Box # 13-1-24

1663

ChemRisk/Shonka Research Associates, Inc., Document Request Form

(This section to be completed by subcontractor requesting document)

Jack Buddenbaum / K-25 SR

Requestor — Document Center (is requested to provide the following document)

Date of request 3/22/95 — Expected receipt of document ~~3~~ 4/7/95

Document number _____ — Date of document 1981

Title and author (if document is unnumbered)

Lab Air Analysis Reports (indoor) - sample pages

Please copy only pages marked w/stickies

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Date request received 3/27/95

Date submitted to ADC 4/3/95

Date submitted to HSA Coordinator 3/27/95

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Date submitted to CICO 4/3/95

Date received from CICO 4/24/95

Date submitted to ChemRisk/Shonka and DOE 4/25/95

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Date document received _____

Signature _____

K/EM-114

LAB AIR ANALYSIS REPORTS (INDOOR) (1981)

(From Box #13-1-24)

Compiled by
S. G. Thornton
Environmental Management Division
OAK RIDGE K-25 SITE
for the Health Studies Agreement

April 1, 1995

Oak Ridge K-25 Site
Oak Ridge, Tennessee 37831-7101
managed by MARTIN MARIETTA ENERGY SYSTEMS, INC.
for the U.S. DEPARTMENT OF ENERGY
under Contract DE-AC05-84OR21400

This document has been approved for release to the public by:
Technical Information Officer
Oak Ridge K-25 Site
6/23/95
Date

ORGDP HEALTH PHYSICS CONTINUOUS AIR SAMPLING PROGRAM

Building Sample Location

Sample No.	Starting Date	Starting Time	Starting Flow Rate (lpm)	Ending Date	Ending Time	Ending Flow Rate (lpm)	Sample Duration (Minutes)	Sample Volume (m^3)	Air Activity $d/m/m^3$
A.S.#9-8	9/26/79	10:06 a.m.	20 l.p.m.	9/27/79	11:18 a.m.	25 l.p.m.	1512	34.02	.705

avg. flow rate = 22.5 l.p.m

avg. flow rate ÷ 1000 cubic meters = Sample volume (m^3)

ex 22.5 ÷ 1000 = .0225 cubic meters

cubic meters x sample Duration (minutes) = Sample volume (m^3)

ex. .0025 x 1512 = 34.02

~~Sample volume~~ ÷ total activity of the filter paper divided by (Sample duration (minutes)) = Air activity $d/m/m^3$

ex 24 (total activity of filter papers) ÷ 34.02 Sample volume (m^3)

= .705

≐ .745

to find Air Activity $d/m/m^3$

C.P.M. x Factor of 3 = total activity on the filter paper (gross alpha) ex C.P.M (8) x factor (3) = 24 *

(3.17 is the factor we use now)

25.36

Remarks:

H. P. Technician

LONG TERM AIR SAMPLES*

Location	MONTHLY SUMMARY						
	Number Taken	Total Duration(hr)	Number > IAL	% > IAL	Activity **		
					Total Activity	Average Activity	Maximum
K-1420 "B" Recovery	18	577.6	0	0	6.0	0.3	1.3
K-1420 Spool Demo.	21	719.1	0	0	5.3	0.2	1.9
K-1420 Conv. Disassembly	17	577.2	0	0	18.5	1.0	3.5
K-1420 Comp. Disassembly	18	556.8	0	0	9.3	0.5	2.9
K-1420 Seal	21	719.0	0	0	22.6	1.1	5.1
K-402-9 Alumina	21	719.9	0	0	3.3	0.2	0.7
K-402-9 Sodium Fluoride	21	719.9	0	0	4.5	0.2	1.1
K-413	21	719.8	1	5	71.2	3.4	35.6
K-1131	21	719.8	0	0	6.0	0.3	3.8
K-1004-L Upper Level	21	719.6	1	5	43.3	2.1	27.8
K-1004-L Lower Level	21	719.6	0	0	2.7	0.1	0.4
K-1423 Autoclave Southwest	21	719.2	0	0	36.4	1.7	11.5
K-1423 Autoclave Northwest	21	719.4	0	0	29.3	1.4	10.3
K-1423 North Transfer	21	719.2	3	14	700.6	33.4	577.0
K-1401 Valve Shop	21	719.3	0	0	2.6	0.1	0.4
K-1401 Comp. Shop	21	719.0	0	0	2.6	0.1	0.4
K-1220 Product Withdrawal	20	719.5	0	0	1.4	0.1	0.1
K-1220 Tails Withdrawal	20	719.0	0	0	1.3	0.1	0.1
K-1210 Transfer Area	21	719.6	0	0	2.1	0.1	0.4
K-1131 Pump Room	21	719.8	1	5	157.3	7.5	136.6
K-1004R Stands	19	670.2	0	0	1.5	0.1	0.1
K-1004R Lab	19	670.0	0	0	1.8	0.1	0.2
Total for month	446	15,282.5	6	1	1129.6	2.5	577.0

These samples are of approximately 24 hours duration.

