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EVALUATION OF S-101 COURSE
"SUPERVISORS ORIENTATION TO OCCUPATIONAL
SAFETY IN DOE" TAUGHT IN
ARGONNE, ILLINOIS
AUGUST 18-21, 1992

T.S. Wright

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Pacific Northwest Laboratory
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MASTER

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1.0 SUMMARY

This section summarizes trainee evaluations for the Safety Training Section course, "Supervisors' Orientation to Occupational Safety in DOE", (S-101) which was conducted August 18-21 at Argonne National Laboratory, in Argonne, Illinois.

Sections 1.1 and 1.2 of this report summarize the quantitative course evaluations that trainees provided upon completion of the course. Section 1.3 provides written comments, and section 1.4 provides the attendees examination results. Appendix A provides a transcript of the trainees' written comments. The students commented that both instructors were knowledgeable and interesting. This is reflected in the ratings. Appendix B provides the trainee evaluation form.

Numeric course ratings were generally positive and show that the course material and instruction were very effective. Written comments supported the positive numeric ratings. The course content and knowledge gained by the trainees exceeded most of the students' expectations of the course.

A continuing problem is the lack of attendees at the various sites, Argonne has twice had low attendance. It is recommended that this site be combined with another for all future classes.

Results from the final examination showed that students gained significant knowledge from the course. One student critiqued the test questions and provided valid information that will be used to improve the test.

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1.1 SUMMARY OF TRAINEE COURSE EVALUATION

This course was conducted at Argonne National Laboratory in Argonne, Illinois, August 18-21, 1992. Charles Aiken and Carl Heise presented the course to 13 Argonne National Laboratory employees.

1.2 NUMERIC RATINGS

Twelve trainees completed a course evaluation form upon finishing the course. The first rating area of the form covered seven items dealing with course content; the second rating area covered one item dealing with testing materials; and the third rating area covered 15 items specifically associated with course topic areas.

For the first and second rating areas, respondents were instructed to rate the degree to which they agreed or disagreed with each statement using a five-point scale with 1 (low) "strongly disagree" and 5 (high) "strongly agree". The ratings are as follows:

COURSE CONTENT AND TESTING MATERIALS RATINGS

1. Developed specific skills and competencies in health and safety that I can use as a supervisor on the job.
Average Class Rating - 4.18
2. Gained a greater understanding of safety liability, hazard recognition, hazard evaluation and hazard control.
Average Class Rating - 4.17
3. Gained factual knowledge about health and safety issues and procedures (terminology, classifications, regulations).
Average Class Rating - 4.50
4. Learned fundamental principles, generalizations, and theories.
Average Class Rating - 4.42
5. Can use the course materials to improve thinking, problem-solving, and decision-making of supervisory health and safety work.
Average Class Rating - 4.25

6. Would recommend this course to others.

Average Class Rating - 4.67

7. This course will help supervisors to make their work environments safer.

Average Class Rating - 4.58

8. The final test was a good measure of the knowledge gained in the course.

Average Class Rating - 4.25

The average class rating for the course content area and testing materials area was 4.38. This high rating reinforces the applicability of the course content to the trainees' interests and work environments.

The students comments reflected their approval of the instructors. The instructors seemed to have the technical background that could help Argonne with specific problems. Efforts will be made in the future to review Tiger Team reports from the sites and attempt to reflect instructors with the background to help resolve problems.

The third rating area asked the respondents to rate the value of each of the fifteen topic areas using a five-point scale with 1 (Unsatisfactory), 2 (Satisfactory), 3 (Good), 4 (Very Good), or 5 (Excellent). The following are the average class ratings that dealt with topic content as well as with the value of the instructor:

INSTRUCTOR	TOPICAL AREAS PRESENTED	CONTENT	INSTRUCT
Charles Aiken	Introduction to DOE Safety and Health Program	3.75	4.42
Charles Aiken	Safety Responsibility	4.42	4.58
Carl Heise	Electrical Hazards	4.17	4.42
Charles Aiken	Fire Hazards	4.42	4.50
Carl Heise	Material Handling and Storage	4.25	4.50
Charles Aiken	Physical Hazards	4.25	4.42
Charles Aiken	Chemical Hazards	4.25	4.42
Charles Aiken	Confined Space Hazards	4.50	4.67
Carl Heise	Hazard Communication	4.17	4.67
Carl Heise	Hand and Portable Power Tools	4.17	4.58
Carl Heise	Machine Safeguards	4.25	4.50
Carl Heise	Inspections and Investigations	4.17	4.58
Charles Aiken	Job Safety Analysis	3.92	4.42
Charles Aiken	Measurement and Testing	4.08	4.58
Carl Heise	Hazard Reduction and Elimination	4.25	4.58

The overall average class rating for specific topic content was 4.20. The overall average class rating for the instructors in general was 4.52. The average instructor rating for Charles Aiken was 4.50, overall rating for Carl Heise was 4.55.

