



To: Radiation Physics 03/03/03
From: Keith Jobe, NLCTA Safety Officer
Subject: Special Monitors at NLCTA May 17 2002 through July 15 2002
Cc: OHP (Frey, Tran), NLCTA Operations

The following graphical maps indicate the locations of the Special Monitors installed at NLCTA over the period July 15 2002 through February 10 2003. (Special Monitors are identical to the traditional "Event Monitors." Event Monitors may only be requested by a Radiation Physicist, while Special Monitors may be requested by anyone. The data is analyzed identically.)

This set of data has no serious surprises.

- The largest doses were on the flower pedal mode converters that launch the SLED compressed rf from into the over-moded high power transport lines for Stations 0 and 2. Dosimetry recorded around 35 R of contact dose. These sources are inside the lead shielding enclosures
- Flower pedal mode converters are also used in the Station 0 rf transport system. The "bend 2" location also recorded anonymously high doses, with a contact dose of 1.4 R and a 3 R dose recorded on the inside of the lead shielding enclosure. The contact dose recorded on the outside of the shielding enclosure was 69 mR.
- The doses recorded on the outside of all of the other the lead shielding enclosures were all low, averaging around 20 mR.
- The 8-pack saw very little operation in this period, and all of the dosimeters were less than 25 mR.
- Dosimetry near the NLCTA klystrons and contact readings on the first mode converters in the sequence (long pulse length, uncompressed rf) were reasonable. The 3 monitors on the klystron modulators recorded less than 200 mR each and the contact doses were less than 350 mR each. These are in low occupancy areas and in a posted Radiation Area.

From an operational standpoint, this data reminds us that it is important to plan to replace the Station 2 rf compression hardware soon. The next set of dosimetry will yield two new data points:

- 8-pack operation will be included
- Station 1 rf compression hardware is of a newer design – this will be the first data with the improved hardware.

All of the data quoted were based on the average of the corrected E1 through E4 readings provided by dosimetry group of ES&H. The table of values and their mean is attached.

Installation notes:

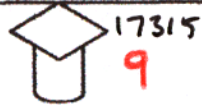
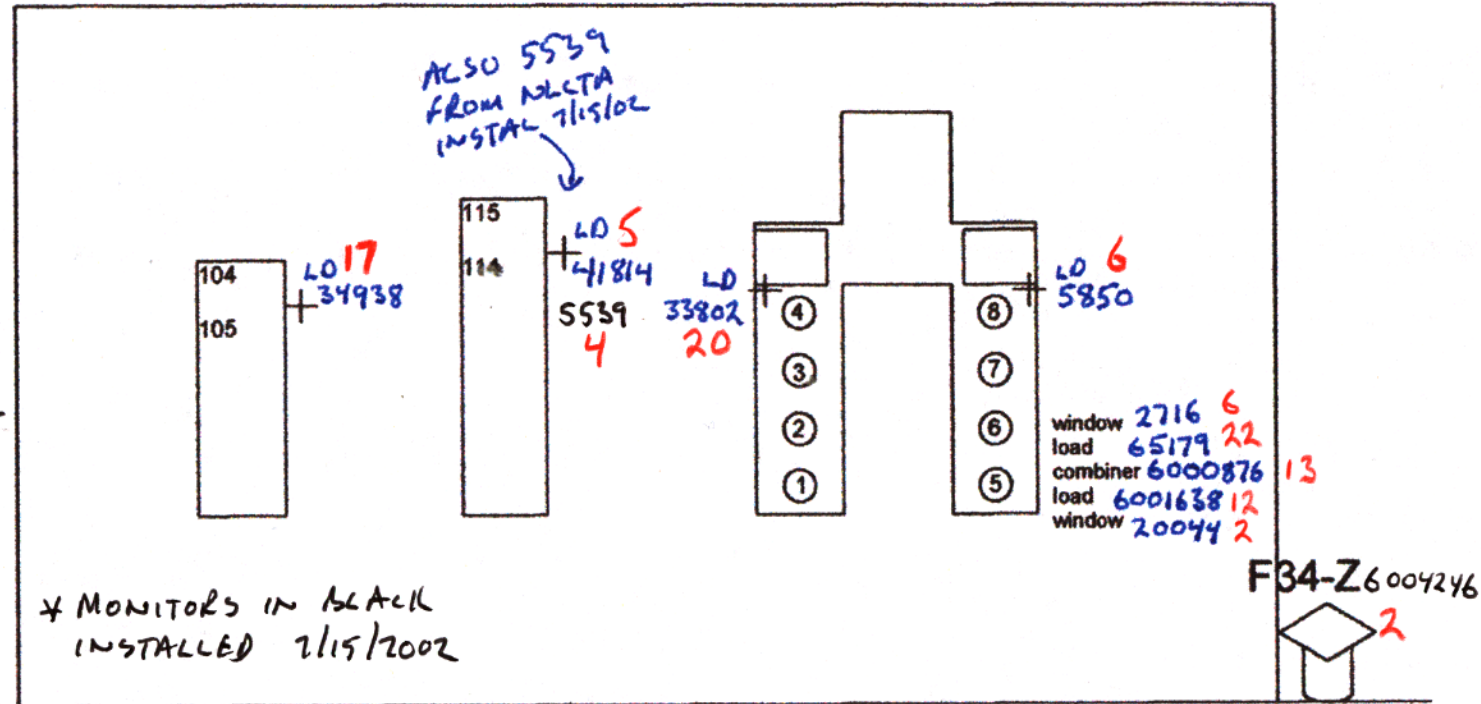
Date TLD monitors installed

