

ER Record I.D.# 63095

ER ID NO. 63095 Date Received: 4/6/99 Processor: MKA Page Count: 7

Privileged: (Y/N) N Record Category: P Record Package No: 0

FileFolder: N/A

Correction: (Y/N) N Corrected No. 0 Corrected By Number: 0

Administrative Record: (Y/N) Y

Refilmed: (Y/N) N Old ER ID Number: 0 New ER ID Number: 0

Miscellaneous Comments:

N/A



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Los Alamos

NATIONAL LABORATORY

memorandum

*Chemical Science and Technology
Responsible Chemistry for America*

Environmental Restoration Project/CST-7
Los Alamos, New Mexico 87545

To/MS: Gary McMath, CST-7, MS M992
From/MS: William C. Francis, CST-18, MS M992. *W. F.*
Phone/FAX: 672- 1361/667-5801
Symbol: EM/ER-RAFA: 99-025
Date: April 6, 1999

SUBJECT: A HISTORY OF THE 1949 ALTERATIONS TO BUILDING TA-21-45

Building TA-21-45 was originally situated at 15th Street and Trinity Drive. In July 1947 it was moved and set on piers on the north side of DP Road across from the DP Laundry, TA-21-20. It was used by the Atomic Energy Commission as a safety training center.

In 1949 the Atomic Energy Commission abandoned the building and in January 1949 the Zia Company started alterations to the building for the Los Alamos Scientific Laboratory's Industrial Waste Studies Group. This was the same group that operated the Waste Treatment Laboratory, TA-21-33, immediately west of the DP Laundry. Building TA-21-45 was originally designated TA-21-35. See attachment No. 1.

Building TA-21-45 was removed in August 1954 by the Conwell Electric Company.

TA-21-45 had two toilet rooms on the north side of the building these toilet rooms projected out to the north about 9'-0" and their east and west dimension was about 16'-0". The toilet room fixtures were removed from the west toilet room and most of the floor was removed. A reinforced concrete pit was constructed with a sump in the southwest corner. The inside dimensions of the pit were 8'-0" north and south by 6'-0" east and west by 3'-4" deep. The inside dimensions of the sump were 3'-0" north and south by 3'-6" east and west by 2'-6" deep. The floor of the pit sloped to drain into the sump. See attachment No. 2, drawing ENG 4C-660, for details.

Attachment No. 3, drawing ENG 4C-660-A, shows two barrels mounted on a steel stand on the north side of the pit. There was a galvanized metal drip pan under each barrel. Each drip pan had a 1/2" pipe drain that emptied onto the floor of the concrete pit. A pump was mounted on the wall above the sump and could pump fluid out of the sump by means of a 3/4" suction line and a check valve. The 3/4" discharge line from the pump was connected to a 3/4" header that dropped down and connected to the metal top of each barrel. Each pipe drop into the barrels had a valve in the line. This meant that the valves on each barrel could be closed at the same time or opened at the same time. Also, the valve to one barrel could be open and the valve to the other barrel could be closed. The 3/4" line that connected the barrels and the pump then went through the west wall of the pit room and dropped down 3'-0" below grade. It continued west underground, until it was below the overhead steam line that serviced the DP Laundry. The 3/4" line then rose above grade and was strapped to the overhead steam line until it entered the DP Laundry's boiler room. It was then suspended from the walls of the laundry and connected to the inlet of a pump mounted on the floor near the sump that collected all of the waste water from the washing machines. A 1" rubber hose was pulled through the 6" steel pipe that connected the sump in the

laundry to the seepage pits, MDA-V. The rubber hose was connected to the pump discharge and extended about 2'-0" into the seepage pits beyond the end of the 6" steel pipe drain from the laundry sump. Apparently the intention was not to mix the discharge from TA-21-45 with the washing machine waste water inside of the laundry. However, there was a valved 3/4" line that by-passed the inlet to the pump that could dump the waste from TA-21-45 directly into the laundry sump. This probably was an emergency by-pass. It is interesting that there is a valved connection between the pump and the barrels in the pit at TA-21-45. This connection could be attached to a portable air compressor. It appears to me that this was a safety feature that could be used to blow the line down in case of power or pump failure.

