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Los Alamos
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memorandum
Chemical Science Technology Division
Environmental Restoration Program

To/MS: OU 1082 File
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EARLY S-SITE HISTORY, LEE HILTON INTERVIEW

This memorandum outlines a discussion with Mr. Hilton on April 2, 1993 that occurred in the TA-35-268 conference room. The interview lasted from 1:15 P.M. to 4:00 P.M. OU 1082 Team Members-Brad Martin, Donald Hickmott, ElRoy Miller, Dorothy Hoard, Margo Buksa, and Faye Metz attended. Additional information was also obtained during a field trip to S-Site and through telephone conversations. Mr. Hilton worked for Laboratory groups X-3, GMX-3, and WX-3 from November 1944 to 1979. He was in charge of a casting line during WWII, and later worked in photography and S-Site plant operations.

Mr. Hilton arrived at Los Alamos in November 1944 after spending time in the Army Air Corps. Prior to enlistment, he had worked at the Atlas Powder Co. doing explosives production work. Mr. Hilton provided much information concerning S-Site operations during the 35 year period he was employed at the facility. Mr. Hilton discussed operations in virtually every building at old S-Site. Pertinent information that pertains to individual facilities is summarized.

TA-16-1 (S-1): Administration building. Mr. Hilton also stated that a structure containing photographic facilities had been located between S-1 and S-2.

TA-16-2 (S-2): Women's change house and laundry facility; also a first aid station. The structure list says this building was an office.

TA-16-3 (S-3): Electricians' shop - used for storing electrical supplies such as conduit and fixtures.

TA-16-4 (S-4): Maintenance - Group X-3 instrumentation shop

TA-16-6 (S-6): Zia repair shop - used for storing tools and supplies.

TA-16-7 (S-7): Boiler house - also stand by twin diesel engines.

TA-16-8 (S-8): Zia cabinet shop - used primarily as a carpentry shop.

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TA-16-10 (S-10): Warehouse. This building was used to store casting molds. The molds were cleaned in the north end of the building, so HE may be present in the facility. Cutting oil was used during threading operations. The molds were then moved to TA-16-11 and TA-16-12 for storage.

TA-16-11 (S-10D): Warehouse. Used for storing decontaminated molds. These were disposed of at Mesita del Buey.

TA-16-12 (S-10E): Warehouse. Used for storing decontaminated HE casting molds.

TA-16-15 (S-12): Men's change house

TA-16-17 (S-14): Plumbing storage (pipes). No contaminated plumbing equipment was ever present in this building.

TA-16-24 (S-20): Analytical building. HE was dissolved in acetone or other solvents during analysis. Trimmings sent to burning ground.

TA-16-25 (S-3 prior to S-23): This building was a powder inspection building.

TA-16-26 (S-4 prior to S-25): This was the original S-Site casting building prior to construction of the 40-Line and TA-16-27. This building had a basement.

TA-16-27 (S-25E): Mr. Hilton confirmed the presence of re crystallized HE in the ductwork. He also claims that the Nash High Torque pumps in the basement are highly HE contaminated. At least some of the sump drains from this building went north beneath the road for dozens of feet (see map). The walls in the sump cleaning area on the south side were contaminated.

TA-16-30 and 16-34 (S-26E): Magazines - one held castings waiting to be machined, the other held finished product waiting to be measured.

TA-16-35 (S-26F): Utility room - an equipment room that housed air compressors which were used to drive the HE machining equipment in the nearby machining bays.

TA-16-36 (S-27F): Steam cleaning.

TA-16-37 (S-27): A GMX-2 facility used for HE grinding and casting. The sump drain line for this building may still be in place. These went west then south beneath the road (see map).

TA-16-38 (S-5 prior to S-28): This was the original milling/casting building. It also was later used for casting. Mr. Hilton doesn't believe that the "french" drain line was ever removed. It drained to the southeast, perhaps 200 and 300 ft. It was suggested that we don't want to dig southeast of 16-38.

TA-16-39 (S-29): Radio-graphic Building. Served as a film loading building for radiography at T-Site.

TA-16-40 (S-29B): Radium hutment. Film produced here was later developed at V-Site.

TA-16-41 (S-30): Contained compressors for air motors in the 40's line (no hydraulics).

TA-16-41 (S-30) sewer: This sewer was contaminated with HE, even though it exited from a bathroom. Hilton regarded this septic tank as never contaminated (field trip 7-9-93), but could not recall its removal.

TA-16-42 (S-31): Casting. There were two sets of drain lines exiting this building each of which was HE contaminated. One terminated to the east near the east road and the other to the southeast near the south road (see map). This building also did machining.

TA-16-43 (S-32): Heavily contaminated - had extra drain line that headed southward passing near 16-41 (added from buildings single sump, removed with the others). The building was also used for cutting risers.

TA-16-44 (S-33): The sumps were removed in advance of the 1966 cleanup and paved over when TA-16-41 was made into an incinerator (date ?). The paving was torn up and pipes removed in the 1966 cleanup.

TA-16-45 (S-34): This X-ray building had a separate drain from the rest of the 40-Line. The drain exited into the wash east of the nearby north/south road. The extra drain line was for a darkroom, it also had a conventional HE drain but was not used much because HE was not broken up.

TA-16-48 (S-36): Radium facility. During a small earthquake, the radium source fell out of alignment and was crushed by its lead pig; it was cleaned up thoroughly.

TA-16-49 (S-41): This was an office and laboratory, not a casting facilty.

TA-16-50 (S-42): This was an experimental casting building.

