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(AFB)

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1. Page 3, Last 2 paragraphs, need further clarification of the intent and meaning of these paragraphs regarding portions of the standards acceptable to the NRC. Possible clarification may include "portions of the referenced standards and codes as referenced within this guide
2. Page 4, Position 1.0, discussion identifies that AG-1 replaces N509, however, subsequent sections reference N509. Need to eliminate this discussion or to be consistent.
3. Page 4, C.1, the paragraph states that systems are acceptable if built to ASME N509-89 and Tested to ASME N510-89 are acceptable. It also states that systems tested to earlier versions of N510 are also acceptable. It is unclear if the paragraph does mean that systems designed and built to earlier versions of N509 are acceptable. Please clarify if all versions of N509 are acceptable for the systems.
4. Page 4, Position 3.1 identifies that the consideration should be given to the installation of a HEPA downstream of the carbon filter to retain carbon fines. A high efficiency filter can provide the required action. Recommend changing to ".. installation of a filter section downstream
5. Page 5, 3.2 should read "To simplify in-place testing...". As already noted in the industry discussions, there are numerous designs with greater flow. This is not necessarily less reliable testing, but more intensive.
6. Page 5, Regulatory Position 4.4: Change to read: "Filter and Type II adsorber mounting frames should be designed...". Type III adsorbers require a different design for mounting.
7. Page 6, Position 4.7, This paragraph states that adsorption units function most efficiently, with respect to the retention of adsorbed iodine, at a input relative humidity of 70% or less. Generic Letter 99-02 required ESF carbon adsorbent to be tested to ASTM D3803-1989. ASTM D3803-1989 Fig. A5.1 shows that the retention of adsorbed methyl Iodide to be relatively constant between 70% and 90% relative humidity. Please indicate why the extra margin is required for the maximum relative humidity of the entering air.
8. Page 8, 6.3, (4) states that In-place aerosol leak testing should be performed following detection of, or evidence of, penetration or intrusion of water or other foreign material into any portion of an ESF atmosphere cleanup system. What is meant by foreign material? This phrase should be removed from the guidance because it is too vague. Particulate is foreign material, and is captured by the HEPA as the filter bank does its job.
9. Page 8, 6.3, (4) Water in the system is not a reason to leak test the HEPA bank. The system is plenum, ductwork, etc. If the HEPA banks are wetted, then there may be a reason to leak test the filter bank, but only if the filter material can be weakened by moisture. Many HEPA filters are steel frame, water-resistant fiberglass medium, aluminum separators, with epoxy sealant.
10. Page 8, 6.3, (5) Why leak test a HEPA bank following painting, fire or chemical release? Particulates from any of these sources will only load the filters, causing higher pressure differential and possible filter change-out based on loading. This shouldn't cause leaks in the filters or filter bank. If you are concerned about the

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- sealing surface of the filters, then state this so we understand that this is your issue. Neoprene or silicone rubber gasketing which is standard on this type of filter is not prone to breakdown due to paint fumes or smoke, or most any chemicals used in industrial power plant settings.
11. Page 8, footnote 5, revise to read "Painting,.... adsorber if the ESF....leak-tight, or another means of isolation which provides reasonable assurance that air is not ...adsorbers." Check dampers, flow paths, etc. may provide adequate isolation.
 12. Page 8, Footnote 5, This footnote uses the term "leak-tight". This is inconsistent with Regulatory Position 4.13. Regulatory Position 4.13 indicates dampers are to be in accordance with Section DA of ASME AG-1-1997. The term "leak-tight" is not defined in Section DA. The Regulatory Guide should use damper leakage class terminology consistent with the referenced Code. The leakage class should be consistent with the risk of contamination of the HEPA filter. If there is no motive force, (no fan in operation or no pressure differential across the filter system to drive air through the filter), a higher level of damper leakage is acceptable.
 13. Page 9, 6.4, (6) Same type of comment as that given for the HEPA filters. Why leak test a carbon bank following painting, fire or chemical release in a zone communicating with the system? Section 7.2 is appropriate following these challenges.
 14. Page 9, 6.4, This position requires in-place leak testing of the adsorber section following the detection of any water into ANY (emphasis added) portion of a normal atmosphere cleanup system. Water leaking into a duct hundreds of feet away will require in-place testing even if there is no probability of water ever reaching the filtration section. This section should be re-written to require re-testing if there is indication of water or "foreign material" in the atmosphere cleanup filter housing.
 15. Page 9, C.6.4. Allowances should be made for increased bypass leakage for systems that assume less than 95% efficiency charcoal. Systems which are credited with less than 95% should have allowance for bypass leakage of 1%.
 16. Page 9, 6.4. eliminate the disallowance of sealants on the ducts. Use of silicone sealants has been previously approved by the NRC for use in ductwork. Within the housing, this prohibition would be consistent with the industry practice and NRC intent.
 17. Page 9, revise discussion on alternative challenge agents to read "Alternate challenge agents⁷ ..."
 18. Page 10, Position 7.2, This position requires laboratory testing of the activated carbon following the detection of any water into ANY (emphasis added) portion of a normal atmosphere cleanup system. Water leaking into a duct hundreds of feet away will require laboratory testing even if there is no probability of water ever reaching the filtration section. This section should be re-written to require testing if there is indication of water or "foreign material" in the atmosphere cleanup filter housing.

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