The piping drawing is so sketchy and incomplete in the TA-21-45 pit area that I cannot determine how the barrels were filled or from where they were filled or how they were emptied. They may have emptied into the sump. The new stainless steel sink in the new work bench against the wall that was common with the east toilet room (see attachment No. 2) was not involved with the pit area because it's drain was connected to the drain that existed after a drinking fountain was removed. Discharge from the sink would have flowed to the septic tank.

WF/th

cc: w/attachments

D. Daymon, EES-13, MS M992

RPF, MS M707

LAB JOB 382-21

TA-21 TITLE ALTERATIONS TO OLD A.E.C. SAFETY

TRAINING BLDG. 35, DP WEST, TA-21

STARTED 12-15-49 COMPLETED 2-13-50

COST \$ 4,962.34

FOLDER 1 OF 1 NUMBER OF PAGES 19

OTHER DATA: NONE

ANTHONY

OF C. NO. 20274	COST CODE 2828	LOCATION Training Bldg. 400 1-220 190905-1-2212, Reynolds, Bldg.	DATE 1-28-50	W. O. NO. 890,098 295 8103
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ESTIMATE SUMMARY
MATERIAL
DIRECT LABOR
TRANSPORTATION
OTHER COST
TOTAL

PRIORITY	TENANT	GROUP
Job position (Fitter, Painter)	Contract (Laborer, Electrician, Utility)	
<p>Make alterations to the old ACO Safety Training Bldg. located north of the DP Laundry. To be used by the Industrial Waste Studies Group. Alter per attached prints LBO 42-456. Identify as Bldg. 435 DP Vest.</p> <p>Hazardous</p> <p>Alter</p>		

COST CENTERS EST. HRS.

DATE	CUMULATIVE TOTAL	COST TOTAL	MATERIAL	DIR. LABOR RES. AMT.	TRANSPORTATION	OTHER CHARGE
1-17-50				378		
		1005.98	134.25	506.81	28.96	
1-14				352		
1-11		591.30	17.39	27.49	77.95	
1-10				27		
		295.37	42.39	73.24	75.00	
1-01		561.11	120.50	89.26		
1-28		1780.80	394.57	429.18	23	
1-17				51		
		16.09		23	16.09	
1-10		195.11	4.96	80.15	38.50	
1-01				13		
		312.08	59.96	77.29		
1-01		2.59		1	2.52	
1-25		67.75	3.17	70.58	1.00	
1-21		459.27	5.17	11.39		
1-01		518.59	5.17	11.39		
TOTAL						

FORM
FM-1
(27-49)

TECH AREA
WORK ORDER REQUEST
ZIA CO.

1. Request No. 2. Requesting Authority 3. Requested by 4. Tel. No. 5. Tech. Program No.
50-2-26 Lab. ENG. Dept. R. G. Stone 1292 ENC-1-120

6. Designation of Work Classification:
Construction Laboratory Operation Maintenance
Service

7. Acct. Code No. 8. Location of work 9. Date Required
31147 Safety Training Bldg., DP West, TA-21 1-3-50

10. Reason for work:
To increase facilities for the Industrial Waste Studies Group.

11. Description of work giving names of items, quantities, sizes, material, finish, etc., including rough sketch, or plan and specifications, with dimensions as applicable:
Make alterations to the old AEC Safety Training building located north of the DP-S1 Laundry. To be used by the Industrial Waste Studies Group. Alter per print ENG-LM-186. J. O. 202741

