Environmental, Health and Safety Issues in Data Centers

The data center industry in the United States is growing rapidly and shows no signs of slowing down. A recent survey revealed that 40 percent of data center owners will build a new data center in the next 12 to 18 months. Typically, corporations either lease property for the data center or build on remote sites. Many of the data centers are operated by building management service groups that may not understand the nuances of environmental, health and safety (EHS) issues.

In addition to enormous energy usage, a significant amount of water is used for cooling; large amounts of greenhouse gas emissions are generated; lead-acid batteries are used for backup energy; and generators that burn significant amounts of diesel fuel are used for backup power.

In light of the complexity of data centers and the engineering challenges of a 24/7, year-round operation, there are many factors that can negatively impact on the environment. The increase in corporations requiring data centers and the utilization of building management services may result in oversight of regulatory requirements. Some of the overlooked EHS issues include:

- Spill Prevention, Control, and Countermeasure (SPCC) Plans
- Above ground and underground storage tank management
- Air permitting for emergency generators
- Greenhouse Gas Emissions
- Refrigerant Management Plans
- Universal Waste Management (i.e., batteries, fluorescent bulbs)
- Community Right-to-Know Tier II Reporting
- Safe Work Practices for Energized Equipment
- SDS Management
- OSHA Compliance Requirements
- Contractor Qualifications

It's important for corporations and building management groups to understand the EHS issues surrounding data centers. Knowing these challenges allows you to put into place the appropriate policies that will protect the environment, keep your employees safe, and keep you out of regulatory trouble.

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