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Los Alamos
NATIONAL LABORATORY

memorandum

Policy and Program Analysis

To/MS: ESH-12 File ~~Gene Potter~~
From/MS: Eugene Potter, ESH-12, MS K483
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SUBJECT: INTERVIEW WITH JULIE WILSON, HRL

From approximately 2:00-3:00 pm, January 4, 1994, Brad Martin, Don Hickmott, Steve Wantanabe, and Gene Potter interviewed Julie Wilson concerning historical activities that were conducted at the HRL building. In particular, questions were asked relative to what radioactive materials or chemicals may have been disposed of in the sanitary sewer between 1963 and 1981. The following is a summary of the main points in the interview.

Ms. Wilson who had been at the lab since 1966 described some of the experiments. They ranged from external irradiation of animals and cells (grown in cultures) to inhalation and metabolism studies where radioactive materials were placed in animals. In one series of experiments, a researcher named John Spalding externally irradiated many generations of mice with low levels. However these experiments were done with sealed sources and are not of concern to the ER program. The building also contained sensitive whole body counters for humans and animals. Humans were counted, for example, to determine the amount of fallout which was incorporated into their bodies. Animals were counted to determine the results of metabolism experiments. These early counters utilized large tanks of liquid scintillation fluid surrounded by photomultiplier tubes. The scintillation fluids were xylene- or toluene-based. Ms. Wilson personally disposed of the smaller animal counter. She did not recall how the larger human counter was decommissioned.

Ms. Wilson recalled that, in the laboratories where the metabolism experiments were done, all of the materials were disposed of by packaging as radioactive waste and shipping to TA-54. However, she admitted that some of the waste could have been disposed of in the drains. She recalled experiments done with Pu-238, Pu-239, Pm-147, and Po-210. For some inhalation experiments, Pu was labeled with Co-60 (because of the difficulty of counting Pu in the lungs directly). In addition, P-32 and S-35 are still used to label DNA. C-14 and H-3 were also used and would have been counted in liquid scintillation cocktails (xylene- or toluene-based). She thought that the scintillation cocktail was also sent to TA-54 after use but referred us to Bob Ratliff (now retired) who did most of the work. She stressed that it was their practice to dispose of waste liquids from experiments as radioactive waste. They did not utilize "hot" sinks or log amounts that were purposely poured in to the sanitary sewer. She recalled the sump in the sub-basement being monitored and thought that any radioactivity found was probably P-32 which some at HRL were less concerned about because of its short half-life (14 days).

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Ms. Wilson did not recall any "hot" showers or eye wash stations being used and thought that it was unlikely because of the nature of their work (small quantities on bench tops) that anyone had been grossly contaminated.

When asked about any hazardous chemicals which may have been disposed of in the sanitary sewer, Ms. Wilson stated that large quantities of ethanol and phenol-chloroform were still in use and could have been poured down the drains in the past. She stated that the nature of working with biological systems did not allow the use of strong solvents, etc. which could damage the experiments. Glassware, for example, can only be cleaned by washing with detergent. She also stated that no biological hazards (for example, viruses) were used in the experiments.

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