12. Budget item chargeable: Zia Tech Maintenance

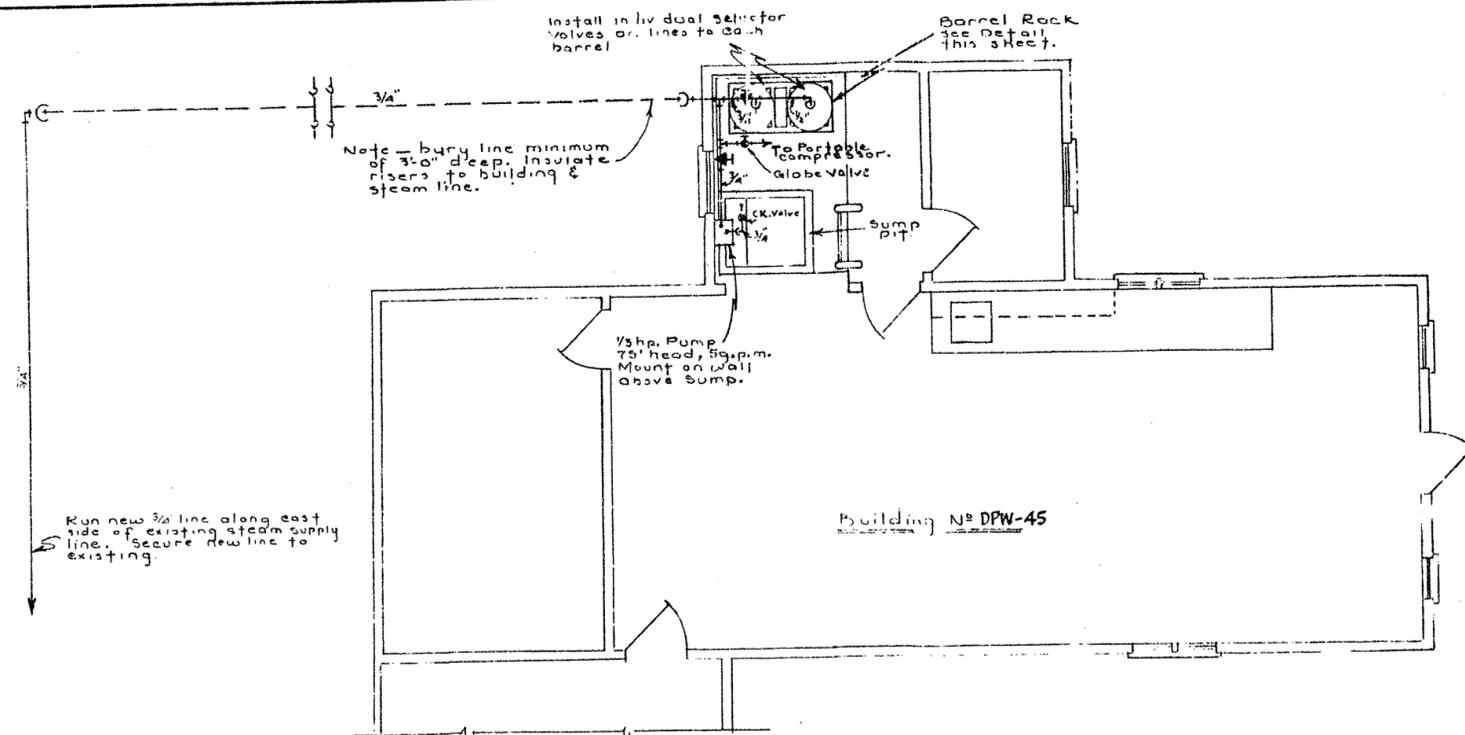
13. Work stated above is authorized if expenditure does not exceed: \$2720.00

