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IN REPLY
REFER TO

DNSC-E

JAN 08 2005

Unclear Regulatory Commission
Nuclear Materials Safety Branch 2
ATTN: Mr. James Schmidt
475 Allendale Road
King of Prussia, PA 19406

STC-133
040 00341

SUBJECT: Final Status Survey Report for Selected Portions
Of Defense National Stockpile Center Scotia Depot

Dear Mr. Schmidt:

The Defense National Stockpile Center (DNSC) submits the enclosed Final Status Survey Report (FSSR) for positions of the DNSC Scotia Depot in Scotia, NY (DNSC Scotia) and requests unrestricted release of these areas. The survey and release of certain specified areas was necessitated by need to transfer ownership of the buildings to the General Services Administration (GSA) and eventual transfer to the public.

The surveys were performed utilizing the guidance contained in the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM). The release criteria used to support the recommendation for unrestricted release of the specified areas was based upon a Derived Concentration Guideline Level (DCGL) for alpha radiation. Results of the surveys are included in the appendix to the report.

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Should you have any questions, please contact me at your convenience.

Sincerely,

A handwritten signature in dark ink, appearing to read "F. Kevin Reilly". The signature is stylized with a large, sweeping "F" and a cursive "Reilly".

F. KEVIN REILLY
Director,
Directorate of Environment
and Safety Management Div.

Enclosures



Defense National Stockpile Center Final Status Survey Report Scotia Depot, New York

STC-133
04000341



Final
December 2004

ERS SOLUTIONS

STC-133

04000341

DEFENSE NATIONAL STOCKPILE CENTER

Final Status Survey Report

Scotia Depot

DECEMBER 2004

Final

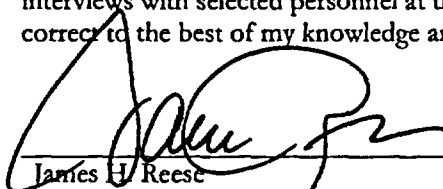
Prepared by
ERS Solutions, Inc
1415 21st Street, Suite C, Sacramento, CA 95814
Phone 916.492-2321 • Fax 916.492-2321

Certification

The following certification applies to a Final Status Survey conducted in January 2004 at the following facility:

Defense National Stockpile Center
Scotia Depot
Route 5/Amsterdam Road, Building 12
Scotia, NY 12302-9463

I certify that the information stated in this report is based on a thorough review and investigation of available records, completion of site surveys of the affected areas for radioactive contamination, and interviews with selected personnel at the Scotia Depot. The contents of this report are true and correct to the best of my knowledge and belief.



James H. Reese
Senior Health Physicist
ERS Solutions, Inc.

12.23.04

Date

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LIST OF ACRONYMS AND ABBREVIATIONS

At	astatine
Bi	bismuth
cm	centimeter
cm/sec	centimeters per second
cm ²	square centimeter
cpm	counts per minute
DCGL	Derived Concentration Guideline Level
DNSC	Defense National Stockpile Center
DoD	Department of Defense
DoE	Department of Energy
dpm	disintegrations per minute
EPA	Environmental Protection Agency
FSSR	Final Status Survey Report
GSA	General Services Administration
HASL	health and safety laboratory
in ²	square inches
LTR	license termination rule
m/s	meters per second
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDA	minimum detectable activity
MDCR	minimum detectable count rate
MeV	million electron volts
mm	millimeters
mrem/yr	millirem per year
NaI (TI)	thallium activated sodium iodide
NRC	Nuclear Regulatory Commission
NS	nanosecond
NUREG	nuclear regulation
OA	Open Area
ORPP	Occupational Radiation Protection Program
Pa	protactinium
Pb	lead
pCi/g	picoCuries per gram
Po	polonium
QA/QC	quality assurance/quality control
RCOC	radionuclide contaminant of concern
SU	survey unit
Th	thorium
Tl	thallium
U	uranium
WRS	Wilcoxon Rank Sum

EXECUTIVE SUMMARY

This Final Status Survey Report (FSSR) supports the release of certain warehouses and an outside storage area affected by the storage of licensed radioactive material at the Defense National Stockpile Center, Scotia (DNSC Scotia). These areas include three separate storage locations at the depot; Open Area 300 (OA 300), Building 503 Section 2, 3, and 4, and Building 403 Sections 3 and 4. Tungsten ores and concentrates were stored in Buildings 503 and 403. The columbium/tantalum, in varying particle sizes, was stored in metal 55-gallon drums within Open Area 300. The survey data were analyzed using the guidance contained in the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), (U.S. NRC, 2000). MARSSIM was developed by the U.S. Environmental Protection Agency (U.S. EPA), U.S. Nuclear Regulatory Commission (NRC), U.S. Department of Energy (DOE), and the U.S. Department of Defense (DOD) to provide guidance in performing radiological release surveys.

Survey Units 1 through 6 (including subunits a and b) at DNSC Scotia are recommended to be released for unrestricted use.

