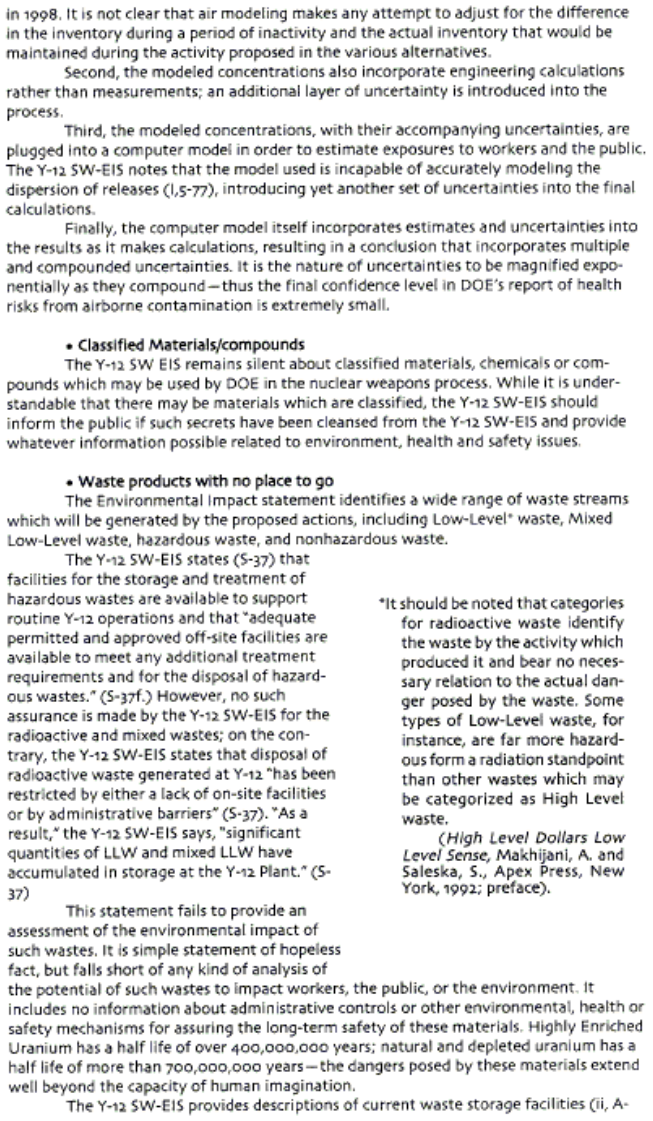

in 1998. It is not clear that air modeling makes any attempt to adjust for the difference in the inventory during a period of inactivity and the actual inventory that would be maintained during the activity proposed in the various alternatives.

Second, the modeled concentrations also incorporate engineering calculations rather than measurements; an additional layer of uncertainty is introduced into the process.

Third, the modeled concentrations, with their accompanying uncertainties, are plugged into a computer model in order to estimate exposures to workers and the public. The Y-12 SW-EIS notes that the model used is incapable of accurately modeling the dispersion of releases (I,5-77), introducing yet another set of uncertainties into the final calculations.

Finally, the computer model itself incorporates estimates and uncertainties into the results as it makes calculations, resulting in a conclusion that incorporates multiple and compounded uncertainties. It is the nature of uncertainties to be magnified exponentially as they compound—thus the final confidence level in DOE's report of health risks from airborne contamination is extremely small.

17/07 (cont.)

• **Classified Materials/compounds**

The Y-12 SW EIS remains silent about classified materials, chemicals or compounds which may be used by DOE in the nuclear weapons process. While it is understandable that there may be materials which are classified, the Y-12 SW-EIS should inform the public if such secrets have been cleansed from the Y-12 SW-EIS and provide whatever information possible related to environment, health and safety issues.

18/16

• **Waste products with no place to go**

The Environmental Impact statement identifies a wide range of waste streams which will be generated by the proposed actions, including Low-Level* waste, Mixed Low-Level waste, hazardous waste, and nonhazardous waste.

