Transformers, Liquid-Filled, Oil Analysis, Rating: Low-Voltage
6.4	2	High Resistance Grounding Unit
6.5	1	Bus: Clean, Inspect, Megg
6.6	3	Current Transformer
6.7	2	Potential Transformer
6.8	1	GE Multilin PQM - Power Quality Meter
6.9	2	Switchboard, Rating: 480V
6.10	2	Main Breaker - Draw-out Air Circuit Breaker - Primary Injection, Rating: 4000A
6.11	4	Feeder Draw-out Air Circuit Breaker - Primary Injection, Rating: 2000A
6.12	5	Feeder Draw-out Air Circuit Breaker - Primary Injection, Rating: 800A
6.13	2	Dry-Type Low Voltage Distribution Transformer

6.14	2	Lighting Panel, Rating: 240V
6.15	2	Auto-Transfer Switch, Rating: 480V
6.16	2	Non-Fused Disconnect Switch, Rating: 600A
6.17	2	Explosion-Proof FVR Starter w/ Motor Circuit Protector, Rating: SZ.5
6.18	2	AC Induction Motor, Rating: >100HP Measure PI

7 **Switchgear A1SA DWG E-6**

7.1	1	Low Voltage Switchgear Lineup, Rating: 480V
7.2	1	Bus: Clean, Inspect, Megg
7.3	4	27 - Under voltage (UV) Relay
7.4	4	47 - Phase Sequence Voltage Relay
7.5	2	83 - Selective Control Relay
7.6	4	Main Breaker - Draw-out Air Circuit Breaker - Primary Injection, Rating: 2000A
7.7	1	Tie Breaker - Draw-out Air Circuit Breaker - Primary Injection, Rating: 2000A
7.8	4	Transient Voltage Surge Suppressor
7.9	4	Feeder Draw-out Air Circuit Breaker - Primary Injection, Rating: 2000A
7.10	2	Feeder Draw-out Air Circuit Breaker - Primary Injection, Rating: 1200A
7.11	4	Digital Multifunction Meter
7.12	2	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 20A
7.13	12	Current Transformer
7.14	8	Potential Transformer

8 **MCC-A1SA and MCC-B1SA DWG E-7**

8.1	2	Low Voltage Motor Control Center, Rating: 208V-600V
8.2	9	FVR Starter w/ Motor Circuit Protector, Rating: SZ.3 Various Sizes
8.3	5	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.3 Various Sizes
8.4	9	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 400A Various Sizes
8.5	1	Dry-Type Low Voltage Distribution Transformer
8.6	1	Lighting Panel, Rating: 240V
8.7	2	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 20A
8.8	2	Branch Feeder Fused Switch, Rating: 100A
8.9	1	Non-Fused Disconnect Switch, Rating: 200A
8.10	7	AC Induction Motor, Rating: >100HP Measure PI

9 **Outside Maint. Building and Panel P DWG E-8**

9.1	2	Switchboard, Rating: 480V
9.2	9	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 125A Various Sizes
9.3	7	Dry-Type Low Voltage Distribution Transformer
9.4	11	Fused Disconnect Switch, Rating: 100A Various Sizes
9.5	3	Non-Fused Disconnect Switch, Rating: 100A

- 9.6 13 Lighting Panel, Rating: 240V
- 9.7 3 FVNR Starter w/ Motor Circuit Protector, Rating: SZ.3 Various Sizes
- 9.8 1 Auto-Transfer Switch, Rating: 480V

10 Welding Shop and Panel N1PA DWG E-9

- 10.1 1 Distribution Panel Board, Rating: 480V
- 10.2 10 Fused Disconnect Switch, Rating: 100A Various Sizes
- 10.3 6 Non-Fused Disconnect Switch, Rating: 100A Various Sizes
- 10.4 4 Dry-Type Low Voltage Distribution Transformer
- 10.5 6 Lighting Panel, Rating: 240V
- 10.6 9 Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 30A Various Sizes
- 10.7 2 FVNR Starter w/ Fused Switch, Rating: SZ.2

11 Panel F2PA, A1PA, and MOV-DP1 DWG E-10

- 11.1 3 Distribution Panel Board, Rating: 480V
- 11.2 22 Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 100A Various Sizes
- 11.3 4 Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 200A Various Sizes
- 11.4 7 Dry-Type Low Voltage Distribution Transformer
- 11.5 7 Fused Disconnect Switch, Rating: 30A
- 11.6 2 Non-Fused Disconnect Switch, Rating: 100A
- 11.7 1 FVR Starter w/ Motor Circuit Protector, Rating: SZ.5
- 11.8 4 FVNR Starter w/ Motor Circuit Protector, Rating: SZ.3 Various Sizes
- 11.9 1 AC Induction Motor, Rating: >100HP Measure PI
- 11.10 11 Lighting Panel, Rating: 240V
- 11.11 1 Auto-Transfer Switch, Rating: 240V

12 Substation 4, 5, and S1S1B-R DWG E-11

- 12.1 11 Oil Switch, Rating: 15KV
- 12.2 11 Drain, Clean Contacts, perform Contact Restistance
- 12.3 6 Non-Fused Load Break Switch, Rating: 15KV
- 12.4 3 Secondary Substation Transformer - Liquid-Filled, Rating: 1000KVA
- 12.5 1 Secondary Substation Transformer - Liquid-Filled, Rating: 1500KVA
- 12.6 3 High Resistance Grounding Unit
- 12.7 4 Transformers, Liquid-Filled, Oil Analysis, Rating: Low-Voltage
- 12.8 4 Circuit Breaker - Insulated Case - Electronic Trip - Primary Injection, Rating: 1600A
- 12.9 1 Test Location for DC Cable Testing
- 12.9.1 9 Three-Conductor Medium Voltage Cable Megger Test, Rating: 15KV

13 Panels T1PA and T1PB DWG E-12

- 13.1 2 Distribution Panel Board, Rating: 480V

- 13.2 15 Feeder Breaker - Insulated Case - Fixed Mount - Electronic Trip - Primary Injection, Rating: 400A Various Sizes
- 13.3 1 Dry-Type Low Voltage Distribution Transformer
- 13.4 5 Fused Disconnect Switch, Rating: 100A Various Sizes
- 13.5 1 Auto-Transfer Switch, Rating: 480V
- 13.6 2 FVR Starter w/ Fused Switch, Rating: SZ.5 Various Sizes
- 13.7 3 FVNR Starter w/ Fused Switch, Rating: SZ.3 Various Sizes
- 13.8 5 AC Induction Motor, Rating: >100HP Measure PI
- 13.9 1 Lighting Panel, Rating: 240V

14 Panels U1PA and U2PA DWG E-13

- 14.1 2 Distribution Panel Board, Rating: 480V
- 14.2 9 Feeder Breaker - Insulated Case - Fixed Mount - Electronic Trip - Primary Injection, Rating: 800A Various Sizes
- 14.3 1 Auto-Transfer Switch, Rating: 480V
- 14.4 4 FVR Starter w/ Motor Circuit Protector, Rating: SZ.3 Various Sizes
- 14.5 2 FVNR Starter w/ Motor Circuit Protector, Rating: SZ.3 Various Sizes
- 14.6 2 Dry-Type Low Voltage Distribution Transformer
- 14.7 2 Lighting Panel, Rating: 240V
- 14.8 6 Fused Disconnect Switch, Rating: 200A
- 14.9 4 AC Induction Motor, Rating: >100HP Measure PI

15 Substation 6, 7, 8N, and 8E and Switchgear S1SA and S1SB DWG E-14

- 15.1 4 Oil Switch, Rating: 15KV Sub 6
- 15.2 4 Fused Load Break Switch, Rating: 15KV Sub 6
- 15.3 4 Secondary Substation Transformer - Liquid-Filled, Rating: 1500KVA Sub 6
- 15.4 1 Secondary Substation Transformer - Liquid-Filled, Rating: 2500KVA Sub 6
- 15.5 5 Transformers, Liquid-Filled, Oil Analysis, Rating: Low-Voltage
- 15.6 3 High Resistance Grounding Unit Sub 6
- 15.7 1 Test Location for DC Cable Testing Sub 6
- 15.7.1 6 Three-Conductor Medium Voltage Cable Megger Test, Rating: 15KV Sub 6
- 15.8 1 Low Voltage Switchgear Lineup, Rating: 480V Switchgear S1SA
- 15.8.1 3 GE Multilin PQM - Power Quality Meter Switchgear S1SA
- 15.8.2 9 Potential Transformer Switchgear S1SA
- 15.8.3 9 Current Transformer Switchgear S1SA (4000:5)
- 15.8.4 15 Feeder Breaker - Insulated Case - Draw-out - Electronic Trip - Primary Injection, Rating: 4000A Switchgear S1SA (Various)
- 15.8.5 1 Auto-Transfer Switch, Rating: 480V Switchgear S1SA
- 15.9 1 Low Voltage Switchgear Lineup, Rating: 480V Switchgear S1SB
- 15.9.1 2 Auto-Transfer Switch, Rating: 480V Switchgear S1SB

15.9.2	7	Feeder Breaker - Insulated Case - Draw-out - Electronic Trip - Primary Injection, Rating: 4000A Switchgear S1SB
15.9.3	4	Feeder Breaker - Insulated Case - Draw-out - Electronic Trip - Primary Injection, Rating: 3200A Switchgear S1SB
15.9.4	1	Feeder Breaker - Insulated Case - Draw-out - Electronic Trip - Primary Injection, Rating: 800A Switchgear S1SB
15.9.5	1	Auto-Transfer Switch, Rating: 480V Switchgear S1SB
15.10	4	Generators 1,2,3,4 Megg (P.I.) Switchgear S1SB
15.11	1	Selector Switch, Rating: 15KV Outside Lab
15.12	2	Secondary Substation Transformer - Liquid-Filled, Rating: 225KVA 300KVA Outside Lab
15.13	2	Transformers, Liquid-Filled, Oil Analysis, Rating: Low-Voltage
15.14	1	Fused Radial Load Break Switch, Rating: 15KV Weatherstation
15.15	1	Pad-Mounted Transformer, Rating: 112.5KVA 75KVA Weatherstation
15.16	1	Branch Feeder Fused Switch, Rating: 400A Weatherstation
15.17	1	Fused Disconnect Switch, Rating: 60A Weatherstation
15.18	1	Auto-Transfer Switch, Rating: 480V Outside Lab
15.19	2	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 1200A Outside Lab In ATS
15.20	1	Lighting Panel, Rating: 240V

16 Switchgear S1SC, MCC H1, H2, H3, and H4 and Switchboard DPG DWG E-15

16.1	1	Selector Switch, Rating: 15KV Switchgear S1SC
16.2	1	Secondary Substation Transformer - Liquid-Filled, Rating: 2500KVA Switchgear S1SC
16.3	1	Transformers, Liquid-Filled, Oil Analysis, Rating: Low-Voltage
16.4	1	High Resistance Grounding Unit Switchgear S1SC
16.5	1	Low Voltage Switchgear Lineup, Rating: 480V Switchgear S1SC
16.6	2	Draw-out Air Circuit Breaker - Primary Injection, Rating: 4000A Switchgear S1SC
16.7	7	Draw-out Air Circuit Breaker - Primary Injection, Rating: 2000A Switchgear S1SC
16.8	1	Switchboard, Rating: 480V Switchboard DPG
16.8.1	3	Branch Feeder Fused Switch, Rating: 100A Switchboard DPG
16.9	3	Dry-Type Low Voltage Distribution Transformer Switchboard DPG
16.10	2	Fused Disconnect Switch, Rating: 100A Switchboard DPG
16.11	2	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.3 Switchboard DPG
16.12	1	Auto-Transfer Switch, Rating: 480V Switchboard DPG
16.13	1	Non-Fused Disconnect Switch, Rating: 30A Switchboard DPG
16.14	2	Lighting Panel, Rating: 240V Switchboard DPG
16.15	4	Low Voltage Motor Control Center, Rating: 208V-600V MCC H4,H3,H2 And H1 Located In P3 Electrical Room
16.16	4	Main Breaker - Insulated Case - Fixed Mount - Electronic Trip - Primary Injection, Rating: 2000A MCC H4,H3,H2 And H1 Located In P3 Electrical Room
16.17	7	FVR Starter w/ Motor Circuit Protector, Rating: SZ.6 MCC H4,H3,H2 And H1 Located In P3 Electrical Room

- 16.18 1 Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 600A MCC H4,H3,H2 And H1 Located In P3 Electrical Room
- 16.19 7 AC Induction Motor, Rating: >100HP Measure PI

17 MCC-A DWG E-16

- 17.1 3 Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 1600A
- 17.2 2 Low Voltage Motor Control Center, Rating: 208V-600V
- 17.3 4 FVR Starter w/ Motor Circuit Protector, Rating: SZ.6
- 17.4 9 FVNR Starter w/ Motor Circuit Protector, Rating: SZ.3
- 17.5 1 Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 600A
- 17.6 1 Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 200A
- 17.7 15 Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 100A
- 17.8 6 Non-Fused Disconnect Switch, Rating: 60A
- 17.9 2 Dry-Type Low Voltage Distribution Transformer
- 17.10 1 Auto-Transfer Switch, Rating: 480V
- 17.11 3 Lighting Panel, Rating: 240V
- 17.12 4 AC Induction Motor, Rating: >100HP Measure PI

18 Panels MDP, 1PPA and 2PPA DWG E-17

- 18.1 1 Distribution Panel Board, Rating: 480V Panel MDP
- 18.2 12 Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 30A Various Sizes
- 18.3 4 FVNR Starter w/ Motor Circuit Protector, Rating: SZ.1
- 18.4 7 Dry-Type Low Voltage Distribution Transformer Panel 1&2 PPA
- 18.5 7 Lighting Panel, Rating: 240V Panel 1&2 PPA

19 Switchboard DPH DWG E-18

- 19.1 1 Switchboard, Rating: 480V DPH 2 Sections
- 19.1.1 17 Branch Feeder Fused Switch, Rating: 100A Various Sizes
- 19.2 1 Dry-Type Low Voltage Distribution Transformer
- 19.3 2 FVNR Starter w/ Motor Circuit Protector, Rating: SZ.3 Various Sizes
- 19.4 10 Non-Fused Disconnect Switch, Rating: 100A Various Sizes
- 19.5 3 Fused Disconnect Switch, Rating: 100A Various Sizes
- 19.6 1 Lighting Panel, Rating: 240V

20 Switchboards S1PA and MDP DWG E-19

- 20.1 1 Switchboard, Rating: 480V SWB S1PA
- 20.1.1 10 Branch Feeder Fused Switch, Rating: 100A SWB S1PA Various Sizes
- 20.2 2 Dry-Type Low Voltage Distribution Transformer SWB S1PA
- 20.3 3 Lighting Panel, Rating: 240V SWB S1PA
- 20.4 4 Fused Disconnect Switch, Rating: 100A SWB A1PA Various Sizes

20.5	2	Explosion-Proof FVNR Starter w/ Motor Circuit Protector, Rating: SZ.3
20.6	1	Switchboard, Rating: 480V Panel MDP
20.7	10	Lighting Panel, Rating: 240V

21 **Carbon Slurry Feed System MCC-PAC-E DWG E-20**

21.1	1	Low Voltage Motor Control Center, Rating: 208V-600V MCC-PAC-E
21.2	3	Current Transformer 225/3
21.3	2	Potential Transformer
21.4	1	Digital Multifunction Meter
21.5	1	Transient Voltage Surge Suppressor
21.6	4	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 225A
21.7	1	Dry-Type Low Voltage Distribution Transformer
21.8	1	Lighting Contactor, Rating: 100A
21.9	7	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.3
21.10	2	FVR Starter w/ Motor Circuit Protector, Rating: SZ.3

22 **Infrared Scan**

22.1	1	Infrared Survey
------	---	-----------------

23 **On Line Partial Discharge Testing**

23.1	1	OLPD13.8KV Switchgear Compartments (79 POA's) TEV Sensor Only
------	---	---

24 **125V DC Systems**

24.1	2	Battery Banks A & B, and associated Chargers
24.2	2	Battery Charger

25 **Eastbank Water Tower Ground Testing**

25.1	3	Point to Point
25.2	3	Three Point (Fall of Potential) Grounding Test
26	20	Manhole Inspections
27	1	HMI Function Verification

2.0 PROJECT COST

The program specified in this proposal can be performed for the sum of:

Base Scope of Work - East Jefferson Parish; 2 Year Preventive Maintenance Contract **\$ 210,367.00**

This price assumes that all work can be performed based on 8 hours per day, starting at 7 am, Weekdays Only, (excluding holidays) exclusive of taxes. Straight Time Rates will apply.

