

SAFETY NOTE 14

ODH COMPETENCY TESTING VERSUS RETRAINING

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In April, Dave Austin asked me if I would conduct ODH requalification training for the personnel of the Magnet Test Facility. They had been receiving this training annually, as required, and Dave tries to get a different instructor each year to keep the presentations interesting. I proposed that we instead give them a written test and then train only those who failed. Dave agreed and I prepared the attached ODH competency exam. The ten questions were intended to assess a basic understanding of ODH and I chose a minimum passing score of 7/10. Most of the questions could be scored "all right" or "all wrong", except (5), (6), and (7) where partial credit could be given.

The employees were unaware that they were going to be tested, believing instead that they would receive routine retraining. Upon completion, the exams were collected and I discussed the correct answers with them. It is my opinion that testing prior to discussion resulted in greater interest and understanding on the part of the employees.

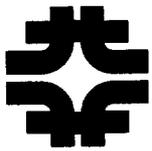
The exam required about three minutes to complete. Scores ranged from 5 3/4 to 10 (average  $8.7 \pm 1.3$ ) with only one employee failing the test. This individual confessed his ignorance and was directed to his supervisor for help in mastering the material.

As a minimum, this exercise showed that testing is a useful adjunct to training and the Magnet Test Facility personnel have a good understanding of ODH. In addition, the completed exams serve as evidence of their competency.

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## OXYGEN DEFICIENCY HAZARDS (ODH)

### Competency Exam

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Instructions: Circle the correct answer(s).

1. The normal concentration of oxygen in air is

9% 11% 13% 15% 18% 21% 24% 27% 30%

2. Significant impairment of function (reduced attention, judgment, and coordination) begins at what concentration of oxygen?

9% 11% 13% 15% 18% 21% 24% 27% 30%

3. Oxygen monitors are set to alarm at what concentration?

9% 11% 13% 15% 18% 21% 24% 27% 30%

4. The most hazardous oxygen deficiency hazard (ODH) class is

1 2 3 4

5. Workers are required to have personal oxygen monitors for which of the following ODH classes? (circle all which apply)

1 2 3 4

6. Medical approval of workers is required for which of the following ODH classes? (circle all which apply)

1 2 3 4

7. Multiple personnel in continuous communication (the "buddy" system) is required in which of the following ODH classes?

1 2 3 4

8. If an oxygen deficiency hazards (ODH) alarm sounds in the area where you are working, your first priority should be to

- a) Turn off the alarm
- b) Ask the area emergency supervisor what to do
- c) Leave the building
- d) Make sure your co-workers are safe
- e) Dial 3131 to report the incident

9. If you are standing outside of a building and an oxygen deficiency hazards (ODH) alarm sounds in the building, your first priority should be to
- a) Stay where you are
  - b) Quickly enter the building and rescue as many people as possible
  - c) Ask the area emergency supervisor what to do
  - d) Dial 3131 to report the incident
  - e) Carefully enter the building to turn off the alarm
10. Self-rescue supplied atmosphere respirators (escape packs) are designed to last
- a) 2-3 minutes
  - b) 5-15 minutes
  - c) 20-30 minutes
  - d) 40-60 minutes