The Scotia depot is authorized to store, sample, repackage, and transfer natural uranium and thorium ores, concentrates or solids under a license issued by the NRC (STC-133) to the DNSC. The DNSC mission is to stockpile essential ores and raw materials that may be used to support industry during global conflicts. No processing or work with the ores or material is performed by DNSC personnel.

In order for a survey unit to be released for unrestricted use, measurements to detect residual radioactivity are compared to a Derived Concentration Guideline Level (DCGL) to ensure they are within the limits specified by the NRC in the License Termination Rule (LTR). A DCGL is a derived activity level that equates to an acceptable quantity of residual radioactivity as defined in the governing regulatory documents. The LTR restricts exposure from residual radioactivity to less than 25 millirems per year (mrem/yr) from all pathways to the critical group.

Alpha static measurements were chosen as the basis for the release criteria since the exposure associated with the radionuclides of concern is largely contributed from the inhalation pathway via alpha radiation (99.6%). The surveys and analysis conducted for this document have been based upon guidance from NUREG 1757 volume 2, appendix B, *Simple Approaches for Conducting Final Radiological Surveys* (U.S. NRC, 2003).

The results of the scanning survey and collection of static measurements, swipe samples, and soil samples indicates there is no residual radioactivity in Survey Units 1 through 6 (including subunits a and b) and support the recommendation for unrestricted release.

1.0 INTRODUCTION AND BACKGROUND

The Defense National Stockpile Center – Scotia Depot (DNSC Scotia) is located west of the village of Scotia, New York. The DNSC Scotia stores various ores and commodities some of which contain naturally occurring radioactive materials in the form of uranium and thorium. Stores of columbium/tantalum ores and tungsten ores and concentrates maintained at the depot contain sufficient quantities of these two naturally occurring radionuclides as to require licensing by the Nuclear Regulatory Commission (NRC).

1.1 SITE HISTORY/DESCRIPTION

The Defense National Stockpile program was established by Congress in the Strategic and Critical Materials Stock Piling Act of 1939, as amended, to minimize the United State's dependence on foreign sources of essential materials in times of national emergency. DNSC is responsible for all activities necessary to provide safe, secure, environmentally sound stewardship of all commodities in the National Defense Stockpile. Over the past several years as new technologies have evolved and global economies emerged, Congress has declared most Defense National Stockpile materials to be in excess of national defense needs and has authorized their dispositions, generally by sale.

The Scotia Depot was commissioned on March 30, 1943 as a naval facility. It served as a storage and supply depot for naval forces along the Atlantic coast and Europe and as a storage and distribution point for the National Stockpile materials. The original depot consisted of an area of approximately 337 acres. Over the years portions of the depot have been sold to the public for development of industrial parks leaving the current depot size at approximately 59 acres. All the depot property is owned by the General Services Administration (GSA) from which DLA leases the facilities.

The ores at the Scotia Depot are stored in piles on concrete pads while other materials are stored in warehouses. The warehouses are single-story concrete block buildings with concrete floors. They are kept locked and sealed unless required to be opened for use.

All commodities in the warehouses are arranged neatly with several feet of aisle space between pallets (Photo 1-1).

Radiological operations at the DNSC Scotia are authorized under NRC license STC-133, application submitted September 10, 1999, and expiration on February 28, 2010 issued to the Defense National Stockpile Center (DNSC). The license authorizes the DNSC to store, sample, repackage, and transfer natural uranium and thorium ores, concentrates or solids. The license was implemented via the Occupational Radiation Protection Program (ORPP) manual dated November 2002.

As part of the ORPP, annual surveys of the radioactive material are performed. These surveys include verification of the integrity of the storage containers, inventory, and dose rate measurements. Surveys for the past 30 years were reviewed as part of the historical

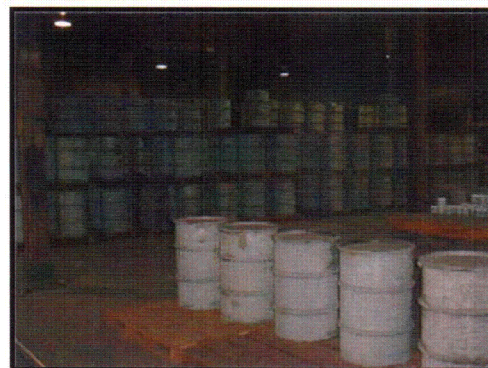


Photo 1-1, Commodities in Storage

assessment. The historical assessment indicated only one spill involving the radioactive material in OA 300 as described below.

From 1998 to 2001 a special project was performed to sample the columbium/tantalum ores in order to determine the percent abundance of uranium and thorium in the ore. The project took place in Building 503, Section 4 following a well-defined procedure to minimize the potential for the spread of contamination. The sampling occurred in an area that was covered to protect the floor surface from contamination and with localized ventilation systems to preclude airborne radioactivity. Surveys performed following the project did not indicate the presence of residual radioactivity.

