

Mechanical Integrity

CRITICAL INSTRUMENT SYSTEMS

REFERENCES: Minimum Requirements, LPP 15.4.

- A 1. Yes ☒ No ☐ Have your critical and important instrument systems been identified? See definition LPP 15.4.3.
If yes, how many are there? CI2: 100-110. Cell Svc: 45-55.
Plans: _____
- A 2. Yes ☒ No ☐ Have test procedures been written?
Yes ☒ No ☐ Is your testing up-to-date?
Yes ☒ No ☐ Is testing documented?
Have records available for inspection. (LPP 15.4.4)
Plans: Records are electronically documented
- B 3. Yes ☐ No ☒ Do you test from the initiating device through the final control element?
Discuss: The instrument itself is tested but typically not the entire control loop
Plans: _____
- B 4. Yes ☒ No ☐ Do you have a process control computer?
What kind do you have? Mod5. TDC 2000. Modicon at Chlorine.
Modicon (in progress) at Cell Service.
- B 5. What would happen if you lost power to your computer?
Battery backup and our UPS system would provide reserve power to allow the computers to continue to function.

What is the amount of operating time available after power failure?
20 minutes for TDC 2000. 2 hours for Mod5.

Yes ☒ No ☐ Is it adequate?

When was your battery back-up last "load checked?"
Date Last Checked: TDC batteries were changed out on 3/4/93. 11-3 bank was tested on 3/23/93. 11-2 bank tested on 3/24/93. Mod5 batteries are tested monthly.

Yes ☒ No ☐ Have there been any computer failures since the last audit?

If Yes, Discuss What Happened: We had a TDC box and board failure due to a lightning strike. Two Mod5 computer failures since last audit.

PROCESS SAFETY AND LOSS PREVENTION AUDIT

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Plans: Reviewing grid grounding system, instrument grounds particularly in the cell area.

- A 6. What controls do you have in place to prevent bypassing critical instruments?
Training and procedures
- B 7. Yes ☒ No ☐ Is the fail safe position of automatic valves documented? Mod5 systems only
Yes ☒ No ☐ Is the rational for selecting the fail safe position documented? Mod5 systems only
- B 8. Yes ☒ No ☐ Do you have documentation of how control systems are supposed to operate, including set point limits?
Mod5 systems and some TDC 2000.
- B 9. When was your last in-depth review of the English language program?
Date Last Reviewed: No documented date
Plans: In-depth reviews of English language programs are done for new systems and existing systems that are being revised. All programming changes should be reflected through updated English language (Mod5 only).
- B 10. When was your last in-depth computer hardware and instrument reliability review?
Date Last Checked: No documented date
Plans: None at this time.
- A 11. What is department procedure for programming changes involving critical and important instruments?
Discuss: Programming changes involving critical/important instrumentation require MOC approval, control code simulation and operations training.
Plans: _____

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