

Trip Report

On December 19, 1996, Alan Roecklein met with

Bill Cooper, Health Physicist Supervisor
Emily Gregory, Respiratory Protection Analyst
John Stump, Respirator Maintenance Engineer

all of Oyster Creek NPP, to discuss possible changes to the NRC regulations and guidance regarding Respiratory Protection. The agenda for the discussion was the attached draft table of changes under consideration by the NRC technical staff.

Highlights of the discussion were as follows:

- The Oyster Creek (OC) respiratory protection program adheres strictly to the regulations. Because of this position OC would not use disposable respirators that are not listed in Appendix A of 10 CFR Part 20. OC does issue face protectors such as papercups or surgeon's masks to protect against facial contamination only if they are not called respirators.
- Contamination control procedures at OC would preclude use of reusable disposable respirators. A change in OC program would be needed in order to take advantage of cost savings associated with reusable disposables.
- The APF for fullface, airline, pressure demand mode should remain at 2,000 as approved by ANSI rather than 1,000. There is a need for an option between APF = 1,000 and APF = 10,000. Sand blasting for decontamination is an example.
- The proposed requirement that fit testing exceed 10 X the APF for negative pressure devices is not a burden for OC because they use a factor of 1,000 anyway.
- OC staff suggested adding the underlined words in the following:

§ 20.1703(b)(1) If the selection of a respiratory protection device with an assigned protection factor greater than the multiple defined in the preceding sentence is inconsistent with the goal specified in § 20.1702 of keeping the TEDE ALARA, the licensee may select equipment with a lower protection factor if such a selection would result in keeping the TEDE ALARA or reduce other risks such as accident due to vision impairment or excessive stress.
- The NRC staff suggestion that Regulatory Guide 8.15 address the frequency of fit testing (not to exceed 3 years) is not a problem for OC

- staff because OSHA currently requires a retest of fit every 6 months.
- OC staff said that if the APF's were in a regulatory guide they would not be enforceable. OC would probably use the regulatory guide but would have to do a costly license amendment to incorporate the regulatory guide into their license.
 - OC staff said that they are not able to use the new guidance from ANSI now because their program is tied tightly to the regulations. They would like to use the newer, more technically defensible Z-88.2 recommendations, and would welcome NRC rulemaking.
 - OC staff suggested several items of technical merit for inclusion in the revision of NUREG-0041.

SUMMARY OF PROPOSED CHANGES TO SUBPART H OF PART 20

Changes	Burden Increase, Reduction, No Change	Discussion
§ 20.1701 add "decontamination" to list of engineering examples	No Change	Intent to encourage licensees to cleanup to avoid resuspension and inhalation.
§ 20.1703(a) delete "pursuant" to § 20.1702	No Change	Removes misinterpretation that if concentration is less than 1 DAC then don't need program as described in § 20.1703; clarifying.
§20.1703(a)(1) delete "or had certification extended"	No Change	All of these extensions have expired and no new extensions will be granted. Corrective.
§ 20.1703 (a)(2) delete "has not had certification extended by NIOSH/MSHA	No Change	All of these extensions have expired and no new extensions will be granted. Corrective.
§ 20.1703(a)(2) "to the Commission" added	No Change	Makes clear that application for use of equipment goes to the Commission. Clarifying.
§ 20.1703(a)(3)(iv) revised for clarity	No Change	Combine all existing requirements for written procedures in one place. Clarifying.
Add § 20.1073(a)(3)(vi) with fit test criteria	No Change	Requirement for fit testing is moved from footnote in Appendix A to body of rule and quantitative criteria for fit test codified.

SUMMARY OF PROPOSED CHANGES TO SUBPART H OF PART 20 (cont.)

