# Educational Requirements for Healthcare Facility Management

## Joint Commission's New Competitor - DNV Healthcare Inc.

## Design, Installation, Maintenance and Testing of Emergency Power Supply Systems for Healthcare Facilities

MGI Systems Inc.
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## Education Is Required – But Budgets Are Tight

Time and budget constraints now limit the amount, and quality, of training available to personnel. No longer can a facility afford to send staff off campus….the cost of travel sometimes exceeds the cost of the training course. 'Web-based training' offers an alternative which is more practical and less expensive. But no matter what method you choose, The Joint Commission HR and EC standards require continuing education.

## What Others Say

Critical Abilities & Responsibilities of the 21st Century Healthcare Facility Manager

"Human Resources:

- Maintain technical expertise and pursue professional development opportunities
- Provide growth mentoring and education
- Recruit and retain competent staff"

Jeffrey L. Arthurs, CHFM, CHSP, SASHE, ASHE Region Five Board of Directors, Nov-Dec 2008, *Inside ASHE*

## HR Is Back In The EC Standards

"The reintroduction of the HR requirements is not a trivial change. While the JC may state the requirements were in place all along, the manner of survey has been to collect data on a form for a few members of the employed staff. Now that the requirement is for staff and members of the medical staff to describe or to demonstrate how they manage physical risks in the environment; every person in the organization becomes a potential survey liability."

Ode Keil, Oct 2008, *FacilityCare*

# Joint Commission Standards

**EC.03.01.01 -** Staff and licensed independent practitioners are familiar with their roles and responsibilities relative to the environment of care.

**Rationale for EC.03.01.01 -** People are the key to successfully managing risks in the physical environment. Plans and procedures are of no value if those who work in the organization do not know how to follow them. Everyone who works in the organization is responsible for safety, and it is important for them to know how to identify and minimize risks, what actions to take when an incident occurs, and how to report it.

# Joint Commission Standards

**Elements of Performance for EC.03.01.01**

(1) Staff and licensed independent practitioners can describe or demonstrate methods for eliminating and minimizing physical risks in the environment of care.
(2) Staff and licensed independent practitioners can describe or demonstrate actions to take in the event of an environment of care incident.
(3) Staff and licensed independent practitioners can describe or demonstrate how to report environment of care risks.

[The above EC standard is from the 2009 Hospital Accreditation Program]

## DNV Healthcare Inc. – The Joint Commission's New Competitor:

DNV was granted "deemed status" by CMS in September 2008, and is now a Joint Commission competitor. Their NIAHO standards are a compilation of the CMS Conditions of Participation (CoPs), and ISO 9001. Their Physical Environment (PE) standards are thought by many to be more subjective, and performance based, than the JC's EC standards.
www.dnvaccreditation.com

## What does NIAHO℠ stand for?

NIAHO℠ is the acronym for the National Integrated Accreditation for Healthcare Organizations. NIAHO℠ is the name of DNV's hospital accreditation program. The NIAHO℠ standards integrate requirements based on the CMS Conditions of Participation (CoPs) with the internationally recognized ISO 9001 Standards for the formation and implementation of the Quality Management System. ISO 9001 is the infrastructure of quality that infiltrates every aspect of your organization – it enables an organization to reach maximum effectiveness and efficiency in its processes that leads to improved outcomes, both clinically and financially. These two sets of standards form the basis of DNV's revolutionary Integrated Accreditation concept in NIAHO℠.

## How long does a hospital have to become compliant with the ISO 9001 Standards?

"The NIAHO℠ standards allow up to 2 years from the initial NIAHO℠ survey to become ISO 9001 compliant. Our experience shows, however, that hospitals achieve ISO compliance in the first year after their initial NIAHO℠ accreditation in order to realize positive outcomes as soon as possible.

If a hospital is currently accredited by TJC or AOA or has received a State survey, it is basically 65-75% of the way to ISO 9001 compliance. The hospitals we have surveyed that have implemented ISO have taken 3-6 months for ISO implementations."

# DNV Educational Standards

SM.5 JOB DESCRIPTION

All staff, whether clinical or supportive, including contract staff, shall have a current job description available that contains the experience, educational and physical requirements, and performance expectations for that position.