1.3 WRITTEN COMMENTS

After providing numeric course evaluations, participants provided written comments about the course. Written comments were transcribed and are presented in Appendix A.

1.4 EXAMINATION RESULTS

On the last day of the course, a final examination was administered to thirteen attendees. There were 25 multiple-choice questions. The scores ranged from 72% to 100%, with the average score being 84%. Thirteen persons successfully completed the class. However, the scores are relatively low. One student critiqued the exam. His comments, along with others will be used to re-evaluate the exam.

APPENDIX A

EVALUATION COMMENTS

"SUPERVISORS' ORIENTATION TO OCCUPATIONAL SAFETY IN DOE"

AUGUST 18-21, 1992

ARGONNE, IL (ARGONNE NATIONAL LABORATORY)

APPENDIX A

TRAINEE EVALUATION RESPONSES

S101, "SUPERVISORS' ORIENTATION TO OCCUPATIONAL SAFETY IN DOE"

AUGUST 18-21, 1992--ARGONNE, IL

ARGONNE NATIONAL LABORATORY

Please briefly describe how your expectations of this course were or were not met.

While I expected that it would lean heavier on DOE order implementation, the OSHA coverage was excellent.

The content of course was more than what I expected.

They were good instructors - very well knowledgeable.

Checking codes.

Gained a working knowledge of CFR 1910.

My expectations were met.

The course provided increased awareness of the safety side of OSHA; an area that I have not had a great deal of formal exposure to.

Met expectations.

I feel better prepared to deal with this subject.

Great introduction to OSHA.

The most helpful topics covered or activities presented in this course were:
Figuring out how to find the regulations with some degree of confidence.
Practice (and color coding) will help me later.

Material handling. DOE/OSHA.

Safety features.

Electrical.

Worksheet on finding violation/walk-through mock inspection.

Walk-through inspection.

Machine guarding, electrical and material handling.

Coverage of CFR.

Chapters 3, 5, 12, and 13.

Hazcom, confined space, chemical hazards.

All were of interest.

The least helpful things discussed or done were:

Confined area, for my area.

Fire hazards.

A lot of the safety discussions, I personally have had in other classes, but it's always good to review and pick up new things.

Chemical hazards, monitoring and JSA. 1 and 2 based on my previous experience, based on lack of depth in course presentation.

Requirements and consequences.

More emphasis should be given to:

JSA.

Mechanical system safety shutdown.

Walk-through, OSHA standards.

Inspection techniques, JSA's, DOE requirements that are above and beyond OSHA regulations.

Ways to anticipate OSHA directives.

Less emphasis should be given to:

Confined area, for my area.

Keep the same.

The requirements of specific chapter and verse citations of OSHA regulations.

Looking up specific citations.

What specific suggestions do you have for improving future sessions?

If time permits, more slides of actual workplace situations. This is good hazard identification practice.

None, I think the course was excellent.

Dedicate more time for walk-through inspections.

Have all class materials here at beginning of class. Integrated DOE specifics into course.

Other materials to supplement or substitute for the provided handouts?

Would love to have some of Carl's AD's, etc...

More on hazards, chemicals.

Good.

Enjoyed the pertinent newspaper articles and examples of violations resulting in an injury.

Copy of all overheads.

Daily schedule/timing of activities, worktime?

Good.

Great.

Okay.

Fine.

The schedule was fine.

Excellent.

Facilities/training room arrangements?

Good.

Very comfortable.

Great.

Very good.

Good, water needed.

Fine.

Adequate.

What other types of safety training courses would you like to see available?
More detail for each section and levels on inspection.

More advance courses in this area.

More on chemical and electrical.

Piping system.

Facilitating employee instruction.

Covering any subject covered in course.

More specifics on materials handling, slings, wire rope, rigging.

Any further comments?

Test questions should be revised as follows:

13. The hazard communication standard is not an ACI!

9. It would be more appropriate to include a time period with the exposure; The "action level" is really 85 dBA exposure as an 8 hour TWA.