9/16/2002

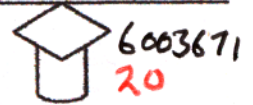
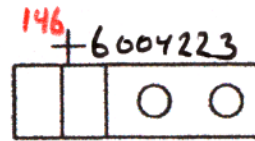
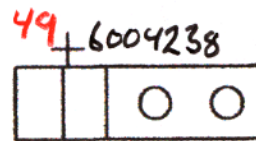
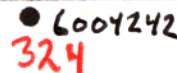
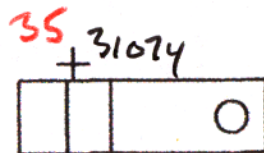
Date TLD monitors removed

2/10/2003

Additional monitors
for 8-pack

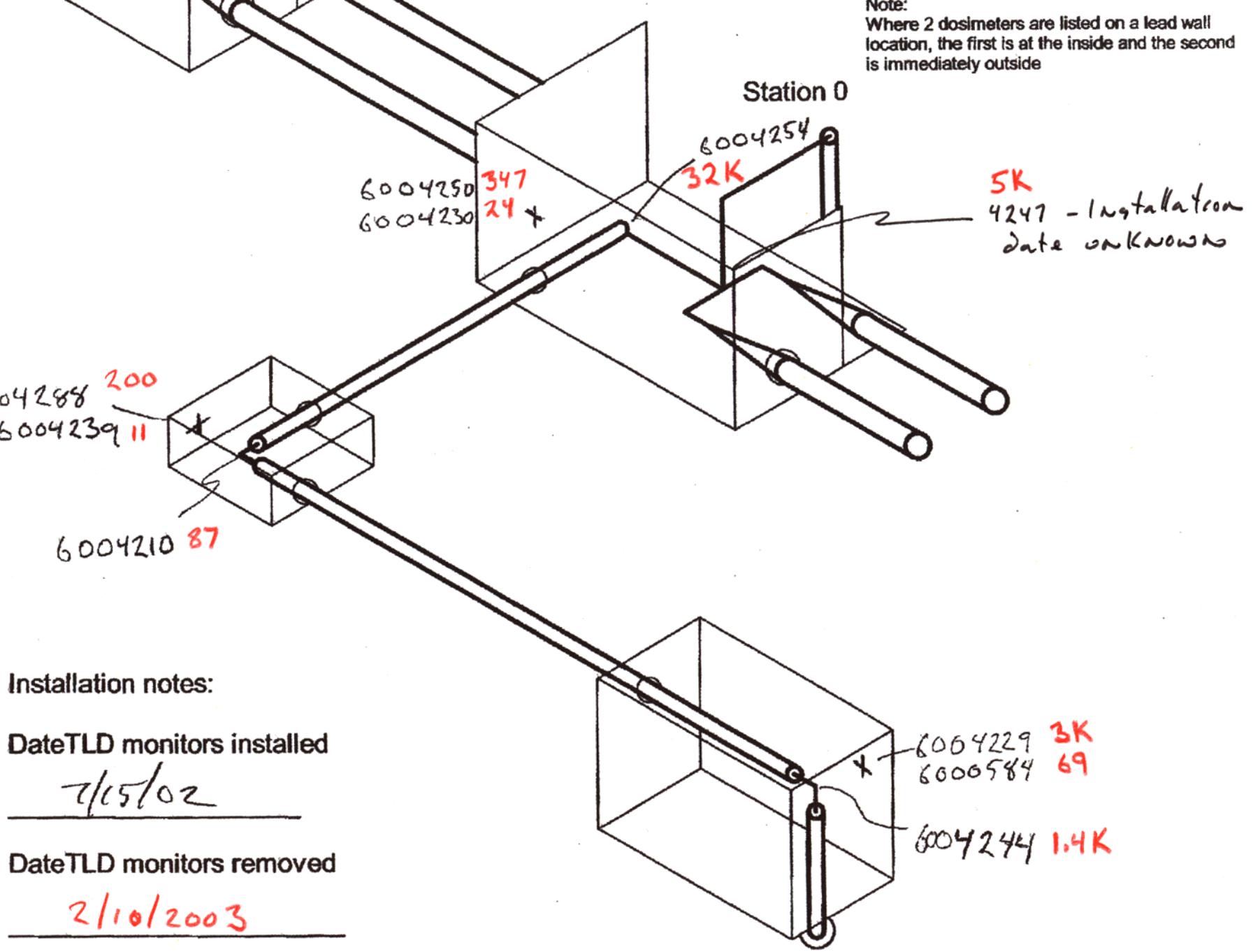


F34-A



F34-U

Note:
Where 2 dosimeters are listed on a lead wall location, the first is at the inside and the second is immediately outside