Any optional work scope will be billed 100% at time of completion of those services.

Unless otherwise noted above payment terms: Net 30 days from date of Seller's invoice.

3.0 GENERAL CLARIFICATIONS AND ASSUMPTIONS

- 3.1 **NOTICE:** To allow the proper scheduling of both manpower and test equipment necessary to perform this work on a mutually agreeable date, please allow a minimum of four weeks advance notice prior to scheduling. Dependent upon ERS's current work load and availability, additional charges for travel labor/expenses and test equipment may be required for work that is requested to be scheduled with less than two weeks advance notice.

If you have any questions regarding the attached proposal, please contact me directly at 225-621-8760. I look forward to your response and the opportunity to work together.

Respectfully Submitted,

Keith D Mayeux
Sr. Sales Engineer

Electrical Reliability Services, Inc.
3535 Emerson Parkway Suite A
Gonzales, LA 70737

PHONE 225-621-8760

CELL (225) 615-1050

EMAIL Keith.Mayeux@vertivco.com

ACCEPTANCE OF PROPOSAL

Jefferson Parish Purchasing Department has read Proposal No.VRT-17015451 in its entirety, and hereby authorizes Electrical Reliability Services, to proceed with executing the Scope of Work referenced herewith in the amount of **\$ 210,367.00**.

Except to the extent ERS and the customer have valid, negotiated terms and conditions in existence (see attached), all work will be performed in accordance with ERS's Standard Terms and Conditions, which are attached to this proposal. No other terms and conditions are acceptable, unless agreed to by Electrical Reliability Services in writing. The signatory below is duly appointed by and authorized by Jefferson Parish Purchasing Department to execute this agreement and to bind same to the terms and conditions of this proposal.

We look forward to working with Jefferson Parish Purchasing Department on this project. Should you have any questions regarding this proposal, please do not hesitate to contact me at 225-621-8760 or email me at Keith.Mayeux@vertivco.com.

Jefferson Parish Purchasing Department		Buyer Signature Required	Date
Printed Name	Title	Printed Name	Title

Purchase Order must be assigned to:

Electrical Reliability Services
610 Executive Campus Dr
Westerville OH 43082

Payment Remittance address:

Electrical Reliability Services
24865 Network Place
Chicago, IL 60673-1248

FID# 94-1742896

PO should be mailed to:

Electrical Reliability Services
3535 Emerson Parkway, Suite A
Gonzales, LA 70737
Attn: Keith D Mayeux

Please provide the following information:

Purchase Order Number*:	Phone:
Billing Contact Person:	Fax:
Person Authorizing Payment:	Phone:
Billing Company Name:	Federal Tax ID:
Billing Address:	Taxable? Yes / No
Billing City, ST Zip:	If non-taxable, fax copy of tax exempt certificate
Site Contact Person:	Phone:
Email Invoices? Yes/No	Email Address:

* If a Purchase Order is provided, a hard copy must be included.

Specifications - Maintenance Testing

East Jefferson Parish 2017

1.0 PROCEDURES

ERS will complete the work per the following specifications for each of the items listed in the equipment inventory section. These specifications were developed from standard NETA Specifications, customer input, past experience and customized for your budget, equipment condition and time considerations. Where applicable, the associated NETA testing specification section has been included for reference only and is not intended to be all inclusive.

1.1 STANDARD

Circuit Breakers, Vacuum, Medium-Voltage

Visual and Mechanical

- Inspect physical and mechanical condition.
- Clean the unit.
- Inspect vacuum bottle assemblies.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Perform time-travel analysis.
- Record as-found and as-left operation counter readings.

Electrical Tests

- Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with circuit breaker closed and across each pole with the breaker open. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Perform a contact/pole-resistance test.
- With breaker in a test position, perform the following tests:
 - Perform minimum pickup voltage tests on trip and close coils in accordance with NETA MTS Table 100.20.
 - Perform power-factor or dissipation-factor tests on each bushing equipped with a power-factor/ capacitance tap. In the absence of a power-factor/ capacitance tap, perform hot-collar tests. These tests shall be in accordance with the test equipment manufacturer's published data.

Metering Devices, Electromechanical and Solid-State

Visual and Mechanical

- Inspect physical and mechanical condition.
- Inspect cover gasket, cover glass, condition of spiral spring, disk clearance, contacts, and case-shorting contacts, as applicable.
- Clean the unit.
- Verify freedom of movement, end play, and alignment of rotating disk(s).

Electrical Tests

- Verify accuracy of meters at all cardinal points.

Protective Relays - Electromechanical and Solid-State

Visual and Mechanical

- Inspect relays and cases for physical damage.

- Clean and inspect the unit.

Electrical Tests

Instrument Transformers CT

Visual and Mechanical

- Inspect physical and mechanical condition.
- Clean the unit.
- Verify that all required grounding and shorting connections provide contact.
- Verify correct operation of transformer withdrawal mechanism and grounding operation, if applicable.
- Verify correct primary and secondary fuse sizes for voltage transformers.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.

Electrical Tests

- Perform insulation-resistance test of each current transformer and wiring-to-ground at 1000 volts dc for one minute. For units with solid-state components that cannot tolerate the applied voltage, follow manufacturer's recommendations.D2530
- Perform a polarity test of each current transformer in accordance with ANSI/IEEE C57.13.1.
- Perform a ratio-verification test using the voltage or current method in accordance with ANSI/IEEE C57.13.1.
- When applicable, perform insulation-resistance tests on the primary winding with the secondary grounded. Test voltages shall be in accordance with NETA MTS Table 100.5.
- Verify that current circuits are grounded and have only one grounding point in accordance with ANSI/IEEE C57.13.3.

Switchgear and Switchboard Assemblies

Visual and Mechanical

- Inspect physical, electrical, and mechanical condition including evidence of moisture or corona.
- Inspect anchorage, alignment, grounding, and required area clearances.
- Clean the unit.
- Attempt closure on locked-open devices. Attempt to open locked-closed devices.
- Make key exchange with all devices included in the interlock scheme as applicable.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Verify correct barrier and shutter installation and operation.
- Exercise all active components.

Electrical Tests

- Perform resistance measurements through bolted connections with a low-resistance ohmmeter, if applicable, in accordance with NETA MTS Section 7.1.A.7.1.
- Perform insulation-resistance tests on each bus section, phase-to-phase and phase-to-ground, for one minute in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Perform a dielectric withstand voltage test on each bus section, each phase-to-ground with phases not under test grounded, in accordance with manufacturer's published data. If manufacturer has no recommendation for this test, it shall be in accordance with NETA MTS Table 100.2. The test voltage shall be applied for one minute. Refer to NETA MTS Section 7.1.3 before performing test.
- Verify operation of switchgear/switchboard heaters and their controller, if applicable.

Surge Arrestors, Medium- and High-Voltage

Visual and Mechanical

- Inspect physical and mechanical condition.
- Inspect anchorage, alignment, and grounding.
- Clean the unit.
- Perform as-left tests.

Electrical Tests

- Perform insulation-resistance tests from phase terminal(s) to case for one minute. Test voltage and minimum resistance shall be in accordance with manufacturer's published data. In the absence of manufacturer's published data, refer to NETA MTS Table 100.1.
- Test grounding connection in accordance with industry standard with NETA MTS Section 7.13.

Protective Relays - Microprocessor Based

Visual and Mechanical

- Record model number, style number, serial number, firmware revision, software revision, and rated control voltage.
- Download the sequence of events, maintenance data, and statistical data prior to testing the relay.
- Record passwords for all access levels.
- Clean the front panel and remove foreign material from the case.

Electrical Tests

- Apply voltage or current to all analog inputs and verify correct registration of the relay meter functions.

Instrument Transformers

Visual and Mechanical

- Inspect physical and mechanical condition.
- Clean the unit.
- Verify correct operation of transformer withdrawal mechanism and grounding operation, if applicable.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Perform as-left tests.

Electrical Tests

- Perform insulation-resistance tests for one minute winding-to-winding and each winding-to-ground. Test voltages shall be applied in accordance with NETA MTS Table 100.5.
- Perform a turns-ratio test on all tap positions, if applicable.
- Verify that potential circuits are grounded and have only one grounding point in accordance with ANSI/IEEE C57.13.3.

Cables, Medium- and High-Voltage

Visual and Mechanical

- Inspect exposed sections of cables for physical damage and evidence of overheating and corona.
- Inspect terminations and splices for physical damage, evidence of overheating, and corona

- Verify that visible cable bends meet or exceed ICEA and/or manufacturer's minimum allowable bending radius.
- Inspect fireproofing in common cable areas.

Electrical Tests

- Perform an insulation-resistance test individually on each conductor with all other conductors and shields grounded. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use industry standard.
- Perform VLF Monitored Withstand Test

Transformers, Liquid-Filled

Visual and Mechanical

- Inspect physical and mechanical condition.
- Verify the presence of PCB labeling, if applicable.
- Clean bushings and control cabinets.
- Verify correct liquid level in tanks and bushings.
- Verify that positive pressure is maintained on gas-blanketed transformers.
- Test load tap-changer in accordance with NETA MTS Section 7.12.
- Verify the presence of transformer surge arresters.
- Perform as-left tests.
- Verify de-energized tap-changer position is left as specified.

Electrical Tests

- Perform insulation-resistance tests, winding-to-winding and each winding-to-ground. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.5. Calculate polarization index.
- Perform turns-ratio tests at the designated tap position.
- Perform insulation power-factor or dissipation-factor tests on all windings in accordance with test equipment manufacturer's published data.
- Perform excitation-current tests in accordance with the test equipment manufacturer's published data.
- Measure the resistance of each winding at the designated tap position.

Transformers, Liquid-Filled, Oil Analysis Only

Visual and Mechanical

- Inspect physical and mechanical condition.
- Verify the presence of PCB labeling, if applicable.
- Verify correct liquid level in tanks and bushings.
- Verify that positive pressure is maintained on gas-blanketed transformers.

Electrical Tests

- Remove a sample of insulating liquid in accordance with ASTM D 923. The sample shall be tested for the following
- Dielectric breakdown voltage: ASTM D 877 and/or ASTM D 1816
- Acid neutralization number: ANSI/ASTM D 974
- Specific gravity: ANSI/ASTM D 1298

- Interfacial tension: ANSI/ASTM D 971 or ANSI/ASTM D 2285
- Color: ANSI/ASTM D 1500
- Visual Condition: ASTM D 1524
- Required on 25 kV or higher voltages and on all silicone-filled units.)
- Measure power factor or dissipation factor in accordance with ASTM D 924.
- Remove a sample of insulating liquid in accordance with ASTM D 3613 and perform dissolved-gas analysis (DGA) in accordance with ANSI/IEEE C57.104 or ASTM D3612.

Ground-Fault Protections Systems

Visual and Mechanical

- Inspect the components for damage and errors in polarity or conductor routing.
- Verify that the neutral sensors are connected with correct polarity on both primary and secondary.
- Verify that grounding conductors do not pass through zero sequence sensors.
- Verify that the grounded conductor is solidly grounded.
- Prior to cleaning the unit, perform as-found tests.

Electrical Tests

- Measure the system neutral-to-ground insulation resistance with the neutral disconnect link temporarily removed. Replace the neutral disconnect link after testing.
- Perform ground fault protective device pickup tests using primary injection.
- Measure time delay of the ground fault protective device at a value equal to or greater than 150 percent of the pickup value.
- Verify blocking capability of zone interlock systems.

Motor Control, Motor Control Centers, Low Voltage

Visual and Mechanical

- Inspect physical, electrical, and mechanical condition including evidence of moisture or corona.
- Clean the unit.
- Verify correct barrier and shutter installation and operation.
- Exercise all active components.

Electrical Tests

- Perform insulation-resistance tests for one minute on each bus section, phase-to-phase and phase-to-ground. Apply voltage in accordance with manufacturer's published data.
- Verify operation of cubicle space heaters, if applicable.

Metering Devices, Microprocessor-Based

Visual and Mechanical

- Inspect meters and cases for physical damage.
- Clean front panel.
- Check tightness of electrical connections.
- Record model number, serial number, firmware revision, software revision, and rated control voltage.
- Verify operation of display and indicating devices.

Electrical Tests

- Apply voltage or current as appropriate to each analog input and verify correct measurement and indication.

- Confirm correct operation and setting of each auxiliary input/output feature including mechanical relay, digital, and analog.
- Confirm measurements and indications are consistent with loads present.

Automatic Transfer Switches

Visual and Mechanical

- Inspect physical and mechanical condition.
- Clean the unit.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Verify that manual transfer warnings are attached and visible.
- Verify tightness of all control connections.

Electrical Tests

- Perform insulation resistance tests on all control wiring with respect to ground. The applied potential shall be 500 volts dc for 300-volt rated cable and 1000 volts dc for 600-volt rated cable. Test duration shall be one minute. For units with solid-state components or for control devices that cannot tolerate the applied voltage, follow manufacturer's recommendation.
- Perform a contact/pole-resistance test.
- Verify settings and operation of control devices.

Motor Control, Motor Starters, Low Voltage

Visual and Mechanical

- Inspect physical and mechanical condition.
- Clean the unit.
- Inspect contactors.
- Motor-Running Protection.
- Compare overload element rating with motor full-load current rating to verify correct sizing.