** Activity - d/m/m^3 -

April, 1983

LONG TERM AIR SAMPLES*

Location	MONTHLY SUMMARY						
	Number Taken	Total Duration (hr)	Number > IAL	% >IAL	Activity ** Total Activity	Activity ** Average Activity	Activity ** Maximum
K-1420 "B" Recovery	20	673.1	0	0	2.2	0.1	0.3
K-1420 Spool Demo.	20	673.0	0	0	3.7	0.2	1.6
K-1420 Conv. Disassembly	20	673.0	0	0	4.4	0.1	1.4
K-1420 Comp. Disassembly	20	673.1	0	0	4.9	0.2	1.4
K-1420 Seal	20	673.0	0	0	7.0	0.4	2.3
K-402-9 Alumina	20	671.7	0	0	4.1	0.2	2.2
K-402-9 Sodium Fluoride	20	671.8	0	0	5.0	0.2	2.8
K-413	20	671.8	0	0	36.3	1.8	13.2
K-1131	20	671.8	0	0	9.6	0.5	5.2
K-1004-L Upper Level	20	672.5	0	0	27.4	1.4	12.3
K-1004-L Lower Level	20	673.1	0	0	14.9	0.8	8.2
K-1423 Autoclave Southwest	20	672.6	0	0	41.8	2.1	11.6
K-1423 Autoclave Northwest	20	672.6	0	0	43.7	2.2	9.8
K-1423 North Transfer	20	672.6	1	0	89.9	4.5	32.2
K-1401 Valve Shop	20	673.0	0	0	2.0	0.1	0.3
K-1401 Comp. Shop	20	673.0	0	0	1.9	0.1	0.2
K-1220 Product Withdrawal	16	673.1	0	0	1.1	0.1	0.1
K-1220 Tails Withdrawal	16	673.1	0	0	1.1	0.1	0.1
K-1210 Transfer Area	20	673.0	0	0	1.9	0.1	0.2
K-1131 Pump Room	20	671.8	0	0	8.4	0.4	3.6
Total for month	392	13,452.7	1	0	311.3	0.8	32.2

* These samples are of approximately 24 hours duration.

** Activity - $d/m/m^3$

mcu

February, 198

LONG TERM AIR SAMPLES*

Location	MONTHLY SUMMARY						
	Number Taken	Total Duration(hr)	Number > IAL	% > IAL	Activity ** Total Activity	Activity ** Average Activity	Activity ** Maximum
K-1420 "B" Recovery	19	667.6	0	0	6.9	0.4	1.6
K-1420 Spool Demo.	19	667.6	0	0	9.2	0.5	3.0
K-1420 Conv. Disassembly	19	667.6	0	0	10.2	0.5	4.4
K-1420 Comp. Disassembly	19	667.6	0	0	14.4	0.8	7.4
K-1420 Seal	19	667.6	0	0	7.5	0.4	2.2
K-402-9 Alumina	19	667.0	0	0	7.4	0.4	2.7
K-402-9 Sodium Fluoride	19	667.0	2	10	103.2	5.4	59.7
K-413	19	667.0	1	5	157.9	8.3	29.0
K-1131	19	666.7	0	0	13.3	0.7	2.9
K-1004-L Upper Level	19	667.9	0	0	17.5	0.9	7.0
K-1004-L Lower Level	19	668.5	0	0	11.8	0.6	2.8
K-1423 Autoclave Southwest	19	665.8	3	16	153.4	8.1	45.0
K-1423 Autoclave Northwest	19	665.8	3	16	383.5	20.2	202.4
K-1423 North Transfer	19	665.8	1	5	103.1	5.4	23.2
K-1401 Valve Shop	19	666.9	0	0	5.9	0.3	2.3
K-1401 Comp. Shop	19	667.0	0	0	7.5	0.4	3.2
K-1220 Product Withdrawal	15	691.6	0	0	1.3	0.1	0.7
K-1220 Tails Withdrawal	15	692.0	0	0	1.4	0.1	0.8
K-1210 Transfer Area	19	667.6	0	0	6.7	0.4	2.4
K-1131 Pump Room	2	90.1	0	0	4.2	2.1	3.2
Total for month	355	12,814	10	3	1026.3	2.9	202.4

These samples are of approximately 24 hours duration.

