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product #1

Chemical Processing Plant - National Reactor Testing Station
Health and Safety Branch

Rev. #1

HEALTH PHYSICS SAMPLE RECORD SHEET

Date <u>2/9/56</u>	Beta Counter No. <u>67 Scaler</u>	Alpha Counter No. <u>106-B</u>
Time <u>1100</u>	Background <u>45 c/m</u>	Background <u>5 c/m</u>
Type of Survey <u>Rad. Cont.</u>	Standard c/m _____	Standard c/m _____
Area Surveyed <u>Product Bottle Cages</u>	Observed c/m _____	Observed c/m _____
Surveyor <u>Byrne L. Rich</u>	Geometry <u>9.9%</u>	Geometry <u>50%</u>

Sample Nos.	Gross Beta	Net Beta	Gross Alpha	Net Alpha	Identity, Location, Remarks, Results, uc/cc, etc.	Gross Beta	Net Beta	Gross Alpha	Net Alpha	Identity, Location, Remarks, Results, uc/cc, etc.
1 26	96	1	6	1	ICPP 273 (empty) OK	56	11	A	-	ICPP 207 OK
2 27	60	15	2	-	" 206			A	-	" 253 Decant. ✓
3 28	64	19	10	5	" 264			5	-	" 271 Decant. ✓
4 29			16	11	" 262 ✓					
5 30	68	23	4	-	" 261 ✓					
6 31			4	-	" 260 ✓					
7 32	48	3	18	13	" 253					
8 33			4	-	" 249 ✓ OK					
9 34	56	11	10	5	" 248					
10 35			5	-	" 247					
11 36	52	7	8	3	" 245					
12 37			6	1	" 209					
13 38	45	-	8	3	" 239					
14 39			14	9	" 238					
15 40	52	7	8	3	" 236					
16 41			5	-	" 235					
17 42	64	19	10	5	" 234 ✓					
18 43			5	4	" 265 ✓					
19 44	45	-	8	3	" 267					
20 45	45	-	35	30	" 271					
21 46	52	7	10	5	" 272 ✓ OK					
22 47	52	8	8	-	" 252					
23 48	54	9	5	-	" 254 ✓					
24 49	9		5	-	" 256					
25 50	78	3	5	-	" 258					

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HEALTH PHYSICS SAMPLE RECORD SHEET

Date Product Bottles Beta Counter No. _____ Alpha Counter No. _____
 Time _____ Background _____ Background _____
 Type of Survey _____ Standard c/m _____ Standard c/m _____
 Area Surveyed _____ Observed c/m _____ Observed c/m _____
 Surveyor _____ Geometry _____ Geometry _____

Date	Sample Numbers	Gross		Results		Gross		Results		Gross		Results		Gross		Results	
		β	α	β	α	β	α	β	α	β	α	β	α	β	α	β	α
1-27-56	1265176	234	21		12	c/m											
	2275277	235	15	Back	1	c/m											
1-30-56	3285378	236	6	Back	0	c/m											
	4295479	238	8	Back	5	c/m											
1/31/56	5305580	239			15	c/m											
	6315681	209			7	c/m											
	7325782	245			23	c/m											
2-1-56	8335883	248			0	c/m											
2-1-56	9345984	249			3	c/m											
	10356085	253			5	c/m											
2-2-56	11366186	260			3	c/m											
2/3/56	12376287	262			0	c/m											
2/2	13386388	261			3	c/m											
2/3	14396489	264			2	c/m											
2/6	15406590	265			3	c/m											
2/6	16416691	267			1	c/m											
	17426792	271			0	c/m											
2/6	18436893	272			0	c/m											
2/7	19446994	252			3	c/m											
2/7	20457095	254			2	c/m											
2-7-56	21467196	256			2	c/m											
	22477297	258			9	c/m											
2/1	23487398	266			5	c/m											
	24497499	273			30	c/m											
2/1	25507500	207			47	c/m											