*Surveyor Guidance:*

*Review and verify a sampling of job descriptions to verify that the hospital has identified the appropriate experience, educational and physical requirements and performance expectations for the positions reviewed.*

*This includes contracted staff for nursing and/or other areas of the organization.*

# DNV Educational Standards

**SM.7 STAFF EVALUATIONS**

SR.6 The organization shall require each staff member, including contract staff, to participate in continuing education as required by individual licensure/certification, professional association, law or regulation, or organization policy. Compliance with this standard shall be reported to Quality Management Oversight.

# DNV Educational Standards

***Surveyor Guidance (SM.7):***

- *Verify the policy and practice the hospital uses to validate the competency of staff occurs within a specified timeframe no less than once per calendar year.*
- *Verify that the hospital requires and makes provision for each staff member, including contract staff, to participate in continuing education as required by individual licensure/certification, professional association, law or regulation, or hospital policy.*

# DNV Educational Standards

**PHYSICAL ENVIRONMENT (PE)**
**PE.1 FACILITY**

The facility shall be constructed, arranged, and maintained to ensure patient safety, and to provide areas for diagnosis and treatment and for special organization services appropriate to the needs of the community.

# DNV Educational Standards

SR.7 The organization, through its senior leadership shall ensure that the physical environment and associated management systems adequately address issues identified throughout the organization and there are prevention, correction, improvement and training programs to address these issues.

## One Person's Opinion on the DNV Process

"He said some interesting things about how they plan to 'adopt codes', rather than writing them, using a 'performance vs. prescriptive format', and their 'ISO self evaluations' (my words). I liked what he said about the 'types' of surveyors they will employ, and the 'gotcha game' they won't be playing."

## One Person's Opinion on the DNV Process

"I think their system will definitely work, although some will say it smacks of a "militaristic regimen"…. The ISO methodology won't allow the system/process to fail, if strictly followed. The ISO 9001 requires the facility manager to have a "worm hole" into the board room during discussions that could affect patient care – good news for the facility manager in most cases I would think."

# All Training From One Place

MGI Systems has a full complement of codes/standards based libraries and courses for facility managers, supervisors and technicians. These courses can be used for basic orientation, advanced "how to" testing, and for customizing facility protocols for specific equipment.

MGI Systems is the only educational provider you need to initially, and continually (quarterly and semi-annual updates), educate staff on all facility management codes and best practices related to the JC's Environment of Care, and the DNV's Physical Environment.

# MGI Facility Management Library

- Courses are ASHE CEU approved
- Compliant to both The Joint Commission EC.03.01.01 and DNV SM.5, .7 and PE.1.
- Written by hospital facility managers and trade supervisors.
- Courses can upload to hospital's LMS – all courses are SCORM compliant.

## MGI Facility Management Library Partial Course List – 47 Total

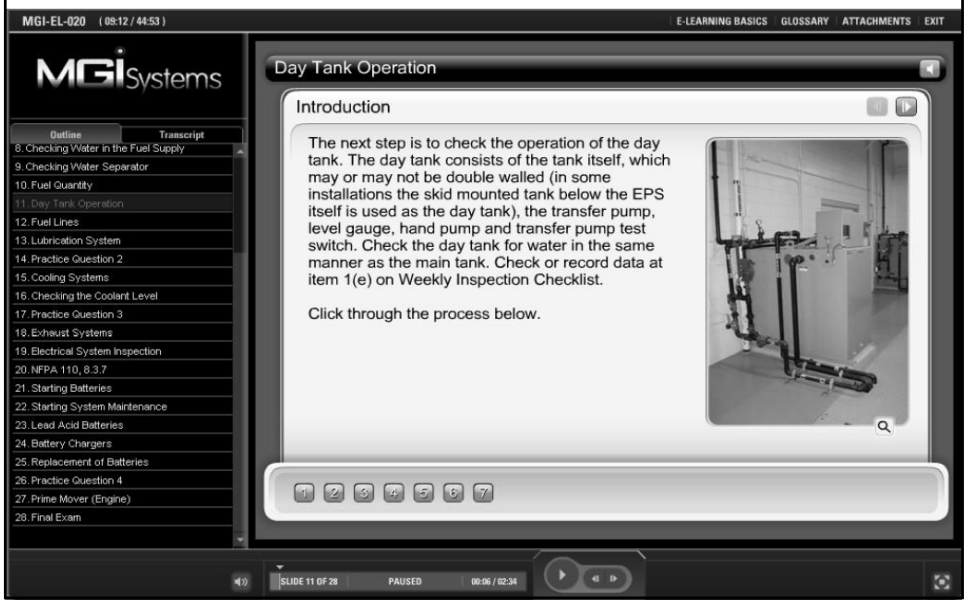
- Electrical (Basic Electrical for Healthcare, NFPA 70E, EPSS, IPS, UPS, MCCC – 22 modules total)
- HVAC
- Fire and Life Support Systems
- Medical Gas
- Emergency Management
- Infection Control During Construction
- OSHA
- Life Safety Code Practices