Electrical Tests

- Perform insulation-resistance tests on each pole, phase-to-phase and phase-to-ground with starter closed, and across each open pole for one minute. Test voltage shall be in accordance with manufacturer's published data or NETA MTS Table 100.1.
- Perform operational tests by initiating control devices.

Circuit Breakers, Air, Insulated-Case/Molded-Case

Visual and Mechanical

- Inspect physical and mechanical condition.
- Clean the unit.
- Operate the circuit breaker to insure smooth operation.
- Inspect operating mechanism, contacts, and arc chutes in unsealed units.
- Perform as left tests.

Electrical Tests

- Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with the circuit breaker closed, and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Perform a contact/pole-resistance test.
- Determine long-time pickup and delay by primary current injection.

- Determine short-time pickup and delay by primary current injection.
- Determine ground-fault pickup and time delay by primary current injection.
- Determine instantaneous pickup by primary current injection.
- Perform minimum pickup voltage tests on shunt trip and close coils in accordance with NETA MTS Table 100.20.

Transformers, Dry Type, Air-Cooled, Low-Voltage, Small

Visual and Mechanical

- Inspect physical and mechanical condition.
- Inspect anchorage, alignment, and grounding.
- Clean the unit.
- Verify that as-left tap connections are as specified.

Electrical Tests

- Perform resistance measurements through bolted connections with a low-resistance ohmmeter, if applicable, in accordance with NETA MTS Section 7.2.1.1.A.5.1.
- Perform insulation-resistance tests winding-to-winding and each winding-to-ground. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use industry standard. Calculate the dielectric absorption ratio or polarization index. In the absence of manufacturer's published data, use NETA MTS Table 100.5.

Switches, Air, Low-Voltage

Visual and Mechanical

- Inspect physical and mechanical condition.
- Clean the unit.
- Verify correct blade alignment, blade penetration, travel stops, and mechanical operation.
- Verify that each fuse has adequate mechanical support and contact integrity.
- Verify phase-barrier mounting is intact
- Verify correct operation of indicating and control devices.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Perform as-left tests.

Electrical Tests

- Perform resistance measurements through bolted connections with a low-resistance ohmmeter, if applicable, in accordance with NETA MTS Section 7.5.1.1.A.8.1.
- Measure contact resistance across each switchblade and fuseholder.
- Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with switch closed and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Measure fuse resistance.
- Verify cubicle space heater operation.
- Perform ground fault test in accordance with NETA MTS Section 7.14.

Switches, Air, Medium-Voltage, Metal-Enclosed

Visual and Mechanical

- Inspect physical and mechanical condition.
- Prior to cleaning the unit, perform as-found tests, if required.

- Clean the unit.
- Verify correct blade alignment, blade penetration, travel stops, arc interrupter operation, and mechanical operation.
- Verify that expulsion-limiting devices are in place on all fuses having expulsion-type elements.
- Verify that each fuseholder has adequate mechanical support and contact integrity.
- Verify that phase-barrier mounting is intact.
- Verify correct operation of all indicating and control devices.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Perform as-left tests.

Electrical Tests

- Measure contact resistance across each switchblade and fuseholder.
- Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with switch closed and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Measure fuse resistance.
- Verify cubicle space heater operation.

Circuit Breakers, Air, Low-Voltage Power

Visual and Mechanical

- Inspect physical and mechanical condition.
- Prior to cleaning the unit, perform as-found tests, if required.
- Clean the unit.
- Inspect arc chutes.
- Inspect moving and stationary contacts for condition, wear, and alignment.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Perform as-left tests.
- Record as-found and as-left operation counter readings.

Electrical Tests

- Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with the circuit breaker closed, and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Perform a contact/pole-resistance test.
- Determine long-time pickup and delay by primary current injection.
- Determine short-time pickup and delay by primary current injection.
- Determine ground-fault pickup and delay by primary current injection.
- Determine instantaneous pickup value by primary current injection.
- Perform minimum pickup voltage test on shunt trip and close coils in accordance with NETA MTS Table 100.20.
- Verify operation of charging mechanism.

Surge Arrestors, Low Voltage

Visual and Mechanical

- Inspect physical and mechanical condition.
- Prior to cleaning the unit, perform as-found tests.
- Clean the unit.
- Perform as-left tests.

Electrical Tests

- Perform an insulation-resistance test on each arrester, phase terminal-to-ground. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Test grounding connection in accordance with NETA MTS Section 7.13.

Thermographic Survey

Visual and Mechanical

- Inspect physical and mechanical condition.
- Remove all necessary covers prior to thermographic inspection. Use appropriate caution, safety devices, and personal protective equipment.

Thermographic Survey Report

- Description of equipment to be tested.
- Discrepancies.
- Temperature difference between the area of concern and the reference area.
- Probable cause of temperature difference.
- Areas inspected. Identify inaccessible and/or unobservable areas and/or equipment.
- Identify load conditions (instantaneous current) at time of inspection (as deemed practical/safe).
- Record load conditions (instantaneous current) of any equipment with abnormal heating (as deemed practical/safe).
- Provide photographs and/or thermograms of the deficient area.
- Provide recommended action for repair.

Test Parameters

- Inspect distribution systems with imaging equipment capable of detecting a minimum temperature difference of 1°C at 30°C.
- Equipment shall detect emitted radiation and convert detected radiation to visual signal.
- Thermographic surveys should be performed during periods of maximum possible loading. Refer to ANSI/NFPA 70B, Section 20.17.

DC Systems, Chargers

Grounding Systems

Visual and Mechanical

- Verify ground system is in compliance with ANSI/NFPA 70, National Electrical Code, Article 250.
- Inspect physical and mechanical condition.

Electrical Tests

- Perform resistance measurements through bolted connections with a low-resistance ohmmeter, if applicable, in accordance with NETA MTS Section 7.13.A.3.1.
- Perform fall-of-potential or alternative test in accordance with IEEE Standard 81 on the main grounding electrode or system.
- Perform point-to-point tests to determine the resistance between the main grounding system and all major electrical equipment frames, system neutral, and/or derived neutral points.

Rotating Machinery, AC Induction Motors and Generators

Visual and Mechanical

- Inspect physical and mechanical condition.

Electrical Tests

- Perform insulation-resistance tests in accordance with ANSI/IEEE Standard 43.

1.2 NON-STANDARD

1.2.1 CLARIFICATION/ASSUMPTION: Per Clients Specifications

SERVICES TERMS AND CONDITIONS

Electrical Reliability Services Inc. is herein referred to as the "Seller" and the customer or person or entity purchasing services ("Services") and parts required for Services ("Parts") from Seller is referred to as the "Buyer." These Services Terms and Conditions, any applicable Fee Schedule, quotation, acknowledgment, Seller's scope of work, or invoice from Seller relevant to the provision of Services and all documents incorporated by specific reference herein or therein, constitute the complete and exclusive statement of the terms of this agreement ("Agreement") governing the sale of Services and Parts by Seller to Buyer. Any discrepancies between the terms of the above referenced documents shall be resolved by Seller. Seller's acceptance of Buyer's purchase order is expressly conditional on Buyer's assent to all of the terms of this Agreement, including terms and conditions that are different from or additional to the terms and conditions of Buyer's purchase order. Buyer's acceptance of the Services and Parts will manifest Buyer's assent to the terms of this Agreement. Seller reserves the right in its sole discretion to refuse orders.

1. **PRICES:** Unless otherwise specified in writing by Seller, the price quoted or specified by Seller for the Services shall remain in effect for ninety (90) days after the date of Seller's quotation, Seller's scope of work or acknowledgment of Buyer's order for the Services, whichever occurs first, provided an unconditional authorization from Buyer for the performance of the Services is received and accepted by Seller within such time period. If authorization is not received by Seller within such ninety (90) day period, Seller shall have the right to change the price for the Services. All prices are exclusive of taxes, which are to be borne by Buyer. Unless otherwise specified by Seller, Parts will be furnished at Seller's then prevailing prices.

2. **TAXES:** Any current or future tax or governmental charge (or increase in same) affecting Seller's costs of Services or costs of production, sale, delivery or shipment of Parts, or which Seller is otherwise required to pay or collect in connection with the provision of Services and Parts, shall be for Buyer's account and shall be added to the price or billed to Buyer separately, at Seller's election.

3. **TERMS OF PAYMENT:** Buyer shall be billed monthly. Seller, at its discretion, may require monthly progress payments for services requiring more than thirty (30) days to complete. Terms of payment are net 30 days from date of Seller's invoice. Seller shall have the right, among other remedies, either to terminate this Agreement or to suspend further performance under this Agreement and/or other agreements with Buyer in the event Buyer fails to make any payment when due, which other agreements Buyer and Seller hereby amend accordingly. Buyer shall be liable for all expenses, including attorneys' fees, relating to the collection of past due amounts. If any payment owed to Seller is not paid when due, it shall bear interest, at a rate to be determined by Seller, which shall not exceed the maximum rate permitted by law, from the date on which it is due until it is paid. Seller may preserve its interests in payment by enforcing any applicable mechanic's construction or similar lien rights. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or security satisfactory to Seller may be required by Seller for future performance of Services or provision of Parts. If such cash payment or security is not provided, in addition to Seller's other rights and remedies, Seller may discontinue performance of Services and provision of Parts.

4. **SHIPMENT AND DELIVERY:** While Seller will use all reasonable commercial efforts to maintain the performance dates acknowledged or quoted by Seller, all performance dates are approximate and not guaranteed. Seller, at its option, shall not be bound to tender delivery of any Parts for which Buyer has not provided shipping instructions and other required information. If the provision of Services or shipment of the Parts is postponed or delayed by Buyer for any reason, Buyer agrees to reimburse Seller for any and all storage costs and other additional expenses resulting therefrom.

5. **LIMITED WARRANTY:** Seller warrants to Buyer that the Services will be performed by trained personnel using proper equipment and instrumentation for the particular service. Seller warrants that any analysis of data, subsequent recommendations and other services will be in accordance with applicable established industry standards and practices. Seller warrants the proper performance of the Services for a period of ninety (90) days from the completion of the Services. Warranties applicable to third party equipment, parts or materials furnished by Seller shall be that of the manufacturer of such Parts and only to the extent assignable to Buyer. EXCEPT AS SPECIFIED ABOVE, THIRD PARTY SERVICES AND/OR PARTS ARE FURNISHED AS-IS, WHERE-IS, WITH NO WARRANTY WHATSOEVER. THE WARRANTY SET FORTH IN THIS SECTION IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY SELLER WITH RESPECT TO THE SERVICES AND PARTS AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHETHER OR NOT THE PURPOSE OR USE HAS BEEN DISCLOSED TO SELLER IN SPECIFICATIONS, DRAWINGS OR OTHERWISE.

This warranty does not extend to any losses or damages due to misuse, accident, abuse, neglect, normal wear and tear, negligence (other than Seller's), unauthorized modification or alteration, use beyond rated capacity, unsuitable power sources or environmental conditions, improper installation, repair, handling, maintenance or application or any other cause not the fault of Seller. To the extent that Buyer or its agents have supplied specifications, information, representation of operating conditions or other data to Seller that is used in (i) the selection of the Services and/or Parts and (ii) the preparation of Seller's quotation and/or scope of work, and in the event that actual operating conditions or other conditions differ from those represented by Buyer, any warranties or other provisions contained herein that are affected by such conditions shall be null and void.

If within thirty (30) days after Buyer's discovery of any warranty defects within the warranty period, Buyer notifies Seller thereof in writing, Seller shall, at its option, repair, correct or replace F.O.B. point of manufacture, or refund the purchase price for, that portion of the services or equipment found by Seller to be defective. Failure by Buyer to give such written notice within the applicable time period shall be deemed an absolute and unconditional waiver of Buyer's claim for such defects. Equipment repaired or replaced during the warranty period shall be covered by the foregoing warranties for the remainder of the original warranty period or thirty (30) days from the date of shipment, whichever is longer.

Buyer assumes all other responsibility for any loss, damage, or injury to persons or property arising out of, connected with, or resulting from the use of Services or Parts, either alone or in combination with other parts.

6. **LIMITATION OF REMEDY AND LIABILITY:** THE SOLE AND EXCLUSIVE REMEDY FOR BREACH OF ANY WARRANTY HEREUNDER SHALL BE LIMITED TO, AT SELLER'S SOLE OPTION, EITHER CORRECT PERFORMANCE FOR THAT PORTION OF THE SERVICES FOUND BY SELLER TO BE DEFECTIVE OR REFUND OF THE PRICE PAID FOR SERVICES.

SELLER SHALL NOT BE LIABLE FOR DAMAGES CAUSED BY DELAY IN PERFORMANCE AND THE REMEDIES OF BUYER SET FORTH IN THIS AGREEMENT ARE EXCLUSIVE. IN NO EVENT, REGARDLESS OF THE FORM OF THE CLAIM OR CAUSE OF ACTION (WHETHER BASED IN CONTRACT, INFRINGEMENT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE), SHALL SELLER'S LIABILITY TO BUYER AND/OR ITS CUSTOMERS EXCEED THE PRICE PAID BY BUYER FOR THE SPECIFIC SERVICES OR PARTS PROVIDED BY SELLER GIVING RISE TO THE CLAIM OR CAUSE OF ACTION.

BUYER AGREES THAT SELLER'S LIABILITY TO BUYER AND/OR ITS CUSTOMERS SHALL NOT EXTEND TO INCLUDE INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES. The term "consequential damages" shall include, but not be limited to, loss of anticipated profits, business interruption, loss of use, revenue, reputation and data, costs incurred, including without limitation, for capital, fuel, power and loss or damage to property or equipment.

Buyer expressly acknowledges and agrees that Seller has set its prices and entered into this Agreement in reliance upon the limitations of liability and other terms and conditions specified herein, which allocate the risk between Seller and Buyer and form a basis of this bargain between the parties. It is expressly understood that any technical advice furnished by Seller with respect to the use of the Parts and/or Services is given without charge, and Seller assumes no obligation or liability for the advice given, or results obtained, all such advice being given and accepted at Buyer's risk.

7. **EXCUSE OF PERFORMANCE:** Seller shall not be liable for delays in performance or for non-performance due to acts of God; war; epidemic; fire; flood; weather; sabotage; strikes or labor disputes; civil disturbances or riots; governmental requests, restrictions, allocations, laws, regulations, orders or actions; unavailability of or delays in transportation; default of suppliers; or unforeseen circumstances; acts or omissions of Buyer, including, without limitation, those specified in Section 19; or any events or causes beyond Seller's reasonable control. Performance of Services and deliveries of Parts may be suspended for an appropriate period of time or canceled by Seller upon notice to Buyer in the event of any of the foregoing, but the balance of this Agreement shall otherwise remain unaffected as a result of the foregoing. If Seller determines that its ability to supply the total demand for the Services or Parts or to obtain material used directly or indirectly in the manufacture of the Parts is hindered, limited or made impracticable due to causes set forth in the preceding paragraph, Seller may delay performance of Services or allocate its available supply of the Parts among its purchasers on such basis as Seller determines to be equitable without liability for any failure of performance which may result therefrom.