** Activity - $d/m/m^3$

Naca

January, 1962

LONG TERM AIR SAMPLES*

Location	MONTHLY SUMMARY						
	Number Taken	Total Duration (hr)	Number > IAL	% > IAL	Activity **		
					Total Activity	Average Activity	Maximum
K-1420 "B" Recovery	21	700.1	0	0	2.7	0.1	0.4
K-1420 Spool Demo.	21	700.1	0	0	1.9	0.1	0.2
K-1420 Conv. Disassembly	21	700.0	0	0	4.9	0.2	1.3
K-1420 Comp. Disassembly	21	700.0	0	0	17.4	0.8	7.2
K-1420 Seal	21	699.9	0	0	7.1	0.3	2.3
K-402-9 Alumina	21	700.9	0	0	3.1	0.1	0.5
K-402-9 Sodium Fluoride	21	701.0	0	0	49.6	2.4	21.4
K-413	21	701.3	0	0	61.9	2.9	12.1
K-1131	21	701.1	0	0	53.9	0.9	10.6
K-1004-L Upper Level	21	699.7	0	0	26.8	1.3	16.4
K-1004-L Lower Level	21	699.6	0	0	17.5	0.8	12.1
K-1423 Autoclave Southwest	21	701.5	2	10	182.2	8.7	58.8
K-1423 Autoclave Northwest	21	701.6	1	5	124.1	5.9	26.3
K-1423 North Transfer	21	701.7	3	14	117.6	5.6	30.1
K-1401 Valve Shop	21	700.8	0	0	2.5	0.1	0.3
K-1401 Comp. Shop	21	701.0	0	0	2.1	0.1	0.2
K-1220 Product Withdrawal	17	723.2	0	0	1.5	0.1	0.4
K-1220 Tails Withdrawal	17	723.8	0	0	1.2	0.1	0.1
K-1210 Transfer Area	20	699.6	0	0	2.6	0.1	0.9
Total for month	390	13,357	6	2%	680.5	1.7	58.8

These samples are of approximately 24 hours duration.

** Activity - $d/m/m^3$

Year of 1700

LONG TERM AIR SAMPLES*

Location	MONTHLY SUMMARY						
	Number Taken	Total Duration(hr)	Number > PAG	% > PAG	Activity **		
					Total Activity	Average Activity	Maximum
K-1420 "B" Recovery	246	8674	0	0	106.3	0.4	7.3
K-1420 Spool Demo.	244	8664	1	0	334.4	1.4	242.2
K-1420 Conv. Disassembly	238	8494	0	0	71.7	0.3	7.1
K-1420 Comp. Disassembly	247	8737	0	0	156.9	0.6	29.8
K-1420 Seal	244	8635	0	0	242.8	1.0	47.2
K-402-9 Alumina	248	8734	0	0	35.1	0.1	2.8
K-402-9 Sodium Fluoride	246	8734	0	0	113.3	0.5	18.8
K-413	248	8734	0	0	648.8	2.6	111.3
K-1131	247	8734	0	0	109.2	0.4	13.1
K-1004-L Upper Level	248	8733	1	0	698.5	2.8	224.1
K-1004-L Lower Level	249	8733	0	0	218.1	0.8	35.7
K-1423 Autoclave Southwest	247	8738	0	0	305.9	1.2	28.1
K-1423 Autoclave Northwest	248	8739	+ 2	0	388.2	1.6	40.4
K-1423 North Transfer	245	8710	0	0	392.0	1.6	76.9
K-1401 Valve Shop	246	8735	0	0	37.4	0.1	3.9
K-1401 Comp. Shop	245	8732	0	0	26.9	0.1	3.3
K-1220 Product Withdrawal	111	4673	0	0	6.2	0.1	0.2
K-1220 Tails Withdrawal	128	6305	0	0	5.5	0.0	0.5
K-1210 Transfer Area	130	4651	0	0	45.5	0.4	13.3
K-29 Converter	153	5791	0	0	78.3	0.5	10.2
K-633	26	889	+ 4	15	282.4	10.9	90.0
K-1200 upstairs	14	504	0	0	1.1	0.1	0.1
K-1200 downstairs	14	504	0	0	1.1	0.1	0.1

These samples are of approximately 24 hours duration.