Until 1994 stores of licensed radioactive material were held in three separate storage locations at the depot; Open Area 300 (OA 300), Building 503 Section 2, 3, and 4, and Building 403 Sections 3 and 4. Tungsten ores and concentrates were stored in Buildings 503 and 403. The columbium/tantalum was stored in metal 55-gallon drums within Open Area 300.

During the relocation of the material from OA 300, one drum received a minor puncture on the bottom and resulted in the spillage of a small amount of the columbium/tantalum ore within OA 300. The spill area was approximately 90 feet long and 6 inches wide. All spilled ore was recovered and a clearance survey was performed following the guidelines contained in the *Guideline For Decontamination of Facilities and Equipment Prior to the Release for Unrestricted Use or Termination of Licenses for Byproduct, Source or Special Nuclear Material* (U.S. NRC, 1982).

In August 2003 scoping surveys were performed of selected areas to be released in this effort. Scoping surveys were performed in OA 300 and Building 503 section 2. Results of the scoping survey did not indicate the presence of residual radioactivity in either the warehouses or the outside area. These results were consistent with the annual surveys performed by the DNSC and with the results of the historical assessment and were used in the classification of the survey units.

RADIOLOGICAL CONTAMINANTS OF CONCERN

The radionuclide contaminants of concern (RCOCs) in this survey effort were thorium 232 and uranium 235 and 238 contained as a constituent of tungsten or columbium/tantalum per the *Radiological Survey and Sampling Plan* (ERS Solutions, Inc. 2004).

The columbium/tantalum ore is in a powder form contained in galvanized or painted universal type steel drums with lids secured with either bolted locking rings or lever action closures. The tungsten ore has various physical configurations ranging from sand-like to gravel-like with some lots having chunks as large as one to two inches in diameter. The tungsten is stored in containers similar to those used for the columbium/tantalum. With the exception of the one time special project for sampling, the content of the containers are not disturbed nor are the containers opened while at the depot.

Sampling of the different ore lots provided percentage breakdown of the uranium and thorium and enabled the calculation of total curie content. This breakdown was used to distribute the amount of residual radioactivity that equates to the annual exposure as specified in the license termination rule (i.e., derived concentration guideline level (DCGL)). Section 3.2 contains a further discussion of the DCGL. The analysis showed that the concentration of thorium 232 was only two thirds the concentration of uranium 238. The calculated percent abundance of thorium 232 was 38.6%, uranium 238 was 61.0%, and uranium 235 was 0.4% by weight (ERS Solutions, Inc. 2004).

Thorium and uranium and their progeny emit alpha, beta, and gamma radiation. For purposes of releasing the facilities for unrestricted use, the dose contribution from alpha radiation is the most

restrictive and was used as the mechanism of release. However, the gamma radiation emitted by the progeny was used as the surrogate to indicate the presence of the parent radionuclide. This fact was considered during analysis of soil samples surrounding OA 300.

The two parent radionuclides of concern to this project are both alpha emitting radionuclides and thus difficult to directly detect using field instrumentation. Therefore detection is based upon the ability of the field instruments to detect the progeny radionuclides associated with the normal decay of the contaminants. Certain progeny radionuclides emit gamma radiations at a sufficient energy and abundance so as to be readily detected by field instrumentation. Inherent in using this approach is that the progeny chosen are in secular equilibrium (i.e., 1:1 correlation) with the parent radionuclide. This assumption is acceptable since the material remained in its natural state and was not processed or disturbed by DNSC therefore the progeny have had sufficient time to achieve equilibrium. Table 1-1 lists the radiological properties of the major progeny for the three RCOs.