8. **CANCELLATION:** Buyer may cancel orders only upon reasonable advance written notice and upon payment to Seller of Seller's cancellation charges which include, among other things, all costs and expenses incurred and to cover commitments made by the Seller, and a reasonable profit thereon. Seller's determination of such cancellation charges shall be conclusive.

9. **CHANGES:** Buyer may request changes or additions to the Services. In the event such changes or additions are accepted by Seller, Seller may revise the price and performance dates. Seller reserves the right to change designs and specifications for the Parts without prior notice to Buyer, except with respect to Parts being made-to-order for

Buyer. Seller shall have no obligation to install or make such change in any Parts manufactured prior to the date of such change.

10. **NUCLEAR/MEDICAL:** SERVICES AND PARTS SOLD HEREUNDER ARE NOT FOR USE IN CONNECTION WITH ANY NUCLEAR, LIFE-SUPPORT AND RELATED APPLICATIONS. Buyer accepts Services and Parts with the foregoing understanding, agrees to communicate the same in writing to any subsequent purchasers or users and to defend, indemnify and hold harmless Seller from any claims, losses, suits, judgments and damages, including incidental and consequential damages, arising from such use, whether the cause of action be based in tort, contract or otherwise, including allegations that the Seller's liability is based on negligence or strict liability.

11. **ASSIGNMENT:** Buyer shall not assign its rights or delegate its duties hereunder or any interest herein without the prior written consent of Seller, and any such assignment or delegation, without such consent, shall be void.

12. **INSPECTION:** Buyer shall have ten (10) days from the date of completion of each portion of the Services to inspect the Services, and in the event of any non-conformity, Buyer must give written notice to Seller within said period stating why the Services are not conforming. Failure by Buyer to give such notice constitutes unqualified acceptance of the Services.

13. **BILLABLE SERVICES:** Additional charges will be billed to Buyer at Seller's then prevailing labor rates for any of the following: a) any Services not specified in Seller's quotation, Seller's order acknowledgment, Seller's scope of work, or other documents referenced herein and therein; b) any Services performed at times other than Seller's normal service hours; c) if timely and reasonable site and/or equipment access is denied the Seller service representative; or d) Seller's performance is made more burdensome or costly as a result of Buyer's failure to comply with its obligations herein.

14. **NON-SOLICITATION:** Buyer shall not solicit, directly or indirectly, or employ any employee of Seller during the period any Services are being provided to Buyer and for a period of one (1) year after the last provision of Services. In the event that an employee of Seller is hired or leaves the employ of Seller in such circumstances, the Buyer shall pay Seller, as compensation for the cost incurred by Seller in recruiting and training the employee, the sum equivalent to six (6) months pay for each employee hired from or leaving the employment of Seller.

15. **GENERAL PROVISIONS:** These Services Terms and Conditions supersede all other communications, negotiations and prior oral or written statements regarding the subject matter of these Services Terms and Conditions. No change, modification, rescission, discharge, abandonment, or waiver of these Services Terms and Conditions shall be binding upon the Seller unless made in writing and signed on its behalf by a duly authorized representative of Seller. No conditions, usage of trade, course of dealing or performance, understanding or agreement purporting to modify, vary, explain, or supplement this Agreement shall be binding unless hereafter made in writing and signed by the party to be bound, and no modification or additional terms shall be applicable to this Agreement by Seller's receipt, acknowledgment, or acceptance of purchase orders, shipping instruction forms, or other documentation containing terms at variance with or in addition to those set forth herein. Any such modifications or additional terms are specifically rejected and deemed a material alteration hereof. If this document shall be deemed an acceptance of a prior offer by Buyer, such acceptance is expressly conditional upon Buyer's assent to any additional or different terms set forth herein. Seller reserves the right to subcontract Services to others. No waiver by either party with respect to any breach or default or of any right or remedy, and no course of dealing, shall be deemed to constitute a continuing waiver of any other breach or default or of any other right or remedy, unless such waiver be expressed in writing and signed by the party to be bound. All typographical or clerical errors made by Seller in any quotation, acknowledgment or publication are subject to correction.

The validity, performance, and all other matters relating to the interpretation and effect of this Agreement shall be governed by the law of the state of Ohio without regard to its conflict of laws principles. Buyer and Seller agree that the proper venue for all actions arising in connection herewith shall be only in the county of Franklin, state of Ohio, and the parties agree to submit to such jurisdiction. No action, regardless of form, arising out of transactions relating to this contract, may be brought by either party more than two (2) years after the cause of action has accrued. The U.N. Convention on Contracts for the International Sales of Goods shall not apply to this Agreement.

16. **ADDITIONAL SERVICE CONDITIONS:** The Buyer shall furnish to Seller, at no cost, suitable working space, storage space, adequate heat, telephone, light, ventilation, regulated electric power and outlets for testing purposes. The facilities shall be within a reasonable distance from where the Services are to be provided. Seller and its representatives shall have full and free access to the equipment in order to provide the necessary Services. Buyer shall provide the means to shut-off and secure electric power to the equipment and provide safe working conditions. Buyer shall not require Seller or its employees, as a condition to site access or otherwise, to further agree or enter into any agreement, which waives, releases, indemnifies or otherwise limits or expands any rights or obligations whatsoever. Any such agreements shall be null and void. Seller is under no obligation to remove or dispose of Parts or equipment unless specifically agreed upon in Seller's scope of work. Seller removed Parts become the property of Seller. Seller shall not perform any electrical power switching or services on energized electrical equipment unless specifically requested by Buyer, under the supervision of the Buyer, and subject to procedures jointly agreed to in advance. Notwithstanding Buyer's request, Seller may refuse to perform power switching or services on energized electrical equipment, if in the opinion of Seller, such action would be unsafe. IN THE EVENT THAT SELLER PERFORMS POWER SWITCHING OR SERVICES ON ENERGIZED ELECTRICAL EQUIPMENT, TO THE FULLEST EXTENT PERMITTED BY LAW, BUYER SHALL INDEMNIFY, DEFEND, AND HOLD SELLER HARMLESS FROM ANY AND ALL LIABILITY, ACTIONS, SUITS, CLAIMS, DEMANDS, DAMAGES, COSTS, AND EXPENSES ("LOSSES") ARISING OUT OF OR IN ANY WAY CONNECTED WITH OR RESULTING FROM SELLER'S PERFORMANCE OF POWER SWITCHING OR SERVICES ON ENERGIZED ELECTRICAL EQUIPMENT, REGARDLESS OF WHETHER THE LOSSES RESULT FROM SELLER'S NEGLIGENCE (WHETHER ACTIVE OR PASSIVE, AND WHETHER SOLE, JOINT, OR CONCURRENT), AND EVEN THOUGH CAUSED IN WHOLE OR IN PART BY A PRE-EXISTING DEFECT, STRICT LIABILITY, OR OTHER LEGAL FAULT OF SELLER. THIS INDEMNITY SHALL APPLY TO ANY ACTS OR OMISSIONS OR NEGLIGENT CONDUCT, WHETHER ACTIVE OR PASSIVE, ON THE PART OF EITHER THE SELLER OR THE BUYER. If OSHA or any other federal, state or local government, trade association, or contractual regulations or standards require a "safety person" to be on site during the performance of services, or in the event of a trade union jurisdictional dispute where trade union represented personnel are required to assist or stand by during the performance of services by Seller, Buyer shall be responsible for providing for and paying for any charge or wages for such person(s), as applicable. Buyer shall immediately inform Seller, in writing, at the time of order placement and thereafter, of any unsafe or hazardous substance or condition at the site, including, but not limited to, the presence of asbestos or asbestos-containing materials, and shall provide Seller with any applicable Material Data Safety Sheets regarding the same. Any losses, costs, damages, claims and expenses incurred by Seller as a result of Buyer's failure to so advise Seller shall be borne by Buyer. Seller, in its sole discretion and without cost or penalty, reserves the right to cancel its performance under this Agreement or any order immediately upon written notice to Buyer following Seller discovery of unsafe or hazardous site substance or condition or any other circumstance altering Seller performance of Services. Buyer shall appoint a representative familiar with the site and the nature of the Services to be performed by Seller to be accessible at all times that Seller personnel are at the site. Seller shall not be liable for any expenses incurred by Buyer in removing, replacing or refurbishing any Buyer equipment or any part of Buyer's building structure that restricts Seller access. Buyer personnel shall cooperate with and provide all necessary assistance to Seller. Seller shall not be liable or responsible for any work performed by Buyer.

17. **INSURANCE:** Seller shall maintain the following insurance or self-insurance coverage: **Worker's Compensation** in accordance with the statutory requirements of the state in which the work is performed. **Employer's Liability** with a limit of liability of \$1,000,000 per occurrence for bodily injury by accident or bodily injury by disease. **Commercial General Liability (CGL)** for bodily injury and property damage with a limit of \$1,000,000 per occurrence and aggregate. CGL includes Contractual Liability. CGL does not include Products and Completed Operations coverage. **Automobile Liability** insurance that covers usage of all owned, non-owned and leased vehicles and which is subject to a combined single limit per occurrence of \$1,000,000. Automobile Liability insurance includes Contractual Liability, but no special endorsements.

18. **INDEMNITY:** Each party shall indemnify and hold the other party harmless from loss, damage, liability or expense resulting from damage to personal property of a third party, or injuries, including death, to third parties to the extent caused by a negligent act or omission of the party providing indemnification or a party's subcontractors, agents or employees during performance of services hereunder. Such indemnification shall be reduced to the extent damage or injuries are attributable to others. The indemnifying party shall defend the other party in accordance with and to the extent of the above indemnification, provided that the indemnifying party is: i) promptly notified by the other party, in writing, of any claims, demands or suits for such damages or injuries; ii) given all reasonable information and assistance by the other party; iii) given full control over any resulting negotiation, arbitration or litigation, including the right to choose counsel and settle claims, or the indemnifying party's obligations herein shall be deemed waived.



Proposal for Service

Vertiv | Electrical Reliability Services

September 22, 2017

West Jefferson Parish; 2 Year Electrical Preventive Maintenance Contract
Proposal No. **VRT-17015474**

Version No. 1

Jefferson Parish Purchasing Department

**Donna Reamey
200 Derbigny Street, Suite 4400
Gretna, LA 70053**



September 22, 2017

Dear Donna Reamey,

Thank you for your interest in Electrical Reliability Services (ERS). We are pleased to offer the attached proposal for your consideration. ERS will furnish personnel, materials and equipment necessary to complete the project outlined in this proposal. This proposal does not include any state or local taxes that may apply.

Several factors set us apart in the industry including our unsurpassed experience, safety record, state-of-the-art training programs, and professional credentials. As a full charter member of the InterNational Electrical Testing Association (NETA), a recognized leader and ANSI standards developer for the electrical testing industry, you are assured that all testing is performed objectively according to NETA/ANSI standards.

ERS delivers the most complete solutions for electrical system reliability and safety including commissioning and startup services, acceptance and maintenance testing, engineering studies, and electrical and safety training. From testing for problems that could disable your system, to complete turnaround execution, you'll quickly understand how we are your single source solution for all your electrical reliability needs. With a network of more than 30 service locations in North America, ERS has experienced professionals when and where you need them. For more information, visit us on the web at www.electricalreliability.com.

If you have any questions regarding the attached proposal, please contact me directly at 225-621-8760. I look forward to your response and the opportunity to work together.

Respectfully Submitted,

Keith D Mayeux
Sr. Sales Engineer

Electrical Reliability Services, Inc.
3535 Emerson Parkway Suite A
Gonzales, LA 70737

PHONE 225-621-8760

CELL (225) 615-1050

EMAIL Keith.Mayeux@vertivco.com

1.0 PROJECT DETAILS

This service proposal is designed using industry standards to provide Jefferson Parish Purchasing Department with economic and safety-related benefits. ERS will furnish personnel, materials and equipment necessary to complete the project outlined in this proposal.

2.0 QUALIFICATIONS

- 2.1 **ACCREDITATIONS / CERTIFICATIONS:** ERS is a full charter member of the InterNational Electrical Testing Association (NETA), a recognized leader and ANSI standards developer for the electrical testing industry. ERS field engineers and technicians must meet the rigorous standards of NETA to become NETA certified. Once certified, they must undergo continuing education to maintain their NETA Certification level and keep abreast of the latest technologies.
- 2.2 **PERSONNEL:** The ERS team is comprised of registered professional engineers, degreed electrical engineers, and NETA certified Level II, III, and IV technicians that are experienced in the operation and maintenance of electrical distribution systems. Resumes are available upon request.
- 2.3 **TEST EQUIPMENT AND CALIBRATION:** ERS maintains a large inventory of state-of-the-art test equipment and diagnostic software. To ensure the accuracy of the test results, all of our field test equipment and secondary standard laboratory equipment are calibrated according to NETA Maintenance Testing Specifications Section 5.3 and are traceable to the National Institute of Standards and Technology (NIST).
- 2.4 **PROPRIETARY TEST SOFTWARE:** ERS's proprietary testing software improves the speed and efficiency of the data acquisition process, saving both time and money. The intelligent forms and built-in quality control ensure the accuracy of the test data through automatic identification of test values outside of the acceptable parameters. The application also stores and organizes millions of test values for various types of electrical equipment--providing an unprecedented historical database of test values critical for trending purposes.

3.0 SAFETY

We are committed to the safety of our employees and yours. Personal safety involves the application of policies and procedures combined with the right attitude, knowledge, and tools that will help you manage risk. ERS's safety organization includes a dedicated Environmental, Health & Safety Manager at the corporate level as well as safety officers and committees at the local level. ERS's Safety Program Includes:

- Written Electrical Safety-Related Work Practices/Procedures
- Training for qualified workers
- Protective equipment and materials
- Safety Records indicating attendees of all training, re-training, shop safety meetings, and tailgate safety meetings
- Mandatory safety meetings
- Safety Compliance including *unannounced* audits of this program
- Accident investigation and reporting

4.0 SCOPE OF WORK

- 4.1 For the Maintenance Testing portion of the project scope of work, the following equipment will be tested or evaluated in accordance with the included Maintenance Testing Specifications.