www.mgisys.com/brochure.pdf

## MGI Facility Management Library Partial List of Clients

Veterans Administration – 172 hospitals
Army Medical Command – 37 hospitals
Mayo Clinic – (Scottsdale)
Memorial Sloan-Kettering
Duke Medical
Detroit Medical Centers
Barnes Jewish
UCLA
Robert Woods Johnson
Queens Hospital – (Honolulu)
MD Anderson

# Healthcare EPSS




# Healthcare EPSS - Safety

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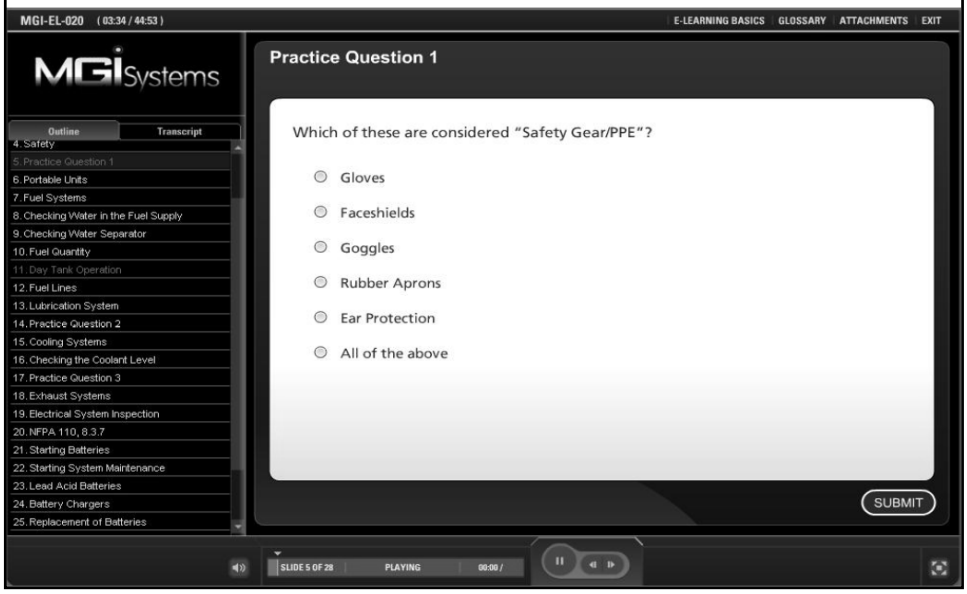
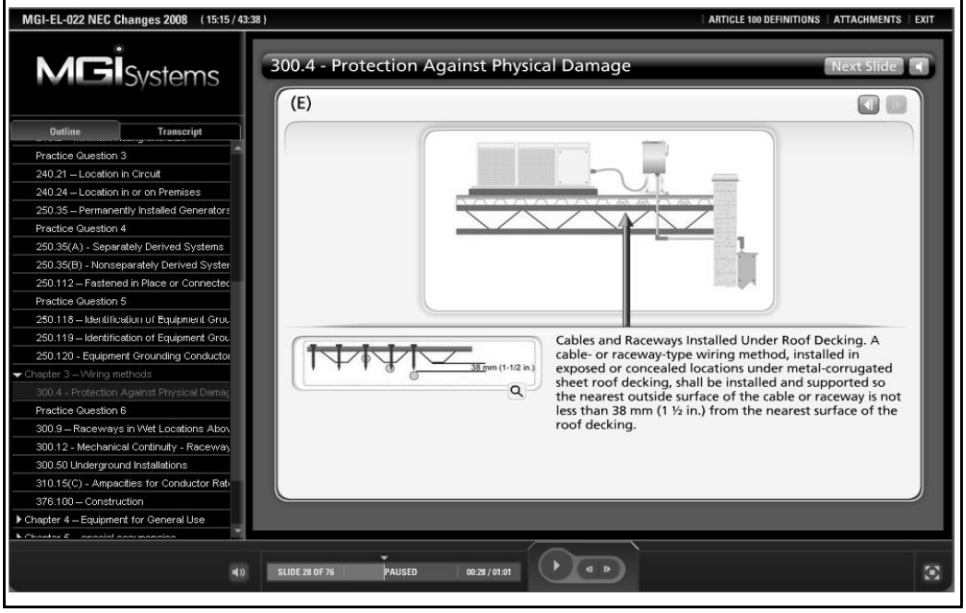