Table 1-1. Radionuclides of Concern and Associated Progeny

Radioisotope (progeny) ^a	Half-Life	Decay Properties		Comments
		Type	Energy (MeV) (% abundance)	
Thorium 232	1.4 x 10 ¹⁰ y	alpha: gamma:	3.83 (0.2), 3.95 (23), 4.01 (76.8) 0.059 (0.19), 0.126 (0.04)	Th-232 and progeny decay via alpha, beta, and gamma emission.
Radium 228	5.75 y	beta:	0.0389 (100)	None
Actinium 228	6.13 h	beta: gamma:	0.983 (7), 1.1014 (6.6), 1.115 (3.4), 1.17 (32), 1.74 (12), 2.08 (8) 0.338 (11.4), 0.911 (27.7), 0.969 (16.6), 1.588 (3.5)	None
Thorium 228	1.913 y	alpha: gamma:	5.34 (26.7), 5.42 (72.4) 0.084 (1.19), 0.132 (0.11), 0.166 (0.08), 0.216 (0.27)	None
Radium 224	3.66 d	alpha: gamma:	5.45 (4.9), 5.686 (95.1) 0.241 (3.9)	None
Radon 220	55.6 s	alpha: gamma:	6.288 (99.9) 0.55 (0.07)	None
Polonium 216	0.15 s	alpha: gamma:	6.78 (100) 0.128 (0.002)	None
Lead 212	10.64 h	beta: gamma:	0.158 (5.2), 0.334 (85.1), 0.573 (9.9) 0.239 (44.6), 0.300 (3.4)	None
Bismuth 212	60.55 m	alpha: beta: gamma:	6.05 (25), 6.09 (9.6) 1.59 (8), 2.246 (48.4) 0.04 (1.0), 0.727 (11.8), 1.62 (2.75)	None
Polonium 212	305 ns	alpha:	8.785 (100)	64.07% branching ratio for Bi-212 decay to Po-212.
Thallium 208	3.07 m	beta: gamma:	1.28 (25), 1.52 (21), 1.80 (50) 0.277 (6.8), 0.5108 (21.6), 0.583 (85.8), 0.860 (12), 2.614 (100)	35.93% branching ratio for Bi-212 decay to Tl-208.
Uranium 235	7.04 x 10 ⁸ y	alpha: gamma:	4.2 (10.3), 4.4 (73.6), 4.5 (11.3) 0.144 (10.5), 0.163 (4.7), 0.186 (54), 0.205 (4.7)	None
Thorium 231	25.5h	beta: gamma:	0.205 (15), 0.287 (49), 0.304 (35) 0.026 (14.8), 0.0842 (6.5)	None

Table 1-1. (Continued)

Radioisotope (progeny) ^a	Half-Life	Decay Properties		Comments
		Type	Energy (MeV) (% abundance)	
Uranium 238	4.468 x 10 ⁹ y	alpha:	4.15 (22.9), 4.2 (76.8)	None
Thorium 234	24.1 d	beta:	0.076 (2.7), 0.095 (6.2), 0.096 (18.6), 0.1886 (72.5)	None
		gamma:	0.0633 (3.8), 0.0924 (2.7), 0.0928 (2.7), 0.1128 (0.24)	
Protactinium 234m	1.17 m	beta:	2.28 (98.6)	None
		gamma:	0.766 (0.207), 1.001 (0.59)	
Protactinium 234	6.7 h	beta:	1.26 (100)	99.87% branching ratio for Pa-234 decay to U-234.
		gamma:	0.132 (19.7), 0.57 (10.7), 0.883 (11.8), 0.926 (10.9), 0.946 (12)	
Uranium 234	244,500 y	alpha:	4.72 (27.4), 477 (72.3)	None.
		gamma:	0.053 (0.12), 0.121 (0.04)	
Thorium 230	7.7 x 10 ⁴ y	alpha:	4.62 (23.4), 4.69 (76.2)	None.
		gamma:	0.0677 (0.37), 0.142 (0.07), 0.144 (0.45)	
Radium 226	1,600 y	alpha:	4.60 (5.55), 4.78 (94.4)	Progeny emissions include alpha, beta, and gamma radiation.
		gamma:	0.186 (3.28)	
Radon 222	3.8 d	alpha:	5.49 (99.9)	None
		gamma:	0.510 (0.078)	
Polonium 218	3.1 m	alpha:	6.0 (100)	None
		beta:	0.33 (0.02)	
		gamma:	0.837 (0.0011)	
Lead 214	26.8 m	beta:	0.67 (48), 0.73 (42.5), 1.03 (6.3)	99.98% branching ratio for Po-218 decay to Pb-214.
		gamma:	0.2417 (7.5), 0.295 (19.2), 0.352 (37.1), 0.786 (1.1)	
Astatine 218	2 s	alpha:	6.66 (6.4), 6.7 (89.9), 6.757 (3.6)	0.02% branching ratio for Po-218 decay to At-218.
		gamma:	0.053 (6.6)	
Bismuth 214	20 m	alpha:	5.45 (0.012), 5.51 (0.008)	None
		beta:	1.42 (8.3), 1.505 (17.6), 1.54 (17.9), 3.27 (17.7)	
		gamma:	0.609 (46.1), 1.12 (15), 1.765 (15.9), 2.204 (5.0)	
Polonium 214	164 s	alpha:	7.687 (100)	99.979% branching ratio for Bi-214 decay to Po-214.
		gamma:	0.7997 (0.010)	

Table 1-1. (Continued)

Radioisotope (progeny) ^a	Half-Life	Decay Properties		Comments
		Type	Energy (MeV) (% abundance)	
<i>Thallium 210</i>	1.3 m	beta:	1.32 (25), 1.87 (56), 2.34 (19)	0.021% branching ratio for Bi-214 decay to Tl-210.
		gamma:	0.2918 (79.1), 0.7997 (99), 0.860 (6.9), 1.110 (6.9), 1.21 (17), 1.310 (21), 1.410 (4.9), 2.010 (6.9), 2.090 (4.9)	
<i>Lead 210</i>	22.3 y	alpha:	3.72 (0.000002)	None
		beta:	0.016 (80), 0.063 (20)	
		gamma:	0.0465 (4)	
<i>Bismuth 210</i>	5.01 d	alpha:	4.65 (0.00007), 4.69 (0.00005)	None
		beta:	1.161 (100)	
<i>Polonium 210</i>	138 d	alpha:	5.305 (100)	0.00013 % branching ratio for Tl 206
		gamma:	0.802 (0.0011)	
<i>Thallium 206</i>	4.2 m	beta:	1.571 (100)	
		gamma:	0.803 (0.0055)	
<i>Lead 206</i>	Stable	None		None