14. Date: 11-30-49 Signed: *R. G. Stone*

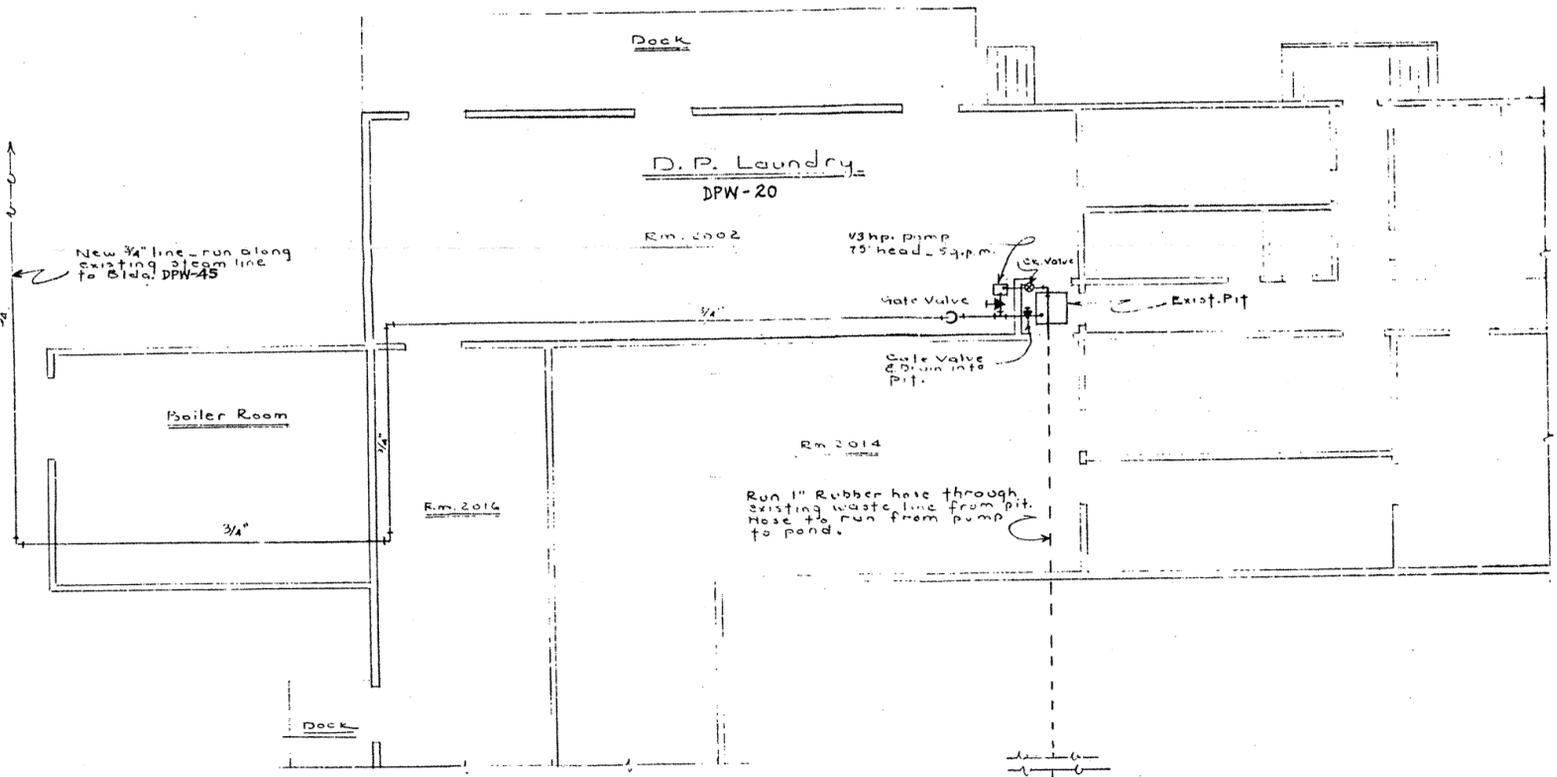
15. Referred to: G. L. Reynolds & S. J. Wasser for estimate
Date: 11-30-49 Signed: *S. J. Wasser*

