

## Policy Update

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The Board members met in Portland, OR, last November. We worked on certification policy. Lately there has been difficulty meeting the testing desires of companies. Here is the problem. Many managers have their operators receiving training as a group (which is good) and want them tested as a group. So, we check the Kryterion scheduling system for locations that can accommodate multiple test takers, concurrently. We are finding that very few Kryterion host sites can meet this need. Test security requirements to preserve RETA's accreditation from the American National Standards Institute (ANSI) make it challenging to find alternative solutions. However, some creative and innovative thinking has brought out a possible solution that is being field tested at this time. We are working out a method where we can appropriately provide multi-seat testing that is more convenient for the operator and the employer.

So, what is the big deal in the first place? RETA must ensure that delivery of a test session is done *evenly across the board*. One aspect of evenness is the physical setting where the test is given. Each testing location must meet strict standards for workspace, computer specs, separation between testing

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## PSM/RMP Compliance

### MECHANICAL INTEGRITY – WHERE TO BEGIN?

— Lee Pyle and Michael Wood, SCS Tracer Environmental

An important part of a PSM program is – **mechanical integrity**. The following regulations require a facility to implement a mechanical integrity program:

- ▶ State and Federal OSHA Process Safety Management (PSM) regulations (29 CFR 1910.119); and
- ▶ EPA Risk Management Program (RMP) (40 CFR Part 68).

The PSM/RMP mechanical integrity program is applicable to all regulated process equipment and requires written procedures. Specifically, the regulation calls out (29 CFR d1910.119(j)(1)) the following process equipment as applicable:

- ▶ Pressure Vessels and Storage Tanks
  - High Pressure Receiver
  - Recirculators
  - Oil Pots
  - Transfer Drums, etc.
- ▶ Piping Systems (including components such as valves)
  - Regulators
  - Insulated/Painted Piping
  - Strainers
  - Solenoid Valves, etc.
- ▶ Relief and Vent Systems and Devices
- ▶ Emergency Shutdown Systems
  - E-Stop (aka Kill Switch)
  - Emergency Refrigerant Control Box (valves and labels), etc.
- ▶ Controls
  - Ammonia Sensors
  - Detection System Actions
  - Vessel Safeties
  - Compressor Safeties, etc.
- ▶ Pumps

Per 29 CFR d1910.119(j)(2), “The employer shall establish and implement written procedures to maintain the on-going *integrity* of process equipment.” What does that mean? Is it just a daily log? Is it via my maintenance contractor? Is it a testing schedule?

According to Merriam-Webster the definition of *integrity* is as follows:

1. Firm adherence to a code of especially moral or artistic values (incorruptibility).
2. An unimpaired condition (soundness).
3. The quality or state of being complete or undivided (completeness).

Synonyms: character, decency, goodness, honesty, morality, righteousness, virtue.

So, when developing your mechanical integrity program (or maintenance schedules), consider the following steps:

#### STEP 1

Include all applicable process equipment per the regulation (29 CFR d1910.119(j)(1)).

#### STEP 2

Consider “*Firm adherence to a code of especially moral or artistic values (incorruptibility).*”

Once you have your list of equipment, you need to consider inspections and tests that

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3) Instructional centers that advertise their prowess in turning out certified operators. They are even more *suspect* since they have opportunity and motive to become familiar with the details of the RETA examinations and focus their instruction toward that content.

As protection against these possible threats, ANSI standards require that RETA create and audit testing procedures that minimize these risks and assure that we can discover and correct such problems if they do occur. Therefore, RETA is required to take steps to verify that test center activities are conducted appropriately whenever RETA exams are being administered

While brainstorming with Dr. Ronald Rodgers, our psychometrician who keeps us on the straight and narrow, we asked ourselves, "What are the two largest concerns?" They are instructor access to the testing environment during a test and the possibility of coaching a test taker during a test. So what if we had a way to look in on a testing center while it was delivering our test and record that session so there'd be evidence to review if an accusation of cheating/coaching occurred? If we had that layer of security, it would be more possible to establish testing at employers' sites and also

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will provide a strong base or code at regular intervals that are backed by a recognized standard (incorruptibility). OSHA and EPA consider equipment manufacturer's recommendations and industry standards for developing your program. More specifically, the International Institute of Ammonia Refrigeration (IIAR) standards and guidelines have been cited by inspectors at ammonia refrigeration facilities. IIAR Bulletin 110 – *Guidelines for: Start-up, Inspection and Maintenance of Ammonia Mechanical Refrigerating Systems* provides details for ammonia refrigeration systems and recommended maintenance and inspection schedules for maintaining *integrity*. This will ensure that your inspection and testing procedures *follow recognized and generally accepted good engineering practices* (29 CFR d1910.119(j) (4) (ii)) and that the frequency is *consistent with applicable manufacturers' recommendations and good engineering practices* (29 CFR d1910.119(j) (4) (iii)). In other words, incorruptible.

### STEP 3

Ensure your program is in *an unimpaired condition (soundness)*.

How could you have a complete mechanical integrity program that is *sound* unless you train your employee/operators? The employer (**you**) shall train each operator involved in maintaining the on-going *integrity* (aka character, virtue) of **your** ammonia refrigeration process in an overview of that process and its hazards and in the procedures applicable to their job tasks to assure that the operators can perform the job tasks in a safe manner (29 CFR d1910.119(j)(3)).

And don't forget – document, document, document this training.

In addition to training operators to ensure soundness of your mechanical integrity program, the owner/operator needs to be sure that equipment associated with new or replacement equipment, as it is fabricated is suitable for the process application for which they will be used (29 CFR d1910.119(j)(6)(i)). At the same time, for new or replacement equipment, the owner/operator needs to ensure the *soundness* or *integrity* of the installation of this equipment (29 CFR d1910.119(j)(6)(ii)) **links your Mechanical Integrity program directly to your Contractor and Management of Change programs** (29 CFR d1910.119(h) and (l)).

### STEP 4

Top off the program with the assurance of *quality or state of being complete or undivided (completeness)*.

This is the topping for your exceptional program and required by OSHA:

- 1) Ensure that you define how to correct deficiencies within your process (29 CFR d1910.119(j)(5)). This could be a work order system, daily log submitted to Chief Engineer, etc.
- 2) If you didn't write it down, it didn't happen... *The employer shall document each inspection and test that has been performed on process equipment* (29 CFR d1910.119(j)(4)(iv)). Here is what is required to be listed:
  - a. Identify the date of the inspection or test,
  - b. Name of the person who performed the inspection or test,
  - c. Serial number or other identifier of the equipment on which the inspection or test was performed,
  - d. Description of the inspection or test performed, and
  - e. Results of the inspection or test.

With these four simple steps, go forth and have integrity!