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EVALUATION OF S-101 COURSE
"ORIENTATION TO OCCUPATIONAL SAFETY
COMPLIANCE IN DOE" TAUGHT IN
ALBUQUERQUE, NEW MEXICO
DECEMBER 16, 1991 - DECEMBER 19, 1991

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MASTER

CONTENTS

1.0	SUMMARY--SANDIA NATIONAL LABORATORY (DECEMBER 16 TO 19,1991)	1.1
1.1	SUMMARY OF TRAINEE COURSE EVALUATIONS AT SANDIA	1.1
1.2	NUMERIC RATINGS	1.1
1.3	WRITTEN COMMENTS	1.5
1.4	EXAMINATION RESULTS	1.5
	APPENDIX A - EVALUATION COMMENTS	A.1
	APPENDIX B - TRAINEE EVALUATION FORM	B.1

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 December 16-19 at Sandia National Laboratory, in Albuquerque, New Mexico.

Section 1.1 and 1.2 of this report summarizes the quantitative course evaluations that trainees provided upon completion of the course. Appendix A provides a transcript of the trainees' written comments.

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.

Results from the final examination showed that students gained significant knowledge from the course.

1.1 SUMMARY OF TRAINEE COURSE EVALUATION AT SANDIA

This course was conducted at Sandia National Laboratory, in Albuquerque, New Mexico, December 16-19, 1991. One instructor and a course administrator presented the course to twenty-eight Sandia National Laboratory and Cortez III personnel.

1.2 NUMERIC RATINGS

Twenty-seven 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 two items dealing with testing materials; and the third rating area covered twelve 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) anchored to "strongly disagree" and 5 (high) anchored to "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 - 3.60
2. Gained a greater understanding of safety liability, hazard recognition, hazard evaluation and hazard control.
Average Class Rating - 3.52
3. Gained factual knowledge about health and safety issues and procedures (terminology, classifications, regulations).
Average Class Rating - 3.48
4. Learned fundamental principles, generalizations, and theories.
Average Class Rating - 3.26
5. Can use the course materials to improve thinking, problem-solving, and decision-making of supervisory health and safety work.
Average Class Rating - 3.33
6. Would recommend this course to others.
Average Class Rating - 3.41
7. This course will help supervisors to make their work environments safer.
Average Class Rating - 3.37
8. The final test was a good measure of the knowledge gained in the course.
Average Class Rating - 3.19
9. The final test (and pre-test) thoroughly covered materials and instruction presented in the course.
Average Class Rating - 3.15

The average class rating for the course content area and testing materials area was 3.37. This high rating reinforces the applicability of the course content to the trainees' interests and work environments.

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	INSTRUCT	CONTENT
Tommye Wright	Introduction to DOE Safety and Health Program	3.78	3.48
Tommye Wright	Safety Responsibility	3.81	3.74
Charles Aiken	Electrical Hazards	3.74	3.63
Charles Aiken	Fire Hazards	3.96	3.96
Tommye Wright	Material Handling and Storage	3.56	3.44
Tommye Wright	Physical Hazards	3.63	3.59
Charles Aiken	Chemical Hazards	3.67	3.67
Tommye Wright	Confined Space Hazards	3.70	3.78
Tommye Wright	Hazard Communication	3.63	3.74
Charles Aiken	Hand and Portable Power Tools	4.74	3.52
Charles Aiken	Machine Safeguards	3.81	3.48
Charles Aiken	Inspections and Investigations	3.67	3.33
Tommye Wright	Job Safety Analysis	3.56	3.41
Charles Aiken	Measurement and Testing	3.44	3.44
Charles Aiken and Tommye Wright	Hazard Reduction and Elimination	3.63	3.56

The overall average class rating for specific topic content was 3.58. The overall average class rating for the instructors in general was 3.69.

1.3 WRITTEN COMMENTS

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

1.4 EXAMINATION RESULTS

On the last day of the course, a final examination was administered to twenty-eight attendees. There were 25 questions including 16 multiple choice questions and 9 questions that required the trainees to list the appropriate answers. The scores ranged from 88% to 100% with the average score being 94.2%. Twenty-eight persons successfully completed the class.

APPENDIX A

EVALUATION COMMENTS

"SUPERVISORS' ORIENTATION TO OCCUPATIONAL SAFETY IN DOE"

DECEMBER 16, 1991 - DECEMBER 19, 1991

ALBUQUERQUE, NM (SANDIA NATIONAL LABORATORY)

APPENDIX A

TRAINEE EVALUATION RESPONSES

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

DECEMBER 16-19, 1991--ALBUQUERQUE, NM

SANDIA NATIONAL LABORATORY

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

Was expecting a more advanced course.

For safety professionals--why are we here? ES&H Coordinator/Supervisors need to better define the goals, not to use the OSHA Regulations

Course took too long to give me the information (3 and 1/2 days).

Not enough on radiation.

I expected more depth of coverage.

Would have liked course to be more oriented to supervisory duties and responsibilities.

Different overview than DOL OSHA course.

I thought course should be more detailed in identifying compliance issue. Okay for overview though.

Gained better understanding of OSHA standards.

Felt more time needed to go into manual itself.

I would have liked more detail in some areas, although I recognize that time is limited.

Good general introduction. Expectations were met.

Would prefer more training in inspections.

Would have preferred to spend more time in CFR. I have a tendency to leave course notebooks on my shelf.

Able to reference regs and hazard. Would have liked more detail into CFR 1910.

I had no expectations, but the course was good.

I believe I can now go to my job being more aware of safety.

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

Some of the problems/confusion with using and interpreting OSHA a lot of answers are not in OSHA.

