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GROUP H-6 MONTHLY REPORT - Dean D. Meyer, Group Leader - June 16 to July 14, 1951

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JOB AND PERSONNEL

PROGRESS

1. Health Chemistry

B. F. Schnap

A drinking water sample was collected at DP East on July 2, 1951, and analyzed for polonium. None was detected.

The following water samples were analyzed for plutonium

Collection Date	Location	d/m/liter
June 30, 1951	Drinking Fountain - DP West	None
	Circ. Water, Bldg. 2 - DP West	54 d/m/l
June 30, 1951	Circ. Water, Bldg. 3 - DP West	None
	Circ. Water, Bldg. 4-5 " "	2258 d/m/l
July 11, 1951	D Building Drinking Fountain	None
	D Building Circ. Water	None

24 samples of washings from trays placed outside from May 11 through May 26 were analyzed for plutonium. Results were negligible, the maximum amount found was 20 d/m from a tray placed on D Building roof and collected May 24th.

11. Special Air Tests

A. O. Dodd

Sample tubes were constructed and installed on both sides of the CWS filter houses at DP West, Rooms 201 and 501. Filter efficiency tests were made across the filters for the 213 and 501 installations. Collection of material was of such an order of magnitude that samples must be collected every half hour in order that they may be counted. A six day sampling was made on the 501 installation. The dust load to the unit had an average alpha activity of 15 d/m/liter. For any one day the load varied from 30 d/m/l to 2.8 d/m/l. Efficiency of cleaning varied from 89.6% to 99.8%, with an average efficiency of 95.4%.

Testing of the 213 installation has shown very erratic results. The efficiency has varied from 96.5% to a negative efficiency. (The sample of air after passage through the filter gives a higher result than that sampled before passage.) The sampling methods are being checked and the samples themselves will be checked to be certain of the material with which we are working.

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Health & Contamination

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JOB AND PERSONNEL	PROGRESS
11. (cont'd)	A charge of graphite dust was dispersed into the exhaust system before passage through the filter and was looked for at the after passage sample point. None was detected. Such a test would detect any gross leakage around the filters or failure of the filters.
111. Decontamination A. Special Studies J. B. Webber A. Fernandez F. Martinez	The special monitoring and digging operation was completed. 2 1/2 days were required for monitoring. 3 days for digging was required and a total of 3 days for decontamination of equipment.
B. Routine Decontamination	97 items having a replacement value of approximately $2,200.00 were decontaminated and returned to use. 294 transfer cans were decontaminated for CMR and ADP-SF personnel.

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PROGRESS REPORT FOR MONITORING
SECTION

Surface Monitoring:

Tech Area	No. Rooms Checked	No. Positions Over Tolerance	Percent Decontamination
D Building	705	298	53
Sigma and Tu	144	107	78
U,M,H Bldg.	9	6	100
DP West			
CMR-11 Areas and CMR Laundry	184	914	72
CMR-4	27	68	78
DP East			
Polonium Areas	837	99	100
Actinium Areas	28	32	100

AIR-BORNE ALPHA CONTAMINATION
(Tech Area - Plutonium Laboratories)
Maximum allowable concentration 0.0044 c/m/l

Location	No. Tests	No. Tests Over M.A.C. July	No. Tests Over M.A.C. June	July High c/m/l	July Ave. c/m/l	June Ave. c/m/l
D-107	14	0	4	0.0040	0.0009	0.0028
D-118	14	1	0	0.0118	0.0010	0.0008
D-130	22	2	0	0.0064	0.0013	0.0009
D-134	23	2	3	0.0293	0.0025	0.0038
D-136	23	1	0	0.0066	0.0011	0.0004
D-138	22	5	0	0.0691	0.0057	0.0009
D-139	23	8	13	0.0148	0.0041	0.0057
D-143	14	1	2	0.0053	0.0011	0.0021
D-149	23	7	4	0.0233	0.0054	0.0038
D-152	23	6	0	0.0209	0.0044	0.0017
D-304	16	2	1	0.0073	0.0022	0.0026
D-304B	23	3	1	0.0358	0.0032	0.0013
D-313	23	4	4	0.1562	0.0124	0.0025
D-142	7	0	-	0.0005	0.0002	- - -

