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**RECOMMENDATION: WASTE DISPOSITION OF PROCESS BUILDING  
DECONTAMINATION AND DECOMMISSIONING PROJECT  
ACTIVITIES.**

**BACKGROUND:** The three process buildings of the U.S. Department of Energy's (DOE) Portsmouth Gaseous Diffusion Plant (Buildings X-326, 330, & 333) at Piketon, Ohio, are scheduled for Decontamination and Decommissioning (D&D) over the next several years. This accelerated D&D will generate an estimated 1 to 3 million cubic yards of waste.

There is a need to evaluate and compare each type of waste and its ultimate disposition as part of the total DOE Environmental Management (EM) study. These wastes include demolition waste (concrete, rebar, structural steel, debris), process equipment with various metals, hazardous waste, low-level radioactive waste, mixed hazardous and radioactive waste, and contaminated environmental media (e.g., soil, sediment, and groundwater treatment waste).

The ultimate disposition of waste must consider such factors as protection of human health and the environment during clean-up, cost, availability of disposal sites, short and long term protection, reduction of volume and toxicity of the waste, and regulatory compliance. There are also many options to consider such as on-site treatment, waste stabilization, recycling, metal smelting, shredding, and on-site disposal cells, which meet community goals and values. The alternative to this is to ship all waste off-site, which has many disadvantages such as cost (containers, transportation), safety, and availability of off-site disposal facilities.

**RECOMMENDATION:** The DOE EM SSAB recommends that DOE continue to study waste disposition alternatives. As a part of this study, DOE should look at positive impacts of recycling and waste minimization. This study should include, but not be limited to: waste stabilization, recycling, metal smelting, compaction, and shredding as a means of minimizing waste volumes. In addition, DOE should investigate scenarios of creating multiple, smaller cells as an alternative to siting one large disposal facility. It is recommended that a cost comparison of all options be provided.



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