Changes	Burden Increase, Reduction, No Change	Discussion
§ 20.1703(a)(4), Policy Statement, deleted	Reduction	Requirement to write policy statement regarding program elements is deleted. Requirement for written procedures remains. Burden reduction.
§ 20.1703(a)(6) [becomes (5)] adds requirement to provide for vision correction, communication and low temperature considerations	Increase	Codifies existing requirements for vision and communication. Adds consideration of low temperature freezing of exhalation valve.
§ 20.1703(a)(6) [becomes (5)] skin protection deleted	Reduction	Removes reference to protection against contamination as a special capability of respirators.
§ 20.1703(a)(6) added	No Change	Moves requirement for standby rescue person from footnote in Appendix A to rule.
§ 20.1703(a)(7)	No Change	Moves requirement to provide quality and quantity of breathing air from footnote in Appendix A to rule.
§ 20.1703(a)(8)	No Change	Moves prohibition of facial hair or other impediments to a good seal from footnote in Appendix A to body of the rule.
§ 20.1703(b)	No Change	"take credit for" is used rather than "make allowance for" to better indicate purpose of APF. Reference to § 20.1702 is deleted.

SUMMARY OF PROPOSED CHANGES TO SUBPART H OF PART 20 (cont.)

Changes	Burden Increase, Reduction, No Change	Discussion
§ 20.1703(b)(1)	No Change	A comparison of an APF to a concentration is corrected, and average concentration is changed to ambient concentration.
§ 20.1703(b)(2) new	No Change	Purpose of APF is written more clearly.
§ 20.1703(b)(new 3)	No Change	New terminology "Assigned Protection Factor" is used.
§ 20.1703(c) is deleted	No Change	Requirement to use as emergency devices only equipment certified by NIOSH/MSHA for emergency use is deleted because this special certification category no longer exists.
§ 20.1703(d) is deleted	Minor Reduction	Requirement to notify region in writing 30 days before use of a respirator is deleted. Requirement is redundant with license application, renewal and amendment process.
§ 20.1704(a) is amended	No Change	Reiterates requirement to maintain total dose ALARA when imposing restrictions on the use of any respiratory equipment.
Appendix A Column labeled "Tested and Certified Equipment" is deleted	No Change	Not useful to NRC. Instructions for determining NIOSH approval will be in NUREG-0041.

SUMMARY OF PROPOSED CHANGES TO SUBPART H OF PART 20 (cont.)

Changes	Burden Increase, Reduction, No Change	Discussion
Footnote (a) to <u>current</u> Appendix A is deleted	No Change	Requires air sampling. Redundant with requirement in body of rule.
Footnote (b) is deleted	No Change	Restriction on facial hair and other impediments to mask seal is moved to body of rule.
Footnote c is revised - becomes b	No Change	Mode of operation symbols revised to fit new terminology.
Footnote d.1 is deleted	No Change	Discussion of meaning of the use of APF is redundant with § 20.1703(b)(2).
Footnote d.2 is deleted	No Change	Requirements that respirator users be trained and fitted is redundant with provisions in the body of the rule.
Footnote d.2(b) is deleted	No Change	Specifies HEPA filters, sufficient oxygen and absence of radioactive gases and vapors to use APF. Redundant with 30 CFR Part II and guidance in Regulatory Guide 8.15.
Footnote d.2(c) is deleted. Prohibition against use of sorbents for radioactive gases is retained as footnote d.	No Change	Requirement retained as footnote d
Current footnote d.2(d), deleted moved to rule at § 20.1703(a)(7)	No Change	Restates NIOSH approved criteria for use of SCBA. Sufficient guidance in Regulatory Guide 8.15 and NUREG-0041.

SUMMARY OF PROPOSED CHANGES TO SUBPART H OF PART 20 (cont.)