Item	Qty	Device Summary
<u>1</u>		<u>Sub 1 Dwg. E-1</u>
2	1	Test Location for DC Cable Testing South & North Entergy Feeder
2.1	2	Three-Conductor Low Voltage Cable Megger Test
3	7	Vertical Section - MV Switchgear
4	6	Current Transformer
5	8	50/51 - Over-Current (OC) Relay
6	2	67 - Directional Over Current Relay
7	2	Ammeter
8	2	Voltmeter
9	2	Main - Medium Voltage Air Circuit Breaker, Rating: 1200A
10	1	Tie - Medium Voltage Air Circuit Breaker, Rating: 1200A
11	1	Feeder - Medium Voltage Air Circuit Breaker, Rating: 1200A
12	4	Ammeter
13	2	Voltmeter
14	12	50/51 - Over-Current (OC) Relay
15	4	51N - Neutral OC Relay
16	12	Current Transformer
17	1	Test Location for DC Cable Testing To Sub # 2 North & South
17.1	1	Three-Conductor Low Voltage Cable Megger Test
18	2	SF6 Circuit Breaker - Medium Voltage, Rating: 15KV
<u>19</u>		<u>Sub 2 U-1 & U-2 Dwg. E-2</u>
20	2	Secondary Substation Transformer - Liquid-Filled, Rating: 2500KVA
21	2	Transformers, Liquid-Filled, Oil Analysis, Rating: Low-Voltage
22	1	Test Location for DC Cable Testing
22.1	2	Three-Conductor Low Voltage Cable Megger Test
23	2	Main Breaker - Draw-out Air Circuit Breaker - Primary Injection, Rating: 4000A
24	1	Feeder Draw-out Air Circuit Breaker - Primary Injection, Rating: 4000A
25	2	GE Multilin SR750 - Feeder Management Relay
26	12	Current Transformer
27	8	Potential Transformer
28	1	Low Voltage Switchgear Lineup, Rating: 480V
28.1	1	Clean, Inspect, & Test Bus

29	19	Feeder Draw-out Air Circuit Breaker - Primary Injection, Rating: 1600A
30	1	Test Location for DC Cable Testing
30.1	19	Three-Conductor Low Voltage Cable Megger Test
31	1	Secondary Substation Transformer - Liquid-Filled, Rating: 1500KVA
32	1	Transformers, Liquid-Filled, Oil Analysis, Rating: Low-Voltage
33	1	SF6 Switch, Rating: 15KV
34	7	FVR Starter w/ Motor Circuit Protector, Rating: SZ.6
35	5	Non-Fused Disconnect Switch, Rating: 600A
36	7	Motors PDMA, Rating: 350HP
37		<u>Synchronizing Switchgear Dwg. E-3</u>
38	2	Main Breaker - Draw-out Air Circuit Breaker - Primary Injection, Rating: 4000A
39	6	Current Transformer
40	2	Ammeter
41	1	Low Voltage Switchgear Lineup, Rating: 480V
42	2	Potential Transformer
43	4	Feeder Draw-out Air Circuit Breaker - Primary Injection, Rating: 2000A
44	1	Test Location for DC Cable Testing
44.1	4	Three-Conductor Low Voltage Cable Megger Test
45	4	Medium Voltage AC Generator, Rating: 2000KW
46	4	GE Multilin SR489 - Generator Management Relay
47	36	Current Transformer
48	8	Potential Transformer
49		<u>Panels F1PA & P-MOV Dwg. E-4</u>
50	2	Distribution Panel Board, Rating: 480V Panel F1PA & Panel P-MOV
51	4	Fused Disconnect Switch, Rating: 60A Panel F1PA
52	9	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 15A Panel P-MOV
53	1	Test Location for DC Cable Testing
53.1	9	Single-Conductor Low Voltage Cable Megger Test
54	1	Dry-Type Low Voltage Distribution Transformer
55	1	Fused Disconnect Switch, Rating: 30A
56		<u>Panels E1PA & F1PBA Dwg. E-5</u>
57	2	Distribution Panel Board, Rating: 480V Panel E1PA & Panel F1PBA
58	7	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 60A
59	1	Test Location for DC Cable Testing
59.1	10	Single-Conductor Low Voltage Cable Megger Test
60	5	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.3
61	1	Fused Disconnect Switch, Rating: 60A

- 62 2 Dry-Type Low Voltage Distribution Transformer
- 63 1 Auto-Transfer Switch, Rating: 110V
- 64 1 Low Voltage AC Generator, Rating: 100KW Emergency Generator
- 65 3 Lighting Panel, Rating: 120V

66 Filter MOV Panel Dwg. E-6

- 67 3 Feeder Breaker - Insulated Case - Fixed Mount - Electronic Trip - Primary Injection, Rating: 100A
- 68 1 Auto-Transfer Switch, Rating: 480V
- 69 11 Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 30A

70 MCC-GMCCN & MCC-GMCCS Dwg. E-7

- 71 1 Low Voltage Switchgear Lineup, Rating: 480V
- 72 2 Control Power Transformer
- 73 4 Potential Transformer
- 74 6 Current Transformer
- 75 1 Auto-Transfer Switch, Rating: 480V
- 76 1 Distribution Panel Board, Rating: 480V
- 77 2 IQ Data Plus II Meter
- 78 2 Main Breaker - Insulated Case - Fixed Mount - Electronic Trip - Primary Injection, Rating: 1600A
- 79 1 Tie Breaker - Insulated Case - Fixed Mount - Electronic Trip - Primary Injection, Rating: 1600A
- 80 2 Low Voltage Motor Control Center, Rating: 208V-600V
- 81 6 FVNR Starter w/ Motor Circuit Protector, Rating: SZ.2
- 82 2 FVNR Starter w/ Fused Switch, Rating: SZ.2
- 83 7 FVR Starter w/ Motor Circuit Protector, Rating: SZ.3
- 84 15 MCC Feeder Bucket - Circuit Breaker- Magnetic Trip, Rating: 50A
- 85 11 Fused Disconnect Switch, Rating: 100A
- 86 3 Non-Fused Disconnect Switch, Rating: 30A
- 87 1 Auto-Transfer Switch, Rating: 480V
- 88 1 Main Auto Transfer Switch, Rating: 1200A
- 89 5 AC Induction Motor, Rating: >200HP Measure PI

90 Panels G1DA, G1PA & P Dwg. E-8

- 91 1 Main Auto Transfer Switch, Rating: 1200A
- 92 3 Distribution Panel Board, Rating: 480V
- 93 1 Feeder Breaker - Insulated Case - Fixed Mount - Electronic Trip - Primary Injection, Rating: 400A
- 94 8 Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 100A
- 95 4 Dry-Type Low Voltage Distribution Transformer

96	2	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.2
97	5	Lighting Panel, Rating: 240V
98	5	Branch Feeder Fused Switch, Rating: 100A
99	2	FVNR Starter w/ Fused Switch, Rating: SZ.2
100	3	Fused Disconnect Switch, Rating: 30A
101	3	Lighting Panel, Rating: 240V
102	1	Non-Fused Disconnect Switch, Rating: 30A

103 **Panels G2PA & G1LA-1 Dwg. E-9**

104	2	Distribution Panel Board, Rating: 480V
105	10	Fused Disconnect Switch, Rating: 60A
106	8	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.1
107	2	Dry-Type Low Voltage Distribution Transformer
108	3	Lighting Panel, Rating: 240V
109	6	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 20A
110	4	Non-Fused Disconnect Switch, Rating: 30A

111 **Panel P1 Dwg. E-10**

112	1	Auto-Transfer Switch, Rating: 480V
113	1	Distribution Panel Board, Rating: 480V
114	1	Main Breaker - Molded Case - Thermal-Magnetic Trip - Fixed Mount, Rating: 400A
115	12	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 50A
116	2	Fused Disconnect Switch, Rating: 100A
117	1	Non-Fused Disconnect Switch, Rating: 30A
118	1	Dry-Type Low Voltage Distribution Transformer
119	2	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.3
120	1	Lighting Panel, Rating: 240V

121 **Switchboard B1SW3 & Distribution Panel BD3 Dwg. E-11**

122	2	Switchboard, Rating: 480V
123	1	Feeder Breaker - Insulated Case - Fixed Mount - Electronic Trip - Primary Injection, Rating: 2000A
124	2	Potential Transformer
125	3	Current Transformer
126	1	Kilowatt Hour Meter
127	15	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 100A
128	1	FVR Starter w/ Motor Circuit Protector, Rating: SZ.4
129	5	Non-Fused Disconnect Switch, Rating: 30A
130	2	Dry-Type Low Voltage Distribution Transformer
131	8	Lighting Panel, Rating: 240V

132	1	Low Voltage AC Generator, Rating: 100KW
133	1	AC Induction Motor, Rating: >200HP Measure PI
134		<u>MCC-CCA, MCC-CCB, & SLPS-P1 Dwg. E-12</u>
135	3	Low Voltage Motor Control Center, Rating: 208V-600V
136	10	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.2
137	11	MCC Feeder Bucket - Circuit Breaker- Magnetic Trip, Rating: 50A
138	6	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.5
139	2	FVNR Starter w/ Fused Switch, Rating: SZ.2
140	8	Non-Fused Disconnect Switch, Rating: 30A
141	1	Fused Disconnect Switch, Rating: 30A
142	1	Dry-Type Low Voltage Distribution Transformer
143	1	Lighting Panel, Rating: 240V
144	6	AC Induction Motor, Rating: >200HP Measure PI
145		<u>Peak Demand Pump Station PDPS-MCC-1 Dwg. E-13</u>
146	1	Low Voltage Motor Control Center, Rating: 208V-600V
147	4	Potential Transformer
148	6	Current Transformer
149	2	Main Breaker - Insulated Case - Fixed Mount - Electronic Trip - Primary Injection, Rating: 800A
150	2	Feeder Breaker - Insulated Case - Fixed Mount - Electronic Trip - Primary Injection, Rating: 400A
151	4	FVR Starter w/ Motor Circuit Protector, Rating: SZ.5
152	4	AC Induction Motor, Rating: >200HP Measure PI
153	1	Auto-Transfer Switch, Rating: 480V
154		<u>Panel PDPS-P1 Dwg. E-14</u>
155	1	Distribution Panel Board, Rating: 480V
156	1	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 225A
157	4	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 50A
158	1	Dry-Type Low Voltage Distribution Transformer
159	1	Lighting Panel, Rating: 240V
160		<u>Substation N0.4 East & West K1MCC-A, K1MCC-B, & K1MCC-C Dwg. E-15</u>
161	10	Non-Fused Load Break Switch, Rating: 15KV
162	1	Fused Load Break Switch, Rating: 15KV
163	2	Capacitor Bank
164	1	Test Location for DC Cable Testing
164.1	8	Three-Conductor Medium Voltage Cable Megger Test, Rating: 15KV

165	2	Secondary Substation Transformer - Liquid-Filled, Rating: 1500KVA
166	2	Transformers, Liquid-Filled, Oil Analysis, Rating: Low-Voltage
167	4	Potential Transformer
168	6	Current Transformer
169	2	Kilowatt Hour Meter
170	1	Low Voltage Motor Control Center, Rating: 208V-600V
171	5	Main Breaker - Insulated Case - Fixed Mount - Electronic Trip - Primary Injection, Rating: 2000A
172	5	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 800A
173	4	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.1
174	2	Dry-Type Low Voltage Distribution Transformer
175	2	Lighting Panel, Rating: 240V
176	5	FVR Starter w/ Motor Circuit Protector, Rating: SZ.6
177	4	AC Induction Motor, Rating: >200HP Measure PI

178 **Raw Water Pump Station RWPS-MCC-1 Dwg. E-16**

179	2	Potential Transformer
180	3	Current Transformer
181	1	Kilowatt Hour Meter
182	1	Main Breaker - Insulated Case - Fixed Mount - Electronic Trip - Primary Injection, Rating: 800A
183	2	FVR Starter w/ Motor Circuit Protector, Rating: SZ.5
184	1	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.4
185	3	MCC Feeder Bucket - Circuit Breaker- Magnetic Trip, Rating: 100A
186	1	Dry-Type Low Voltage Distribution Transformer
187	1	Lighting Panel, Rating: 240V
188	2	AC Induction Motor, Rating: >200HP Measure PI

189 **Carbon Slurry Feed System MCC-PAC-W Dwg. E-17**

190	1	Low Voltage Motor Control Center, Rating: 208V-600V
191	2	Potential Transformer
192	3	Current Transformer
193	1	Kilowatt Hour Meter
194	4	Circuit Breaker - Molded Case - Thermal-Magnetic Trip, Rating: 225A
195	4	FVR Starter w/ Motor Circuit Protector, Rating: SZ.2
196	2	FVNR Starter w/ Motor Circuit Protector, Rating: SZ.1
197	1	Dry-Type Low Voltage Distribution Transformer
198	1	Lighting Panel, Rating: 240V

199 **Online Partial Discharge Testing**

200 1 OLPD 13.8KV Switchgear Compartments (46 POA's) TEV Sensor Only

201 Thermographic Inspection

202 1 Infrared Survey

203 System Ground Compliance Testing - Westbank Elevated Water Storage Tanks (Qty of 5)

204 1 Point to Point & Fall of Potential

205 System Ground Compliance Testing - Grand Isle Elevated Water Storage Tanks (Qty of 2)

206 1 Point to Point & Fall of Potential

207 Manhole Inspections - Westbank Water Treatment Plant

208 10 Manhole Inspections

209 1 HMI Functionality Inspection

5.0 PROJECT COST

The program specified in this proposal can be performed for the sum of:

Base Scope of Work - West Jefferson Parish 2 Year Preventive Maintenance Contract **\$ 123,758.00**

This price assumes that all work can be performed based on 8 hours per day, starting at 7 am, Weekdays Only, (excluding holidays) exclusive of taxes. Straight Time Rates will apply.

Any optional work scope will be billed 100% at time of completion of those services.

Unless otherwise noted above payment terms: Net 30 days from date of Seller's invoice.

6.0 GENERAL CUSTOMER RESPONSIBILITIES

In support of the project described herein, we ask that Jefferson Parish Purchasing Department provide the following as applicable:

- 6.1 **EQUIPMENT ACCESS:** Convenient access to the equipment covered by the Scope of Work, and shall provide any special lifting or racking devices needed prior to start of any work by ERS.
- 6.2 **PERSONNEL:** Qualified personnel trained in arc flash protection with appropriate arc flash personal protective equipment (PPE) to gain access to energized electrical conductors and circuit parts required for ERS to perform the proposed scope of work.
- 6.3 **DOCUMENTATION:** Documents listing all protective device settings, any necessary electrical drawings and manufacturer's instruction manuals. If drawings and settings are not available, ERS can update one-line drawings and perform a coordination study for an additional fee.
- 6.4 **UTILITY OUTAGES:** Arrange and pay for any utility outages that may be required to de-energize equipment to be tested by ERS.
- 6.5 **SWITCHING:** Customer shall perform all switching required to de-energize or energize equipment associated with this project. If ERS is required to perform switching, customer must sign and submit an ERS Switching Agreement. ERS shall not perform energized switching of any electrical distribution equipment as part of this or any other Scope of Work without a signed Switching Agreement relieving ERS of any and all liability associated with such switching activity.
- 6.6 **SITE ACCESS:** Prior to start of work, provide all site specific and generic safety training and security requirements for ERS employees to perform work at customer site. Any additional training requirements not specifically listed in customer specification or Request for Proposal will be charged as an additional fee.