TA-16-51 (S-42A): Steam cleaning

TA-16-52 (S-43): This was an experimental casting building.

TA-16-53 (S-44): This was used as both a casting and a machining facility. At one point the sump was clogged and it overflowed. Mr. Hilton removed a 'desk-sized' chunk of HE from the adjacent ground.

TA-16-54 (S-45): Barium nitrate grinding.

TA-16-55 (S-45A): This building was used for "all sorts of things". These things included barium nitrate grinding and lead storage.

TA-16-56 (S-46): Magazine.

TA-16-57 (S-56): Magazine - Mr. Hilton was unsure if effluent was ever removed.

TA-16-68 (S-72): Magazine.

TA-16-72 (S-76): This was a nitrocellulose drying facility. Nitrocellulose arrived packed in alcohol, the workers left work drunk due to inhalation of alcohol vapor.

TA-16-74 (S-78): Magazine - held castings for building TA-16-99, riser sawing. Hilton doesn't remember its removal.

TA-16-81 (S-90): This was also a nitrocellulose drying facility.

TA-16-83 (S-92): Magazine.

TA-16-84 (S-93): Magazine.

TA-16-86 (S-95): Magazine.

TA-16-88 (S-100): This was used for storage of casting molds during WWII. This building had a bomb shelter behind it.

TA-16-89 through TA-16-93 (S-101 through S-105): Sumps were vacuum cleaned (this disagrees with a 1952 memo - maybe they were upgraded ? Elroy) After TA-16-260 opened, TA-16-89 and 16-90

became storage and TA-16-91 and 16-92 were used for cleaning and refurbishing HE contaminated equipment.

TA-16-93 (S-104): Electroplating. No real exposure to HE.

TA-16-94 (S-106): Control building for machining in four surrounding facilities. This bldg. contained a submarine periscope used to observe machining in TA-16-95.

TA-16-95 (S-106 S): Contained a lathe and drill press.

TA-16-96 (S-106 W): Constructed as a machining facility designed to house a new generation of lathe.

TA-16-97 (S-106 N): Contained a lathe. Later cleaned out for a coffee/smoke room.

TA-16-98 (S-106E): Contained a lathe.

TA-16-99 (S-87): This building is where risers were cut off in WWII.

TA-16-100 (S-108): This was once an electroplating facility. Chrome, copper and nickel were used.

TA-16-182: Diesel Unit Building - housed a generator.

TA-16-183: HE scrap pickup platform (used garbage cans, not drums)

TA-16-186: This storage area was used to store tools and equipment for servicing TA-16-35, utility room.

TA-16-187: This building was used to store barrels of oil and solvent, with spigots on their sides, for machine shops. These barrels could have easily leaked. Also, platform TA-16-191 by bldg. 16-93 was used for chrome and copper sulfate drums.

TA-16-450: Facility used for materials testing, not plating.

TA-16-460: Analytical lab. The drains have been cleaned and are still in use.

TA-16-477, 478: The HE machining operations in these buildings drained to a french drain rather than a sump - until the late 1960s. Mr. Hilton estimates that several hundred pounds of HE may still be in the french drain to the east of the building. He does not recommend drilling or trenching in this area.

TA-16-490 (T-1): T-Site administration and laboratories. Lots of photo developing in this building. Effluent discharged to east.

TA-16-491 (T-2): X-ray building (could be confused with 16-496). One or more of these X-ray buildings may have contained a radium facility.

TA-16-492 (T-3): X-ray building

TA-16-493 (T-4): Magazine.

TA-16-494 (T-5): Magazine.

TA-16-495 (T-6): Work area.

TA-16-496 (T-7): X-ray building (could be confused with 16-491).

TA-16-497 (T-8): Magazine.

TA-16-498 (T-9): X-ray building.

TA-16-499 (T-10): Radium building.

TA-16-515: Experimental casting and photo developing occurred in the west end of this facility. Later, there was an X-ray unit in the west end of the facility. Remote control activities occurred here (the shake table). Boracitol and Comp-B were cast herein. Only water jackets were used for cooling.

TA-16-516: V-Site - structure list states the bldg. was formerly a lab (V-4) but was later used for storage.

TA-16-517: Trinity device assembly occurred here. An outdoor shake table was located to the southeast of this facility. It was used to shake devices overnight. Resin operations and plastic operations occurred herein. MEK (methyl ethyl ketone) may have been used.

TA-16-518: There was a pit in the center of the U-shaped area to simulate the loading dock of the B-29. A portion of the B-29 assembly was suspended above this to allow practice loading and arming of a device. The pit was shored with railroad ties.

TA-16-519: Varnishing, painting, and assembly of HE castings.

TA-16-520: Formerly part of 16-519. This facility contained wrestling mats that were used to protect the HE during assembly. Varnishing, painting, and assembly also took place in this building.

Other useful information included that fact that there was an HE burning ground where TA-16-90 was later built. It blew up scattering debris as far as the administration area. He believes that the north end of MDA-R was used as a dumping ground for flashed material. He confirmed that lead troughs were present in TNT buildings and suggested that some facilities had lead floors. Most sump drain lines did not daylight, they infiltrated into the subsurface. He emphasized that operations were performed in the most expeditious way possible during the war. HE was exposed, scooped, and moved in process buildings and in magazines. He provided a number of names as possible additional contacts. Mr. Hilton also indicated that the cleanup of the ponds northeast of the old 30's machining line may not have been very thorough.

The administration area buildings were taken offsite, and in some cases, removed by Bob Waterman to the town site for residential and commercial use. In addition to the town site, some of the buildings were taken to other technical areas, while others were transported to Colorado.