# 2008 NEC Changes for Healthcare



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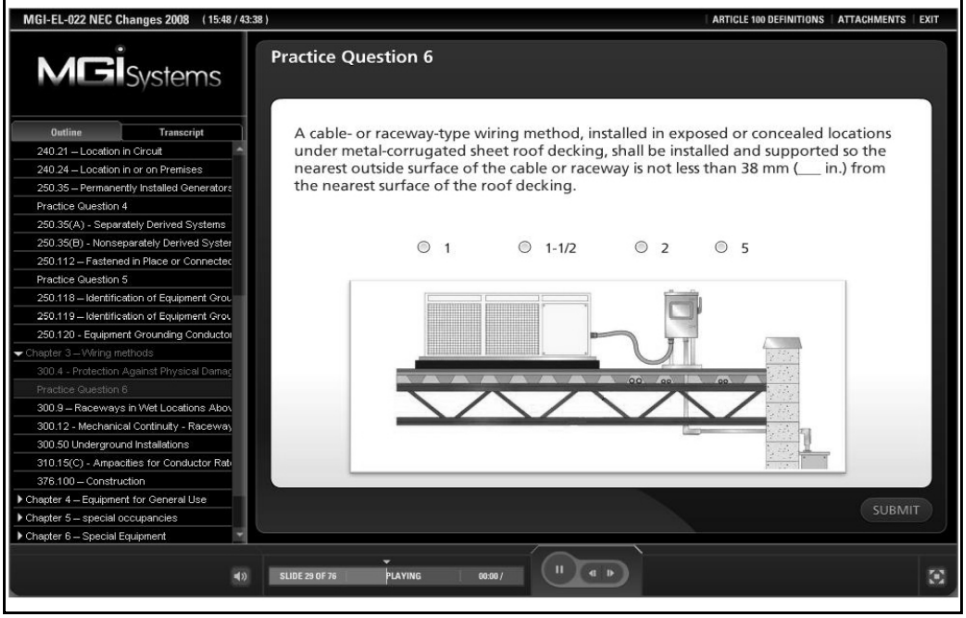
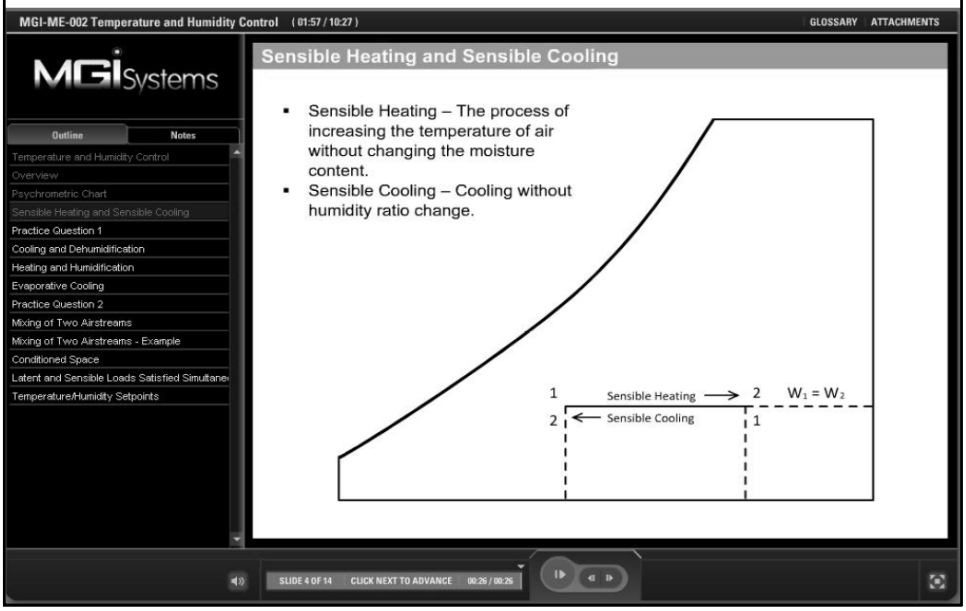



