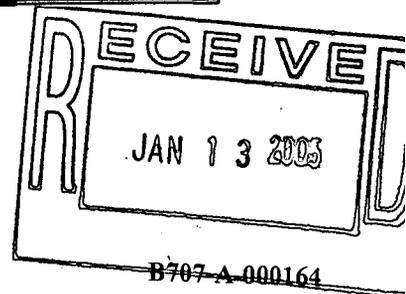


SURVEY PACKAGE COVER SHEET

Survey Area: C	Survey Unit: 707031A	Building/Structure: B707
Survey Unit/Area Description: Building 707, 1st floor, B module		
Building Information:		
Survey Type: Reconnaissance Level Characterization Survey <input type="checkbox"/> Pre-Demolition Survey <input checked="" type="checkbox"/>		
Building Type: Type 1 <input type="checkbox"/> Type 2 <input type="checkbox"/> Type 3 <input checked="" type="checkbox"/>		
Classification: Class 1 <input checked="" type="checkbox"/> Class 2 <input type="checkbox"/> Class 3 <input type="checkbox"/> Unknown <input type="checkbox"/>		
Contaminants of Concern: Plutonium <input checked="" type="checkbox"/> Uranium <input type="checkbox"/> Other <input type="checkbox"/>		
Types of Surveys Required: Alpha <input checked="" type="checkbox"/> Beta <input type="checkbox"/> Gamma <input type="checkbox"/>		
Justification for Classification: Area has been decontaminated and surveyed previously, it is not expected that contamination greater than the DCGLw will exist		
Special Support Requirements: A heated instrument storage location will need to be placed in B707. Natural lighting may not illuminate some areas of survey unit - temperature and/or lighting set-up required for these areas as needed.		
Special Safety Requirements:		
Isolation Controls:		No use, storage, or movement of radioactive material, with the exception of instrument check sources, is permitted in this survey unit.
LEVEL 1 <input type="checkbox"/> LEVEL 2 <input checked="" type="checkbox"/> N/A <input type="checkbox"/>		
Comments: TSA and removable measurements are only required where elevated readings are found by scanning or where media samples are obtained		
Labeling Requirements: Survey area surfaces shall be labeled per the attached survey map(s). All areas surveyed will be marked on the surveyed surface with indelible ink pen or equivalent.		
Survey Package Implementation:		
		12-1-2004
		12-1-04
Radological Engineer Printed Name:	Employee #:	Radological Engineer Signature:
Comments: Source checks documented on the sheets attached to the investigations are operability checks performed with the source attached to each instrument. These checks are documented to demonstrate that cold (below freezing) conditions in B707 did not affect the instruments adversely during the course of work.		
Survey Package Closure:		
		12-3-04
		12-3-04
		12/6/04

(PRO-475-RSP-16.01, effective 05/22/01)



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SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTION FORM

Survey Area:	C	Survey Unit:	707031A	Building/Structure:	B707
Survey Unit/Area Description: Building 707 1st floor B module					
Minimum Survey/Sampling Measurement Requirements					
Measurement	Number and Type			Comments	
Surface Activity Measurements	TOTAL SURFACE CONTAMINATION Any location identified by scanning that exceeds 300 dpm/100cm ²			60-second count time required	
RE Verification	J. Mattson <small>Print Name</small>			 <small>Signature</small>	12/2/04 <small>Date</small>
Surface Scanning	Scan 100% of each area marked in blue on the attached map.			Perform scans in accordance with the attached Flow chart. Note: All locations are denoted on survey package survey map.	
RE Verification	Mattson <small>Print Name</small>			 <small>Signature</small>	12/2/04 <small>Date</small>
Media Samples	N/A				
RE Verification	N/A <small>Print Name</small>				
		<small>Employee #</small>		<small>Signature</small>	<small>Date</small>

(PRO-475-RSP-16.01, effective 05/22/01)

SURVEY PACKAGE SURVEY/SAMPLING INSTRUCTION FORM (cont)

Survey Area: C	Survey Unit: 707031A	Building/Structure: B707
Survey Unit/Area Description: Building 707, 1st floor, B module		

Survey/Sampling Instructions

- ◆ **NOTE:** Any changes to the Survey Package must be logged in the "Survey Package Correction/Change History Form."
 - ◆ **RCT** – If not already completed, label the survey unit surfaces per the Survey Package Cover Sheet Grid Requirements Section and the attached survey map(s).
 - ◆ **RCT** – If not already completed, transpose sample numbers from attached survey maps onto each corresponding survey location on the survey unit surfaces.
- Note:** Work will be performed in cold conditions. Instrument operability may be affected. Increased operability checks are required.
- ◆ **RCT** – Perform pre-use performance checks of all instrumentation to be utilized in conjunction with this survey plan. Perform operational checks with sources attached to the instrument frequently, at least once every survey location. If operational check performed during work is 20% less than check performed prior to work, return instrument to the heated storage location. Obtain new instrument from heated storage location, perform operational check and re-survey the square meter where previous instrument failed operational check before proceeding to next area.
 - ◆ **RCT** – A priori Minimum Detectable Concentrations (MDCs) listed in the RFETS Pre-Demolition Survey Plan (PDSP) may be used. If MDCs are calculated, use the formula indicated below in the sampling instructions. Verify that computed MDCs are less than 50% of the applicable DCGL_w. Record all information on the Instrument Data Sheet.

$$MDC = \frac{3 + 3.29 \sqrt{R_b t_s (1 + \frac{t_s}{t_b})}}{E_t (A / 100) t_s}$$