7.0 GENERAL CLARIFICATIONS AND ASSUMPTIONS

- 7.1 **NOTICE:** To allow the proper scheduling of both manpower and test equipment necessary to perform this work on a mutually agreeable date, please allow a minimum of four weeks advance notice prior to scheduling. Dependent upon ERS's current work load and availability, additional charges for travel labor/expenses and test equipment may be required for work that is requested to be scheduled with less than two weeks advance notice.
- 7.2 **PRICE:** The price above is based on assumption of accuracy of the electrical system data supplied to ERS by Jefferson Parish Purchasing Department (e.g. single-line diagram, equipment list or other source). Any unplanned time necessitated by inaccuracies of this information due to restricted site access, deficiencies discovered or failure of Jefferson Parish Purchasing Department to follow OSHA 1910 and NFPA 70E safety guidelines (e.g. safety equipment, procedures) will result in a work stoppage additionally billed on a time and material basis in accordance with our current published rates for applicable class of service.
- 7.3 **STANDBY TIME:** Any unplanned standby time necessitated by Jefferson Parish Purchasing Department operating conditions will be additionally billed on a time and material basis in accordance with straight, overtime or premium rates.
- 7.4 **RETESTING / REPAIRS:** Any equipment found to be defective requiring re-tests, repairs, non-routine troubleshooting or other work not specifically listed in this proposal shall be considered additional workscope, and a chargeable fee.
- 7.5 **DELAYS / CANCELLATION:** ERS is not responsible for any delays or cancellations due to weather. It is the client's responsibility to communicate the re-scheduling of any work due to adverse weather. The client will be charged for any time incurred by ERS due to weather delays or cancellations.
- 7.6 **CORRECTIVE ACTION:** Much of the work proposed is investigative in nature and could reveal a need for corrective maintenance, replacement of parts, or even replacement of complete system elements to improve the distribution system's reliability, operation, and safety. If any defects found during this project require immediate attention, the costs incurred by ERS for these repairs will be billed additional. However, no such work will be performed without your prior approval.
- 7.7 **SCOPE CHANGES:** The price is based on the work scope at the time of quotation. Any changes in work scope that occur prior to the job acceptance will require a separate quotation and change order.
- 7.8 **PARTS:** Any parts found defective during the maintenance will be quoted separately.
- 7.9 **METHOD OF PROCEDURE:** This proposal does not include any method of procedure (MOP) development or meeting time. ERS would be pleased to offer assistance or develop any required MOP's for an additional fee.
- 7.10 **MOBILIZATION:** This proposal includes a limited amount of mobilizations that result in the most cost effective and efficient execution of the project. Any additional mobilizations, or additional trips requested by the customer will incur additional mobilization charges.
- 7.11 **TRAVEL NOTIFICATION:** Pricing for all project travel in this proposal assumes notification of dates to ERS at least two weeks in advance of any travel requirement. Should ERS receive notifications with less than two weeks advance notice, impacting travel costs (airline tickets, hotel costs, etc.), the added costs may be considered additional to the original proposal.

8.0 TERMS AND CONDITIONS

- 8.1 **CONFIDENTIAL INFORMATION:** The information contained in this proposal is considered to be of a confidential and proprietary nature, the rights of which belong to ERS and are protected under copyright and trade secret laws. This information is being provided to the purchaser to evaluate ERS's proposal and performance should a contract be awarded to ERS. Neither this proposal nor any information contained herein nor any proprietary information furnished pursuant thereto, shall be disclosed to others or used for any purpose other than set forth above without the prior written approval of Electrical Reliability Services.
- 8.2 **GENERAL PROVISIONS:** All work shall be performed in accordance with ERS Terms and Conditions, which are attached to this proposal. No other terms and conditions are acceptable unless agreed to by ERS in writing.
- 8.3 **EXPIRATION OF PROPOSAL:** This proposal shall remain valid for 60 days from the date of issue. Please allow four weeks notice prior to start date of the proposed scope of work.

ACCEPTANCE OF PROPOSAL

Jefferson Parish Purchasing Department has read Proposal No.VRT-17015474 in its entirety, and hereby authorizes Electrical Reliability Services, to proceed with executing the Scope of Work referenced herewith in the amount of **\$ 123,758.00**.

All work will be performed in accordance with ERS's Standard Terms and Conditions, which are attached to this proposal. No other terms and conditions are acceptable, unless agreed to by Electrical Reliability Services in writing. The signatory below is duly appointed by and authorized by Jefferson Parish Purchasing Department to execute this agreement and to bind same to the terms and conditions of this proposal.

We look forward to working with Jefferson Parish Purchasing Department on this project. Should you have any questions regarding this proposal, please do not hesitate to contact me at 225-621-8760 or email me at Keith.Mayeux@vertivco.com.

Jefferson Parish Purchasing Department	Buyer Signature Required	Date
--	--------------------------	------

Printed Name	Title	Printed Name	Title
--------------	-------	--------------	-------

Purchase Order must be assigned to:

Electrical Reliability Services
 610 Executive Campus Dr
 Westerville OH 43082

Payment Remittance address:

Electrical Reliability Services
 24865 Network Place
 Chicago, IL 60673-1248

FID# 94-1742896

PO should be mailed to:

Electrical Reliability Services
 3535 Emerson Parkway, Suite A
 Gonzales, LA 70737
 Attn: Keith D Mayeux

Please provide the following information:

Purchase Order Number*:	Phone:
Billing Contact Person:	Fax:
Person Authorizing Payment:	Phone:
Billing Company Name:	Federal Tax ID:
Billing Address:	Taxable? Yes / No
Billing City, ST Zip:	If non-taxable, fax copy of tax exempt certificate
Site Contact Person:	Phone:
Email Invoices? Yes/No	Email Address:

* If a Purchase Order is provided, a hard copy must be included.

Specifications - Maintenance Testing

West Jefferson Parish

1.0 PROJECT DETAILS

The NFPA Standard 70B Electrical Equipment Maintenance guidelines states "Electrical equipment deterioration is normal, but failure is not inevitable." An effective electrical maintenance testing program identifies and recognizes factors leading to deterioration and provides measures for coping with these factors. A well-administered testing program can reduce accidents, save lives and minimize costly breakdowns and unplanned shutdowns of production equipment. Benefits of an effective electrical testing program fall into two categories: a) direct measurable economic benefits are derived by reduced cost of repairs and reduced down time. b) less measurable but very real benefits result from improved safety in the operation of the electrical system.

2.0 PROCEDURES

ERS will complete the work per the following specifications for each of the items listed in the equipment inventory section. These specifications were developed from standard NETA Specifications, customer input, past experience and customized for your budget, equipment condition and time considerations. Where applicable, the associated NETA testing specification section has been included for reference only and is not intended to be all inclusive.

2.1 STANDARD

Cables, Low-Voltage, 600-Volt Maximum

Visual and Mechanical

- Inspect exposed sections of cables for physical damage and evidence of overheating.
- Inspect compression-applied connectors for correct cable match and indentation.

Electrical Tests

- Perform insulation-resistance test on each conductor with respect to ground and adjacent conductors. Applied potential shall be 500 volts dc for 300-volt rated cable and 1000 volts dc for 600-volt rated cable. Test duration shall be one minute.
- Verify uniform resistance of parallel conductors.

Switchgear and Switchboard Assemblies

Visual and Mechanical

- Inspect physical, electrical, and mechanical condition including evidence of moisture or corona.
- Clean the unit.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Verify correct barrier and shutter installation and operation.
- Exercise all active components.
- Inspect mechanical indicating devices for correct operation.
- Verify that filters are in place and/or vents are clear.
- Perform visual and mechanical inspection of instrument transformers in accordance with NETA MTS Section 7.10.
- Inspect for physical damage, cracked insulation, broken leads, tightness of connections, defective wiring, and overall general condition.

- Verify that primary and secondary fuse ratings or circuit breakers match drawings.
- Verify correct functioning of drawout disconnecting and grounding contacts and interlocks.

Electrical Tests

- Perform insulation-resistance tests on each bus section, phase-to-phase and phase-to-ground, for one minute in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Perform a dielectric withstand voltage test on each bus section, each phase-to-ground with phases not under test grounded, in accordance with manufacturer's published data. If manufacturer has no recommendation for this test, it shall be in accordance with NETA MTS Table 100.2. The test voltage shall be applied for one minute. Refer to NETA MTS Section 7.1.3 before performing test.
- Verify operation of switchgear/switchboard heaters and their controller, if applicable.

Instrument Transformers CT

Visual and Mechanical

- Inspect physical and mechanical condition.
- Clean the unit.
- Verify that all required grounding and shorting connections provide contact.
- Verify correct operation of transformer withdrawal mechanism and grounding operation, if applicable.
- Verify correct primary and secondary fuse sizes for voltage transformers.

Electrical Tests

- Perform insulation-resistance test of each current transformer and wiring-to-ground at 1000 volts dc for one minute. For units with solid-state components that cannot tolerate the applied voltage, follow manufacturer's recommendations. D2530
- Verify that current circuits are grounded and have only one grounding point in accordance with ANSI/IEEE C57.13.3.

Protective Relays - Electromechanical and Solid-State

Visual and Mechanical

- Inspect relays and cases for physical damage.
- Clean and inspect the unit.
- Tighten case connections.
- Inspect cover for correct gasket seal.
- Clean cover glass. Inspect shorting hardware, connection paddles, and knife switches.
- Remove any foreign material from the case.
- Verify target reset.
- Inspect relay for foreign material, particularly in disk slots of the damping and electromagnets.
- Verify disk clearance. Verify contact clearance and spring bias.
- Inspect spiral spring convolutions.
- Inspect disk and contacts for freedom of movement and correct travel. Verify tightness of mounting hardware and connections. Burnish contacts. Inspect bearings and/or pivots.

Electrical Tests

- Perform insulation-resistance test on each circuit-to-frame. Procedures for performing insulation-resistance tests on solid-state relays should be determined from the relay manufacturer's published data
- Test targets and indicators
- Determine pickup and dropout of electromechanical targets
- Verify operation of all light-emitting diode indicators
- Set contrast for liquid-crystal display readouts.

Metering Devices, Electromechanical and Solid-State

Visual and Mechanical

- Inspect physical and mechanical condition.
- Inspect cover gasket, cover glass, condition of spiral spring, disk clearance, contacts, and case-shorting contacts, as applicable.
- Clean the unit.
- Verify freedom of movement, end play, and alignment of rotating disk(s).

Electrical Tests

- Verify accuracy of meters at all cardinal points.
- Calibrate meters in accordance with manufacturer's published data.

Circuit Breakers, Air, Medium-Voltage

Visual and Mechanical

- Inspect physical and mechanical condition.
- Inspect anchorage, alignment, and grounding.
- Verify that all maintenance devices are available for servicing and operating the breaker.
- Clean the unit.
- Inspect arc chutes.
- Inspect moving and stationary contacts for condition, wear, and alignment.
- If recommended by manufacturer, slow close/open breaker and check for binding, friction, contact alignment, contact sequence, and penetration. Verify that contact sequence is in accordance with manufacturer's published data. In the absence of manufacturer's published data, refer to ANSI/IEEE C37.04.
- Perform all mechanical operation tests on the operating mechanism in accordance with manufacturer's published data.
- Verify cell fit and element alignment.
- Verify racking mechanism operation.
- Inspect puffer operation.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Perform as-left tests.
- Record as-found and as-left operation-counter readings.

Electrical Tests

- Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with the circuit breaker closed, and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTSTable 100.1.
- Perform a contact/pole-resistance test.
- With the breaker in a test position, perform the following tests:
 - Trip and close breaker with the control switch.
 - Trip breaker by operating each of its protective relays.
 - Verify mechanism charge, trip-free, and antipump functions.
- Verify blowout coil circuit continuity.
- Verify operation of cubicle space heaters, if applicable.
- Test instrument transformers in accordance with NETA MTS Section 7.10.

Circuit Breakers, SF6

Visual and Mechanical

- Inspect physical and mechanical condition.
- Inspect anchorage, alignment, and grounding.
- Verify that all maintenance devices are available for servicing and operating the breaker.
- Clean the unit.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Record as-found and as-left operation counter readings.

Electrical Tests

- Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with breaker closed, and across each open pole. For single-tank breakers, perform insulation resistance tests from pole-to-pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Perform a contact/pole-resistance test.
- With breaker in a test position, perform the following tests:
 - Trip and close breaker with the control switch.
 - Trip breaker by operating each of its protective relays.
 - Verify trip-free and antipump functions.
- Perform a dielectric withstand voltage test in accordance with manufacturer's published data.

Transformers, Liquid-Filled

Visual and Mechanical

- Inspect physical and mechanical condition.
- Verify the presence of PCB labeling, if applicable.
- Clean bushings and control cabinets.
- Verify correct liquid level in tanks and bushings.
- Verify that positive pressure is maintained on gas-blanketed transformers.
- Verify the presence of transformer surge arresters.
- Verify de-energized tap-changer position is left as specified.

Electrical Tests

- Perform insulation-resistance tests, winding-to-winding and each winding-to-ground. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.5. Calculate polarization index.
- Perform turns-ratio tests at the designated tap position.
- Perform insulation power-factor or dissipation-factor tests on all windings in accordance with test equipment manufacturer's published data.
- Perform power-factor or dissipation-factor tests on each bushing equipped with a power-factor/capacitance tap. In the absence of a power-factor/capacitance tap, perform hot-collar tests. These tests shall be in accordance with the test equipment manufacturer's published data.
- Perform excitation-current tests in accordance with the test equipment manufacturer's published data.
- Measure the resistance of each winding at the designated tap position.

Transformers, Liquid-Filled, Oil Analysis Only

Visual and Mechanical

- Inspect physical and mechanical condition.

- Inspect anchorage, alignment, and grounding.
- Verify the presence of PCB labeling, if applicable.
- Verify that cooling fans and/or pumps operate correctly.
- Verify correct liquid level in tanks and bushings.
- Verify that positive pressure is maintained on gas-blanketed transformers.

Electrical Tests

- Remove a sample of insulating liquid in accordance with ASTM D 923. The sample shall be tested for the following
- Dielectric breakdown voltage: ASTM D 877 and/or ASTM D 1816
- Acid neutralization number: ANSI/ASTM D 974
- Specific gravity: ANSI/ASTM D 1298
- Interfacial tension: ANSI/ASTM D 971 or ANSI/ASTM D 2285
- Color: ANSI/ASTM D 1500
- Visual Condition: ASTM D 1524
- Required on 25 kV or higher voltages and on all silicone-filled units.)
- Measure power factor or dissipation factor in accordance with ASTM D 924.
- Remove a sample of insulating liquid in accordance with ASTM D 3613 and perform dissolved-gas analysis (DGA) in accordance with ANSI/IEEE C57.104 or ASTM D3612.

Circuit Breakers, Air, Low-Voltage Power

Visual and Mechanical

- Inspect physical and mechanical condition.
- Inspect anchorage, alignment, and grounding.
- Verify that all maintenance devices are available for servicing and operating the breaker.
- Clean the unit.
- Inspect arc chutes.
- Inspect moving and stationary contacts for condition, wear, and alignment.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Perform as-left tests.
- Record as-found and as-left operation counter readings.