The Y-12 SW-EIS states (S-37) that facilities for the storage and treatment of hazardous wastes are available to support routine Y-12 operations and that "adequate permitted and approved off-site facilities are available to meet any additional treatment requirements and for the disposal of hazardous wastes." (S-37f.) However, no such assurance is made by the Y-12 SW-EIS for the radioactive and mixed wastes; on the contrary, the Y-12 SW-EIS states that disposal of radioactive waste generated at Y-12 "has been restricted by either a lack of on-site facilities or by administrative barriers" (S-37). "As a result," the Y-12 SW-EIS says, "significant quantities of LLW and mixed LLW have accumulated in storage at the Y-12 Plant." (S-37)

19/12

*It should be noted that categories for radioactive waste identify the waste by the activity which produced it and bear no necessary relation to the actual danger posed by the waste. Some types of Low-Level waste, for instance, are far more hazardous form a radiation standpoint than other wastes which may be categorized as High Level waste.

(*High Level Dollars Low Level Sense*, Makhijani, A. and Saleska, S., Apex Press, New York, 1992; preface).

This statement fails to provide an assessment of the environmental impact of such wastes. It is simple statement of hopeless fact, but falls short of any kind of analysis of the potential of such wastes to impact workers, the public, or the environment. It includes no information about administrative controls or other environmental, health or safety mechanisms for assuring the long-term safety of these materials. Highly Enriched Uranium has a half life of over 400,000,000 years; natural and depleted uranium has a half life of more than 700,000,000 years—the dangers posed by these materials extend well beyond the capacity of human imagination.

The Y-12 SW-EIS provides descriptions of current waste storage facilities (ii, A-

12

Comment No. 13 **Issue Code: 12**

The release of mercury from Y-12 storm sewers has been a problem during heavy rainfall events. However, corrective actions, such as storm sewer cleaning and relining and mercury source removals conducted since 1985 have greatly reduced releases of mercury from former mercury-use facilities. The Y-12 National Security Complex has an Integrated Mercury Strategy Program to achieve compliance with regulations and guidance addressing mercury contamination in EFPC. A description of mercury releases at Y-12 is provided in Appendix D, Section D.3.7.1. Effects of mercury in the environment at Y-12 are also monitored and reported in the ORR Annual Site Environmental Report. The discussion of mercury contamination in the environment at Y-12 is contained in Chapter 4, Section 4.5, Hydrology and Section 4.7, Air Quality.

In response to the figure in the referred report, as the commentor correctly points out, this was an artist rendition of a hypothetical, futuristic, all new Y-12. It is not the plan for modernization nor the location.

Comment No. 14 **Issue Code: 14**

Section 5.12.3 provides a detailed evaluation of beryllium exposure. The long-term health effects resulting from beryllium exposure are dependent on exposure concentration, frequency of exposure, and duration. Inhalation of large quantities of soluble beryllium can result in acute beryllium disease which results in lung damage. However, lung damage is reversible if exposure to beryllium does not continue. DOE initiated an Interim Chronic Beryllium Disease Prevention Program in 1997 to reduce worker exposure to beryllium. DOE also published a final rule which set the airborne beryllium concentration at 0.2 $\mu g/m^3$ as part of its Chronic Beryllium Disease Prevention Program.

DOE can meet the airborne beryllium concentration of 0.2 $\mu g/m^3$ in existing manufacturing operations in beryllium facilities at Y-12 but it would require more administrative procedures and the use of personal

32ff) but does not provide sufficient information for the public to answer significant questions. For example, on page A-36 of Volume 2, the Y-12 SW-EIS describes the capacity of the Production Waste Storage Facility (A.5.1.11) and the Liquid Organic Solvent Storage Facility (A.5.1.13). In neither instance is there information provided which would enable the public to understand whether that capacity is sufficient to handle expected waste streams or what the design-life of the facilities is expected to be.

19/12 (cont.)

ENVIRONMENTAL JUSTICE

The Department of Energy is required by Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations," (59 Fed. Reg. 7629 (1994) to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations." In a memorandum to heads of agencies, the President specifically recognizes the importance of procedures under NEPA for addressing environmental justice concerns. (42 USC §4321 *et seq*).

