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NOTES FROM 100-F AREA SITE VISIT
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MAP

According to Scott Kitts, the hand-drawn map we have done by Jim Fields is our best source of information. He has some revised coordinates for the waste sites in a WIDS update that he will give us.

MISC. WASTE DISPOSAL AREAS NEAR REACTOR

118-F-7 is the concrete box with wooden cover containing contaminated equipment
that we saw referenced in documents.

The 100-BC area had a disposal area for the boron balls. Richards said that the boron balls from F Reactor may be buried off the corner of 115 Building, but that he doesn't remember them being disposed of and they may still be in the reactor.

118-F-4 contained silica gel from building 115-F that was used to dry the process air. It contains tritium, C-14, and Co-60.

Pluto crib (116-F-4) was very hot according to Bob Richards. When he was doing a soil boring there they had to abandon the corer in place. The crib was used only for a couple of years because the firehose used to route water to it leaked and causing overland flow and contamination of a wider area. (Side note - WDOE does not like it to be called the pluto crib because it suggests that plutonium was dumped there.)

REACTOR COOLING WATER EFFLUENT HANDLING

When the reactor first started, it was run at approximately 200 MW. Later (?) the power was upped to 500 MW, greatly increasing the amount of process water used and the number of fuel element ruptures. These increases caused problems in the process wastewater handling system. Originally, one side of the retention

basin (107-F or 116-F-14) was reserved for retention of highly contaminated water when ruptures took place. With the increase in the water use, both sides of the basin were used simultaneously. Water from rupture incidents then went directly to the 116-F-2 trench via a unlined canal. This canal and trench were readily seen in the aerial photographs.

Three sets of effluent lines to the retention basin were used during operations. The original lines were constructed of 42" reinforced concrete. Subsequent lines were made of stainless steel. The lines ran underground from the reactor, but became overground lines east of the 108-F building near the ash pit. In one of the lines there was a valve by which water could be directly routed to 116-F-2.

Richards recalls that sludge was removed from the retention basin at least once early on to reduce exposures while repairs were made to the basin floor. He does not know where it was disposed of, though. It could have been off the northeast corner. The sludge that accumulated in the basin was mainly from sand and debris that blew into it and not from the reactor itself.

The retention basin has been decommissioned and partially filled with a soil cover. The outline of the basin is still clearly visible, though. Some of the stainless steel line sections have been removed and are stored in one side of the basin.

PERCOLATION TRENCH

A percolation trench is shown on the hand-drawn map leading from the northeast corner of the retention basin to the river. Richards said that this was used when the baffles in the basin broke loose and plugged the outlet to the basin. The trench was dug to keep the drainage in a confined area. Richards said that Battelle had also used this trench.

108-F CRIB

Another source area that has not been designated yet is a crib under the 108-F building, used by Battelle as a lab and animal hospital. Bob Richards said that the drain pipes coming from glove boxes and hoods that are on the east side of the building drained via vertical pipes to a 12x12 crib located 35 ft up from the southeast corner of the building. It is not clear how much of the crib was actually under the building. Richards said that this was a hot crib, and that it probably flowed to the low-lying area just southeast of the 108-F building where the ash pit (126-F-1) was.

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ASH PIT

The ash pit (126-F-1) contained fly ash from the coal generation plant. It also received flow from the 108-F crib, leakage from the cooling water effluent lines that ran through the area, and drainage from a septic tank (possibly 1607-F2). Because this is a low-lying area, the water from these sources tended to pool there.

A trench approximately 150 feet long is adjacent to the ash pit. Richards did not know when or for what purpose it was used, but the surface contamination readings were greater than 150 mR.

BATTELLE ANIMAL RESEARCH AREA

141-C is a large animal barn used by Battelle. Also in this area is an L-shaped building that housed a radon generation facility. A valve leak from this facility resulted in a discharge that is designated as source area UN-100-F-1. The spill area is marked by a red post with white paint on top.

PNL had an outfall to the river just northwest of the outfall from the retention basin. These are both demolished and covered. At one time PNL used to discharge the animal manure slurry from the barn area through their outfall. DOE put a stop to this practice in 1962, according to Richards, and in 1963 PNL constructed the animal waste leaching trench (116-F-9) to receive this waste.

LEWIS CANAL

The Lewis Canal is still visible all the way to the river, though the northern half has been released from radioactive control. The south end of the canal was hard piped to the reactor. It was used to discharge reactor water during the major outage when the Ball 3X system was installed. It also received water from the 190-F building.

STRONTIUM GARDEN

The strontium garden, located in the southwest corner of the 100-F area, is a rather small area enclosed in a wooden, open structure. Sheep and other animals were kept in pens around the garden and were fed grains grown there.

PCBs

Scott Kitts said that there were good records of PCB usage in F Area.

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WILDLIFE

Several mule deer were seen in the area during the site visits as well as a kerlew.