^a Associated progeny are shown in italics below the radioisotope

At	=	astatine	MeV	=	million electron volts	s	=	seconds
Bi	=	bismuth	n	=	nanoseconds	Th	=	thorium
d	=	days	Pa	=	protactinium	Tl	=	thallium
h	=	hours	Pb	=	lead	U	=	uranium
m	=	minutes	Po	=	polonium	y	=	years

Note: Information was obtained from *The Health Physics and Radiological Health Handbook*. Revised edition, Schlein, B. ed., 1992.

2.0 SURVEY UNITS AND CLASSIFICATION

A survey unit (SU) is a physical area consisting of structures or land areas of specified size and shape for which a separate decision will be made as to whether or not that area exceeds the release criterion (U.S. NRC, 2000). Survey units may also be assigned based on the type of media (i.e., separate survey units may be assigned for walls, overhead horizontal surfaces, and floors within a contiguous area).

2.1 SURVEY UNIT DESIGNATIONS

At DNSC Scotia, a total of sixteen (16) survey units have been identified. The areas were chosen to coincide with natural landmarks or separations and changes in material composition. Table 2-1 provides a description of the survey units and the reference area survey units. Figure 2-1 shows the survey units and reference areas.

SU 1 is located in the northwest corner of the depot (Figure 2-2) (Photo 2-1). It encompasses the open storage area 300 in which columbium/tantalum ores were stored. The area is bounded by 1st Street on the south, the railroad tracks to north, and an access road to the east and west. OA 300 is a pad 390 feet by 270 feet in size. The area of concern for the radiological survey is an area of 70 feet by 90 feet located in the middle of the storage pad where the radioactive material was stored. The scoping survey has shown this area to contain no residual radioactivity.



Photo 2-1. SU 1 (Open Storage Area 300)

SUs 2 – 6 are individual warehouse sections within Buildings 403 and 503. SUs 2, 3, and 5 measure 140 feet by 200 feet; SUs 4 and 6 measure 160 feet by 200 feet (Figures 2-3 and 2-4). Each survey unit is further divided to account for the difference in material composition of the walls from the floor (block verses concrete) and the rafters. Survey Units 2 – 4 are Sections 2, 3, and 4, respectively of Building 503. SUs 2a – 4a are the walls and SUs 2b – 4b are the rafters in Sections 2, 3, and 4, respectively. Survey Units 5 and 6 are Sections 3 and 4, respectively of Building 403. SUs 5a and 6a are the walls and SUs 5b and 6b are the rafters in Sections 3 and 4, respectively. Photo 2-2 shows the interior of a typical warehouse.



Photo 2-2. SU 2 (Building 503, Section 2)

2.2 CLASSIFICATION

Consistent with the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), a survey classification system was used to focus the greatest surveillance efforts on those areas with the highest risk potential. Classes used in the investigation, were as follows:

- Class 1: Areas that have, or had prior to remediation, a potential for radioactive contamination (based on site operating history) or known contamination (based on previous radiation surveys) above the DCGL.
- Class 2: Areas that have, or had prior to remediation, a potential for radioactive contamination or known contamination, but are not expected to exceed the DCGL.
- Class 3: Any impacted areas that are not expected to contain any residual radioactivity, or are expected to contain levels of residual radioactivity at a small fraction of the DCGL, based on site operating history and previous radiation surveys.

Based on the above classification system, each survey unit was issued a classification. A spill occurred during the removal of storage containers in Survey Unit 1. However, scoping survey results and DNSC annual survey results indicate there is no residual radioactivity and SU 1 is not expected to contain radioactive contamination exceeding the DCGL. The sampling was performed using strict radiological controls in accordance with an approved sampling protocol. Therefore, it is considered a Class 3 area in accordance with the guidance provided in MARSSIM

Survey Units 2 – 6 are identified as Class 3 survey units because licensed radioactive material was stored in these locations. Sampling of the columbium/tantalum ore occurred in Survey Unit 4 (Section 4 of Building 503). The sampling was performed using strict radiological controls in accordance with an approved sampling protocol. A survey post sampling did not indicate the presence of residual radioactivity; therefore, Survey Unit 4 also meets the criteria for a Class 3 investigation area.