** Activity - d/m/m^3

+ As of November, 1982 The PAG of of 200d/min/m3 was changed to the IAL of 22d/min/m^3. This reflects the new guidelines

LONG TERM AIR SAMPLES* (continued)

Location	MONTHLY SUMMARY						
	Number Taken	Total Duration(hr)	Number > PAG	% > PAG	Activity **		
					Total Activity	Average Activity	Maximum
K- 4027	17	571	0	0	1.8	0.1	0.3
TOTAL FOR YEAR	4529	163,148	7	0	4307.4	1.0	242.2

* These samples are of approximately 24 hours duration.

** Activity - $d/m/m^3$

ORGDP HEALTH PHYSICS CONTI OUS AIR SAMPLING PROGRAM

Building K-1131 Location Feed

Sample No.	Starting Date	Starting Time	Starting Flow Rate (lpm)	Ending Date	Ending Time	Ending Flow Rate (lpm)	Sample Duration (Minutes)	Sample Volume (m^3)	Air Activity $d/m/m^3$
2274-L	4-27-81	9:25/am	20 lpm	4-28-81	9:37/am	20 lpm	1452	29.04	.144
2283-L	4-28-81	9:37/am	" "	4-29-81	10:22/am	" "	1485	29.70	.352
2292	4-29-81	10:22/am	" "	4-30-81	10:08/am	" "	1426	28.52	.536
2301-L	4-30-81	10:08/am	" "	5-1-81	9:21/am	" "	1393	27.86	.075
2310-L	5-1-81	9:21/am	" "	5-4-81	9:32/am	" "	4331	86.62	.048
2321-L	5-4-81	9:32/am	" "	5-5-81	9:28/am	" "	1436	28.72	.251
2332-L	5-5-81	9:28/am	" "	5-6-81	9:52/am	" "	1464	29.28	.500
2343-L	5-6-81	9:52/am	" "	5-7-81	10:20/am	" "	1468	29.36	.071
2354-L	5-7-81	10:20/am	" "	5-8-81	9:16/am	22 "	1376	28.90	.012
2366-L	5-8-81	9:16/am	" "	5-11-81	9:42/am	20 "	4376	86.72	.168
2378-L	5-11-81	9:42/am	" "	5-12-81	10:56/am	" "	1514	30.28	.067
2390-L	5-12-81	10:56/am	" "	5-13-81	10:54/am	" "	1438	28.76	.073
2402-L	5-13-81	10:54/am	" "	5-14-81	12:50/pm	" "	1556	31.12	.336
2414-L	5-14-81	12:50/pm	" "	5-15-81	11:15/am	" "	1345	26.90	.018
2426-L	5-15-81	11:15/am	" "	5-18-81	9:42/am	" "	4227	84.54	.173
2438-L	5-18-81	9:42/am	" "	5-19-81	9:39/am	" "	1437	28.74	.073
2450-L	5-19-81	9:39/am	" "	5-20-81	9:58/am	" "	1457	29.14	.072
2462-L	5-20-81	9:58/am	" "	5-21-81	9:33/am	" "	1415	28.30	.071
2474-L	5-21-81	9:33/am	" "	5-22-81	9:25/am	" "	1432	28.64	.013
2486	5-22-81	9:25/am	" "	5-26-81	8:55/am	18 "	5130	108.81	.058
2498-L	5-26-81	8:55/am	" "	5-27-81	10:40/am	20 "	1515	30.30	.062
2510-L	5-27-81	10:40/am	" "	5-28-81	2:40/am	" "	1680	33.60	.011

Remarks:

H. P. Technician L. Love Jr.

ORGDP HEALTH PHYSICS CONTI OUS AIR SAMPLING PROGRAM

Building K-413 Location Product Withdrawal

Sample No.	Starting Date	Starting Time	Starting Flow Rate (lpm)	Ending Date	Ending Time	Ending Flow Rate (lpm)	Sample Duration (Minutes)	Sample Volume (m^3)	Air Activity $d/m/m^3$
2797-L	6-30-81	10:18/am	20 lpm	7-1-81	9:20/am	20 lpm	1382	27.64	1.13
2805-L	7-1-81	9:20/am	" "	7-2-81	10:56/am	" "	1536	30.72	1.22
2813	7-2-81	10:56/am	" "	7-7-81	10:20/am	" "	5724	114.48	2.83
2821	7-7-81	10:20/am	" "	7-8-81	9:38/am	" "	1398	27.96	2.37
2829	7-8-81	9:38/am	" "	7-9-81	9:10/am	" "	1412	28.24	.89
2837	7-9-81	9:10/am	" "	7-10-81	10:05/am	" "	1495	29.90	.49
2845-L	7-10-81	10:05/am	" "	7-13-81	9:18/am	" "	4273	85.46	.59
2853-L	7-13-81	9:18/am	" "	7-14-81	9:45/am	" "	1467	29.34	.36
2861-L	7-14-81	9:45/am	" "	7-15-81	12:30/pm	" "	1605	32.10	.46
2869-L	7-15-81	12:30/pm	" "	7-16-81	9:43/am	" "	1273	25.46	.25
2877-L	7-16-81	9:43/am	" "	7-17-81	9:54/am	" "	1451	29.02	.27
2885-L	7-17-81	9:54/am	" "	7-20-81	9:40/am	" "	4306	86.12	.10
2893-~~2900~~-L	7-20-81	9:40/am	" "	7-21-81	9:38/am	" "	1438	28.76	.22
2908-L	7-21-81	9:38/am	" "	7-22-81	10:07/am	" "	1469	29.38	.43
2923-L	7-22-81	10:07/am	" "	7-23-81	9:24/am	" "	1394	27.94	.07
2938-L	7-23-81	9:24/am	" "	7-24-81	10:27/am	" "	1503	30.06	1.39
2954-L	7-24-81	10:27/am	" "	7-27-81	9:20/am	" "	4253	85.06	.25
2970-L	7-27-81	9:20/am	" "	7-28-81	10:24/am	" "	1504	30.08	.12
2986-L	7-28-81	10:24/am	" "	7-29-81	9:42/am	" "	1378	27.96	.07
3002-L	7-29-81	9:42/am	" "	7-30-81	9:43/am	" "	1411	28.22	3.96
3018-L	7-30-81	9:43/am	" "	7-31-81	10:28/am	" "	1485	29.70	.07
3034-L	7-31-81	10:28/am	" "	8-3-81	9:57/am	" "	4289	85.78	0.15

Remarks:

H. P. Technician

ORGDP HEALTH PHYSICS CONTINUOUS AIR SAMPLING PROGRAM

Building K-402-9 Location Alumina Trap

Sample No.	Starting Date	Starting Time	Starting Flow Rate (lpm)	Ending Date	Ending Time	Ending Flow Rate (lpm)	Sample Duration (Minutes)	Sample Volume (m^3)	Air Activity $d/m/m^3$
2894-L	7-20-81	2:04/pm	20 lpm	7-21-81	9:43/am	20 lpm	1117	23.51	.07
2909-L	7-21-81	9:43/am	" "	7-22-81	10:04/am	" "	1461	29.22	.50
2924-L	7-22-81	10:04/am	" "	7-23-81	9:23/am	" "	1399	27.98	.07
2939-L	7-23-81	9:23/am	" "	7-24-81	10:10/am	" "	1481	29.74	.07
2955-L	7-24-81	10:10/am	" "	7-27-81	9:09/am	" "	1379	27.58	.08
2971-L	7-27-81	9:09/am	" "	7-28-81	10:15/am	" "	1506	30.12	.35
2987-L	7-28-81	10:15/am	" "	7-29-81	9:30/am	" "	1395	27.90	.30
3003-L	7-29-81	9:30/am	" "	7-30-81	9:32/am	" "	1412	28.81	.07
3019-L	7-30-81	9:32/am	" "	7-31-81	10:13/am	" "	1481	29.62	.07
3035-L	7-31-81	10:13/am	" "	8-3-81	9:47/am	" "	4294	85.88	.02
3051-L	8-3-81	9:47/am	" "	8-4-81	9:04/am	" "	1397	27.94	.15
3067-L	8-4-81	9:04/am	" "	8-5-81	10:19/am	" "	1515	30.30	.41
3083-L	8-5-81	10:19/am	" "	8-6-81	10:02/am	" "	1423	28.46	.07
3099-L	8-6-81	10:02/am	" "	8-7-81	10:29/am	" "	1467	29.34	.07
3115-L	8-7-81	10:29/am	" "	8-10-81	11:13/am	" "	4364	87.28	.02
3131	8-10-81	11:13/am	" "	8-11-81	9:47/am	" "	1354	27.08	.08
3147-L	8-11-81	9:47/am	" "	8-12-81	9:44/am	" "	1437	28.74	.07
3163-L	8-12-81	9:44/am	" "	8-13-81	10:16/am	" "	1472	29.44	.35
3179-L	8-13-81	10:16/am	" "	8-14-81	10:13/am	" "	1437	28.74	.07
3195-L	8-14-81	10:13/am	" "	8-17-81	10:28/am	" "	4365	87.30	.02
3211-L	8-17-81	10:28/am	" "	8-18-81	10:44/am	" "	1456	29.12	.07
3227-L	8-18-81	10:44/am	" "	8-19-81	2:01/pm	" "	1637	32.74	.32