Changes	Burden Increase, Reduction, No Change	Discussion
Footnote e retained as d and corrected	No Change	Examples of calculated effective protection factor for case of skin absorption of tritium oxide are corrected.
Footnote f is deleted	No Change	Observation regarding service-life limitations not needed in rule.
Footnote g has four parts, 1-limits half-mask to under-chin only, becomes footnote(f) 2, 3, and 4 are deleted	Reduction	Prohibition against use of particulate respirator if instantaneous concentrations can exceed 10 times Appendix B, is redundant with § 20.1702(b)(1). Precluding use against plutonium is not justified. Requirement for irritant smoke fit test is deleted because it is a § 20.1703(a)(3)(v).
Footnote h is deleted	No Change	Prescribes air-flow rates needed to operate air-flow hoods. These are NIOSH approval criteria and are redundant here.
Current footnote i requires that APF be determined for Atmos-supplying, Air-line suits. APF now 1	No Change	New footnote g specifies conditions for use.
Current footnote j says testing required before use	No Change	New footnote specifies conditions for use.
Current footnote k permits SCBA in PD mode in emergency	No Change	Retain in new footnote h.

SUMMARY OF PROPOSED CHANGES TO SUBPART H OF PART 20 (cont.)

Changes	Burden Increase, Reduction, No Change	Discussion
Current footnote 1 requires fit test <0.02% leakage	No Change	Retain in rule at § 20.1703(a)(3)(vi).
Current footnote 1 warns any leaks in SCBA in open or closed circuit reduces service life	No Change	Retain in footnote 1.
Footnote I (training part) deleted	No Change	Requires special training for use of SCBA. Redundant with body of the rule at § 20.1703(a)(3)(iv).
Note 1 to Appendix A retained as footnote (a)	No Change	Retains important conditions for use of APFs and references DOL regulations.
Appendix A adds single use disposable	Reduction (greater flexibility)	Rule recognizes utility of disposables, permits use with "no credit" (APF=1). No physiological impact; may provide some protection; contribute to ALARA; accommodate workers who request respirators.
Appendix A - full facepiece air-purifying	Reduction (increased flexibility)	The APF for this device operating in negative pressure mode is increased from 50 to 100 consistent with ANSI recommendation.
Appendix A - adds loose-fitting facepiece PP (powered)	Reduction (increased flexibility)	ANSI recognized these devices as effective protection and assigned PF=25. Inclusion in Appendix A makes them available to NRC licensees.

SUMMARY OF PROPOSED CHANGES TO SUBPART H OF PART 20 (cont.)

Changes	Burden Increase, Reduction, No Change	Discussion
Appendix A - APFs reduced	Increase	Half mask and full facepiece air-line respirators operating in demand mode are reduced from APF=5 TO APF=1. Based on observation of failure.
Appendix A - APFs reduced	Increase	APFs for half and full facepiece air-line respirators operating in demand mode are reduced from APF=5 to APF=1. Based on observation of failure.
Appendix A - Half mask air-line in pressure demand added	Decrease (increased flexibility)	Half mask air-line type in pressure demand is added with APF=50. Based on ANSI recommendations.
Appendix A - APF reduced	No Change	The APF for full facepiece air-line respirator operating in pressure demand mode is reduced from 2000 to 1000. Based on likelihood of needing 2000, need to simplify APF system and provision for licensees to apply for higher APF.
Appendix A - Helmet/hood retained w/APF specified	No Change	APF for Helmet/hood type air-line respirator now specified in table as 1000 rather than in footnote. Air-flow criteria moved to Regulatory Guide.
Appendix A - loose-fit facepiece added	Decrease (increased flexibility)	ANSI also recognizes use of loose-fit mask in air-line respirators, continuous flow with APF=25.

SUMMARY OF PROPOSED CHANGES TO SUBPART H OF PART 20 (cont.)

Changes	Burden Increase, Reduction, No Change	Discussion
Appendix A - air-line suit given APF	Decrease (increased flexibility)	An APF=1 now assigned to these devices so their use is clearly sanctioned. Licensees may apply for use of higher APF.
Appendix A - reduced APFs for SCBA	Increase (reduced flexibility)	APFs for SCBA devices operating in demand and demand recirculating mode are reduced from 50 to 1. This mode of operation subject to failure. Inexpensive alternatives are available.
Footnote j - fit-test in negative pressure mode added	No Change	Footnote j to Appendix A requires fit testing SCBA facepieces in negative pressure mode, as recommended by ANSI.