R #1

HEALTH PHYSICS SAMPLE RECORD SHEET

Date _____	Beta Counter No. _____	Alpha Counter No. _____
Time _____	Background _____	Background _____
Type of Survey <u>Product Bottles</u>	Standard c/m _____	Standard c/m _____
Area Surveyed _____	Observed c/m _____	Observed c/m _____
Surveyor _____	Geometry _____	Geometry _____

Sample Nos.	Gross Net		Gross Net		Identity, Location, Remarks, Results, uc/cc, etc.	Gross Net		Gross Net		Identity, Location, Remarks, Results, uc/cc, etc.
	Beta	Beta	Alpha	Alpha		Beta	Beta	Alpha	Alpha	
1 26			10	9	OK Bottle # 203 9/14/56					
2 27			24	23	" " 275 "					
3 28			6	4	OK Bottle # 257 9/17/56					
4 29			22	20	OK Bottle # 241 9/17/56					
5 30			17	15	OK BOTTLE # 239 9/18/56					
6 31			41	39	OK " # 252 9/19/56					
7 32			14	12	OK " # 265 9/19/56					
8 33			21	19	OK " # 235 9/21/56					
9 34			8	7	OK # 736 9/24/56					
10 35			28	27	OK " # 215 9/27/56					
11 36			32	31	OK " # 232 9/27/56					
12 37			18	17	OK " " 234 10/1/56					
13 38			14	13	OK " " 240 10/1/56					
14 39			54	53	- " " 247 10/1/56					
15 40			24	23	OK " " 247 10/1/56					
16 41			50	49	OK - - 249 10/1/56					
17 42			32	30	OK - - 254 10/9/56					
18 43			19	17	OK - - 266 10/9/56					
19 44			84	82	Hot 264 10/9/56					
20 45			4	2	OK - - 264 10/9/56					
21 46			39	38	OK - - 207 10/15/56					
22 47			38	36	OK - - 206 10/15/56					
23 48			18	17	OK - - 209 10/15/56					
24 49			4	2	OK - - 238 10/25/56					
25 50			4	2	OK - - 235 10/25/56					

Product shipment

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HEALTH PHYSICS SAMPLE RECORD SHEET

Date _____	Beta Counter No. _____	Alpha Counter No. _____
Time _____	Background _____	Background _____
Type of Survey _____	Standard c/m _____	Standard c/m _____
Area Surveyed _____	Observed c/m _____	Observed c/m _____
Surveyor _____	Geometry _____	Geometry _____

Sample No.	Gross Beta	Net Beta	Gross Alpha	Net Alpha	Identity, Location, Remarks, Results, uc/cc, etc.			Gross Beta	Net Beta	Gross Alpha	Net Alpha	Identity, Location, Remarks, Results, uc/cc, etc.		
1	26			18	9/11	Product Bottle #	276							
2	27			15	"	" "	213							
3	28			8	"	" "	204							
4	29			15	"	" "	268							
5	30			14	"	" "	216							
6	31			20	"	" "	267							
7	32			6	"	" "	271							
8	33			59	10/11									
9	34			6	10/21	" "	229							
10	35			48	10/22	" "	221							
11	36			20	10/26	" "	230							
12	37			26	10/26	✓ ✓	237							
13	38			36	10/29	- -	245							
14	39													
15	40													
16	41													
17	42													
18	43													
19	44													
20	45													
21	46													
22	47													
23	48													
24	49													
25	50													

Top	Bottom	Gross	Net	Bottom	Notes	Gross	Net
226	8 %		6 %	225		17 %	15 % ✓
259	8 %		6 %	221		8 %	6 %
278	4 %		2 %	230		6 %	4 %
222	4 %		2 %	229		6 %	4 %
251	9 %		7 %	202		15 %	13 % ✓
255	5 %		3 %	240		6 %	4 %
244	4 %		2 %	243		20 %	18 % ✓
277	6 %		4 %	266		7 %	5 %
205	12 %		10 %	279		8 %	6 %
217	3 %		2 %	218		7 %	5 %
231	4 %		2 %	211		8 %	6 %
210	4 %		2 %	219		8 %	6 %
223	11 %		9 %	269		14 %	12 % ✓
201	7 %		5 %	214		9 %	7 %
274	2 %		0 %	212		13 %	11 % ✓