The Council on Environmental Quality, charged with oversight of the federal government's compliance with Executive Order 12898 and NEPA, produced a Guidance document, Environmental Justice: Guidance under the National Environmental Policy Act, December 10, 1997.

This NEPA guidance document identifies key issues in the President's memorandum, including the importance of research, data collection and analysis, particularly with multiple and cumulative exposures for communities of color and low-income communities (Executive Order 12898, 59 Fed. Reg. at 7630 (Section 1-101)). The Guidance document states that data on these exposures should be incorporated into NEPA analyses as appropriate.

The six general principles provided as guidance for federal agencies include considering "the composition of the affected area to determine whether minority populations...are present in the area affected by the action, and if so whether there may be disproportionately high and adverse human health or environmental effects" on those populations. (Environmental Justice: Guidance under the National Environmental Policy Act, CEQ, December 10, 1997. p. 9)

The general principles also guide agencies to "assure meaningful community representation in the process," and should "endeavor to have representation of the community as a whole," recognizing the diverse constituencies present in any particular community. (Environmental Justice: Guidance under the National Environmental Policy Act, CEQ, December 10, 1997. p. 9)

Particular actions are required of agencies by the CEQ Guidance, including identifying communities of color early in the scoping process and seeking their input. A strategy for effective public involvement of the community is to be developed, and a broad slate of alternative media for communicating information is proposed. (Environmental Justice: Guidance under the National Environmental Policy Act, CEQ, December 10, 1997. p. 11)

The Guidance document goes on to suggest specific actions and mechanisms an agency might find useful in engaging targeted communities.

The Scarboro community in Oak Ridge is a residential area located about 1,500 feet northwest of the Oak Ridge Y-12 Plant, occupying about 250 acres. The community has approximately 250 homes or residential units.

The EIS provides, in Table 7.2.1-1 a long list of "Major Federal and State Requirements Regulating Environmental Control Remediation and Worker Safety." The list includes a wide variety of Presidential Executive Orders, including Indian Sacred Sites (p.4 of list). Executive Order 12898 does not appear on the list.

The most proximate community to the Y-12 Plant, census tract 201, with 2,767 souls, Scarboro is disproportionately populated by people of color. While other Oak Ridge area census tracts average 10% or less people of color, the Scarboro community is 42% "non-white," with 34.4% identified as "black."(I, 4-96). The same census tract is the

13

Comment No. 14 (cont.) **Issue Code: 14**

protective equipment, which is expensive and reduce worker and production efficiency. However, construction of the Special Materials Complex with its new beryllium production operations would incorporate engineered controls that would significantly reduce the risk of worker exposure to beryllium, meet regulatory requirements, and increase production efficiency.

Comment No. 15 **Issue Code: 14**

Section 3.2.2.1 in Volume I of the SWEIS discusses the lithium operations at Y-12. The lithium operation is a very small activity compared to uranium operations. Section A.3.1.2 describes in detail the lithium process which produces finished lithium hydride and lithium deuteride from stored lithium hydride and lithium deuteride, recycled weapons parts, and manufacturing scrap. Current lithium and support operations are performed in Building 9204-2, 9404-9, 9805-1, 9720-19 and 9720-19A, described in Section A.4. The lithium production process produces machine dust in the blanks finishing process. Machine dust is collected for direct recycle salvage operations which primarily involve washing and chemical recovery. Solutions from the purification and wash operations are neutralized, filtered, crystallized, and sent to storage or waste disposal. Machine dust not recovered for recycling salvage operations is captured in the HEPA-filtered gloveboxes.

The lithium accident referred to by the commentor was the result of a lithium recovery operation involving HEPA filters. Trapped air within a HEPA filter reacted with the lithium hydride and water (an exothermic reaction which liberates hydrogen). The very small explosion resulted in expulsion of approximately one quart of caustic solution from the salvage vat onto the floor. No workers were present and no adverse effects on personnel safety or health were experienced. Corrective procedures were implemented to pierce all filters with a screwdriver to allow air to escape before washing, in the future. Appropriate engineered controls and procedures are in place to protect worker health and safety and minimize the risk of accidents.