

To: Caroline Reynolds
HSAE-12 MS-K495

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REVIEW

OF

DRAWING NUMBER ENG-C43338

AND

THE NOTES COMPILED BY L. WALKER FROM CONVERSATION
WITH BILL MARAMAN AND WILBUR MCNEESE ON 5/31/79.

Reviewed by:

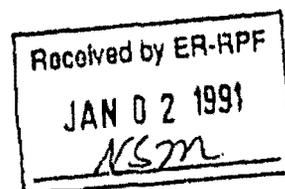
W. J. Maraman and

E. L. Christensen

July 21, 1987



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WILBUR MCNEESE

WILBUR MCNEESE

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A check was made at ENG-7 for records concerning Lab job number 5704-21. This job was to produce the drawing set we now know as ENG-C-43338. The ENG-7 records do not give a date for the job, but the records do show that the job was cancelled on 4-11-77 and that the drawings were sent to the vault on that day.

The memo that L. Walker wrote after conversation with Bill Maraman and Wilbur McNeese on 5/31/79 was, therefore, written at least two years after the conversation with Maraman and McNeese took place. My conclusion then is that Walker used a lot of the wording on the drawing for the various statements in the memo.

Drawing ENG-C-43338 was done by Jim Cox of ENG-14 for lab job number 5704-21 in response to work order number 4498-55.

The L. Walker was reviewed by W.J. Maraman and E.L. Christensen on July 21. Our comments about each statement follow.

STATEMENT 1: "DP Acid Digester Pit. About 4 x 4 ft., about 200 ft west of Bldg. 212, about half way between Bldgs. 210 and 220. LASL coordinates about 151 and 90+50. Pulled up and paved about 1965."

Comments: Building 210 is at LASL coordinates 87+50 and 150+00. Building 220 is shown on drawing ENG-R-5113 as a cooling tower at Coordinates 85+00 and 167+50. Coordinates 85+00 and 167+50 intersect at the EAST end of DP West, between DP West and DP East. So, either the coordinates of the acid digester are wrong, or the Building references are wrong.

Bill feels that the acid digester was located between Buildings 22 and 32, but a little south of a straight line between the two buildings.

Conclusion: The statement recorded by L. Walker is wrong. And the note on drawing ENG-C43338 is also wrong.

STATEMENT 2: "Waste Treatment Lab, across from old laundry, Bldg. 20. Was old Bldg 33, waste trtmnt lab, cleaned up and used as safety and driver's liconse bldg., finally removed. Had its own septic tank, with waste field to south in a V from Bldgs 269 and 260."

Comments: References: Drawing Eng-R-139 dated 7-10-50; Drawing ENG4-R-139 dated 3-331-50; Drawing ENG-R-140 dated 9-23-55; ENG-R5113 dated 8-5-83; and ENG-R-2449 through 2452 dated 8-15-61 with four revisions, the last bringing the drawings "to status" as of 12-2-66.

Building 260, according to ENG-R5113, is a manhole(steam pit) at coordinates 90+00 and 147+50.

Building 269, according to ENG-R5113 and ENG-R2450, is a manhole(a water P.R.V.) at coordinates 92+50 and 145+00.

If it had "its own septic tank, with waste field to south in a V from Bldgs 269 and 260" then the waste field would have been under DP Road and Bldg 20, the laundry. I don't believe the waste field or waste lines are ever shown crossing DP Road in this location.

But, more important, Drawings ENG-R-139 and ENG4-R-139 show Bldg 45 NORTH of DP Road with a septic tank at Bldg 124. Drawing ENG-R-140 dated 9-23-55(as status revision dated 7-1-57) still shows Bldg 33 as south of DP Road, but building 45 has been removed. Drawing ENG-R2449 says that Bldg. 45 was removed in 1954.

Drawing ENG-R-5113 says Bldg 45 was the "Safety Training Bldg". Maraman remembers Bldg 45 as the place to go to get driver's training and licenses. This building is always shown as north of DP Road.

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Drawing ENG-R-5113 identifies Bldg. 33 as a "Waste Treatment Lab" that was not removed until 1965. And Bldg 33 is shown south of DP Road, on the SAME side as Bldg 20, the laundry, until that date.

Conclusion: The statement recorded by L. Walker is wrong in that it doesn't agree with laboratory drawings.

Filter Bldg.
STATEMENT 3: "-----ground around Bldg. 12 may be contaminated, -----".

Comments: This statement is correct as far as it goes. The decontamination, demolition and soil sampling method and results are all reported in LA-5755, dated January 1975.

Conclusion: Level of contamination of the ground where Building 12 used to be is well documented.

STATEMENT 4: "Area south of Bldg. 43 may be contaminate due to overflow of recirculated chill water system".