Electrical Tests

- Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with the circuit breaker closed, and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Perform a contact/pole-resistance test.
- Determine long-time pickup and delay by primary current injection.
- Determine short-time pickup and delay by primary current injection.
- Determine ground-fault pickup and delay by primary current injection.
- Determine instantaneous pickup value by primary current injection.
- Perform minimum pickup voltage test on shunt trip and close coils in accordance with NETA MTS Table 100.20.
- Verify operation of charging mechanism.

Protective Relays - Microprocessor Based

Visual and Mechanical

- Record model number, style number, serial number, firmware revision, software revision, and rated control voltage.

- Clean the front panel and remove foreign material from the case.
- Check tightness of connections.

Electrical Tests

- Apply voltage or current to all analog inputs and verify correct registration of the relay meter functions.
- Control Verification
- Check operation of all active digital inputs.
- Check all output contacts or SCRs, preferably by operating the controlled device such as circuit breaker, auxiliary relay, or alarm.
- For pilot schemes, perform a loop-back test to check the receive and transmit communication circuits.
- For pilot schemes with direct transfer trip (DTT), perform transmit and received DTT at each terminal.
- Upon completion of testing, reset all min/max records and fault counters. Delete sequence-of-events records and all event records.
- Verify trip and close coil monitoring functions

Instrument Transformers

Visual and Mechanical

- Inspect physical and mechanical condition.
- Clean the unit.
- Inspect bolted electrical connections for high resistance using one or more of the following methods:
- Verify that all required grounding and shorting connections provide contact.
- Verify correct operation of transformer withdrawal mechanism and grounding operation, if applicable.
- Verify correct primary and secondary fuse sizes for voltage transformers.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.

Electrical Tests

- Perform insulation-resistance tests for one minute winding-to-winding and each winding-to-ground. Test voltages shall be applied in accordance with NETA MTS Table 100.5.
- Perform a turns-ratio test on all tap positions, if applicable.
- Verify that potential circuits are grounded and have only one grounding point in accordance with ANSI/IEEE C57.13.3.

Switches, SF6, Medium-Voltage

Visual and Mechanical

- Inspect physical and mechanical condition.
- Clean the unit.
- Verify that each fuseholder has adequate mechanical support and contact integrity.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Record as-found and as-left operation counter readings, if applicable.

Electrical Tests

- Perform a contact-resistance test.
- Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with switch closed, and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Perform a dielectric withstand voltage test across each gas bottle with the switch in the open position in accordance with manufacturer's published data.
- Verify open and close operation from control devices, if applicable.

Motor Control, Motor Starters, Low Voltage

Visual and Mechanical

- Inspect physical and mechanical condition.
- Clean the unit.
- Inspect contactors.
- Verify mechanical operation.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.

Electrical Tests

- Perform insulation-resistance tests on each pole, phase-to-phase and phase-to-ground with starter closed, and across each open pole for one minute. Test voltage shall be in accordance with manufacturer's published data or NETA MTS Table 100.1.
- Test motor protection devices in accordance with manufacturer's published data. In the absence of manufacturer's data, use NETA MTS Section 7.9.
- Test circuit breakers in accordance with NETA MTS Section 7.6.1.1.

Switches, Air, Low-Voltage

Visual and Mechanical

- Inspect physical and mechanical condition.
- Inspect anchorage, alignment, grounding, and required clearances.
- Clean the unit.
- Verify correct blade alignment, blade penetration, travel stops, and mechanical operation.
- Verify that each fuse has adequate mechanical support and contact integrity.
- Verify phase-barrier mounting is intact
- Verify correct operation of indicating and control devices.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.

Electrical Tests

- Perform resistance measurements through bolted connections with a low-resistance ohmmeter, if applicable, in accordance with NETA MTS Section 7.5.1.1.A.8.1.
- Measure contact resistance across each switchblade and fuseholder.
- Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with switch closed and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Measure fuse resistance.

Rotating Machinery, AC Induction Motors and Generators

Visual and Mechanical

Electrical Tests

- Perform insulation-resistance tests in accordance with ANSI/IEEE Standard 43.

Circuit Breakers, Air, Insulated-Case/Molded-Case

Visual and Mechanical

- Inspect physical and mechanical condition.

- Clean the unit.
- Operate the circuit breaker to insure smooth operation.
- Inspect operating mechanism, contacts, and arc chutes in unsealed units.

Electrical Tests

- Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with the circuit breaker closed, and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.
- Perform a contact/pole-resistance test.
- Determine long-time pickup and delay by primary current injection.
- Determine short-time pickup and delay by primary current injection.
- Determine ground-fault pickup and time delay by primary current injection.
- Determine instantaneous pickup by primary current injection.

Transformers, Dry Type, Air-Cooled, Low-Voltage, Small

Visual and Mechanical

- Inspect physical and mechanical condition.
- Inspect anchorage, alignment, and grounding.
- Clean the unit.

Electrical Tests

- Perform insulation-resistance tests winding-to-winding and each winding-to-ground. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use industry standard. Calculate the dielectric absorption ratio or polarization index. In the absence of manufacturer's published data, use NETA MTS Table 100.5.

Automatic Transfer Switches

Visual and Mechanical

- Inspect physical and mechanical condition.
- Clean the unit.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
- Verify that manual transfer warnings are attached and visible.
- Verify tightness of all control connections.

Electrical Tests

- Perform insulation resistance tests on all control wiring with respect to ground. The applied potential shall be 500 volts dc for 300-volt rated cable and 1000 volts dc for 600-volt rated cable. Test duration shall be one minute. For units with solid-state components or for control devices that cannot tolerate the applied voltage, follow manufacturer's recommendation.
- Perform a contact/pole-resistance test.
- Verify settings and operation of control devices.
- Perform automatic transfer tests: Simulate loss of normal power.
- Perform automatic transfer tests: Return to normal power.
- Perform automatic transfer tests: Simulate loss of emergency power.
- Perform automatic transfer tests: Simulate all forms of single-phase conditions.

Metering Devices, Microprocessor-Based

Visual and Mechanical

- Inspect meters and cases for physical damage.
- Clean front panel.
- Check tightness of electrical connections.
- Record model number, serial number, firmware revision, software revision, and rated control voltage.
- Verify operation of display and indicating devices.

Electrical Tests

- Apply voltage or current as appropriate to each analog input and verify correct measurement and indication.
- Confirm correct operation and setting of each auxiliary input/output feature including mechanical relay, digital, and analog.
- Confirm measurements and indications are consistent with loads present.

Motor Control, Motor Control Centers, Low Voltage

Visual and Mechanical

- Inspect physical, electrical, and mechanical condition including evidence of moisture or corona.
- Clean the unit.
- Exercise all active components.
- Inspect mechanical indicating devices for correct operation.
- Verify that filters are in place and/or vents are clear.

Electrical Tests

- Perform insulation-resistance tests for one minute on each bus section, phase-to-phase and phase-to-ground. Apply voltage in accordance with manufacturer's published data.
- Verify operation of cubicle space heaters, if applicable.

Switches, Air, Medium-Voltage, Metal-Enclosed

Visual and Mechanical

- Inspect physical and mechanical condition.
- Inspect anchorage, alignment, grounding, and required clearances.
- Clean the unit.
- Verify correct blade alignment, blade penetration, travel stops, arc interrupter operation, and mechanical operation.
- Verify that expulsion-limiting devices are in place on all fuses having expulsion-type elements.
- Verify that each fuseholder has adequate mechanical support and contact integrity.
- Verify that phase-barrier mounting is intact.
- Verify correct operation of all indicating and control devices.
- Use appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.

Electrical Tests

- Measure contact resistance across each switchblade and fuseholder.
- Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with switch closed and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.1.

- Perform a dielectric withstand voltage test on each pole with switch closed. Test each pole-toground with all other poles grounded. Test voltage shall be in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA MTS Table 100.2.
- Measure fuse resistance.
- Verify cubicle space heater operation.

Capacitors and Reactors, Capacitors

Visual and Mechanical

- Inspect physical and mechanical condition.
- Inspect anchorage, alignment, grounding, and required clearances.
- Clean the unit.
- Inspect bolted electrical connections for high resistance using one or more of the following methods:
- Perform as-left tests.

Electrical Tests

- Perform insulation-resistance tests from phase terminal(s) to case for one minute. Test voltage and minimum resistance shall be in accordance with manufacturer's published data. In the absence of manufacturer's published data, refer to NETA MTS Table 100.1.
- Measure the capacitance of all terminal combinations.
- Measure resistance of internal discharge resistors.

Cables, Medium- and High-Voltage

Visual and Mechanical

- Inspect exposed sections of cables for physical damage and evidence of overheating and corona.
- Inspect terminations and splices for physical damage, evidence of overheating, and corona
- Inspect shield grounding and cable support.
- Verify that visible cable bends meet or exceed ICEA and/or manufacturer's minimum allowable bending radius.

Electrical Tests

- Perform an insulation-resistance test individually on each conductor with all other conductors and shields grounded. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use industry standard.
- Perform a shield-continuity test on each power cable by ohmmeter method.
- Perform Very Low Frequency (VLF) Withstand Test in accordance with IEEE 400.2 – IEEE Guide for Field Testing of Shielded Power Cable Systems Using Very Low Frequency (VLF) (less than 1 Hz).

Thermographic Survey

Visual and Mechanical

- Inspect physical and mechanical condition.
- Remove all necessary covers prior to thermographic inspection. Use appropriate caution, safety devices, and personal protective equipment.

Thermographic Survey Report

- Description of equipment to be tested.
- Discrepancies.
- Temperature difference between the area of concern and the reference area.

- Probable cause of temperature difference.
- Areas inspected. Identify inaccessible and/or unobservable areas and/or equipment.
- Provide photographs and/or thermograms of the deficient area.
- Provide recommended action for repair.

Test Parameters

- Inspect distribution systems with imaging equipment capable of detecting a minimum temperature difference of 1°C at 30°C.
- Equipment shall detect emitted radiation and convert detected radiation to visual signal.
- Thermographic surveys should be performed during periods of maximum possible loading. Refer to ANSI/NFPA 70B, Section 20.17.

3.0 CUSTOMER RESPONSIBILITIES

In support of the project described herein, we ask that Jefferson Parish Purchasing Department provide the following:

- 3.1 **PROTECTIVE DEVICE SETTINGS:** Prior to ERS mobilization, customer shall provide the protective device settings to be used during the maintenance testing. In the absence of engineered settings, the devices will be tested and left on an "as found" basis. Note: It must be considered that the system may not operate properly without engineered settings. Additional mobilizations to install settings and retest protective devices will result in additional cost.
- 3.2 **MV CABLE TESTING:** When MV cables are included in the scope of work for this proposal, Customer shall be responsible for the preparation of medium voltage cables for testing prior to start of any work by ERS.
- 3.3 **TEST POWER:** Test power will be provided by the client, as required, within 50 feet of the equipment to be tested. This may require up to 150kW, (125A at 480VAC single phase), and DC power as required for function testing.

4.0 CLARIFICATIONS AND ASSUMPTIONS

- 4.1 **PARTS:** Any parts found defective during the maintenance will be quoted separately.
- 4.2 **THERMOGRAPHIC INSPECTION:** If ERS is to perform an Infrared Survey or Thermographic Inspection, unless otherwise specified in this proposal, customer must provide a qualified representative for purposes of providing access to all electrical equipment, including the removal, opening, and reinstall of all panel covers as required for the inspection. The site representative must be trained and knowledgeable on OSHA Electrical Safe Work Practices, NFPA 70E electrical Arc Flash Safety, and must don the appropriate PPE for the hazards associated with all tasks while performing the survey/inspection.

SERVICES TERMS AND CONDITIONS

Electrical Reliability Services Inc. is herein referred to as the "Seller" and the customer or person or entity purchasing services ("Services") and parts required for Services ("Parts") from Seller is referred to as the "Buyer." These Services Terms and Conditions, any applicable Fee Schedule, quotation, acknowledgment, Seller's scope of work, or invoice from Seller relevant to the provision of Services and all documents incorporated by specific reference herein or therein, constitute the complete and exclusive statement of the terms of this agreement ("Agreement") governing the sale of Services and Parts by Seller to Buyer. Any discrepancies between the terms of the above referenced documents shall be resolved by Seller. Seller's acceptance of Buyer's purchase order is expressly conditional on Buyer's assent to all of the terms of this Agreement, including terms and conditions that are different from or additional to the terms and conditions of Buyer's purchase order. Buyer's acceptance of the Services and Parts will manifest Buyer's assent to the terms of this Agreement. Seller reserves the right in its sole discretion to refuse orders.

1. **PRICES:** Unless otherwise specified in writing by Seller, the price quoted or specified by Seller for the Services shall remain in effect for ninety (90) days after the date of Seller's quotation, Seller's scope of work or acknowledgment of Buyer's order for the Services, whichever occurs first, provided an unconditional authorization from Buyer for the performance of the Services is received and accepted by Seller within such time period. If authorization is not received by Seller within such ninety (90) day period, Seller shall have the right to change the price for the Services. All prices are exclusive of taxes, which are to be borne by Buyer. Unless otherwise specified by Seller, Parts will be furnished at Seller's then prevailing prices.

2. **TAXES:** Any current or future tax or governmental charge (or increase in same) affecting Seller's costs of Services or costs of production, sale, delivery or shipment of Parts, or which Seller is otherwise required to pay or collect in connection with the provision of Services and Parts, shall be for Buyer's account and shall be added to the price or billed to Buyer separately, at Seller's election.

3. **TERMS OF PAYMENT:** Buyer shall be billed monthly. Seller, at its discretion, may require monthly progress payments for services requiring more than thirty (30) days to complete. Terms of payment are net 30 days from date of Seller's invoice. Seller shall have the right, among other remedies, either to terminate this Agreement or to suspend further performance under this Agreement and/or other agreements with Buyer in the event Buyer fails to make any payment when due, which other agreements Buyer and Seller hereby amend accordingly. Buyer shall be liable for all expenses, including attorneys' fees, relating to the collection of past due amounts. If any payment owed to Seller is not paid when due, it shall bear interest, at a rate to be determined by Seller, which shall not exceed the maximum rate permitted by law, from the date on which it is due until it is paid. Seller may preserve its interests in payment by enforcing any applicable mechanic's construction or similar lien rights. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or security satisfactory to Seller may be required by Seller for future performance of Services or provision of Parts. If such cash payment or security is not provided, in addition to Seller's other rights and remedies, Seller may discontinue performance of Services and provision of Parts.

4. **SHIPMENT AND DELIVERY:** While Seller will use all reasonable commercial efforts to maintain the performance dates acknowledged or quoted by Seller, all performance dates are approximate and not guaranteed. Seller, at its option, shall not be bound to tender delivery of any Parts for which Buyer has not provided shipping instructions and other required information. If the provision of Services or shipment of the Parts is postponed or delayed by Buyer for any reason, Buyer agrees to reimburse Seller for any and all storage costs and other additional expenses resulting therefrom.

