

**ELECTRICAL SYSTEM
RELIABILITY AUDIT OF**

***GLYCOL I
AND
TANK FARM***

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AUDIT CONDUCTED:
OCTOBER 8, 1996

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October 10, 1996

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ELECTRICAL SYSTEM RELIABILITY AUDIT - GLYCOL I AND TANK FARM

The Electrical Reliability Inspection for Glycol I and Tank Farm was conducted on October 8, 1996. This five point Electrical Reliability Inspection is part of the Louisiana Division consolidated Audit Program.

Attached are the general comments and evaluation sheets for your consideration. The audit team wishes to thank you for your cooperation in this effort.

Billy Stears
Electrical Reliability Coordinator

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DEFINITIONS OF INDEX NUMBERS

1. NEW CONDITION: New or recently installed; no corrosion; clean paint in good condition; all fasteners in place; documented P.M. program; complies with all current S&LP guidelines; no signs of any deterioration; access for service or maintenance is good; functional in every respect; suitable for environment or in controlled environment.
2. GOOD CONDITION: In service for some time; fully functional; has been incorporated into a documented P.M. program (initial operation may not have been); minimum signs of corrosion or deterioration; no obvious indication of problems (vibration, heat, noise, recurring maintenance); generally clean; suitable for environment; minimum access problems.
3. AVERAGE CONDITION: Average condition; functional with no obvious indications of problems (vibration, heat, noise, frequent recurring maintenance); recent inclusion in P.M. program with incomplete history; slight corrosion/deterioration of hardware; paint or insulation may be evident; access for service/maintenance may be difficult in some cases.
4. NEEDS ATTENTION: Needs attention, functional with definite signs of deterioration evident (corrosion, heat, noise, vibration, insulation); no P.M. history; may have loose or missing fasteners, supports or small parts; guards or barriers not effective; environment is a significant problem (cleanliness, corrosion); access for maintenance or service poor; some aspects not in compliance with current S&LP guidelines; impaired reliability.
5. SIGNIFICANT DETERIORATION: In operation, but with significant signs of deterioration (i.e., substantial corrosion, checking/cracking insulation); elevated noise or vibration levels; higher than normal temperatures; frequent maintenance repairs required in the same or related items; poor protection from an aggressive environment; physical and/or electrical characteristics substantially below average; major repair required to return to original condition if parts are available; low level of reliability.
6. MARGINAL CONDITION: Functional or operationally marginal; obsolete with no spares available; repairs not practical; high level of noise, vibration, temperature; high incidence of maintenance/repair required; marginally suitable for application/environment; unreliable.
7. FAILURE IMMINENT: Unsuitable for application; deterioration to the extent that repairs not practical; severe vibration, noise overheating; insulation breakdown, tracking on insulators; conditions bordering on "hazardous" or "unsafe".
8. NONFUNCTIONAL OR UNSAFE: Replacement required; continued use may result in serious safety or property damage incident.

GENERAL COMMENTS

I. All items rated 4.0 or marked with an * requires a response.

II. GLYCOL I

A. MUST DO

1. Update and post Safety Electrical One Line Diagram. L14 and L83 is not shown feeding TR-15. MCC 6-A not shown on SEOLD.
2. Proper labeling of motors per S&LP S-214.
3. Electrical Room Door: Install warning and exit signs or lights per OSHA 1910.38 (Q) B-1512 and MCC 6A.
4. Check MP 5C - running very hot.

B. RECOMMENDATION

1. Paint the following equipment:

LBS 12 MPD 2B
LBS 83 MPD 102 A
MCC 6A

2. Install Lockable Switches on all control stations.

3. Field junction boxes not installed in accordance with LGE - 0370 - 00.
(i.e.)

IJB 1403 IJB 1200
IJB 1401 R - 4
IJB 1900

Recommended that all junction boxes be checked for compliance with LGE - 0370 - 00.

4. Cable trays are overfilled and broken.

Repair as needed:

- A. Cable tray above B 1505 is overloaded.
- B. Cable tray by AH7 is broken.
- C. Cables out of tray by DV 1205 A .
- D. Cables not tied to cable tray by E 300 A.

5. Replace missing conduit covers by:

FJB 6102
IJB 1403
AD - 10 A
AD - 10 B

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6. Seal opening in building 1511 and MCC 6A.
7. Repair hole in MCC 12 section H5.
8. Ground switch handle on L 14 & L 83.

III. TANK FARM

A. MUST DO

1. Post a current Safety Electrical One Line Diagram in all MCC building's.
2. Ground motors in accordance with G7C 0104 - 00. P 111 A&B.
3. Electrical Room Doors: Install warning and exit signs or lights per OSHA 1910-38 (Q).
4. Install emergency lights and smoke detectors in all MCC's..

B. RECOMMENDATIONS

1. Paint and repair the following MCC buildings:

MCC-D	MCC-C	MCC-A
MCC-6	MCC-F	MCC-E
2. Paint the following equipment:

XFMR-C	MCC-6
XFMR-F	Switch Gear for P 111 A&B
3. Add Nitrogen Pad to XFMR-F.
4. Remove abandoned cable in North pinerack.
5. Tie cable to cable tray B MCC-D.
6. Replace missing conduit covers by PP-I.
7. Repair or replace Corroded cable trays.

- IV. The overall condition of electrical assets of Glycol I are good.
 The overall condition of electrical assets of the Tank Farm are fair.

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