Comments: Bldg 43 (a pump house) was located by Buildings 20 and 33. We don't know why a chilled water recirc system would be there. Wasn't that area sampled many times after Bldg 20 was removed?

Conclusion: If there is contamination remaining in that area it probably came from Bldg 20 and was not decommissioned thoroughly.

STATEMENT 5: "The Bldg.120 area had an old waste treatment area with french drains to open pits around Bldg. 106."

*This should probably be
Course Tower TA-21-143
←
from which
collected the
CIP's original*

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Comments: Drawing ENG-R-5113 calls DP-120 an acid tank located near area T.

Drawing ENG-R-139 calls DP-120 a tank but shows it as the "splitter box" between the two southern pits of Area T.

Bldg. 186 is shown on drawing ENG-R-5113 as an acid pit located about where the southwest waste pit of Area T is located, but this drawing shows only one waste pit in what is called area T.

Drawings done as late as 1955 did not use Bldg numbers as high as 186.

Drawing ENG-R-2451 shows "Bldg. 186" but does not show the southwest waste pit of area T that all earlier drawings show, although it does show the other three pits. Drawing ENG-R-2449 calls Bldg 120 and 122 an "acid sump".

Conclusion: "Bldg 120 area" is indeed contaminated, but I believe it would be better to say that Area T is contaminated. Even though drawings don't say Bldg 120 has been removed or abandoned I don't believe that it exists today. I will check with Lud Emelity about this.

STATEMENT 7. "There were wells at the ends of Bldgs. 80, 82, 84, 86, 87 and 89 which were laid up brick cisterns and may have had some hot waste dumped into them."

Comments: On all drawings Bldgs 80, 82, 84, 86, 87 and 89 are called manholes. Therefore these "wells" could not be at the "ends" of these "bldgs".

There were indeed, laid up brick cisterns which received all the waste water from the floor drains, janitor sinks, and chilled water overflows from Bldgs 2, 3, 4 and 5. Bldg 150 was equipped with a similar "cistern" when it

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was built. They were not really cisterns in that the word "cistern" implies collection and storage of liquid. These "wells" indeed collected the waste water but it was then sampled and pumped to a gravity drain that went to the waste handling area. At first this area was Area T, but later it went to Bldg 35 and, when Bldg 35 was replaced, it went to Bldg 257.

We knew these waters were contaminated and we took a 1% sample as the water was being pumped to the gravity drain. These samples were analyzed daily and the results along with volume pumped to the gravity drain were recorded in log books by both CMB-11 and H-7.

These acid wells were modified in about 1960 to add a solid plastic liner inside the brick walls and the annular space was filled with concrete. All of these were removed in 1979 and 1980 and the soil was sampled and analyzed before filling up the hole. HS&E-1 has a report giving all these data.

Conclusion: The statement needs revision and expansion.

STATEMENT 8: "There was a cast iron waste line from 80 to 516 to 94 involving the hedge (?) buildings. Line was abandoned because of leaks."

Comments: There indeed was a cast iron line running from the acid well at the north end of Bldg 2 past Bldgs 3, 4, 5 and 150 to Bldg 35. When the acid wells were modified, as mentioned above, a stainless steel line was put in and the cast iron line abandoned. We do not know of any reported or actual leaks in this line. It was replaced by a stainless steel line as part of a general upgrade of the low-level liquid waste stream. The cast iron line was under the paved road on the north side of the buildings. We believe it was abandoned in place rather than dig up the road and block all road access to

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the north wings of all buildings. The stainless steel line was placed north of this paved road but just south of the exhaust duct stanchions.

Conclusion: Statement as written is wrong. The statement refers to "516" and no building at DP Site had that high a number. Drawing ENG-C-4330 refers to things being "incorporated into TA-O-516". We think that numbering system was used when referring to demolition jobs at Los Alamos.

STATEMENT 9: "-----Floor drains in Bldg 81 ran north-----".

Comments: Bldg 81 is a manhole. How could it have a floor drain?

Conclusion: Statement is wrong as written.

STATEMENT 10: "Bill and Mac asked whether 335 might have been a hot tank."

Comments: DP 335 is indeed a containment vessel (a tank) that was installed to collect any water from Bldg 21 if the sprinklers were activated in Bldg 21. I checked with Vic Bond and Glen Champion, the people who managed the vault in those days, and they report that the sprinklers never activated. There may be some minor contamination in that tank, but more likely in the pipe leading to it. None of those contacted could remember if the tank was new or used at the time it was first installed. Vic Bond said he believed that the traps in the floor drains leading to this tank were filled with ethylene glycol to prevent freezing if any water did get in the floor drains and traps.

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Conclusion: Statement as written needs revision and expansion.

