Storage Level at the Y-12 Plant, Oak Ridge, Tennessee, September 1994 (DOE/EA 0929) submitted to Susan Morris, US Department of Energy) 7/05 (cont.)

Incinerator ash

The Y-12 SW-EIS (I, 4-77) describes Industrial Landfill V as being used for "disposal of classified, non-hazardous industrial waste, for construction/demolition waste, and for approved special waste." Approved special wastes include items which appear to be hazardous. No mention is made of the 165 barrels (thirteen truckloads) of radioactive and hazardous/mixed waste disposed of in Industrial Landfill V at Y-12 during the five week period, December 20, 1996-January 27, 1997 (The Disposal of Mixed Waste at Y-12 Industrial Landfill V Investigation Team Report, K-2104, February 24, 1997). 8/12

Burial Grounds/state position

The Y-12 SW-EIS is virtually moot on historic waste disposal on-site at Y-12, stating, for instance, that "All disposal activities at the Bear Creek Burial Grounds were terminated on June 30, 1991." (I, 4-77). The blotchy maps included in the Draft EIS indicate that DOE lumps the historic Bear Creek Burial Grounds and the Walk-In Pits into a single entity. If the Y-12 SW-EIS is truly assessing site-wide environmental impacts, DOE must include the effects of historic contamination from Y-12 activities (the true baseline) on the environment which , when added to any additional effects, become the cumulative effect.

The Bear Creek Burial Ground are a case in point. Although DOE states the Burial Grounds were closed "June 30, 1991," in fact additional waste from Kerr Hollow Quarry was placed in the Bear Creek Burial Grounds area after June 30, 1991, waste that was, according to DOE officials, mixed waste—radioactive and hazardous wastes combined. This combination, which includes quantities of shock sensitive chemicals (prone to explode if jarred), presents significant down-the-road risks to workers and the public. 9/12

Further, while the Burial Grounds have been "closed," and are currently not receiving waste, it is the policy of the state of Tennessee that the current status of the Burial Grounds is not the final status. In an August 21, 1997, letter from the office of Governor Don Sundquist, the state set forth its guidance policy for the remediation of Bear Creek Valley, effective September 1, 1997. The Guidance states that "the long term and final remedy is to be removal and proper disposal of the uranium waste," and that DOE will establish a date by which "uranium material will be removed from the burial grounds."

In other words, the Bear Creek Burial Grounds are not "case closed," as the EIS suggests. The future (three years? five? ten?) will see massive industrial activity and the potential for dramatic environment impacts as the Burial Grounds are fully remediated.

The EIS considers Cumulative Impacts in Chapter 6; the existence of and further remediation of the Burial Grounds is ignored; it is not listed in Section 6.3, "Areas Consider But Not Included," even though remediation in the more distant Melton Valley Watershed is listed.

The EIS should, at a minimum, provide full information on the wastes in the Burial Ground, the plans for future remediation, and any potential bearing SW-EIS decisions may have on the remediation. (For instance, is a massive cleanup operation complicated, inhibited, or encouraged by the presence of active, high-security nuclear weapons production facilities, cornerstone of the US nuclear weapons complex?)

Hydrogen Fluoride

Hydrogen fluoride is a colorless, corrosive toxic liquid or gas used by DOE in nuclear weapons production processes. Currently, DOE is in the process of building a new supply system for anhydrous hydrogen fluoride for Building 9212; the new system's construction was prompted by leaks in the old system (Defense Nuclear Facilities Staff Issue Report, June 26, 1998).

Hydrogen fluoride, as used at Y-12, represents the potential for significant health and safety exposures to workers and the off-site public. Analysis of the new Hydrogen Fluoride supply system indicated that "the worst-case, off-site release of HF in an 10/14

8

Comment No. 5 (cont.) **Issue Code: 12**

focus of the section is on the regulatory setting for environment, safety and health requirements for operations at the Y-12 National Security Complex. International treaties on nonproliferation and other nuclear weapons treaties are not applicable, appropriate or required by NEPA to be listed in this section.

Comment No. 6 **Issue Code: 12**

While all are DOE responsibility, Environmental Management (EM) activities are managed separately from Defense Programs (DP) waste management activities at Y-12. EM waste activities are currently ongoing and would continue regardless of future projects proposed for Y-12 DP missions. Waste management activities at Y-12 are discussed in Sections 3.2.2.2 and A.5, Volume II. For the Y-12 SWEIS, waste management activities and waste generation for 1999 is included under the No Action - Status Quo Alternative. Estimated waste generation by type and volume is presented in the No Action - Planning Basis Operations Alternative in Chapter 5, Section 5.11 of the SWEIS and for each of the proposed new facilities for the HEU Storage Mission and the Special Materials Mission.

Comment No. 7 **Issue Code: 05**

DOE believes that it has adequately addressed impacts to the environment that could result from implementing the various alternatives. Volume I, Chapter 5 of the Y-12 SWEIS addresses impacts from the proposed action and alternatives, and Volume II, Appendices D and E provide further detailed analyses related to human health effects from normal operations/facility accidents and air quality, respectively.

In response to off-site wells having contaminant levels above drinking water MCLs, DOE asserts that the wells are not drinking water wells, but sampling and monitoring wells. Drinking water for the city of Oak Ridge is from the Clinch River and is not groundwater. DOE has conducted sampling of springs and waters on the north slope of Pine Ridge (the Scarboro side of the hill) and has found no contamination.

accident situation is 1000 parts per million, which is more than 30 times the level considered immediately dangerous to life and health." (Defense Nuclear Facilities Staff Issue Report, March 10, 2000).