Where,

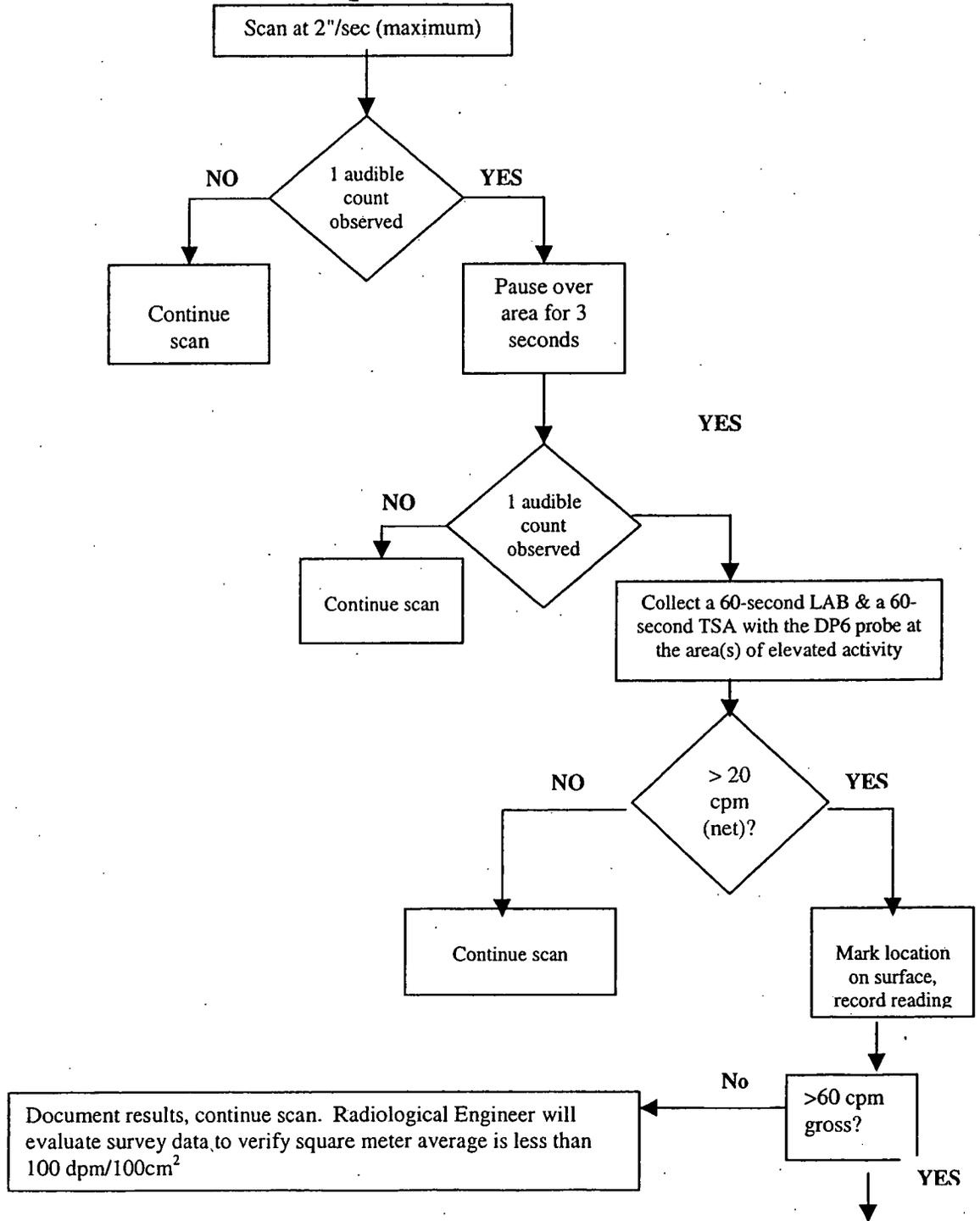
- R_b = Background counting rate
- t_s = sample counting time interval
- t_b = background counting time
- E_t = total efficiency
- A = physical surface area of the detector (or area sampled for smears)

Note: Ensure that a 90 second count time is utilized when determining the MDC of the NE Electra. A ten minute background and a two minute sample count time shall be used for the SAC-4. This will allow a correspondence between the MDC calculations and field measurements.

- ◆ **RCT** – Local Area Background values should be obtained at each survey block either just before or just after obtaining the actual total surface activity. Only one LAB per survey block is required.

SCAN AND INVESTIGATION METHODS WITH SELECTED INSTRUMENTS

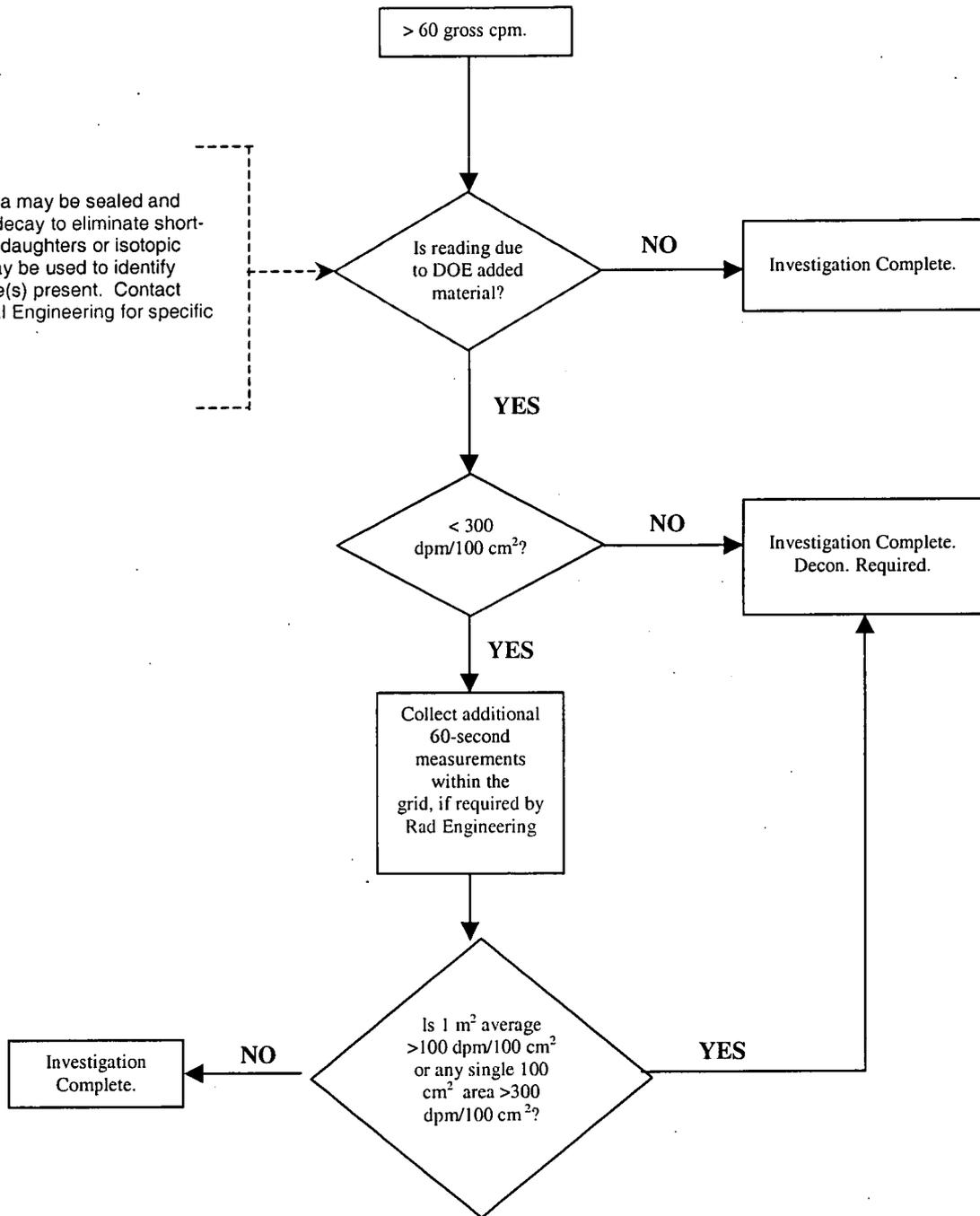
Scan Method with DP6 (example)
(Alpha)



6

Investigation Method with DP6 (verify no areas >300 dpm/100cm²) (Alpha)

NOTE: Area may be sealed and allowed to decay to eliminate short-lived radon daughters or isotopic analysis may be used to identify radionuclide(s) present. Contact Radiological Engineering for specific guidance.