STATEMENT 11: "-----paved surface contaminated-----"

Comments: We don't think that layers of pavement were added since that would interfere with surface drainage. There were several times occasions when contamination of the pavement was covered with road tar and sand. Areas between buildings were re-contoured during upgrading of the spinal corridor and ventilation systems and hence contaminated paving was removed at that time.

Conclusion: Statement as written is wrong, in that "layers of paving" were not added. We don't believe that the area between Bldgs 2 and 3, north side, was ever very heavily contaminated.

STATEMENT 12: "-----overflow from trailers on south of Bldg 2-----",

Comments: Trailers at Bldg 2, from 1949 or 1950 to 1979, were loaded at the north side of Room 218(which was built at the southwest corner of building 2.). The trailers were loaded by putting a vacuum on the trailer tank. Consequently, if the tank was filled to the overflow mark, then the overflow would have gone back into the plant and to the vacuum system and its solution traps.

Conclusion: We do not believe that the statement is correct.

STATEMENT 13: "There was a buried trench on the south side from building 2 to building 3 which contained ether extraction lines."

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Comments: There were buried lines but they were used to transport plutonium oxalate supernatant from building 3 to building 2. They were not used with any other component, but there was an other extraction system in building 2. The lines were dug up but the concrete trench stayed in-place. The contamination level of the concrete trench should be low, probably less than 100 nCi/g of soil.

Conclusion: Statement should be re-written for clarification.

STATEMENT 14: This statement appears correct.

STATEMENT 15: "The showers which were used in 101-248 (7) drained to about 19 septic tanks, and these areas should be surveyed for contamination."

Comments: The meaning of this statement is unknown. None of the drawings show 19 septic tanks in that area.

Conclusion: Statement is in error.

STATEMENT 15b: "The area about 31 is probably not contaminated, per Bill and Mac."

Comments: No radioactive material was used in this building, nor were any significant quantities of chemicals used here.

Conclusion: Statement appears correct.

STATEMENT 16: "The area around the 272 dock, just at end of 2 had a french drain, with a solution room right above it."

Comments: There is a dock by the elevator leading to the second story chemical make-up room. This room is over the corridor area of Bldg 3, not 2.

The area between Bldg 2 and Bldg 3 south was extensively re-graded several times to improve drainage. It seems likely that if there was a french drain that it would have been dug up during that re-grading. There may be non-radioactive chemical contamination of soil below the lowest level of grading.

Conclusion: Statement needs rewording.

STATEMENT 17: "Some contamination-----south of Bldgs. 4 and 5, and is between layers of paving."

Comments: The contamination is on both sides of Bldgs 4 and 5 south as well as to the south as the statement says. The contamination is both U and Pu. We don't believe there are "layers" of paving because putting many layers of paving would have modified the drainage system. We think it was road tar and sand applications.

Conclusion: Statement needs to be revised.

STATEMENT 18: "The Gener¹l's tanks-----"

Comments: Statement is true.

STATEMENT 19: "Area A was a "dump".-----"

Comments: Pictures of DP East that show the east end of Area A and the barrels in question do not show any paving in that area. Indeed, some of the

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barrels leaked, but the leakage was caught on the soil, not on paving. The rest of the statement is probably true.

STATEMENT 20: "The west end of the Area A disposal pits was pretty deep, and received the ductwork from Bldg. 12. Also the old stack from Bldg. 12. -----."

Comments: See picture number 73-2349 for a good view of the west end of Area A. It can be used to estimate the depth the pit.

Building 12 had four stacks and, according to HS&E-7 waste management personnel (John Warren's office) these four stacks were delivered to area G, pit number 17 during the period February, 1973 and April 1973.

The last sentence is not correct as far as coordinates area concerned. If TA-O-516 refers to a demolition job that needs further explanation.

Conclusion: Statement needs to be rewritten.

STATEMENT 21: "Waste disposal area B contains the sea disposal casks (steel casks) and some old trucks."

Comments: We talked with several senior H-1 monitors who were unanimous in saying that they believed that only one truck was buried there.

Conclusion: Excavation would be needed to confirm or disprove the statement.

STATEMENT 22: "There are rumors ----- Dean Meyers is thought to have studied this."

Comments: The only way to clarify this is to talk to Dean Meyer. He now lives in the San Pedro area of Espanola. Maraman does not remember any such study.

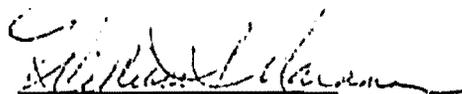
STATEMENT 23: We could add the name of Ray E. Pederson of N-2 as an individual who knows about contamination of Bayo Canyon.

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SUMMARY: We believe that both drawing ENG-C-43338 and the L. Walker memo contain too many errors to be considered authentic data about TA-21. There are several other drawings and many reports and job books which contain much more reliable data and information.

Submitted by:


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