

Results of the evaluations conducted were transmitted in the form of a memorandum to supervisors that discussed physical observations and relayed the results of the sampling that had been conducted. The sampling results indicated that at times there were measurable airborne bioaerosol levels in the vaults. Some aerobiologists consider concentrations of mold greater than 1,000 DFUs/m³ of air as a potential problem for allergy sufferers. Recommendations were made to supervisors to improve working conditions that included increasing ventilation in identified areas, reducing moisture/humidity in the areas, and considering chemical treatment to eliminate the mold. Disposable respirators were made available as an option for use under some conditions, with the requirement that wearers had to be medically qualified and respirator fit-tested. Independent assessments were also conducted by external industrial hygienists, and sampling data collected was consistent with that collected by the contractor in noting that elevated fungal and bacterial levels were present in some samples.

RESOLUTION/RECOMMENDED ACTIONS: A facility Deactivation Surveillance and Maintenance Plan (DS&M Plan) should include overall general guidelines, and be tailored to address specific and unique hazards associated with the specific facility. Key elements to be considered in establishing the guidelines are the non-operational use of the facility, such as for waste storage, and the extent to which the facility must be entered for surveillance and maintenance operations. Information regarding facility condition and hazards from all existing plans relative to the management and deactivation of facility should be reviewed and consolidated into the DS&M Plan, All groups conducting or planning to conduct activities in the facility should be consulted and their plans integrated into the consolidated document. Guidelines must provide for adequate protection of those who must enter the facility and identify to what level building systems must be maintained. The plan should also consolidate existing safety and management guidelines and be tailored to address bioaerosol exposure and other unique hazards associated with the facility. Additional lessons learned will be disseminated as identified during the implementation of corrective actions and follow-up assessments.

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NAME OF AUTHORIZED DERIVATIVE CLASSIFIER: Jeffrey S. Paris

NAME OF REVIEWING OFFICIAL: D. D. Holt

PRIORITY DESCRIPTOR: Yellow/Caution

KEYWORDS: industrial hygiene, respiratory, vaults, shutdown facility, bioaerosol

REFERENCES: For-Cause Review of Worker Respiratory Illnesses Associated with Working in the K-25 Vaults at the East Tennessee Technology Park, DOE-ORO, June, 1998

DOE FUNCTIONAL AREAS: Occupational Safety and Health, Management

BJC TREND CATEGORIES: SH - Occupational Safety and Health, MG -Management

HAZARDS: Health/Hygiene, Personnel Protection

WORK ACTIVITY: Facility Maintenance, Other

FOLLOW-UP ACTION: Information in this report is accurate to the best of our knowledge. As means of measuring the effectiveness of this report please notify Joanne E. Schutt at (423) 574-

1248, e-mail at s6u@ornl.gov of any action taken as a result of this report or of any technical inaccuracies you find. Your feedback is important and appreciated.