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 707 CLUSTER

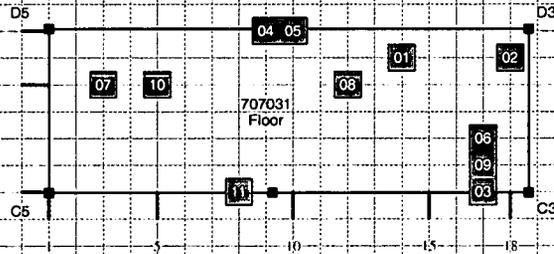
Survey Area: C Survey Unit: 707031A Classification: 1

Building: 707

Survey Unit Description: First floor (B module)

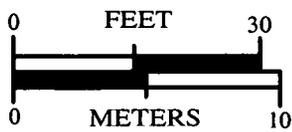
Total Floor Area: 108 sq. m Total Area: 108 sq. m Block Size: 1 x 1 sq.m

SURVEY UNIT 707031A - MAP 1 OF 1



Scan Area

Scan Area



SURVEY MAP LEGEND

- Smear & TSC Location
- Smear, TSC & Sample Location
- Open/Inaccessible Area
- Area in Another Location

707031
Random Scan Set

Location	Page	X-Coordinate	Y-Coordinate	Location	Page	X-Coordinate	Y-Coordinate
# 1	1	14	6	NA	1	12	1
#2	1	18	6	NA	1	6	5
#3	1	17	1	NA	1	17	3
#4	1	9	7	NA	1	10	1
#5	1	10	7	NA	1	3	5
#6	1	17	3	NA	1	18	2
#7	1	3	5	NA	1	4	5
#8	1	12	5	NA	1	6	5
#9	1	17	2	NA	1	15	3
#10	1	5	5	NA	1	15	6
#11	1	8	1	NA	1	15	1
#12	1	17	6	NA	1	4	7
#13	1	2	5	NA	1	14	3
#14	1	14	7	NA	1	5	5
#15	1	2	6	NA	1	17	3
#16	1	18	7	NA	1	2	6
#17	1	5	7	NA	1	5	4
#18	1	6	5	NA	1	1	5
#19	1	15	5	NA	1	7	1
#20	1	8	6	NA	1	14	6
NA	1	17	1	NA	1	17	3
#21	1	7	2	NA	1	11	2
#22	1	6	5	NA	1	14	6
NA	1	7	3	NA	1	4	7
NA	1	8	3	NA	1	1	3
NA	1	6	7	NA	1	15	3
NA	1	2	3	NA	1	6	3
NA	1	11	5	NA	1	18	5
NA	1	18	1	NA	1	7	7
NA	1	4	4	NA	1	1	1
NA	1	3	6	NA	1	17	7
NA	1	10	1	NA	1	18	1
NA	1	8	1	NA	1	16	4
NA	1	9	6	NA	1	17	7
NA	1	17	4	NA	1	15	4
NA	1	7	4	NA	1	4	2
NA	1	4	1	NA	1	15	4
NA	1	18	2	NA	1	1	5
NA	1	15	5	NA	1	1	6
NA	1	10	1	NA	1	3	4
NA	1	16	1	NA	1	8	3
NA	1	17	4	NA	1	1	1
NA	1	1	6	NA	1	15	1
NA	1	14	5	NA	1	10	3
NA	1	2	2	NA	1	14	4

LEGEND:

C-NA= UNPAINTED CEILING
X-NA=> NUMBER OF SAMPLES
REQUIRED

REVIEWED BY SIGNATURE

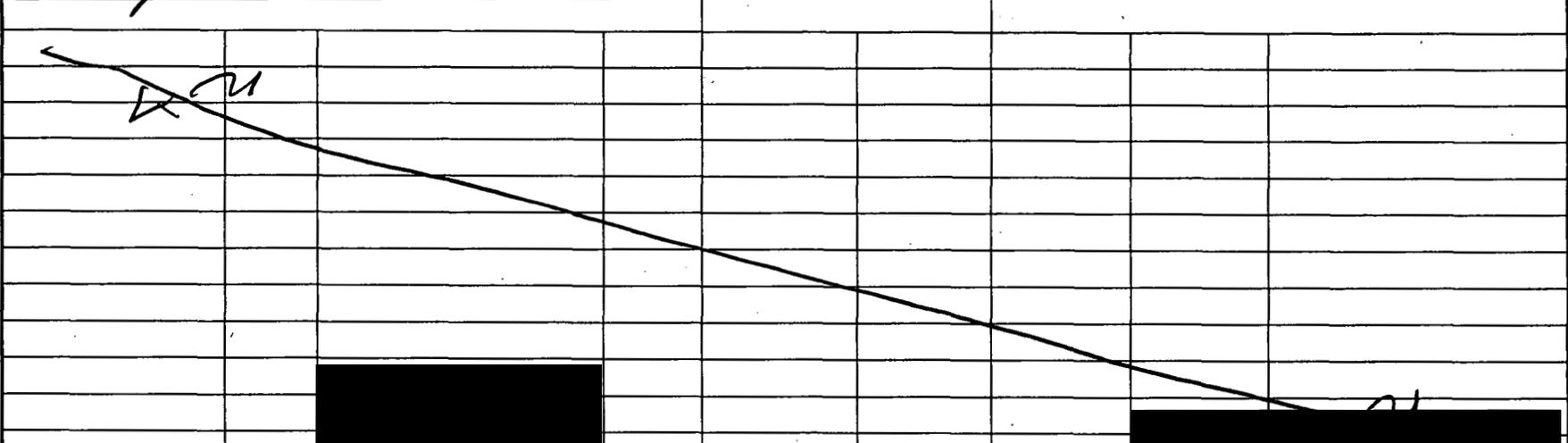

12/6/04

Mr. W. H. 12-2-04

Survey Area: C
 Survey Unit: 70703M Building/Structure:
 Survey Unit/Area Description: Building 707, 1st floor, B module
 Scan Survey, RCT and Instrument Sign In Sheet