Remarks:

H. P. Technician

ORGDP HEALTH PHYSICS CONTINUOUS AIR SAMPLING PROGRAM

Building K-1413 Location Laboratory Engineering

Sample No.	Starting Date	Starting Time	Starting Flow Rate (lpm)	Ending Date	Ending Time	Ending Flow Rate (lpm)	Sample Duration (Minutes)	Sample Volume (m^3)	Air Activity $d/m/m^3$
3248-L	8-19-81	1:48/pm	20 lpm	8-20-81	9:40/am	20 lpm	1192	23.84	.09
3264-L	8-20-81	9:40/am	20 lpm	8-21-81	10:52/am	" "	1512	30.24	.09
3280-L	8-21-81	10:52/am	" "	8-24-81	11:19/am	" "	4345	86.90	.10
	8-24-81	11:19/am	" "						

Remarks: Sampling discontinued 10-24-81 due to minute levels of airborne radioactive contamination

H. P. Technician L. Love Jr.

ORGDP HEALTH PHYSICS CONTINUOUS AIR SAMPLING PROGRAM

Building K-1420 Location Comp. Disassembly

Sample No.	Starting Date	Starting Time	Starting Flow Rate (lpm)	Ending Date	Ending Time	Ending Flow Rate (lpm)	Sample Duration (Minutes)	Sample Volume (m^3)	Air Activity $d/m/m^3$
2782-L	6-26-81	12:46/pm	20 lpm	6-29-81	11:16/am	20 lpm	4230	84.60	.074
2791-L	6-29-81	11:16/am	" "	6-30-81	10:43/am	" "	1407	28.14	1.708
2799-L	6-30-81	10:43/am	" "	7-1-81	11:06/am	" "	1463	29.26	2.071
2807-L	7-1-81	11:06/am	" "	7-2-81	11:09/am	" "	1443	28.86	2.68
2815	7-2-81	11:09/am	" "	7-7-81	9:56/am	" "	5687	113.74	.17
2823	7-7-81	9:56/am	" "	7-8-81	9:24/am	" "	1408	28.16	1.26
2831	7-8-81	9:24/am	" "	7-9-81	10:37/am	" "	1513	30.26	4.40
2839	7-9-81	10:37/am	" "	7-10-81	10:45/am	" "	1448	28.96	3.10
2847-L	7-10-81	10:45/am	" "	7-13-81	11:08/am	" "	4343	86.86	.34
2855-L	7-13-81	11:08/am	" "	7-14-81	1:09/pm	" "	1561	31.22	6.16
2863-L	7-14-81	1:09/pm	" "	7-15-81	1:47/pm	" "	1478	29.56	3.25
2871-L	7-15-81	1:47/pm	" "	7-16-81	1:01/pm	" "	1394	27.88	1.30
2879-L	7-16-81	1:01/pm	" "	7-17-81	10:53/am	" "	1312	26.24	5.10
2887-L	7-17-81	10:53/am	" "	7-20-81	10:20/am	" "	4287	85.74	1.66
2899-L	7-20-81	10:20/am	" "	7-21-81	10:58/am	" "	1478	29.56	3.11
2914-L	7-21-81	10:58/am	" "	7-22-81	11:03/am	" "	1445	28.90	3.44
2929-L	7-22-81	11:03/am	" "	7-23-81	10:10/am	" "	1387	27.74	1.21
2945-L	7-23-81	10:10/am	" "	7-24-81	11:03/am	" "	1493	29.86	2.57
2961-L	7-24-81	11:03/am	" "	7-27-81	3:22/pm	" "	1699	33.98	2.03
2977-L	7-27-81	3:22/pm	" "	7-28-81	1:47/pm	" "	1345	26.90	1.55
2993-L	7-28-81	1:47/pm	" "	7-29-81	10:26/am	" "	1239	24.78	1.60
3009-L	7-29-81	10:06/am	" "	7-30-81	10:53/am	" "	1487	29.74	.71

Remarks:

9:17/am

H. P. Technician