5. **LIMITED WARRANTY:** Seller warrants to Buyer that the Services will be performed by trained personnel using proper equipment and instrumentation for the particular service. Seller warrants that any analysis of data, subsequent recommendations and other services will be in accordance with applicable established industry standards and practices. Seller warrants the proper performance of the Services for a period of ninety (90) days from the completion of the Services. Warranties applicable to third party equipment, parts or materials furnished by Seller shall be that of the manufacturer of such Parts and only to the extent assignable to Buyer. EXCEPT AS SPECIFIED ABOVE, THIRD PARTY SERVICES AND/OR PARTS ARE FURNISHED AS-IS, WHERE-IS, WITH NO WARRANTY WHATSOEVER. THE WARRANTY SET FORTH IN THIS SECTION IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY SELLER WITH RESPECT TO THE SERVICES AND PARTS AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHETHER OR NOT THE PURPOSE OR USE HAS BEEN DISCLOSED TO SELLER IN SPECIFICATIONS, DRAWINGS OR OTHERWISE.

This warranty does not extend to any losses or damages due to misuse, accident, abuse, neglect, normal wear and tear, negligence (other than Seller's), unauthorized modification or alteration, use beyond rated capacity, unsuitable power sources or environmental conditions, improper installation, repair, handling, maintenance or application or any other cause not the fault of Seller. To the extent that Buyer or its agents have supplied specifications, information, representation of operating conditions or other data to Seller that is used in (i) the selection of the Services and/or Parts and (ii) the preparation of Seller's quotation and/or scope of work, and in the event that actual operating conditions or other conditions differ from those represented by Buyer, any warranties or other provisions contained herein that are affected by such conditions shall be null and void.

If within thirty (30) days after Buyer's discovery of any warranty defects within the warranty period, Buyer notifies Seller thereof in writing, Seller shall, at its option, repair, correct or replace F.O.B. point of manufacture, or refund the purchase price for, that portion of the services or equipment found by Seller to be defective. Failure by Buyer to give such written notice within the applicable time period shall be deemed an absolute and unconditional waiver of Buyer's claim for such defects. Equipment repaired or replaced during the warranty period shall be covered by the foregoing warranties for the remainder of the original warranty period or thirty (30) days from the date of shipment, whichever is longer.

Buyer assumes all other responsibility for any loss, damage, or injury to persons or property arising out of, connected with, or resulting from the use of Services or Parts, either alone or in combination with other parts.

6. **LIMITATION OF REMEDY AND LIABILITY:** THE SOLE AND EXCLUSIVE REMEDY FOR BREACH OF ANY WARRANTY HEREUNDER SHALL BE LIMITED TO, AT SELLER'S SOLE OPTION, EITHER CORRECT PERFORMANCE FOR THAT PORTION OF THE SERVICES FOUND BY SELLER TO BE DEFECTIVE OR REFUND OF THE PRICE PAID FOR SERVICES.

SELLER SHALL NOT BE LIABLE FOR DAMAGES CAUSED BY DELAY IN PERFORMANCE AND THE REMEDIES OF BUYER SET FORTH IN THIS AGREEMENT ARE EXCLUSIVE. IN NO EVENT, REGARDLESS OF THE FORM OF THE CLAIM OR CAUSE OF ACTION (WHETHER BASED IN CONTRACT, INFRINGEMENT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE), SHALL SELLER'S LIABILITY TO BUYER AND/OR ITS CUSTOMERS EXCEED THE PRICE PAID BY BUYER FOR THE SPECIFIC SERVICES OR PARTS PROVIDED BY SELLER GIVING RISE TO THE CLAIM OR CAUSE OF ACTION.

BUYER AGREES THAT SELLER'S LIABILITY TO BUYER AND/OR ITS CUSTOMERS SHALL NOT EXTEND TO INCLUDE INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES. The term "consequential damages" shall include, but not be limited to, loss of anticipated profits, business interruption, loss of use, revenue, reputation and data, costs incurred, including without limitation, for capital, fuel, power and loss or damage to property or equipment.

Buyer expressly acknowledges and agrees that Seller has set its prices and entered into this Agreement in reliance upon the limitations of liability and other terms and conditions specified herein, which allocate the risk between Seller and Buyer and form a basis of this bargain between the parties. It is expressly understood that any technical advice furnished by Seller with respect to the use of the Parts and/or Services is given without charge, and Seller assumes no obligation or liability for the advice given, or results obtained, all such advice being given and accepted at Buyer's risk.

7. **EXCUSE OF PERFORMANCE:** Seller shall not be liable for delays in performance or for non-performance due to acts of God; war; epidemic; fire; flood; weather; sabotage; strikes or labor disputes; civil disturbances or riots; governmental requests, restrictions, allocations, laws, regulations, orders or actions; unavailability of or delays in transportation; default of suppliers; or unforeseen circumstances; acts or omissions of Buyer, including, without limitation, those specified in Section 19; or any events or causes beyond Seller's reasonable control. Performance of Services and deliveries of Parts may be suspended for an appropriate period of time or canceled by Seller upon notice to Buyer in the event of any of the foregoing, but the balance of this Agreement shall otherwise remain unaffected as a result of the foregoing. If Seller determines that its ability to supply the total demand for the Services or Parts or to obtain material used directly or indirectly in the manufacture of the Parts is hindered, limited or made impracticable due to causes set forth in the preceding paragraph, Seller may delay performance of Services or allocate its available supply of the Parts among its purchasers on such basis as Seller determines to be equitable without liability for any failure of performance which may result therefrom.

8. **CANCELLATION:** Buyer may cancel orders only upon reasonable advance written notice and upon payment to Seller of Seller's cancellation charges which include, among other things, all costs and expenses incurred and to cover commitments made by the Seller, and a reasonable profit thereon. Seller's determination of such cancellation charges shall be conclusive.

9. **CHANGES:** Buyer may request changes or additions to the Services. In the event such changes or additions are accepted by Seller, Seller may revise the price and performance dates. Seller reserves the right to change designs and specifications for the Parts without prior notice to Buyer, except with respect to Parts being made-to-order for

Buyer. Seller shall have no obligation to install or make such change in any Parts manufactured prior to the date of such change.

10. **NUCLEAR/MEDICAL:** SERVICES AND PARTS SOLD HEREUNDER ARE NOT FOR USE IN CONNECTION WITH ANY NUCLEAR, LIFE-SUPPORT AND RELATED APPLICATIONS. Buyer accepts Services and Parts with the foregoing understanding, agrees to communicate the same in writing to any subsequent purchasers or users and to defend, indemnify and hold harmless Seller from any claims, losses, suits, judgments and damages, including incidental and consequential damages, arising from such use, whether the cause of action be based in tort, contract or otherwise, including allegations that the Seller's liability is based on negligence or strict liability.

11. **ASSIGNMENT:** Buyer shall not assign its rights or delegate its duties hereunder or any interest herein without the prior written consent of Seller, and any such assignment or delegation, without such consent, shall be void.

12. **INSPECTION:** Buyer shall have ten (10) days from the date of completion of each portion of the Services to inspect the Services, and in the event of any non-conformity, Buyer must give written notice to Seller within said period stating why the Services are not conforming. Failure by Buyer to give such notice constitutes unqualified acceptance of the Services.

13. **BILLABLE SERVICES:** Additional charges will be billed to Buyer at Seller's then prevailing labor rates for any of the following: a) any Services not specified in Seller's quotation, Seller's order acknowledgment, Seller's scope of work, or other documents referenced herein and therein; b) any Services performed at times other than Seller's normal service hours; c) if timely and reasonable site and/or equipment access is denied the Seller service representative; or d) Seller's performance is made more burdensome or costly as a result of Buyer's failure to comply with its obligations herein.

14. **NON-SOLICITATION:** Buyer shall not solicit, directly or indirectly, or employ any employee of Seller during the period any Services are being provided to Buyer and for a period of one (1) year after the last provision of Services. In the event that an employee of Seller is hired or leaves the employ of Seller in such circumstances, the Buyer shall pay Seller, as compensation for the cost incurred by Seller in recruiting and training the employee, the sum equivalent to six (6) months pay for each employee hired from or leaving the employment of Seller.

15. **GENERAL PROVISIONS:** These Services Terms and Conditions supersede all other communications, negotiations and prior oral or written statements regarding the subject matter of these Services Terms and Conditions. No change, modification, rescission, discharge, abandonment, or waiver of these Services Terms and Conditions shall be binding upon the Seller unless made in writing and signed on its behalf by a duly authorized representative of Seller. No conditions, usage of trade, course of dealing or performance, understanding or agreement purporting to modify, vary, explain, or supplement this Agreement shall be binding unless hereafter made in writing and signed by the party to be bound, and no modification or additional terms shall be applicable to this Agreement by Seller's receipt, acknowledgment, or acceptance of purchase orders, shipping instruction forms, or other documentation containing terms at variance with or in addition to those set forth herein. Any such modifications or additional terms are specifically rejected and deemed a material alteration hereof. If this document shall be deemed an acceptance of a prior offer by Buyer, such acceptance is expressly conditional upon Buyer's assent to any additional or different terms set forth herein. Seller reserves the right to subcontract Services to others. No waiver by either party with respect to any breach or default or of any right or remedy, and no course of dealing, shall be deemed to constitute a continuing waiver of any other breach or default or of any other right or remedy, unless such waiver be expressed in writing and signed by the party to be bound. All typographical or clerical errors made by Seller in any quotation, acknowledgment or publication are subject to correction.

The validity, performance, and all other matters relating to the interpretation and effect of this Agreement shall be governed by the law of the state of Ohio without regard to its conflict of laws principles. Buyer and Seller agree that the proper venue for all actions arising in connection herewith shall be only in the county of Franklin, state of Ohio, and the parties agree to submit to such jurisdiction. No action, regardless of form, arising out of transactions relating to this contract, may be brought by either party more than two (2) years after the cause of action has accrued. The U.N. Convention on Contracts for the International Sales of Goods shall not apply to this Agreement.

16. **ADDITIONAL SERVICE CONDITIONS:** The Buyer shall furnish to Seller, at no cost, suitable working space, storage space, adequate heat, telephone, light, ventilation, regulated electric power and outlets for testing purposes. The facilities shall be within a reasonable distance from where the Services are to be provided. Seller and its representatives shall have full and free access to the equipment in order to provide the necessary Services. Buyer shall provide the means to shut-off and secure electric power to the equipment and provide safe working conditions. Buyer shall not require Seller or its employees, as a condition to site access or otherwise, to further agree or enter into any agreement, which waives, releases, indemnifies or otherwise limits or expands any rights or obligations whatsoever. Any such agreements shall be null and void. Seller is under no obligation to remove or dispose of Parts or equipment unless specifically agreed upon in Seller's scope of work. Seller removed Parts become the property of Seller. Seller shall not perform any electrical power switching or services on energized electrical equipment unless specifically requested by Buyer, under the supervision of the Buyer, and subject to procedures jointly agreed to in advance. Notwithstanding Buyer's request, Seller may refuse to perform power switching or services on energized electrical equipment, if in the opinion of Seller, such action would be unsafe. IN THE EVENT THAT SELLER PERFORMS POWER SWITCHING OR SERVICES ON ENERGIZED ELECTRICAL EQUIPMENT, TO THE FULLEST EXTENT PERMITTED BY LAW, BUYER SHALL INDEMNIFY, DEFEND, AND HOLD SELLER HARMLESS FROM ANY AND ALL LIABILITY, ACTIONS, SUITS, CLAIMS, DEMANDS, DAMAGES, COSTS, AND EXPENSES ("LOSSES") ARISING OUT OF OR IN ANY WAY CONNECTED WITH OR RESULTING FROM SELLER'S PERFORMANCE OF POWER SWITCHING OR SERVICES ON ENERGIZED ELECTRICAL EQUIPMENT, REGARDLESS OF WHETHER THE LOSSES RESULT FROM SELLER'S NEGLIGENCE (WHETHER ACTIVE OR PASSIVE, AND WHETHER SOLE, JOINT, OR CONCURRENT), AND EVEN THOUGH CAUSED IN WHOLE OR IN PART BY A PRE-EXISTING DEFECT, STRICT LIABILITY, OR OTHER LEGAL FAULT OF SELLER. THIS INDEMNITY SHALL APPLY TO ANY ACTS OR OMISSIONS OR NEGLIGENT CONDUCT, WHETHER ACTIVE OR PASSIVE, ON THE PART OF EITHER THE SELLER OR THE BUYER. If OSHA or any other federal, state or local government, trade association, or contractual regulations or standards require a "safety person" to be on site during the performance of services, or in the event of a trade union jurisdictional dispute where trade union represented personnel are required to assist or stand by during the performance of services by Seller, Buyer shall be responsible for providing for and paying for any charge or wages for such person(s), as applicable. Buyer shall immediately inform Seller, in writing, at the time of order placement and thereafter, of any unsafe or hazardous substance or condition at the site, including, but not limited to, the presence of asbestos or asbestos-containing materials, and shall provide Seller with any applicable Material Data Safety Sheets regarding the same. Any losses, costs, damages, claims and expenses incurred by Seller as a result of Buyer's failure to so advise Seller shall be borne by Buyer. Seller, in its sole discretion and without cost or penalty, reserves the right to cancel its performance under this Agreement or any order immediately upon written notice to Buyer following Seller discovery of unsafe or hazardous site substance or condition or any other circumstance altering Seller performance of Services. Buyer shall appoint a representative familiar with the site and the nature of the Services to be performed by Seller to be accessible at all times that Seller personnel are at the site. Seller shall not be liable for any expenses incurred by Buyer in removing, replacing or refurbishing any Buyer equipment or any part of Buyer's building structure that restricts Seller access. Buyer personnel shall cooperate with and provide all necessary assistance to Seller. Seller shall not be liable or responsible for any work performed by Buyer.

17. **INSURANCE:** Seller shall maintain the following insurance or self-insurance coverage: **Worker's Compensation** in accordance with the statutory requirements of the state in which the work is performed. **Employer's Liability** with a limit of liability of \$1,000,000 per occurrence for bodily injury by accident or bodily injury by disease. **Commercial General Liability (CGL)** for bodily injury and property damage with a limit of \$1,000,000 per occurrence and aggregate. CGL includes Contractual Liability. CGL does not include Products and Completed Operations coverage. **Automobile Liability** insurance that covers usage of all owned, non-owned and leased vehicles and which is subject to a combined single limit per occurrence of \$1,000,000. Automobile Liability insurance includes Contractual Liability, but no special endorsements.

18. **INDEMNITY:** Each party shall indemnify and hold the other party harmless from loss, damage, liability or expense resulting from damage to personal property of a third party, or injuries, including death, to third parties to the extent caused by a negligent act or omission of the party providing indemnification or a party's subcontractors, agents or employees during performance of services hereunder. Such indemnification shall be reduced to the extent damage or injuries are attributable to others. The indemnifying party shall defend the other party in accordance with and to the extent of the above indemnification, provided that the indemnifying party is: i) promptly notified by the other party, in writing, of any claims, demands or suits for such damages or injuries; ii) given all reasonable information and assistance by the other party; iii) given full control over any resulting negotiation, arbitration or litigation, including the right to choose counsel and settle claims, or the indemnifying party's obligations herein shall be deemed waived.