Survey Date	Instrument Model	Inst. Serial #	Survey Type	Block # or No)	100% survey, Less than 300 dpm/100cm ² (Yes or No)
12/1/04	ELECTRA	3120	S	1	YES
12/1/04	ELECTRA	2166	S	2	YES
12/1/04	ELECTRA	3977	S	3	YES
12/1/04	ELECTRA	1266	S	4	YES
12/1/04	ELECTRA	4176	S	5	YES
12/1/04	ELECTRA	4176	S	6	YES
12/1/04	ELECTRA	4398	S	7	YES
12/1/04	ELECTRA	3120	S	8	YES
12/1/04	ELECTRA	3977	S	9	YES
12/1/04	ELECTRA	1245	S	10	YES
12/1/04	ELECTRA	4408	S	11	YES

1 - Survey Type:
 S = Scan only
 I = Investigation



Survey unit 707031A

Grid # 1

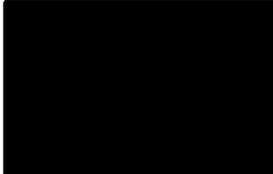
ALL < 94 μ /m

Pre Source check 545 c/m

Post Source check 548 c/m

Post Source check for - 20%

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name 

Rct #

Date 12/01/04

Inst Electra

S/N 3120

Cal Date Due 02/17/05

EFF .207

LAB 3.0 μ /m 15 D/m

Reviewed by W Sutter 

12-3-04

Survey unit 707031A

Grid # 2

All < 94 dpm

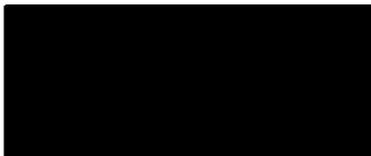
Pre Source check 366 c/m

Post Source check 400 c/m

Post Source check for - 20%

yes	no
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name



Rct #

Date 12-1-04

Inst Electra

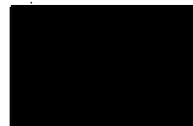
S/N 2166

Cal Date Due 1-28-05

Eff .219

LAB 1.0 c/m 5 d/m

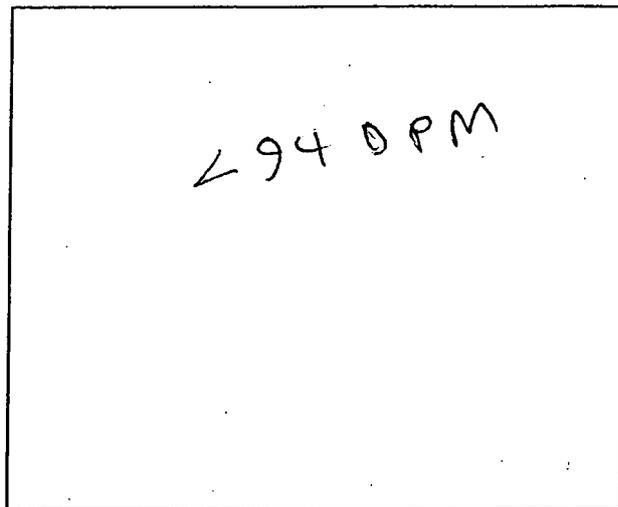
Reviewed by W Jetter



12/3/04

Survey unit 707031A

Grid # 3

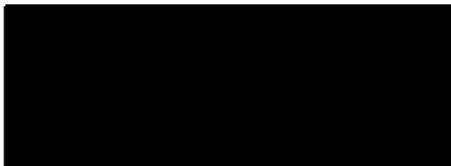


Pre Source check 286 c/m

Post Source check 282 c/m

Post Source check for - 20%

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name 

Rct #

Date 12-1-04

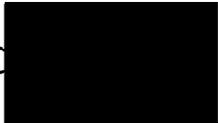
Inst Electra

S/N 3977

Cal Date Due 1-31-05

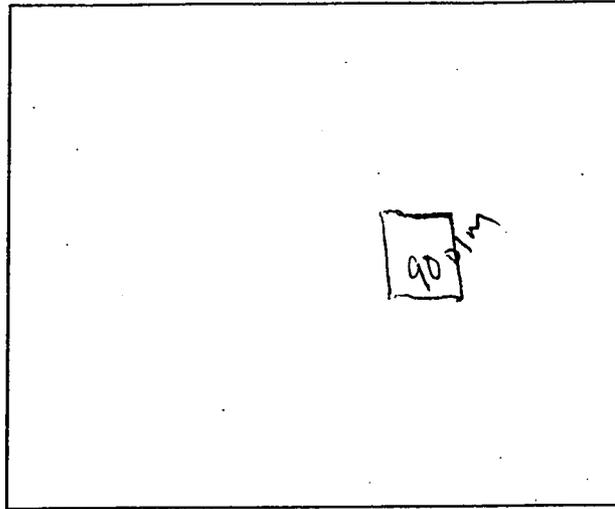
Eff. .213

LAB 2.0 c/m 10 D/m

Reviewed by W Suttler   12/3/04

Survey unit 707031A

Grid # 4



Pre Source check 366 clm

Post Source check 377 clm

Post Source check for - 20%

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name



Rct #

Date 12-1-04

Inst Electra

S/N 1266

Cal Date Due 1-28-05

ESS .219

LAB 4.0 clm 20 Dlm

Reviewed by U.S. Satter



12/3/04

Survey unit 707031A

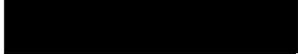
Grid # 5

ABL < 94 dpm

Pre Source check 493 c/m

Post Source check 519 c/m

Post Source check for - 20% yes no