Table 2-1. Survey Unit Description

Survey Unit	MARSSIM Class	Description	Reference Point	Reference Area
SU 1	3	Open Storage Area 300	Northwest corner of entry paved area	SU 0a
SU 2	3	Building 503, Section 2	Southeast corner of Section 2, B503	SU 0b
SU 2a	3	Building 503, Section 2, walls	Southeast corner of Section 2, B503	SU0c
SU 2b	3	Building 503, Section 2, ceiling	Southeast corner of Section 2, B503	SU0c
SU 3	3	Building 503, Section 3	Southeast corner of Section 3, B503	SU0b
SU 3a	3	Building 503, Section 3, walls	Southeast corner of Section 3, B503	SU0c
SU 3b	3	Building 503, Section 3, ceiling	Southeast corner of Section 3, B503	SU0c
SU 4	3	Building 503, Section 4	Southeast corner of Section 4, B503	SU 0b
SU 4a	3	Building 503, Section 4, walls	Southeast corner of Section 4, B503	SU0c
SU 4b	3	Building 503, Section 4, ceiling	Southeast corner of Section 4, B503	SU0c
SU 5	3	Building 403, Section 3	Southeast corner of Section 3, B403	SU 0b
SU 5a	3	Building 403, Section 3, walls	Southeast corner of Section 3, B403	SU0c
SU 5b	3	Building 403, Section 3, ceiling	Southeast corner of Section 3, B403	SU0c
SU 6	3	Building 403, Section 4	Southeast corner of Section 4, B403	SU 0b
SU 6a	3	Building 403, Section 4, walls	Southeast corner of Section 4, B403	SU0c
SU 6b	3	Building 403, Section 4, ceiling	Southeast corner of Section 4, B403	SU0c



Figure 2-1. Survey Units and Background Reference Areas.

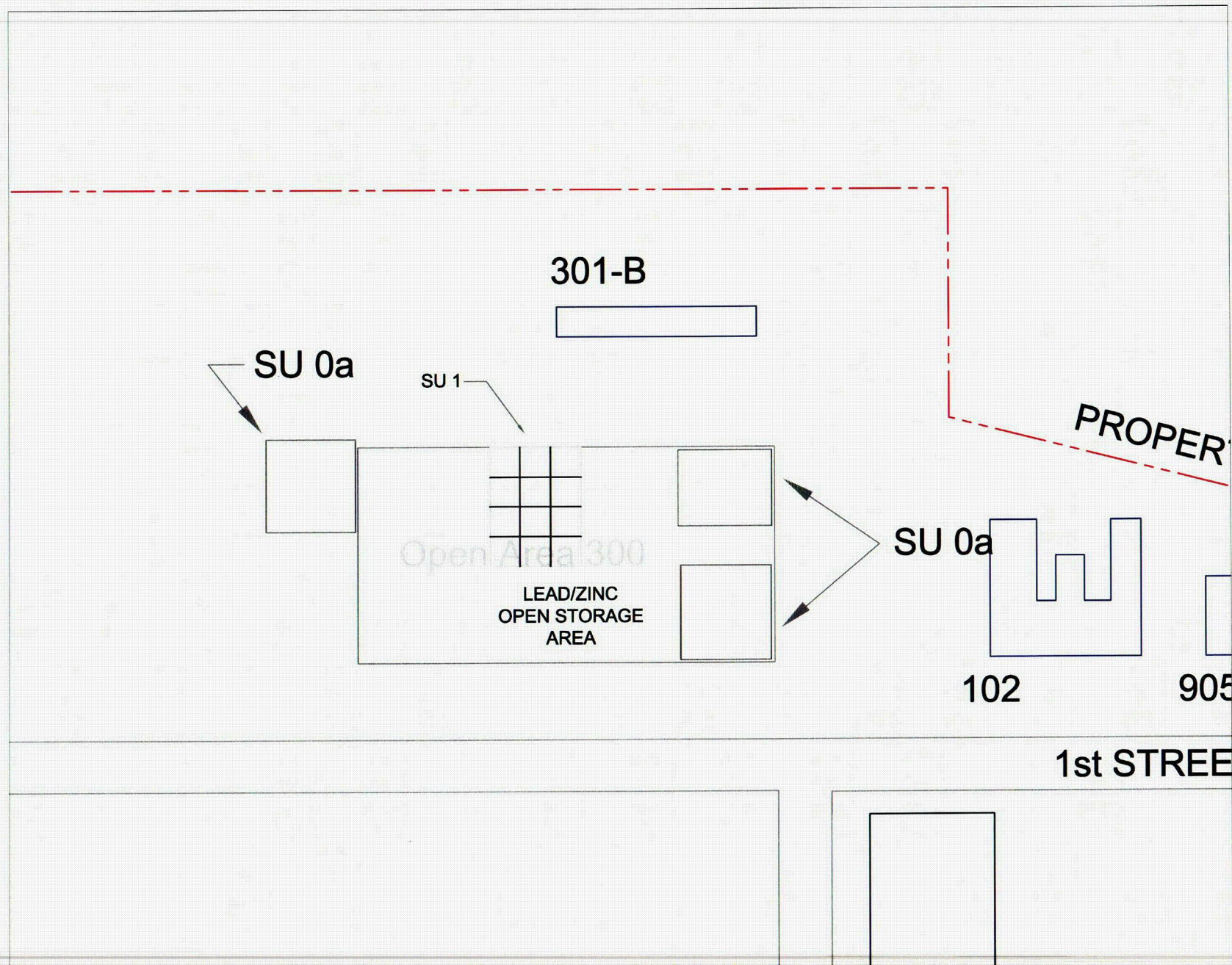


Figure 2-2. Survey Units and Scanning Grid Layouts for SUs 1 and 0a for Open Area 300.