	Gross	Net
225	6	5
202	5	4
243	0	Bkgd
266	4	3
218	2	1
229	8	7
279	4	3
220	5	4
269	10	9
228	5	4
224	5	4
242	4	3
273	7	6

9/7/56

Cages

150 m/ft
 45 m/ft
 10 m/ft
 15 ft
 1 meter
 contact

Shipped

R. #1

HEALTH PHYSICS SAMPLE RECORD SHEET

Date _____	Beta Counter No. _____	Alpha Counter No. _____
Time _____	Background _____	Background <u>2 Jan</u>
Type of Survey <u>Product Bottles</u>	Standard c/m _____	Standard c/m _____
Area Surveyed _____	Observed c/m _____	Observed c/m _____
Surveyor _____	Geometry _____	Geometry _____

Sample Nos.	Gross Net		Gross Net		Identity, Location, Remarks, Results, uc/cc, etc.	Gross Net		Gross Net		Identity, Location, Remarks, Results, uc/cc, etc.
	Beta	Beta	Alpha	Alpha		Beta	Beta	Alpha	Alpha	
1 26			16	14	8/3 Bottle #214					
2 27			32	30	8/3/56 #269					OK
3 28			22	20	8/7/56 #201					OK
4 29			6	4	8/10/56 #223					OK
5 30			110	108	8/10/56 #248					Cleanup
6 31			82	80	8/10/56 #210					"
7 32			36	34	8-15-56 #210					OK
8 33			28	26	8/13/56 #217					OK
9 34			38	36	8/13/56 #205					OK
10 35			78	46	8/13/56 #231					OK
11 36			36	34	8/17/56 #255					OK
12 37			52	49	8/17/56 #244					OK
13 38			24	21	8/17/56 277					OK
14 39			49	47	8/20/56 278					OK
15 40			6	4	8/20/56 251					
16 41			269	263	8/24 226					
17 42			48	45	8/24 226					OK
18 43			28	25	8/24 259					OK
19 44			50	45	8/27 224					OK
20 45			21	18	8/27 242					OK
21 46			657	655	8/27 273					
22 47			98	96	8/27 272					
23 48			136	134	8/27 273					
24 49			4	2	8/27 273					OK
25 50										

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Re. #1

HEALTH PHYSICS SAMPLE RECORD SHEET

Date _____	Beta Counter No. _____	Alpha Counter No. _____
Time _____	Background _____	Background _____
Type of Survey _____	Standard c/m _____	Standard c/m _____
Area Surveyed _____	Observed c/m _____	Observed c/m _____
Surveyor _____	Geometry _____	Geometry _____

Sample Nos.	Gross		Net		Identity, Location, Remarks, Results, uc/cc, etc.	Gross		Net		Identity, Location, Remarks, Results, uc/cc, etc.
	Beta	Beta	Alpha	Alpha		Beta	Beta	Alpha	Alpha	
1 26			6	4	7/16 PRODUCT BOTTLE 300					
2 27			1	0	7/16 301					
3 28			10	8	7/19 " " 302					
4 29			5	3	7/19 " " 304					0824 115A
5 30			5	3	7/19 " " 303					
6 31			6	5	7/23 " " 305					
7 32			2	1	7/25 " " 306					
8 33			2	1	7/30 " " 308					
9 34			82	81	7/30 " " 218					23 55/127 110 170 16/5
10 35			128	127	7/30 " " 218					
11 36			14	13	7/30 " " 218					08
12 37			4	3	7/30 " " 219					
13 38			94	93	7/30 " " 211					
14 39			16	15	7/30 " " 211					
15 40			56	55	8/3/56 " " 212					23:60 11:5A 12:06 18:24 20:30
16 41			8	7	8/3/56 " " 212					
17 42			3	2	9/6/56 " " 214					
18 43										
19 44										
20 45										
21 46										
22 47										
23 48										
24 49										
25 50										

300/20 = 150
6000/6150 = 1.74
6.15 x 10^3 x 1.74 = 1.07 x 10^4