Name 
Rct # 

Date 12-1-04

Inst Electra

S/N 4176

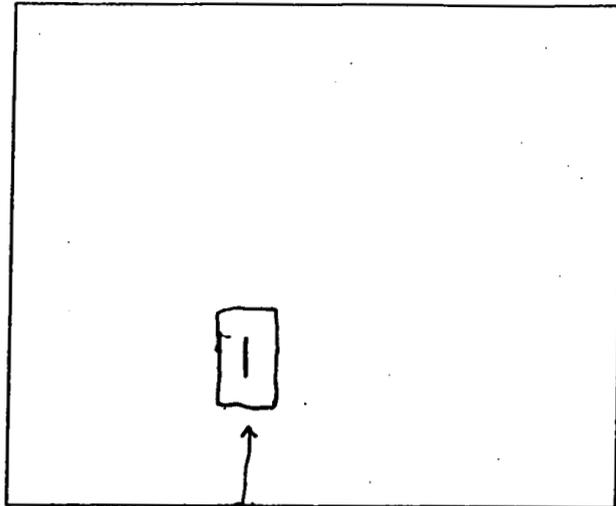
Cal Date Due 1/16/05

Eff 22.3%

LAB 4.0 cpm 20 d/m

Reviewed by W Sutter   12/3/04

Survey unit 707031A
Grid # 6



70

Pre Source check 493 clm

Post Source check 452 clm

Post Source check tol - 20% Yes No

Name

Rct #

Date

12/1/04

Inst

Electra

S/N

4176

Cal Date Due 1/16/05

ESS

.223

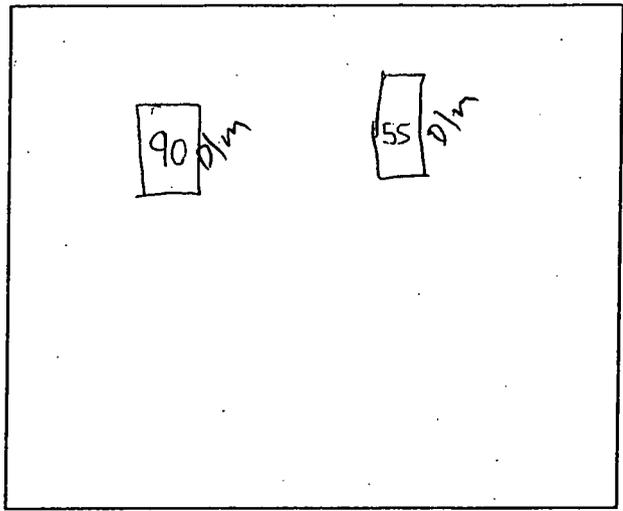
LAB

5.0 clm 25 dlm

Reviewed by W Sutter *[Signature]*

12/3/04

Survey unit 707031A
Grid # 7



Pre Source check 337 clm
Post Source check 348 clm
Post Source check for - 20% yes no

Name 
Rct #

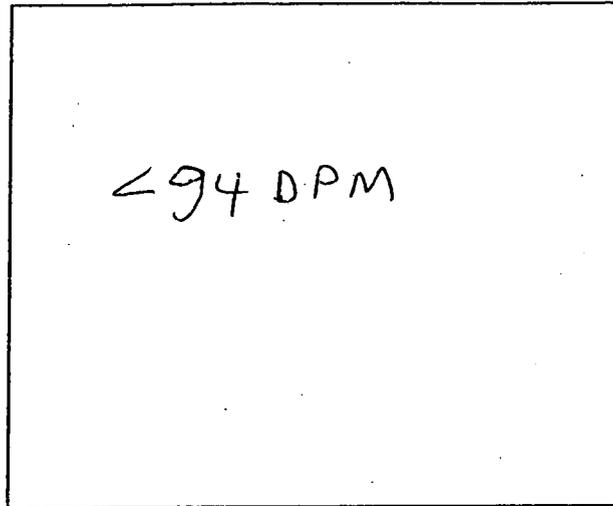
Date 120104

Inst Electra
S/N 4398

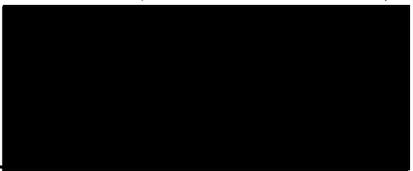
Cal Date Due 012905
Eff 1210
LAB 2.0 c/m 10 d/m

Reviewed by W Sathya   1213104

Survey unit 707031A
Grid # 9



Pre Source check 282 c/m
Post Source check 276 ^{AM 12-1-04} c/m
Post Source check for - 20% Yes No

Name 

Rct #

Date 12-1-04

Inst Electra

S/N 3977

Cal Date Due 1-31-05

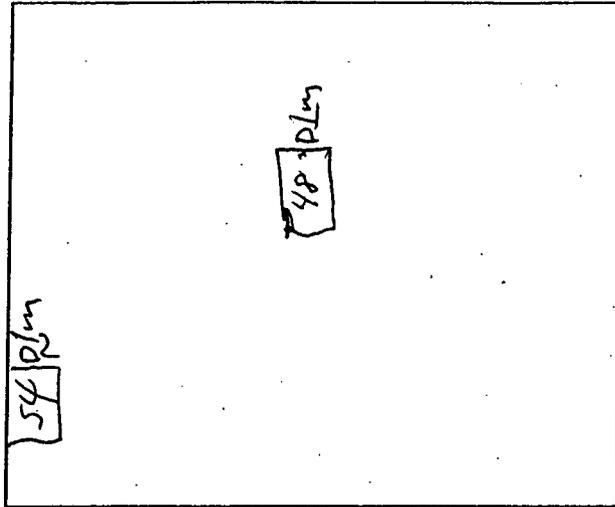
ESS -213

LAB 2-0 c/m 10 D/m

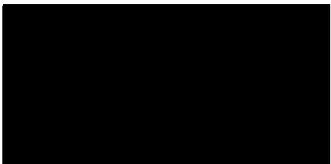
Reviewed by W. Sutter   12/3/04

Survey unit 707031A
Grid # 10

1
LAB 8.0
TSA 8.0
2
LAB 8.0
TSA 9.0



Pre Source check 427 c/m
Post Source check 432 c/m
Post Source check tol - 20% Yes No

Name 

Rct #

Date 12/1/04

Inst Electra

S/N 1245

Cal Date Due 2/23/05

Eff 22,390

LAB 8.0 c/m 40 d/m

Reviewed by W Sutter  12/3/04

MM 12-02-04

Survey Area: C	Survey Unit: 707031 A	Building: 707
Survey Unit/Area Description: Building 707 1st floor B module		

Investigation Documentation Sheet

Grid Location (X, Y Coord)	Survey #	RCT ID #	TSA Measurements			RSA Measurements		Gross (cpm)	Comments	Date
			Inst ID #	LAB (cpm)	TSA (cpm)	Net (cpm)	Inst Bkg (cpm)			
10	1	1	1	8.0	9.0					12-1-04
10	2	1	1	8.0	8.0					12-1-04
N/A										
N/A										
N/A										
N/A										
N/A										
N/A										
N/A										
N/A										
N/A										

RCT ID #	Date
1	12/01/04
2	
3	
4	

Inst #	Serial #	Cal Due Date	Efficiency	Comments
1	1245	02/23/05	.223	
2	N/A			
3	N/A			
4	N/A			

Comments

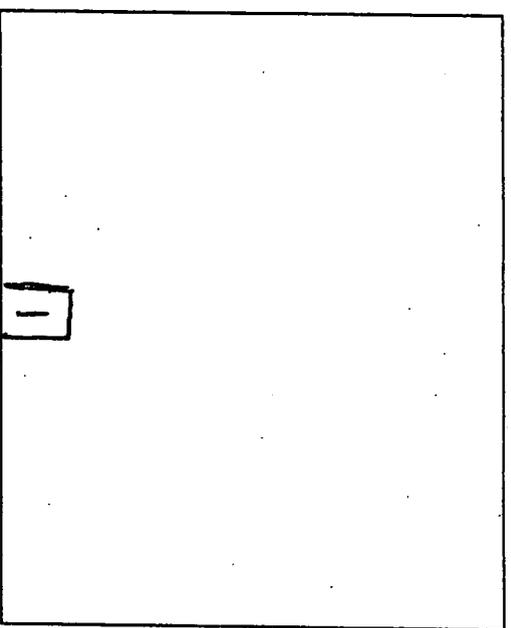
W Sutter
Supervisor (print)