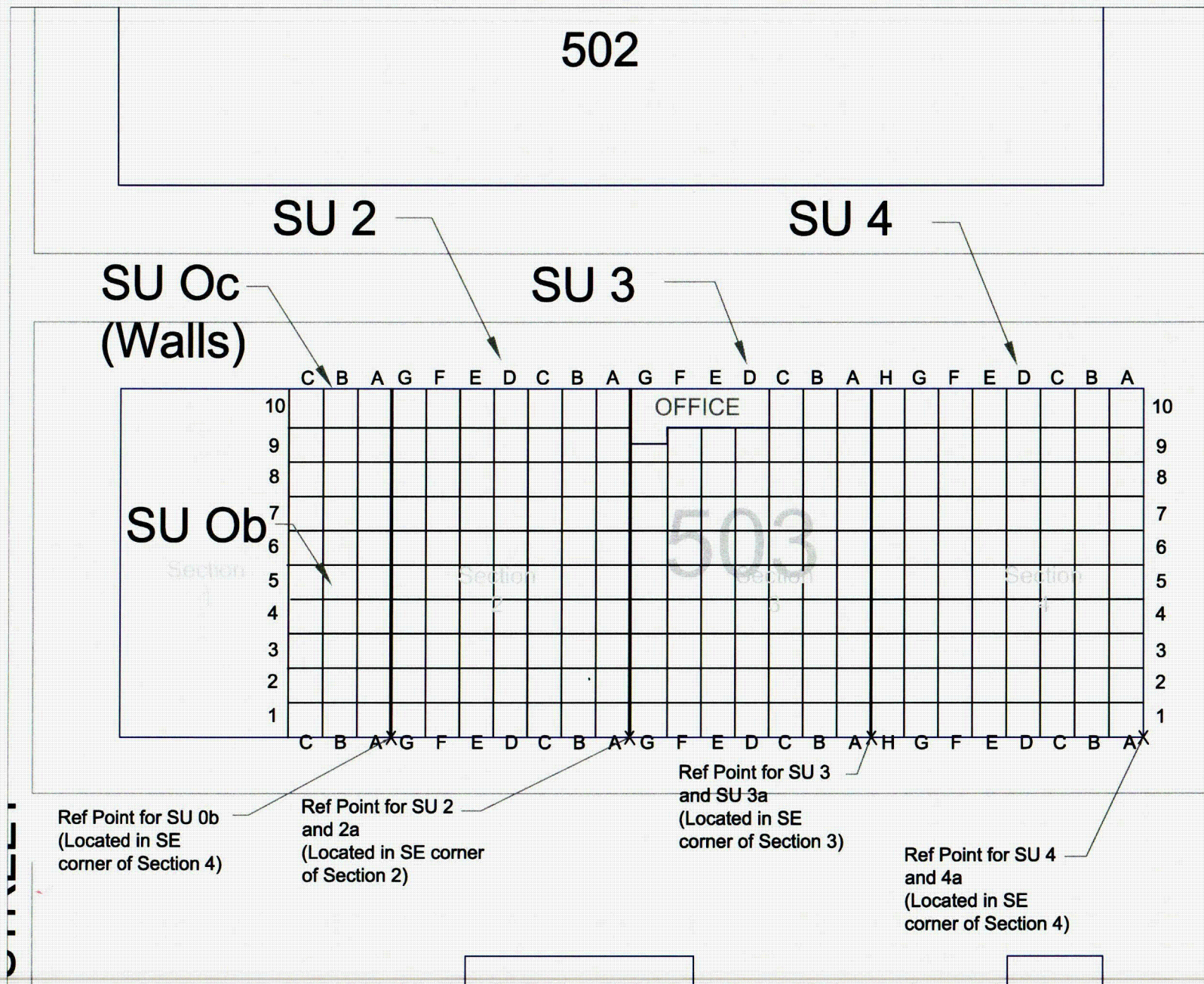


Figure 2-3. Survey Units and Scanning Grids for SUs 2, 3, 4, Ob, and Oc in Building 503.