Overview of the topics in 29 CFR 1910.

All were very helpful.

Electrical, confined space, OSHA Regs.

Fire, chemical, machine safeguards.

Overview of workplace hazards.

Toxic chemical hazards.

Learning to read 29 CFR 1910.

Physical and chemical hazards.

Recordkeeping.

Machine guarding.

Confined space, chemical hazards.

Fire, electrical, chemical material storage.

Explanation of 29 CFR 1910 regulations.

Electrical hazards, machine guarding, PPE.

Machine guarding, electrical, hazard reduction.

Learning how to look things up in 29 CFR 1900.

Confined spaces, job safety analysis, requirements and consequences.

The least helpful things discussed or done were:

Basic safety summaries (e.g., fire extinguisher; stuff we already get).

Material handling.

How to find/mitigate workplace hazards.

Job safety analysis (already had it in machine guarding).

Recordkeeping.

Hazcom.

All were good.

Confined space, JSA inspection.

JSA.

Hazard communication.

More emphasis should be given to:

Examples of shop machine guarding.

Shorter duration. For SNL supervisors (as advertised: fewer examples, more quick highlights).

More specific CFR hands-on activity. More on Hazcom and Lab standards. 1200 and 1450.

Chemical and radiation hazards and inspections.

Electrical safety. DOE facilities.

Materials handling and storage, Lab standard inspections.

Hazard reduction and elimination.

Inspections and investigations. Need to be more specific on what to look for and how to perform.

29 CFR 1910.

Hazcom, lab standard.

About rights for supervisors.

On site inspections: learn by doing, not by reading regulations.

Regulatory compliance and handout chapters 3-9.

Cranes/hoists (Subpart N), hand tools, walking-working surfaces.

Hazcom and machine guarding.

Material handling.

Less emphasis should be given to:
Measurement and testing.

How regs are numbered.

Chapters 11-13.

Regs.

Notebook.

Machine safeguarding and other highly specific hazard mitigation techniques.

The navy.

Time consuming activities (walk-through and some exercises).

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

Responsibilities of participants not understood: Sandia problem.

Some homework would not hurt.

Follow course outline. Better slides and videos.

Better viewgraphs giving more visual impact.

Would like to be able to leave materials in classroom.

Learn companies policies and relate course to them. Use as reference so more time can be spent covering company regulated undefined areas.

Electrical behind the receptacle.

Slides excellent

It would be useful to have the ES&H experts from Fire org. give input to class that is specific for that group of people.

More time spent in CFR rather than viewgraphs.

Delve more into the CFR.

Always have the viewgraph machine working. The hazard assessment that we did was too silly, so I don't think we really learned how to do one.

More video.

Other materials to supplement or substitute for the provided handouts?
Have handouts of other supplemental projected charts

No additional handouts.

Notebook good. Basic information.

Most instruction did not follow handouts, yet, test was taken out of handouts.

Life safety code or portion of it.

DOE orders 5480.4 and 5483.1A.

Most instructors did not follow handouts, yet, test was taken out of handouts.

Handout about book numbering.

Pressure safety standards.

NEC, NFPA, handouts.

Handouts summarize 29 CFR 1910 content.

Daily schedule/timing of activities, worktime?
Moved right along but not overwhelming.

Fine

8:30 works better for me.

Excellent.

Fine.

Was good, adequate breaks, field activity was good.

Too long.

Facilities/training room arrangements?
Adequate, like it away from inside tech area.

Fine.

Excellent

Problems with A/V equipment.

Good.

Fine.

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

Specific work shop for safety engineers on OSHA.

Specific courses on may topics covered here.

NEPA.

I would like to see SNL ESH manual training with CFR. Also NEC and NFPA for lad workers.

NFPA, NEPA, RCRA.

Electrical safety for the general site worker. Video.

Detailed interpretations of 29 CFR 1910 Subparts D, E, F, I, J, L, M, N, O, P, Q, S.

NFPA

Life safety course, conduct of operations.

Other regulations 10 CFR.

Any further comments?

Good class. Very informative!

Always learn a few things. Not directed toward safety professional. Good for supervisors in that understand some of the problems involved with compliance.

Instructors knowledgeable and enjoyable.

Good course, good instructors, overall very beneficial.

Training is moving in the right direction.

The course lacked good transitional flow from topic to topic. Abrupt shifts.

Would like to see more in class work out of CFR manual instead of viewgraphs.

Should not allow phones and beepers in class.

APPENDIX B

TRAINEE EVALUATION FORM

EVALUATION FORM

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

	5	4	3	2	1	5	4	3	2	1
Introduction to DOE safety and health program5	4	3	2	1		5	4	3	2	1
Safety responsibility5	4	3	2	1		5	4	3	2	1
Electrical hazards5	4	3	2	1		5	4	3	2	1
Fire hazards5	4	3	2	1		5	4	3	2	1
Material handling and storage5	4	3	2	1		5	4	3	2	1
Physical hazards5	4	3	2	1		5	4	3	2	1
Chemical hazards5	4	3	2	1		5	4	3	2	1
Confined space hazards5	4	3	2	1		5	4	3	2	1
Hazard communication5	4	3	2	1		5	4	3	2	1
Hand and portable power tools5	4	3	2	1		5	4	3	2	1
Machine safeguards5	4	3	2	1		5	4	3	2	1
Inspections and investigations5	4	3	2	1		5	4	3	2	1
Job safety analysis5	4	3	2	1		5	4	3	2	1
Measurement and testing5	4	3	2	1		5	4	3	2	1
Hazard reduction and elimination5	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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