[Signature]
Supervisor (signature)

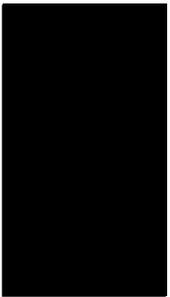
[Redacted] 12-1-04
Date

(PRO-475-RSP-16.01, effective 05/22/01)

Survey unit 707031A
Grid # 11



Pre Source check 421 c/m 95.0 d/m
Post Source check 369 c/m
Post Source check for - 20% Yes No

Name 

Rct #

Date 12/1/04

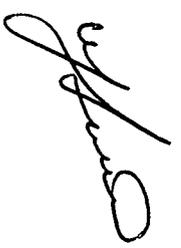
Inst Electra

S/N 4408

Cal Date Due 4/18/05

ESL .219

LAB 7.0 d/m 35 d/m

Reviewed by W Subt 



12/13/04

SOURCE ISOTOPE (Alpha): PU-239 (CSL)/(S/N)/(Registry No.): TS 2707 Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): 14,578 Range (cpm) ± 15%: 2602/3528

SOURCE ISOTOPE (Beta) N/A (CSL)/(S/N)/(Registry No.): N/A Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): N/A Range (cpm) ± 20%: N/A

Approved by: _____
 RS Supervision: [Signature] _____
 Name (print) _____ Signature _____ Date 12/1/04

$$\%Error = \frac{(Net\ cpm + eff) - Source\ dpm}{Source\ dpm} \times 100$$

Where $Net\ cpm = Source\ cpm - Background\ cpm$

GUIDANCE:

- The appropriate instrument data and building location is recorded on RSFORMS-02.01-04.
- Obtain an appropriate certified source or decay chart source for the instrument being tested.
- A general inspection is performed on the instrument for the following:
 - * Physical condition of the detector, cables, and instrument
 - * Instrument battery/power supply check is satisfactory
 - * Instrument audio check is satisfactory, as applicable
 - * Instrument light leak check is satisfactory, as applicable
- * Instrument background response check is within tolerances of expected values (typically 1 minute count)
- * Instrument corrected source count reading falls within an acceptable range (± 15% of source value typically using a 1 minute count)
- Performance test data is recorded (as applicable) to each portable contamination survey instrument with signature upon completion.

82

PORTABLE SCALER CONTAMINATION INSTRUMENT PERFORMANCE TEST LOG

RSFORMS-02.01 04

(Alpha only)

Alpha beta

INST. TYPE/SERIAL #: ELECTRA / 1245 CAL. DUE DATE: 2/23/05 INSTRUMENT EFFICIENCY: 22.3% / N/A

PROBE S/N: 6101 BLDG. 70 (Range, 2763 / 3737)

This form is used to record parameters noted during daily performance checks on NE Electra, Bicon Frisk-Tech, Portable instruments with gas proportional detector. Instruments that require additional repair or service are returned to Instrumentation Repair Facility.

TIME/DATE	IN CAL Yes No	BATT SAT Yes No	COUNT TYPE	BKG (cpm)	INSTRUMENT READING (Net cpm)	FLUSH/RE-CHARGE (N/A if not gas prop. det.) (Initials)
1660 12/1/04	yes	yes	Alpha	1.5	3329	N/A
			Beta	N/A	N/A	
2230 12/1/04	y	y	Alpha	6.0	3259	N/A
			Beta	N/A	N/A	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
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			Beta	 	 	
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			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
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			Beta	 	 	
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			Beta	 	 	
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			Beta	 	 	
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			Beta	 	 	
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			Beta	 	 	
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			Beta	 	 	
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			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
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			Beta	 	 	
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 	 	 	Alpha	 	 	
			Beta	 	 	
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 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
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			Beta	 	 	
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			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
 	 	 	Alpha	 	 	
			Beta	 	 	
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SOURCE ISOTOPE (Alpha): PU-239 (CSL)/(S/N)/(Registry No.): 752707 Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): 14578 Range (cpm) ± 15%: 2763-3250-3737

SOURCE ISOTOPE (Beta) N/A (CSL)/(S/N)/(Registry No.): N/A Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): N/A Range (cpm) ± 20%: N/A

Approved by: [Signature]
 RS Supervision: [Signature]
 Name (print) [Redacted] Signature [Redacted] Date 12/1/04

$$\%Error = \frac{(Net\ cpm + eff) - Source\ dpm}{Source\ dpm} \times (100)$$

Where $Net\ cpm = Source\ cpm - Background\ cpm$

GUIDANCE:

- The appropriate instrument data and building location is recorded on RSFORMS-02.01-04.
- Obtain an appropriate certified source or decay chart source for the instrument being tested.
- A general inspection is performed on the instrument for the following:
 - * Physical condition of the detector, cables, and instrument
 - * Instrument battery/power supply check is satisfactory
 - * Instrument audio check is satisfactory, as applicable
 - * Instrument light leak check is satisfactory, as applicable
 - * Instrument background response check is within tolerances of expected values (typically 1 minute count)
 - * Instrument corrected source count reading falls within an acceptable range (± 15% of source value typically using a 1 minute count)
- Performance test data is recorded (as applicable) to each portable contamination survey instrument with signature upon completion.

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PORTABLE SCALER CONTAMINATION INSTRUMENT PERFORMANCE TEST LOG

RSFORMS-02.01 ^4

(Alpha only)

Alpha beta

INST. TYPE/SERIAL #: ELECTRA / 1266 CAL. DUE DATE: 1-28-05 INSTRUMENT EFFICIENCY: 21.9% / N/A

PROBE S/N: 1086 BLDG. 707 (Range, 2714 / 3471)

This form is used to record parameters noted during daily performance checks on NE Electra, Bicon Frisk-Tech, Portable instruments with gas proportional detector. Instruments that require additional repair or service are returned to Instrumentation Department.

TIME/DATE	IN CAL Yes No	BATT SAT Yes No	COUNT TYPE	BKG (cpm)	INSTRUMENT READING (Net cpm)	FLUSH/RE-CHARGE (N/A if not gas prop. det.) (Initials)
1600 12-1-04	y	y	Alpha	2.0	3095	N/A
2230 12-1-04			Beta	N/A	N/A	
	YES	YES	Alpha	5.0	3173.	N/A
			Beta	N/A	N/A	
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A

SOURCE ISOTOPE (Alpha): PU-239 (CSL)/(S/N)/(Registry No.): 680145 Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): 14578 Range (cpm) ± 15%: 2714 / 3671

SOURCE ISOTOPE (Beta): N/A (CSL)/(S/N)/(Registry No.): N/A Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): N/A Range (cpm) ± 20%: N/A

Approved by: [Signature]
 RS Supervision: [Signature]
 Name (print) [Redacted] Signature [Redacted] Date 12/1/04

$$\%Error = \frac{(Net\ cpm + eff) - Source\ dpm}{Source\ dpm} \times (100)$$

Where $Net\ cpm = Source\ cpm - Background\ cpm$

GUIDANCE:

- The appropriate instrument data and building location is recorded on RSFORMS-02.01-04.
- Obtain an appropriate certified source or decay chart source for the instrument being tested.
- A general inspection is performed on the instrument for the following:
 - * Physical condition of the detector, cables, and instrument
 - * Instrument battery/power supply check is satisfactory
 - * Instrument audio check is satisfactory, as applicable
 - * Instrument light leak check is satisfactory, as applicable
- * Instrument background response check is within tolerances of expected values (typically 1 minute count)
- * Instrument corrected source count reading falls within an acceptable range (± 15% of source value typically using a 1 minute count)
- Performance test data is recorded (as applicable) to each portable contamination survey instrument with signature upon completion.