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Location	No. Tests	No. Tests Over M.A.C. July	No. Tests Over M.A.C. June	July High c/m/l	July Ave. c/m/l	June Ave. c/m/l
D-148	18	5	0	0.0182	0.0041	0.0031
D-307	4	0	-	0.0025	0.0014	- - -
D-119	5	0	-	0.0005	0.0004	- - -
D-107A	9	1	0	0.1934	0.0222	0.0011
D-320	22	1	0	0.0329	0.0027	0.0014
D-311	23	1	1	0.0110	0.0012	0.0016
D-145 Hall	19	1	1	0.0060	0.0016	0.0016
D-101	12	0	-	0.0004	0.0002	- - -
D-112 Hall	12	0	1	0.0023	0.0009	0.0044
D-504	5	0	-	0.0008	0.0004	- - -
DP West						
Room 201	23	2	0	0.0125	0.0019	0.0008
Room 213 Evap. Room	23	0	0	0.0034	0.0007	0.0007
Main Aisle	20	2	0	0.5047	0.0009	0.0006
Unloading Rm.	23	0	0	0.0028	0.0009	0.0006
Beside Filter Drybox	12	3	0	0.1019	0.0063	0.0007
Room 218	23	1	0	0.0090	0.0013	0.0004
Room 313	23	1	0	0.0094	0.0010	0.0007
Room 322	22	0	0	0.0009	0.0002	0.0001
Room 401	22	0	0	0.0031	0.0007	0.0005
Room 406	23	4	8	0.0179	0.0032	0.0071
Room 408	23	5	6	0.0321	0.0041	0.0045
Room 413	17	3	1	0.0193	0.0034	0.0017
Room 501 Plant	23	4	1	0.4287	0.0275	0.0012
Room 501 Control Rm.	18	0	0	0.0011	0.0003	0.0003

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Location	No. Tests	No. Tests Over M.A.C. July	No. Tests Over M.A.C. June	July High c/m/l	July Ave. c/m/l	June Ave. c/m/l
Room 506	23	1	0	0.0070	0.0008	0.0006
Room 508	23	1	0	0.0058	0.0009	0.0007
Room 513	22	4	6	0.0607	0.0052	0.0151
Hot Locker Rm.	22	0	1	0.0030	0.0011	0.0013
Bldg. 35	23	1	2	0.0056	0.0012	0.0021
Bldg. 34	23	0	0	0.0023	0.0009	0.0011
		PLUTONIUM AND AMERICIUM Maximum allowable concentration 0.0044 c/m/l				
DP West - GMR-4						
Room 307	21	0	0	0.0020	0.0005	0.0005
Room 319	21	0	0	0.0023	0.0006	0.0004
		PLUTONIUM - AMERICIUM - POLONIUM AND URANIUM Maximum allowable concentration 0.0044 c/m/l				
GMR Laundry						
Sorting Rm.	23	1	2	0.0052	0.0014	0.0021
Washing Rm.	23	1	1	0.0074	0.0009	0.0012
Respirator Rm.	23	0	0	0.0027	0.0005	0.0007
		POLONIUM Maximum allowable concentration 0.700 c/m/l				
DP East						
Room 5203	23	0	0	0.036	0.004	0.002
Room 5204	10	0	0	0.091	0.012	0.034
Room 5205	9	0	0	0.003	0.001	0.002
Room 5206	9	0	0	0.016	0.004	0.019
Room 5208	9	0	0	0.006	0.003	0.002
Room 5210	13	0	0	0.008	0.003	0.002
Room 5211	9	0	0	0.019	0.007	0.019
Room 5212	23	0	0	0.021	0.003	0.027

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Location	No. Tests	No. Tests Over M.A.C. July	No. Tests Over M.A.C. June	July High c/m/l	July Ave. c/m/l	June Ave. c/m/l
Room 5213	14	0	0	0.006	0.002	0.005
Room 5214	14	0	0	0.039	0.004	0.006
Room 5227	14	0	0	0.002	0.001	0.002
Room 5230	14	0	0	0.070	0.009	0.013
NORMAL URANIUM Maximum allowable concentration 0.033 c/m/l						
Sigma Building						
Sigma 21	22	0	0	0.0277	0.0082	0.0110
Sigma 21C	22	0	0	0.0154	0.0049	0.0065
Sigma 22	11	0	0	0.0162	0.0036	0.0035
Sigma 104	22	1	1	0.0469	0.0061	0.0054
Sigma 118	22	0	0	0.0013	0.0007	0.0007
TU Bldg.						
TU Saw Rm.	19	0	2	0.0261	0.0095	0.0143
ENRICHED URANIUM Maximum allowable concentration 0.0044 c/m/l						
D Bldg.						
D-108A	23	0	1	0.0035	0.0008	0.0017
D-112	20	2	6	0.0060	0.0012	0.0047
D-114	23	0	2	0.0034	0.0010	0.0024
D-115	23	3	11	0.0080	0.0020	0.0062
D-116	23	6	14	0.0064	0.0026	0.0074
D-127*	22	0	0	0.0063	0.0022	0.0027
D-129	23	2	1	0.0406	0.0031	0.0011

* This room is considered to be on the uranium M.A.C. since enriched uranium only is worked with here and in the adjoining room, and flow of air is out of this room into the adjoining room.