16. A.E.C. Approval (if required): 17. Zia Approval: 18. Work Order No. Assigned
S. C. DeLuca *S. J. Wasser* Date: _____

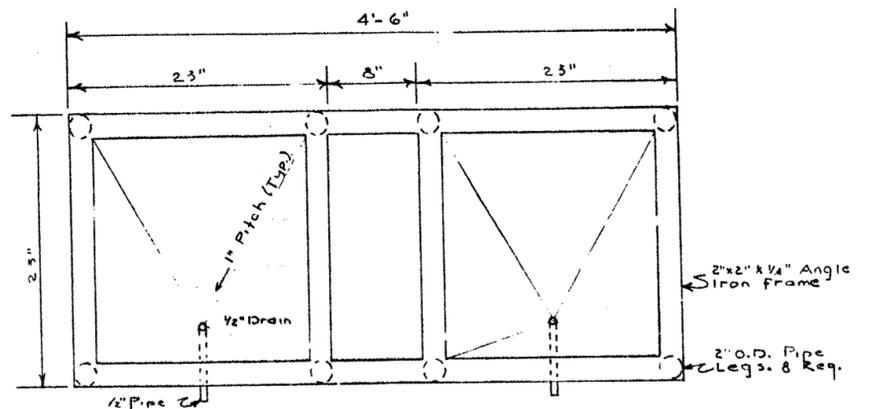
- Distribution: F. C. Clark (4) ←
- F. L. ...
- E. W. ...
- John ...
- 125



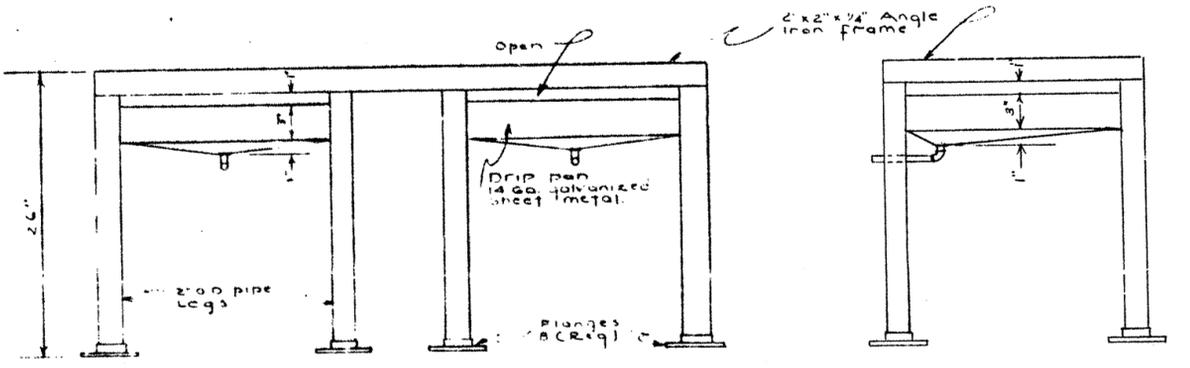
Mechanical Plan
Scale 1/8" = 1'-0"



Mechanical Plan
Scale 1/8" = 1'-0"



Top View



Front View
Barrel Rack Detail
Scale 1/8" = 1'-0"

End View

ATTACH. No. 3

**OBSOLETE
DEAD STORAGE**

WAS ENG. 4M-186 REV. 3-30-50 C.H.O.

AUTHORIZED FOR		LOS ALAMOS SCIENTIFIC LABORATORY DEPARTMENT OF ENGINEERING-CONSTRUCTION & MAINTENANCE GROUP			
HEALTH VLB		ALTERATIONS TO BLDG. DPW-45			
SAFETY TEE		TA-21			
FIRE PR.		J.O. 202741 OR. ENG. 4-30-C			
COMM.		SCALE	DRAWN BY: MGRILS	DATE: 11-23-49	DWG. NO.
SEC.		NOTED	CHKD. BY: N.G. C.S.W.	DATE: 11-28-49	ENG. 412-200A
REV. 0			APPVD. BY: [Signature]	DATE: 11-28-49	2 OF 2
JOB NO. 382					