# Healthcare HVAC



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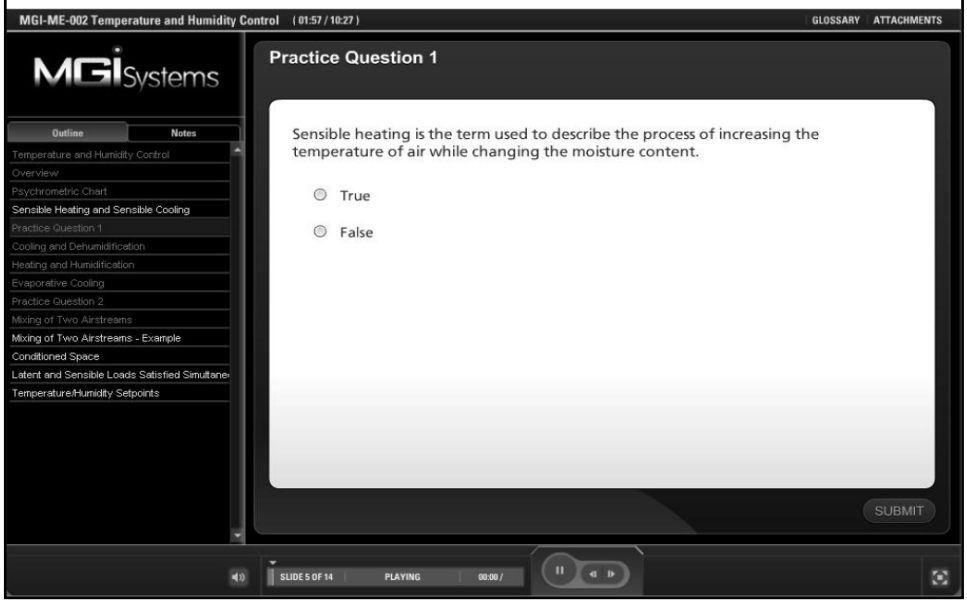
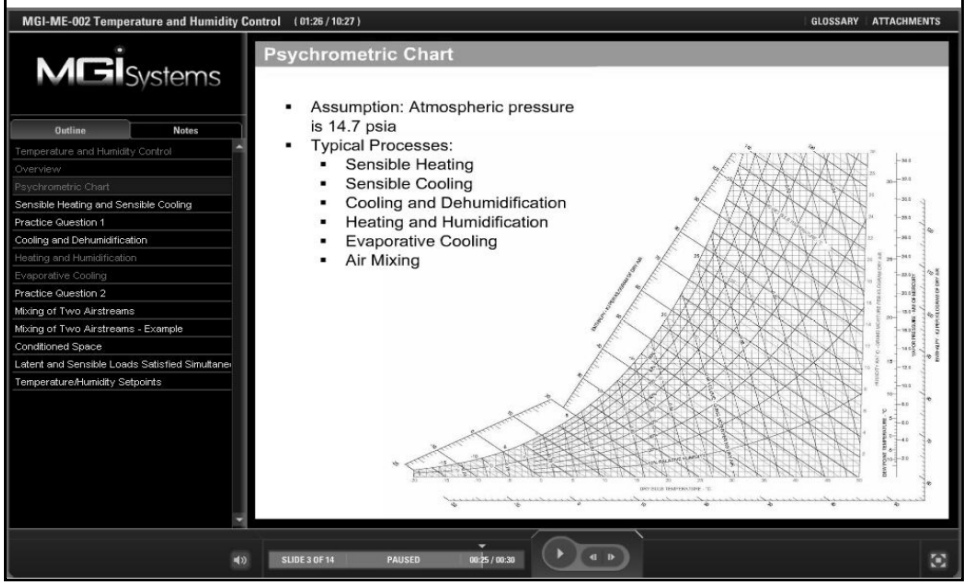



# Healthcare HVAC – Psychrometrics



## MGI Facility Management Library

- Is there any proprietary software needed to install MGI's Library? No, MGI is a Software-as-a-Service (SaaS) provider, so there's no proprietary software to install or upgrade.
- Are the courses available 24x7 if we use MGI's LMS? Yes, your employees can access training assignments anytime, anywhere, from virtually any Internet-connected computer. And you can manage and report on your training efforts the same way. Whether you have 5 employees or 50,000, the MGI Enterprise LMS has the flexibility to fit any environment and the power to get results.

