

1. SUMMARY OF WORK: The contractor shall provide all labor, materials, tools, equipment, supervision, engineering services, and transportation necessary to restore the oil inhibitor levels of the electrical distribution transformers at the Dryden Aircraft Operations Facility (DAOF), Palmdale, CA 93523.

2 GENERAL SCOPE OF WORK:

The contractor shall provide all labor, materials, tools, equipment, supervision, and transportation necessary to restore the oil inhibitor levels of (4) General Electric, 1500 KVA electrical distribution substation transformers at the Dryden Aircraft Operations Facility. The contractor shall test the inhibitor levels and add inhibiting agent 9DBPC or BHT or equivalent, or equivalent in accordance with the manufacturer's requirements / recommendations.

The contractor shall propose the preferred and alternative options below:

Preferred Option: The preferred option is to perform the work with the transformers energized during non-core hours (5:00 PM – 5:00 AM).

Alternative Option: The alternative option is to perform the work with the transformers de-energized from Friday at 5:00 PM – Sunday at 6:00 PM. Under this option the work can't begin before 5:00 PM on a Friday and must be completed no later than 6:00 PM on Sunday immediately following the Friday on which the work begins.

The contractor's proposed options shall consider all risk to equipment and personnel and incorporate safe work practices, hazard analysis, and hazard mitigation procedures to ensure the risks and hazards of the proposed work are mitigated. The contractor shall participate in all utility outages and lock out tag out procedures required to isolate energy sources and set up the work site for the performance of the work.

2.1. Background

An annual oil sample performed by S.D Myers of Southern CA. found all 4 of the distribution transformers at the DAOF facilities require inhibitor to be added to restore the inhibitor to manufacturer's recommended levels and to protect the transformers against potential damage. The transformers are 1500 KVA, 12.47 KV primary, 480 Volt secondary, 3 phase, General Electric model numbers M123882B, M123155B, M123155A and M123882A. The oil capacity of the transformers is 237 gallons.

2.2. Work Description

2.2.1.

- The contractor shall have a minimum of ten years of experience performing electrical substation transformer testing, maintenance, repair, and inhibitor service. The contractor shall provide proof of experience and qualifications to perform the work.

- The contractor shall perform testing to determine the inhibitor levels prior to adding inhibitor to the transformers, add inhibitor to restore inhibitor levels to the manufacturer's recommended levels.
- The contractor shall perform a complete insulating fluid analysis after completing the inhibitor service. The test shall, at a minimum, include all of the following:
 - Oxidation Inhibitor Level
 - Acid Testing
 - Dielectric Testing
 - Moisture Testing
 - Interfacial Tension Testing
 - Dielectric Breakdown Voltage
 - Dissolved Gas Analysis

The analysis shall be performed and certified by an electric transformer testing laboratory such as S.D Myers of Southern CA, which performs maintenance testing for the Operations and Maintenance Organization at NASA Dryden Flight Research Center.

- The contractor shall run a minimum of four (4 x nameplate gallons), passes through a media, (earth, heat and vacuum) to remove any impurities in the oil. Thereafter the contractor shall run an additional four passes (4 x nameplate gallons), through heat and vacuum adding the inhibitor during this final process. (Note: The reason for the additional 4 passes of heat and vacuum are to remove any moisture that might have been introduced during the inhibiting process.)
- The contractor shall pressurize the transformer with nitrogen and check for leaks at all accessible penetrations that do not require disassembly. Leak checks that require disassembly are beyond the scope of this scope of work.
- The contractor will restore all equipment to its normal operating condition; check the transformers for normal operation, and clean-up work areas.

2.2.2 General Notes:

Prior to performing work the contractor shall provide a job and work site specific work plan and activity hazard analysis for government approval. The work plan shall detail the procedures which will be used to perform each definable feature of work. The work plan shall address all the procedures and requirements to perform the work safely and to provide a quality service. The activity hazard analysis shall assess all hazards associated with each definable feature of work or procedure and will identify safe work practices that will be used to mitigate the associated hazards. The activity hazard analysis shall identify training of workers, certification of workers, safe work procedures and personal protective equipment required for the safe performance of all work in the work plan.

- The Contractor shall provide a minimum of 14 days notification of any work requiring the shutdown of utilities associated with the scope of this work.
- The contractor shall submit material safety data sheets and submittals for all chemicals and products used on this project within 5 days after receiving NTP for government review and approval. The chemicals and products require government approval before use.

- The contractor shall provide daily progress reports of the scheduled work at the end of each work day. The report shall include what work was performed, quality concerns, problems encountered and schedule status.

2.3. Performance Period

The performance period for this work is 30 days and shall be in accordance with the instructions received from the Contracting Officer at the time of Task Award and Notice to Proceed. The contractor shall provide a detailed work schedule to the government for review and approval within 3 days of receiving NTP from the Contracting Officer. Work plans and activity hazard analysis shall be submitted for government review and approval within 10 days of NTP and all work shall be completed within the 30 day performance period.

2.4. Work Hours:

Normal Work Hours shall be for Preferred Option identified in the "General Scope of Work" is 5:00 PM – 5:00 AM daily. Normal hours for the "Alternative Option" identified in the "General Scope of Work" are from 5:00 PM Friday – 6:00 PM Sunday. All proposed work hours must be approved by the Contracting Officer. The work required in this task order shall be performed as stated to avoid disruption to operations at the Dryden Aircraft Operations Facility.

3. Applicable Administrative Documents and Requirements:

The following administrative documents and requirements are part of this task and compliance will be required. Copies of the documents are available upon request.

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| 1. DCP-F-614 | Utility Outage and Facility Closure |
| 2. DCP-S-062 | Lock Out Tag Out |
| 3. DCP-F500-Rev C | Responsibility for Construction Safety |
| 4. Contractor Quality Control (Section 01401D) 01/2004 | |

3.1 Utility Outages/Facility Closures

Turning a utility off or on is a *Permit Required Operation*. Closing a facility or part of a facility is a *Permit Required Operation*. Streets, walks, and other facilities occupied and used by the Government or other affected personnel shall not be closed or obstructed without prior approval of the government. Utility outages and facility closures must be approved before outages and closures begin. The Contractor shall submit outage and closure requests and associated work plans and hazard analysis to the government fourteen (14) calendar days in advance of the planned outage or closure.

After obtaining utility outage or facility closure approval the contractor shall proceed with the work in accordance with the approved documents. The contractor shall not perform the shut-down and start-up of utilities. The shut-down and start-up of the utilities for the outage shall be performed by the government. The contractor shall participate in the outage planning and in the lock out tag out of equipment and systems to ensure the safety of contractor employees and others.

End of Statement of Work

Saunders, Sarah L. (DFRC-A)

From: Searcy, Melissa (DFRC-C)[Media Fusion Inc. (DFRC - CATS)]
Sent: Wednesday, May 30, 2012 10:14 AM
To: Saunders, Sarah L. (DFRC-A)
Cc: Tannert, Kerri (DFRC-CR)
Subject: 4200424724 Status / Repair of Elect Dist Transformers

Hi Sally,

Could I please get the status of PR 4200424724. It is for the Repair of the Electrical Distributor Transformers. We were trying to find out when it would be obligated. Please let us know if you are waiting information on our end.

Thanks,
Melissa Searcy
Media Fusion/SCSC
Ph. 661-276-3995

follow sent to
Dan Eason
for status of
revised SOW
6/1/2012