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Location	No. Tests	No. Tests Over M.A.C. July	June	July High c/m/l	July Ave. c/m/l	June Ave. c/m/l
Sigma Bldg. - M.A.C. 0.033 c/m/l						
S-106	22	1	0	0.0668	0.0062	0.0014
S-110	22	0	0	0.0173	0.0048	0.0036
S-117	22	0	1	0.0235	0.0045	0.0068

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AIR-BORNE ALPHA CONTAMINATION IN EXHAUST SYSTEMS

Location: DP West	No. Tests	July High c/m/l	July Ave. c/m/l	June Ave c/m/l
Average conc. from stacks (24 hrs)	164	0.8348	0.0501	0.0173
Average conc. from bldg. ducts (24 hrs)	82	2.3099	0.1129	0.0453
Daily conc., Stack 1, day run (7 hrs)	23	0.8348	0.1582	0.0269
Daily conc., Stack 2, day run (7 hrs)	23	0.6868	0.1709	0.0317
Daily conc., Stack 3, day run (7 hrs)	23	0.1994	0.0606	0.0489
Daily conc., Stack 4, day run (7 hrs)	23	0.4374	0.1284	0.0376
Daily conc., Stack 1, night run (17 hrs)	18	0.0118	0.0040	0.0025
Daily conc., Stack 2, night run (17 hrs)	18	0.0298	0.0088	0.0032
Daily conc., Stack 3, night run (17 hrs)	18	0.0151	0.0023	0.0055
Daily conc., Stack 4, night run (17 hrs)	18	0.0277	0.0060	0.0050
Daily conc., east side plenum, day (7 hrs)	23	2.3099	0.4678	0.0117
Daily conc., west side plenum, day (7 hrs)	23	0.8181	0.1131	0.0091
Daily conc., east side plenum, night (17 hrs)	18	0.0593	0.0165	0.1182
Daily conc., west side plenum, night (17 hrs)	18	0.0556	0.0104	0.0911
DP East				
Average conc. from stacks (24 hrs)	45	0.796	0.053	0.106
Average conc. from bldg. ducts (24 hrs)	23	0.513	0.120	0.353

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NOSE SWIPE TESTS

Areas	No. Tests Taken	No. Over Tolerance	Highest Over Tolerance
D and M Buildings	1333	0	- - - -
Sigma and Tu	311	3	90/196 c/m
DP West (CMR-11 and Zia)	1146	7	9382/6679 c/m
DP West (CMR-4)	79	0	- - - -
Laundry	367	0	- - - -
DP East			
Polonium Area	116	0	- - - -
Actinium Area	8	0	- - - -

HAND COUNTS

Areas	No. Counts Recorded	No. Over Tolerance	High Over Tolerance Count
D Building	5634	2	25,000 c/m
Sigma	542	0	- - - -
DP West (CMR-11)	2030	2	500 c/m
DP West (Zia)	2216	2	1500 c/m
DP West (CMR-4)	522	0	- - - -
Laundry	2000	0	- - - -
DP East			
Polonium Area	683	1	50,000 c/m
Actinium Area	16	0	- - - -

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General:

1. 139 persons were sent to the Health Pass Ward during the month for collection of 24 hour urine samples. These include 68 University of California personnel, 43 Zia Company personnel, and 28 A.E.C. personnel. Eight of these tests were submitted by the home collection method. Reports on all tests show concentrations below the permissible levels in the urine.

2. Work was started on the dismantling of Room 413 at DP West. The work is progressing very satisfactorily. Surface and air-borne contamination is being kept to a minimum.

3. Shift work has started in Building 2 at DP West. A H-6 monitor has been assigned to this work.

4. CMR-3 continued work with actinium. Twenty-three air samples were taken during the month. Average air-borne activity was 0.010 c/m/l with a maximum of 0.189 c/m/l. All samples decayed rapidly.

5. No contaminated accidents were reported during the month.

Dean D. Meyer

Dean D. Meyer
Group Leader H-6

cc: 1A Doc. Room
2A E. R. Jette
3A T. L. Shipman
4A H-6 File

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