PORTABLE SCALER CONTAMINATION INSTRUMENT PERFORMANCE TEST LOG

RSFORMS-02.01

(Alpha only)

Alpha beta

INST. TYPE/SERIAL #: ELECTRA / 4408 CAL. DUE DATE: 4/18/05 INSTRUMENT EFFICIENCY: .218 / N/A

PROBE S/N: 2154 BLDG. 70 (Range, 2701 / 3654)

This form is used to record parameters noted during daily performance checks on NE Electra, Bicron Frisk-Tech, Portable instruments with gas proportional detector. Instruments that require additional repair or service are returned to Instrumentation Repair Facility.

TIME/DATE	IN CAL Yes No	BATT SAT Yes No	COUNT TYPE	BKG (cpm)	INSTRUMENT READING (Net cpm)	FLUSH/RE-CHARGE (N/A if not gas prop. det.) (Initials)
1600 12/1/04	Y	Y	Alpha	6.0	3231	N/A
2230 12-1-04	yes	yes	Beta	N/A	N/A	N/A
			Alpha	3.0	3187	N/A
			Beta	N/A	N/A	N/A
			Alpha	N/A	N/A	N/A
			Beta	N/A	N/A	N/A
			Alpha	N/A	N/A	N/A
			Beta	N/A	N/A	N/A
			Alpha	N/A	N/A	N/A
			Beta	N/A	N/A	N/A
			Alpha	N/A	N/A	N/A
			Beta	N/A	N/A	N/A
			Alpha	N/A	N/A	N/A
			Beta	N/A	N/A	N/A
			Alpha	N/A	N/A	N/A
			Beta	N/A	N/A	N/A
			Alpha	N/A	N/A	N/A
			Beta	N/A	N/A	N/A
			Alpha	N/A	N/A	N/A
			Beta	N/A	N/A	N/A

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SOURCE ISOTOPE (Alpha): PU-239 (CSL)/(S/N)/(Registry No.): 2707 Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): 14578 Range (cpm) ± 15%: 2701 3654

SOURCE ISOTOPE (Beta): N/A (CSL)/(S/N)/(Registry No.): N/A Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): N/A Range (cpm) ± 20%: N/A

Approved by: [Signature]
 RS Supervision: [Signature]
 Name (print) [Redacted] Signature [Redacted] Date 12/1/04

$$\%Error = \frac{(Net\ cpm + eff) - Source\ dpm}{Source\ dpm} \times (100)$$

Where $Net\ cpm = Source\ cpm - Background\ cpm$

GUIDANCE:

- The appropriate instrument data and building location is recorded on RSFORMS-02.01-04.
- Obtain an appropriate certified source or decay chart source for the instrument being tested.
- A general inspection is performed on the instrument for the following:
 - * Physical condition of the detector, cables, and instrument
 - * Instrument battery/power supply check is satisfactory
 - * Instrument audio check is satisfactory, as applicable
 - * Instrument light leak check is satisfactory, as applicable
 - * Instrument background response check is within tolerances of expected values (typically 1 minute count)
 - * Instrument corrected source count reading falls within an acceptable range (± 15% of source value typically using a 1 minute count)
- Performance test data is recorded (as applicable) to each portable contamination survey instrument with signature upon completion.

PORTABLE SCALER CONTAMINATION INSTRUMENT PERFORMANCE TEST LOG

RSFORMS-02.01

(Alpha only)

Alpha beta

INST. TYPE/SERIAL #: ELECTRA/ 3977 CAL. DUE DATE: 01-31-05 INSTRUMENT EFFICIENCY: 21.3901 N/A

PROBE S/N: 2097 BLDG. 707 (Range, 2640 / 3570)

This form is used to record parameters noted during daily performance checks on NE Electra, Bicon Frisk-Tech, Portable instruments with gas proportional detector. Instruments that require additional repair or service are returned to Instrumentation Department.

TIME/DATE	IN CAL Yes No	BATT SAT Yes No	COUNT TYPE	BKG (cpm)	INSTRUMENT READING (Net cpm)	FLUSH/RE-CHARGE (N/A if not gas prop. det.) (Initials)
1600 12-1-04	yes	yes	Alpha	2.0 AM 12-1-04 3369	3369	
2230 12-1-04			Beta	N/A	N/A	N/A
N/A	yes	yes	Alpha	7.0	3,297	
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A
			Alpha			
			Beta	N/A	N/A	N/A

SOURCE ISOTOPE (Alpha): PU-239 (CSL)/(S/N)/(Registry No.): 680145 Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): 14578 Range (cpm) ± 15%: 2640 / 3570

SOURCE ISOTOPE (Beta) N/A (CSL)/(S/N)/(Registry No.): N/A Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): N/A Range (cpm) ± 20%: N/A

Approved by: [Signature]
 RS Supervision: [Signature]
 Name (print) [Redacted] Signature [Redacted] Date 12/1/04

$$\%Error = \frac{(Net\ cpm + eff) - Source\ dpm}{Source\ dpm} \times (100)$$

Where $Net\ cpm = Source\ cpm - Background\ cpm$

GUIDANCE:

- The appropriate instrument data and building location is recorded on RSFORMS-02.01-04.
- Obtain an appropriate certified source or decay chart source for the instrument being tested.
- A general inspection is performed on the instrument for the following:
 - * Physical condition of the detector, cables, and instrument
 - * Instrument battery/power supply check is satisfactory
 - * Instrument audio check is satisfactory, as applicable
 - * Instrument light leak check is satisfactory, as applicable
- * Instrument background response check is within tolerances of expected values (typically 1 minute count)
- * Instrument corrected source count reading falls within an acceptable range (± 15% of source value typically using a 1 minute count)
- Performance test data is recorded (as applicable) to each portable contamination survey instrument with signature upon completion.