## MGI Facility Management Library

With the MGI system you have the power to:

- Upload current in-house training programs; and, OEM manuals on your equipment
- Duplicate your company's employee hierarchy, allowing you to assign training and track results by employee, department, location or company-wide.
- Track and record every action taken within the system, including both online and offline (classroom-based or hands-on) training activities.

## MGI Facility Management Library

- Train your employees as much as you want on the training titles of your choice for one fixed annual fee.
- Allow your employees to ask questions and provide feedback through our two-way messaging system.
- Access real-time reports on training activities including assignments, completion status and test scores.
- Automate email report distribution to facilitate communication of training progress.

## MGI Facility Management Library

- Create your own delivery to your employees.
- Schedule a series of custom training tasks and assignments for training requirements at pre-selected intervals, perfect for new hire orientation.
- Guarantee recurring annual training assignments are completed with our certification process.
- Issue diplomas to trainees automatically.

Note: The Joint Commission and DNV can be held liable if they don't survey for compliance to education standards.

## Design, Installation, Maintenance and Testing of Emergency Power Supply Systems

Recent litigation stemming from long term power outages affecting patient care, decreased budgets, and proposals to NFPA 99 and NFPA 110/111 are causing specifying engineers and facility directors to “rethink” both the design and installation of emergency power systems. This in turn has created a need for both new and advanced protocols for maintaining, monitoring and testing generators, transfer gear and appurtenant components. Compliance to operational standards, education and reporting must now be both automatic and reliable.

## Litigation Stemming From Power Outages

The petit jury (or trial jury) hears the evidence in a trial as presented by both the plaintiff (petitioner) and the defendant (respondent). After hearing the evidence and often jury instructions from the judge, the group retires for deliberation, to consider a verdict. The majority required for a verdict varies. In some cases it must be unanimous, while in other jurisdictions it may be a majority or supermajority. A jury that is unable to come to a verdict is referred to as a hung jury. The size of the jury varies; in criminal cases there are usually 12 jurors, although Scotland uses 15. In civil cases many trials require only six.

## Litigation and Opportunities Stemming From Power Outages

- Katrina and Andrew
- Fuel Storage – quantity and bi-fuel options
- Location – above flood plane
- Cooling and other “non-essential” loads

## Design Ideas

- N+1, 2, 3, 4, 5
- 2N
- Location
- Commissioning Agents
- Facility Cooling
- IT Cooling
- Connection Cabinets

# Load Banks - Connections

# No Exterior Connection Box

## Door Slams Shut When Generator Starts

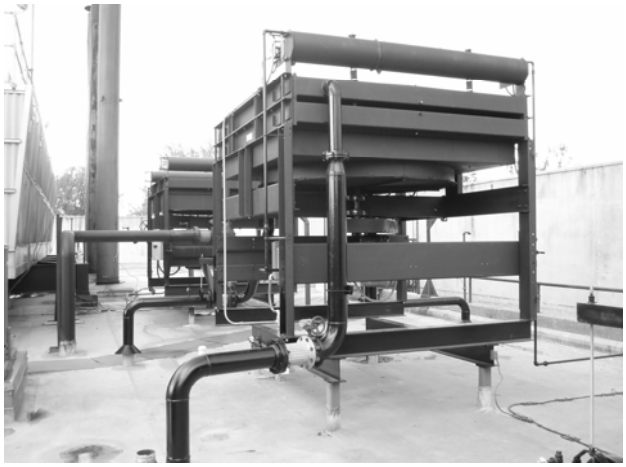
## Load Bank, or Rental EPS, Connection Cabinet