19. I think this question would be more accurate if you said subpart S or 301-399. 301 is only sort of the OSHA regulations covering electrical safety.

23. The answer to this question should include an egress or emergency escape bottle with the air line resp.

Extremely well presented! Both instructors were very knowledgeable and interacted well with the students. A very positive learning experience.

I think the team teaching concept was excellent, two very excellent instructors.

You guys did a great job. You made OSHA fun!

APPENDIX B

TRAINEE EVALUATION FORM

EVALUATION FORM

S-101—Supervisors Orientation to Occupational Safety in DOE

Date _____
 Name (optional) _____
 Title _____
 Location _____

Please evaluate various features of the course you have just completed. The information you provide here will be combined with that from other trainees and summarized for the sponsor, the U.S. Department of Energy. Results from this evaluation will be used to improve this course.

Course Content	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Overall, as a result of this course I believe that I:					
developed specific skills and competencies in health and safety that I can use on the job.	5	4	3	2	1
gained a greater understanding of safety liability, hazard recognition, hazard evaluation and hazard control.	5	4	3	2	1
gained factual knowledge about health and safety issues and procedures (terminology, classifications, regulations) ...	5	4	3	2	1
learned fundamental principles, generalizations, and theories.	5	4	3	2	1
can use the course materials to improve thinking, problem-solving, and decision-making of supervisory health and safety work.	5	4	3	2	1
would recommend this course to others.	5	4	3	2	1
this course will help supervisors to make their work environments safer.	5	4	3	2	1

Testing Materials	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
The final test was a good measure of the knowledge gained in the course.	5	4	3	2	1

Topic Areas

Please evaluate each topic area using the 5-point scale below.

5 Excellent 4 Very Good 3 Good 2 Satisfactory 1 Unsatisfactory

	Content	Instructor
Introduction to DOE safety and health program	5 4 3 2 1	5 4 3 2 1
Safety responsibility	5 4 3 2 1	5 4 3 2 1
Electrical hazards	5 4 3 2 1	5 4 3 2 1
Fire hazards	5 4 3 2 1	5 4 3 2 1
Material handling and storage	5 4 3 2 1	5 4 3 2 1
Physical hazards	5 4 3 2 1	5 4 3 2 1
Chemical hazards	5 4 3 2 1	5 4 3 2 1
Confined space hazards	5 4 3 2 1	5 4 3 2 1
Hazard communication	5 4 3 2 1	5 4 3 2 1
Hand and portable power tools	5 4 3 2 1	5 4 3 2 1
Machine safeguards	5 4 3 2 1	5 4 3 2 1
Inspections and investigations	5 4 3 2 1	5 4 3 2 1
Job safety analysis	5 4 3 2 1	5 4 3 2 1
Measurement and testing	5 4 3 2 1	5 4 3 2 1
Hazard reduction and elimination	5 4 3 2 1	5 4 3 2 1

Comments

1. Please briefly describe how your expectations of this course were or were not met. _____

2. The most helpful topics covered or activities presented in this course were: _____

3. The least helpful topics or activities in this course were: _____

4. More emphasis should be given to: _____

5. Less emphasis should be given to: _____

6. What specific suggestions do you have for improving future sessions?

7. Other materials to supplement or substitute for the provided handouts? _____

8. Daily schedule/timing of activities, worktime? _____

9. Facilities/training room arrangements? _____

10. What other types of safety training courses would you like to see available? _____

11. Any further comments? _____

12. **Overall rating:** Based on your comments above, please rate the course on a 5-point scale by circling the number of your choice.

5 Excellent 4 Very Good 3 Good 2 Satisfactory 1 Unsatisfactory

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Technical Information

DOE Richland Field Office

Dr. Segna

R. E. Gibbs
Office of Occupational Safety
U.S. Department of Energy
19901 Germantown Rd.
Germantown, MD 20874

14 Pacific Northwest Laboratory

H. N. Bowers
T. S. Wright
C. C. Aiken
M. A. Leckband (5)
Publishing Coordination
Technical Report Files (5)

G. R. Florczak
U.S. Department of Energy
EH-31.2
19901 Germantown Rd.
Germantown, MD 20874

Carl Heise
1145 Saddle Ridge
Portage, WI 53901

Sue Dornfeld
Argonne National Laboratory
9700 S. Cass Ave.
Argonne, IL 60439

END

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