

Critical Facilities Round Table

1st Meeting of the Legacy Data
Center Committee

April 7, 2006

Legacy Data Center Committee

- Chairperson: Horst Pfendt (interim)
- Vice Chairperson:
- Secretary:
- Program Chairperson:

Legacy Data Center Committee

- LDCC Purpose and Membership
 - Purpose
 - Address End-Users' existing environmental infrastructure deficiencies and provide a road map to correct those deficiencies to maximize up time.
 - Membership
 - Anyone interested in sharing his/her expertise in LDCC is welcome to become a member and participate in the activities.

Legacy Data Center Committee Environmental Survey Overview

- 1.0 Purpose
- 2.0 Summary of Survey
- 3.0 Background
- 4.0 Review Process
- 5.0 Present Condition Summary
- 6.0 Result Matrix
- 7.0 Appendix

Legacy Data Center Committee Environmental Survey Overview

- 1.0 Purpose
 - To Establish the Existing Condition of the Environmental Infrastructure
 - To Identify Design and Operational Deficiencies
 - To Identify and Assess Opportunities (Phase 1 of the Project Development & Execution Process)

Legacy Data Center Committee Environmental Survey Overview

- 2.0 Summary
 - In Section 5.0, the results for each present condition of the environmental infrastructure system will be summarized
 - In Section 6.0, the results will be entered into a results matrix

Legacy Data Center Committee Environmental Survey Overview

- 3.0 Background
 - Provide all background, including the original design criteria of the Legacy Data Center
 - Review the new operating parameters based on current trends

Legacy Data Center Committee Environmental Survey Overview

- 4.0 Review Process
 - Determine the present condition of the:
 - Electrical System
 - Process Cooling System
 - Special Area Detection/Suppression System
 - Architectural/Structural
 - Security and Data Center Access

Legacy Data Center Committee Environmental Survey Overview

- 4.0 Review Process (continued)
 - Site Subsystem Review Criteria
 - Information/Records
 - Operational Procedures
 - Regulations
 - Emergency Preparedness
 - Disaster Recovery Plans
 - Incidents

Legacy Data Center Committee Environmental Survey Overview

- 5.0 Present Condition Summary
 - 5.1 Electrical
 - 5.1.1 Utility Service
 - Information Records Fair
 - Operational Procedures Good
 - Regulations Poor
 - Emergency Preparedness NFR
 - Disaster Recovery Plans
 - Incidents

Legacy Data Center Committee Environmental Survey Overview

- 5.0 Present Condition (continued)
 - 5.1 Electrical (continued)
 - 5.1.2 Lightning Protection
 - Information/Records
 - Operational Procedures
 - ETC
 - ETC

Legacy Data Center Committee Environmental Survey Overview

- 6.0 Result Matrix; Source, Uptime Institute

Subsystem Review	Information Records	Operational Procedures	Regulations	Emergency Preparedness	Disaster Recovery Plans	Incidents
Utility Service	Good	Good	Good	Good	NFR	Fair
Lightning Protection	Fair	Fair	NFR	Fair	NFR	NFR
Power Distribution	Fair	Poor	Poor	Fair	Fair	Fair
UPS Systems	Fair	Good	Good	Fair	Fair	Fair
Batteries	Fair	Fair	Fair	Fair	Fair	Fair
Engine Generator Plants	Fair	Good	Good	Fair	Fair	Good
Computer Room Power	Fair	Good	Poor	Fair	Fair	Fair
Grounding	Fair	Good	Good	Good	NFR	Fair

Legend		
Overall Rating	Code	Description
Good	Good	Satisfactory or minor modification needed
Fair	Fair	Moderate modification needed
Poor	Poor	Needs Immediate Attention
NFR	NFR	Needs Further Research

Legacy Data Center Committee Environmental Survey Overview

- 7.0 Appendix
 - 7.1 Site Subsystems Checklist
 - 7.2 Site Subsystem Review Criteria
 - 7.3 Electrical
 - 7.4 Process Cooling
 - 7.5 Special Area Detection/Suppression
 - 7.6 Architectural/Structural
 - 7.7 Security and Data Center Access

Legacy Data Center Committee Environmental Survey Overview

- 7.1 Site Subsystems Checklist
 - Electrical
 - Utility Service
 - Utility's transmission, substation, and feeders
 - Utility or customer owned on site substation
 - Entrance equipment, circuit breakers, metering
 - Operations sequence, load shedding
 - Station batteries
 - Grounding
 - Maintenance documentation

Legacy Data Center Committee Environmental Survey Overview

- 7.1 Site Subsystem Checklist (continued)
 - ELECTRICAL
 - Power Distribution
 - Circuit breakers, switchgear, power distribution boards
 - Controls, automatic operation sequences, relays
 - Breaker operation
 - Feeders
 - Line disturbance analyzers
 - Short-circuit coordination
 - Spare parts
 - Maintenance documentation

Legacy Data Center Committee Environmental Survey Overview

- 7.1 Site Subsystem Checklist (continued)
 - Process Cooling
 - Special Area Detection/Suppression
 - Architectural/Structural
 - Security and Data Center Access

Legacy Data Center Committee Environmental Survey Overview

- 7.2 Site Subsystem Review Criteria
 - To provide a roadmap of the review process
 - To identify the strengths & weaknesses of the subsystems
 - Not to define corrections of problems but to identify and assess opportunities

Legacy Data Center Committee Environmental Survey Overview

- 7.2 Site Subsystems Review Criteria
 - 7.2.1 Information/Records
 - As built drawings for all systems
 - Drawing location
 - Original design criteria
 - Commissioning documentation
 - Life expectancy
 - Maintenance Records

Legacy Data Center Committee Environmental Survey Overview

- 7.2 Site Subsystem Review Criteria (con.)
 - 7.2.2 Operational Procedures
 - Sequence of operation
 - Equipment
 - Scripts as applicable
 - Equipment identification/nameplates
 - Training documentation
 - Etc...
 - Etc...

Legacy Data Center Committee Environmental Survey Overview

- 7.3 Electrical System Survey Report
- 7.3 Process Cooling System Survey Report
- 7.4 Architectural/Structural Survey Report
- 7.5 Special Area Detection/Suppression Survey Report
- 7.6 Security and Data Center Access Survey Report

Environmental Support Solutions (ESS)

- **Refrigerant Management Survey-Mock EPA Inspection**
 - benchmark current Title VI regulatory performance
 - identify problem areas associated with the federal regulations and provide solutions
 - review record keeping for regulatory compliance
 - review existing policy and management practices for refrigerants
 - provide a confidential report that defined solution pathway to compliance
 - keeps existing refrigerant compliance programs fine tuned while experiencing the common personnel and business changes that are common today

Environmental Support Solutions

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