# Cooling

- Vertical Radiators
- Horizontal Radiators
- Baffles – Silencers

# Vertical Radiator

# Horizontal Radiator



# Baffles/Silencers

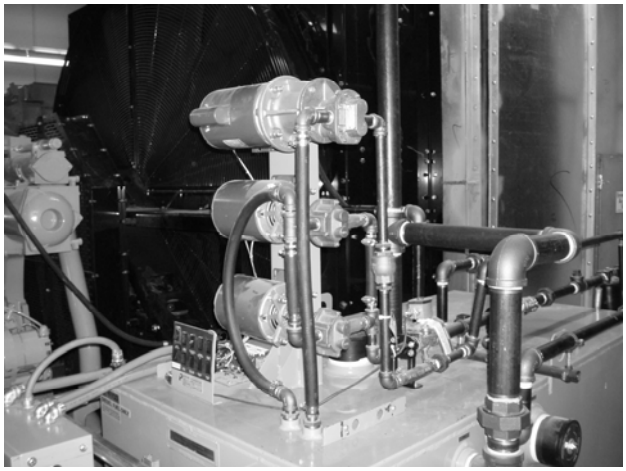
# Fuel Supplies

- Fuel Supplies and Contracts
- Piping
- Installation

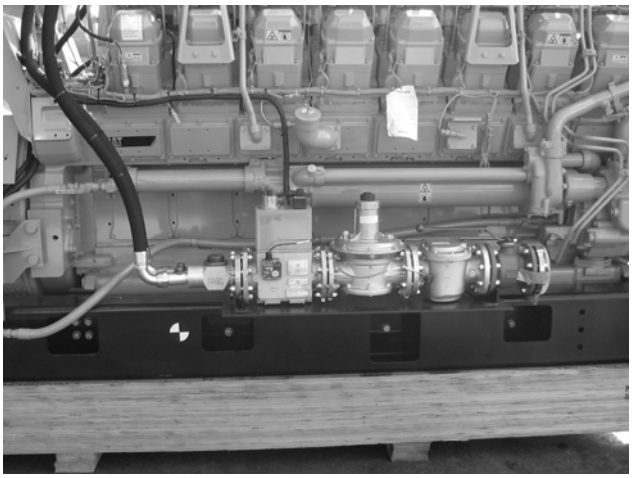
# OK, but could use lockouts. However..

## …what's that thing parked next to the generator?

## Not Best Practice



# Bi-Fueled CAT



# Maintenance and Rental Contracts

- Tie in NFPA 110 8.1.1

  *NFPA 110, 8.1.1 The routine maintenance and operational testing program shall be based on all of the following:*

  *(1) Manufacturer's recommendations*
  *(2) Instruction manuals*
  *(3) Minimum requirements of this chapter*
  *(4) the authority having jurisdiction*

- Rental Units

## Rentals

## Starting Systems

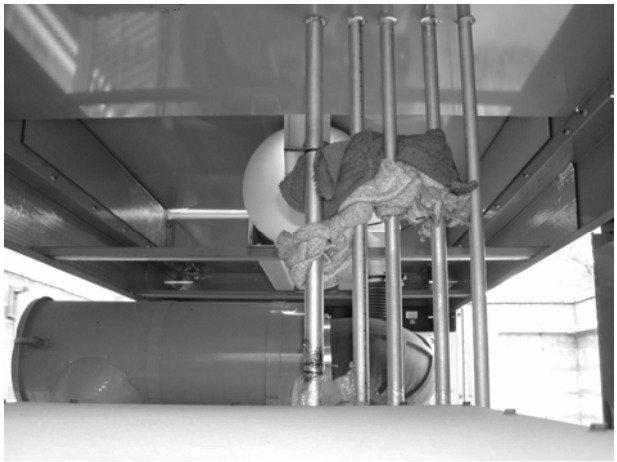
- Ni Cad and Lead Acid
- Lockouts

# Required by OSHA


# Monitoring, Management and Curtailment Systems

## Skyhooks …

## UL Listed Rags…



# Testing

- Basic

  8.4.2 Diesel generator sets in service shall be exercised at least once monthly, for a minimum of 30 minutes, using one of the following methods:

  1. Loading that maintains the minimum exhaust gas temperatures as recommended by the manufacturer.
  2. Under operating temperature conditions and at not less than 30 percent of the EPS nameplate kW rating.
  3. If the engine cannot be loaded as required in (2), the engine shall be operated until the water temperature and the oil pressure have stabilized and then the test shall be terminated before the 30 minute time period expires.

- Dress Rehearsals

# Oops…

## Picture Window

## Baby Sitting – TN Style