The system currently being constructed has been designed and constructed without reference to process industry, nuclear industry, or DOE standards. "The system as designed and constructed without a finalized or DOE-approved safety basis and without a complete rational basis for specifying safety requirements for system components." (Defense Nuclear Facilities Staff Issue Report, September 7, 1999). 10/14 (cont.)

The current system is not yet operational; the discovery of faulty welds in the system (a reflection of a lack of quality assurance) and the consideration of numerous serious safety questions raised by the Defense Nuclear Facilities Safety Board about controls for the system have slowed progress toward a system-operational date.

The Department of Energy made a decision in the early 1990s to prepare an Environmental Assessment ("HF-EA") to evaluate the environmental impacts associated with the construction and operating of the Anhydrous Hydrogen Fluoride Supply System. In preparing the HF-EA, DOE did not include public participation, in defiance of direct Guidance from the Secretary of Energy and DOE's own Office of NEPA Compliance and Assistance and despite specific requests from the public for involvement.

It is not clear at present that public participation in the HF-EA process would have raised the safety and quality assurance questions now identified by the Safety Board, but it is clear that the public was denied information about the serious risks presented by the HF-EA system when DOE decided to prepare the HF-EA in secret.

The fact that DOE now finds itself confronted with significant safety problems, ranging from the failure to design to any safety criteria to the failure to assure that simple industrial processes like welding met a basic quality assurance standard provides an opportunity for DOE to rectify its past reticence to engage the public on issues associated with the hydrogen fluoride supply system. 11/25

The health and safety issues arising from the design and construction of the hydrogen fluoride system should be addressed in detail in the Y-12 SW-EIS; the HF-EA prepared in 1995 without the benefit of public participation has been rendered moot by subsequent and persistent health and safety problems.

The hydrogen fluoride system as analyzed in the HF-EA was intended to be a replacement system for the still functioning hydrogen fluoride system which would remain in place to support production. Midway through the design and construction phases, it was decided that the old system would not be used, and its replacement would be treated as a new system to support Enriched Uranium Operations restart. (Defense Nuclear Facilities Staff Issue Report, June 26, 1998).

The hydrogen fluoride supply system is clearly, according to NEPA's regulations and guidance, a connected action whose impacts must be incorporated into the current Y-12 SW-EIS (40 CFR 1508.25(a)). 12/26

Other materials

•Mercury

Mercury has been present at Y-12 for at least fifty years; it was used to produce Lithium-6, a nuclear weapons material, from Lithium-7. In the process of production activities, more than 2,000,000 pounds of mercury, a toxic, heavy element, were "lost to the environment." Tens of thousands of pounds were lost to the air; hundreds of thousands of pounds were released to public areas via East Fork Poplar Creek. Some of the impacts of mercury on the community have already been established—the use of mercury contaminated soil for fill in the sewer-line beltway, for instance, and during the construction at Robertsville school. 13/12

A significant quantity of mercury remains on site, however, trapped in soils, held up in old drainage systems, contained in the flooring of old process buildings. In times of heavy rainfall, excessive mercury is released from the site into East Fork Poplar Creek; even in the best of times, mercury is released in quantities which exceed Tennessee Water Quality Criteria every day. Y-12's National Pollution Discharge Elimination Permit ("NPDES") issued by the state of Tennessee requires that millions of gallons of water be

9

Comment No. 8 **Issue Code: 12**

Landfill V is permitted and operated as a landfill for sanitary/industrial waste as described in section 4.8.2.3 of the Y-12 SWEIS. Some mixed waste was inadvertently disposed of at Landfill V on the occasion referred to in the comment. The mistake, a result of human error at the waste point of origin, was discovered and reported to the State by DOE soon after it occurred. The incident, follow-up investigation, and decision related to further action or need to remediate were fully documented and approved as evidenced by the comment's reference to the Investigation Team Report. The incident does not alter the general description of the landfill's status or purpose. Special wastes do not include hazardous waste.

Comment No. 9 **Issue Code: 12**

The historic waste disposal activities at the Bear Creek Burial Grounds and the resulting groundwater contamination are detailed in Volume I, Section 4.5.2. Figure 4.5.2-1 specifically shows VOC levels of contamination in groundwater. This information is reflective of the affected environment and baseline for analyzing potential impacts of the proposed action and alternatives in the SWEIS. Concerning the closure date of June 30, 1991, the Final SWEIS has been changed to state that disposal activities in the Bear Creek Burial Grounds ended in 1993. This is consistent with the "Record of Decision for the Phase I Activities in the Bear Creek Valley at the Oak Ridge Y-12 Plant, Oak Ridge, Tennessee," May 2000 (DOE/OR/01-1750&D4).

In response to the reference to the State of Tennessee Guidance Policy on "Perpetual Institutional Controls" at the ORR, the above mentioned ROD for the Phase I activities in Bear Creek Valley defers remedy decisions for Bear Creek Burial Grounds and final remediation goals for groundwater for future CERCLA decision documents. There are a number of outstanding issues and concerns for Bear Creek Valley by the State and other parties to the Federal Facilities Agreement that must be prepared and approved. There is no milestone date set for a ROD on Bear Creek Burial Grounds.