Station 0

6004250 347
6004230 24 *

6004254
32K

5K
4247 - Installation
date unknown

6004288 200
6004239 11

6004210 87

6004229 3K
6000584 69

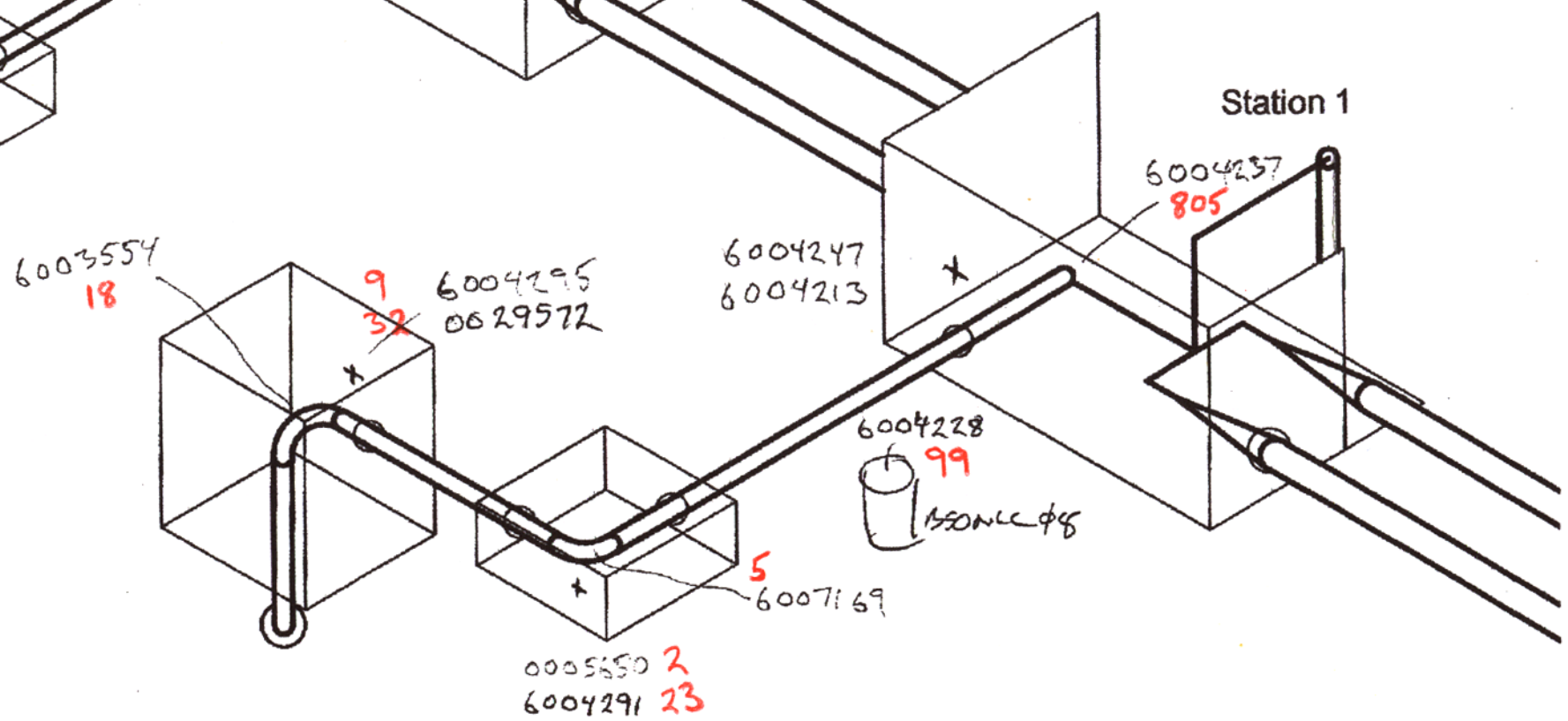
6004244 1.4K

Installation notes:

Date TLD monitors installed
7/15/02

Date TLD monitors removed
2/10/2003

Note:
Where 2 dosimeters are listed on a lead wall location, the first is at the inside and the second is immediately outside

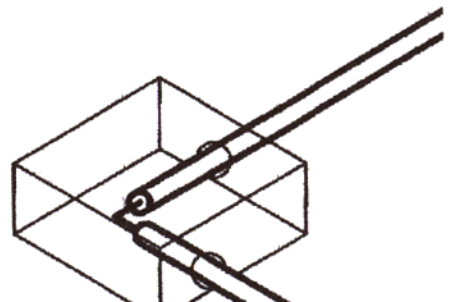


Installation notes:

Date TLD monitors installed
7/15/02

Date TLD monitors removed
2/10/2003

6004245
16
AREA
MON
F345



Installation notes:

Date TLD monitors installed

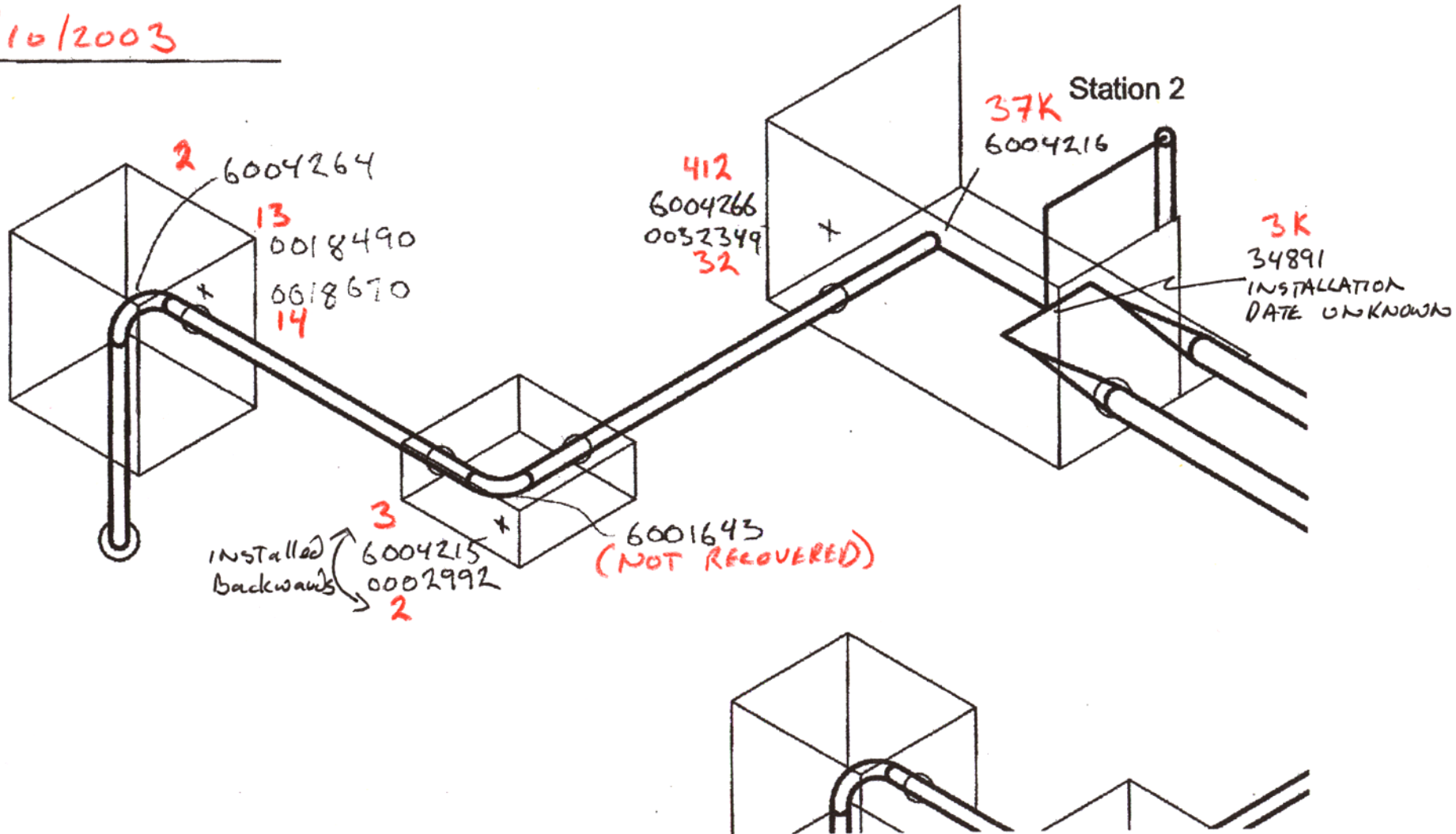
7/15/02

Date TLD monitors removed

2/10/2003

Note:

Where 2 dosimeters are listed on a lead wall location, the first is at the inside and the second is immediately outside



01/13/2002 11:04

Badgeld	average	MrE1	MrE2	MrE3	MrE4
*0002716	6	20	3	0	0
*0002992	2	0	0	4	3
*0003226	258	192	148	559	132
*0004288	200	251	148	275	125
*0004747	4,660	2,640	3,087	8,188	4,724
*0005539	4	9	5	0	0
*0005650	2	2	6	0	0
*0005850	6	20	5	0	0
*0005877	2	7	0	0	0
*0017315	9	36	0	1	0
*0017715	0	0	0	0	0
*0018490	13	25	7	4	16
*0018670	14	29	11	10	6
*0020044	2	0	2	1	5
*0029572	32	58	48	11	9
*0031074	35	55	38	22	24
*0032349	32	53	34	21	18
*0033261	16	49	14	0	0
*0033802	20	47	35	0	0
*0034891	2,785	1,748	2,193	5,287	1,911
*0034938	17	54	13	0	0
*0041814	5	20	0	0	0
*0065179	22	64	22	0	0
*6000570	17	46	21	0	0