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PORTABLE SCALER CONTAMINATION INSTRUMENT PERFORMANCE TEST LOG

RSFORMS-02.01

(Alpha only)

Alpha beta

INST. TYPE/SERIAL #: ELECTRA / 3120 CAL. DUE DATE 2/17/05 INSTRUMENT EFFICIENCY: .207 / N/A

PROBE S/N: 1933 BLDG. 70 (Range, 2564 / 3471)

This form is used to record parameters noted during daily performance checks on NE Electra, Bicon Frisk-Tech, Portable instruments with gas proportional detector. Instruments that require additional repair or service are marked with an 'X'.

TIME/DATE	IN CAL Yes No	BATT SAT Yes No	COUNT TYPE	BKG (cpm)	INSTRUMENT READING (Net cpm)	FLUSH/RE-CHARGE (N/A if not gas prop. det.) (Initials)
1600 12/1/04	Y	Y	Alpha	1.0	3111	N/A
2230 12-1-04			Beta	N/A	N/A	
	YES	YES	Alpha	5.0	3143	N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	
			Alpha			N/A
			Beta	N/A	N/A	

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SOURCE ISOTOPE (Alpha): PU-239 (CSL)/(S/N)/(Registry No.): 2707 Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): 14578 Range (cpm) ± 15%: 2564 3471

SOURCE ISOTOPE (Beta) N/A (CSL)/(S/N)/(Registry No.): N/A Certification/Decay Chart Date: N/A
 (Circle One)

Source (dpm): N/A Range (cpm) ± 20%: N/A

Approved by: [Signature]
 RS Supervision: [Signature]
 Name (print) [Redacted] Signature [Redacted] Date 12/1/04

$$\%Error = \frac{(Net\ cpm +\ eff) - Source\ dpm}{Source\ dpm} \times (100)$$

Where $Net\ cpm = Source\ cpm - Background\ cpm$

GUIDANCE:

- The appropriate instrument data and building location is recorded on RSFORMS-02.01-04.
- Obtain an appropriate certified source or decay chart source for the instrument being tested.
- A general inspection is performed on the instrument for the following:
 - * Physical condition of the detector, cables, and instrument
 - * Instrument battery/power supply check is satisfactory
 - * Instrument audio check is satisfactory, as applicable
 - * Instrument light leak check is satisfactory, as applicable
- * Instrument background response check is within tolerances of expected values (typically 1 minute count)
- * Instrument corrected source count reading falls within an acceptable range (± 15% of source value typically using a 1 minute count)
- Performance test data is recorded (as applicable) to each portable contamination survey instrument with signature upon completion.

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SOURCE ISOTOPE (Alpha): PU-239 (CSL)/(S/N)/(Registry No.): 75 2707 Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): 14578 Range (cpm) ± 15%: 2639-3105-3570

SOURCE ISOTOPE (Beta): N/A (CSL)/(S/N)/(Registry No.): N/A Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): N/A Range (cpm) ± 20%: N/A

Approved by: [Signature]
 RS Supervision: [Signature]
 Name (print): _____ Signature: _____ Date: _____

$$\%Error = \frac{(Net\ cpm + eff) - Source\ dpm}{Source\ dpm} \times (100)$$

Where $Net\ cpm = Source\ cpm - Background\ cpm$

GUIDANCE:

- The appropriate instrument data and building location is recorded on RSFORMS-02.01-04.
- Obtain an appropriate certified source or decay chart source for the instrument being tested.
- A general inspection is performed on the instrument for the following:
 - * Physical condition of the detector, cables, and instrument
 - * Instrument battery/power supply check is satisfactory
 - * Instrument audio check is satisfactory, as applicable
 - * Instrument light leak check is satisfactory, as applicable
 - * Instrument background response check is within tolerances of expected values (typically 1 minute count)
 - * Instrument corrected source count reading falls within an acceptable range (± 15% of source value typically using a 1 minute count)
- Performance test data is recorded (as applicable) to each portable contamination survey instrument with signature upon completion.

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PORTABLE SCALER CONTAMINATION INSTRUMENT PERFORMANCE TEST LOG

RSFORMS-02.01 ^1

(Alpha only)

Alpha beta

INST. TYPE/SERIAL #: ELECTRA / 4176 CAL. DUE DATE: 1/16/05 INSTRUMENT EFFICIENCY: 22.3% / N/A

PROBE S/N: 2106 BLDG. 70 (Range, 2763 / 3738)

This form is used to record parameters noted during daily performance checks on NE Electra, Bicon Frisk-Tech, Portable instruments with gas proportional detector. Instruments that require additional repair or service are returned to Instrumentation Repair Facility.

TIME/DATE	IN CAL Yes No	BATT SAT Yes No	COUNT TYPE	BKG (cpm)	INSTRUMENT READING (Net cpm)	FLUSH/RE-CHARGE (N/A if not gas prop. det.) (Initials)
1630			Alpha	3.0	3240	
12/1/04	Yes	Yes	Beta	N/A	N/A	
2230			Alpha	5.0	3181	
12-1-04	Yes	Yes	Beta	N/A	N/A	
			Alpha			
			Beta	N/A	N/A	
			Alpha			
			Beta	N/A	N/A	
			Alpha			
			Beta	N/A	N/A	
			Alpha			
			Beta	N/A	N/A	
			Alpha			
			Beta	N/A	N/A	
			Alpha			
			Beta	N/A	N/A	
			Alpha			
			Beta	N/A	N/A	
			Alpha			
			Beta	N/A	N/A	
			Alpha			
			Beta	N/A	N/A	
			Alpha			
			Beta	N/A	N/A	

1/11/11

SOURCE ISOTOPE (Alpha): PU-239 (CSL)/(S/N)/(Registry No.): TS 2707 Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): 14578 Range (cpm) ± 15%: 2763 - 3738

SOURCE ISOTOPE (Beta): N/A (CSL)/(S/N)/(Registry No.): N/A Certification/Decay Chart Date: N/A
 (Circle One) (Circle One)

Source (dpm): N/A Range (cpm) ± 20%: N/A

Approved by: [Signature]
 RS Supervisor: [Signature]
 Name (print) [Redacted] Signature [Redacted] Date 12/1/04

$$\%Error = \frac{(Net\ cpm + eff) - Source\ dpm}{Source\ dpm} \times (100)$$

Where Net cpm = Source cpm - Background cpm

GUIDANCE:

- The appropriate instrument data and building location is recorded on RSFORMS-02.01-04.
- Obtain an appropriate certified source or decay chart source for the instrument being tested.
- A general inspection is performed on the instrument for the following:
 - * Physical condition of the detector, cables, and instrument
 - * Instrument battery/power supply check is satisfactory
 - * Instrument audio check is satisfactory, as applicable
 - * Instrument light leak check is satisfactory, as applicable
 - * Instrument background response check is within tolerances of expected values (typically 1 minute count)
 - * Instrument corrected source count reading falls within an acceptable range (± 15% of source value typically using a 1 minute count)
- Performance test data is recorded (as applicable) to each portable contamination survey instrument with signature upon completion.