*6000584	69	64	49	92	71
*6000838	27	70	37	0	0
*6000876	13	43	10	0	0
*6000993	19	51	26	0	0
*6001223	10	36	5	0	0
*6001224	18	49	23	0	0
*6001616	57	97	51	59	23
*6001635	34	28	3	105	0
*6001638	12	36	11	1	0
*6003554	18	34	17	12	8
*6003671	20	26	12	24	20
*6004210	87	106	42	116	84
*6004213	26	51	21	17	15
*6004215	3	4	5	3	1
*6004216	36,666	20,987	26,267	66,584	32,827
*6004223	146	87	63	284	149
*6004228	99	84	50	206	55
*6004229	2,777	2,391	2,159	4,481	2,078
*6004230	26	30	21	29	24
*6004237	805	824	904	1,089	403

*6004238	49	27	24	101	46
*6004239	11	14	6	15	10
*6004242	324	117	108	426	647
*6004244	1,408	1,077	1,064	1,973	1,520
*6004245	16	18	16	19	13
*6004246	2	9	0	0	0
*6004247	5	6	0	10	3
*6004250	347	291	270	550	278
*6004254	31,738	13,133	26,099	60,446	27,276
*6004264	2	4	1	2	0
*6004266	412	357	375	775	142
*6004291	23	39	18	21	13
*6004295	9	16	9	6	4
*6007169	5	10	5	3	1