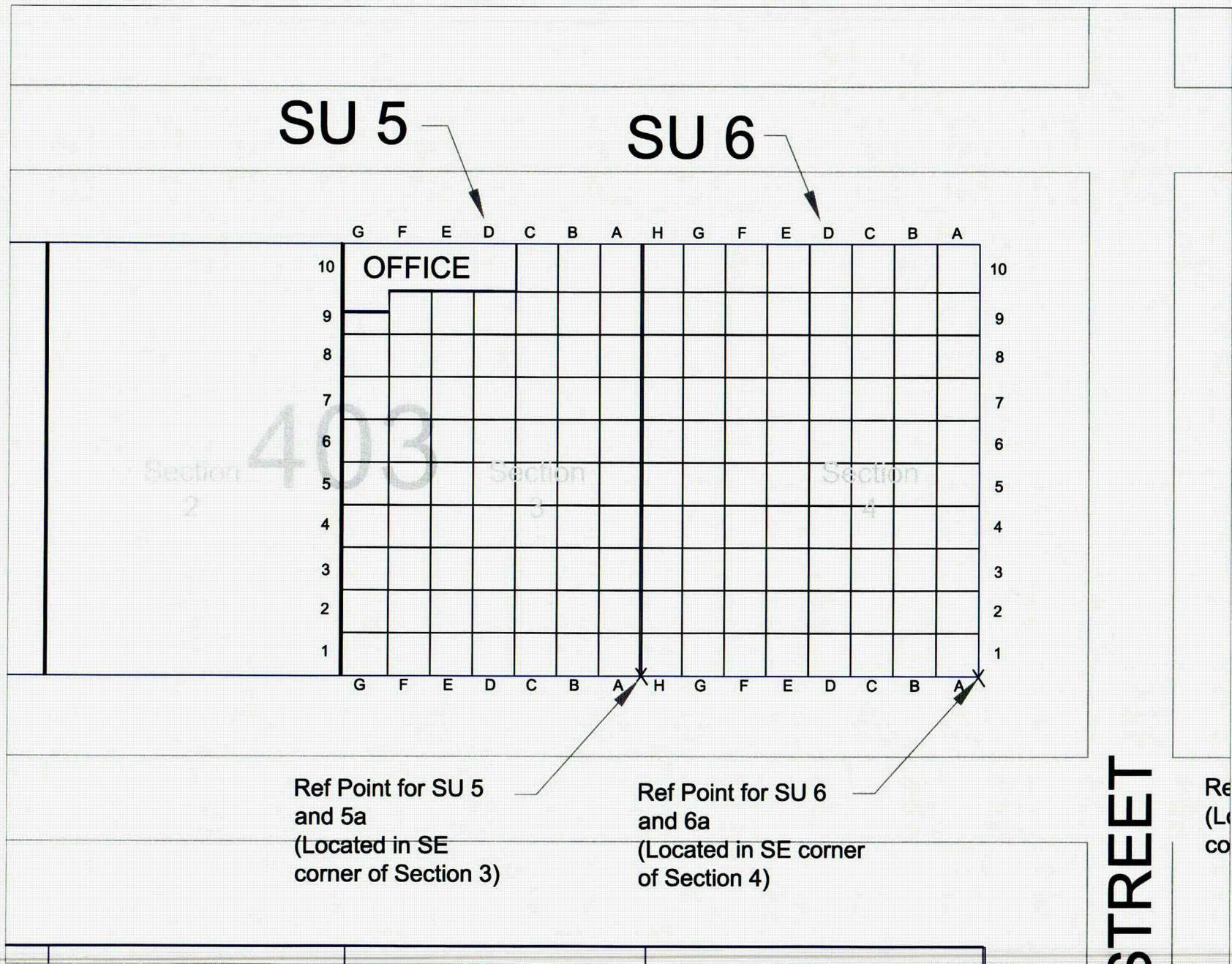


Figure 2-4. Survey Units and Scanning Grids for SUs 5 and 6 in Building 403.

3.0 MECHANISM OF RELEASE

The radiological closure survey was conducted using three types of survey methods (scanning and collection of static measurements and swipe samples) to determine and evaluate the presence of any radiological contamination. Section 5 provides a detailed description of the survey methods used during the final survey.

In order for a survey unit to be released for unrestricted use, measurements to detect residual alpha radioactivity are statistically compared to a DCGL to ensure they are within the limits specified by the NRC in the License Termination Rule (LTR). A DCGL is a derived activity level that equates to an acceptable quantity of residual radioactivity as defined in the governing regulatory documents. The LTR restricts exposure from residual radioactivity to less than 25 millirems per year (mrem/yr) from all pathways to the critical group. To make this determination, either a statistical test is used (the Wilcoxon Rank Sum [WRS] test) or a direct comparison to the DCGL is made.

3.1 STATIC MEASUREMENTS

Static measurements were collected in areas where storage, spillage, or handling of licensed radioactive material occurred. Columbium/tantalum ore was stored in steel drums both for the warehouses and outside area and tungsten ore was also stored inside the warehouses. Static measurements collected from the survey units were compared to the $DCGL_{\alpha}$ to ensure all measurements were less than the $DCGL_{\alpha}$.

3.2 DCGL COMPARISON

As indicated in the *Radiological Survey and Sampling Plan*, the DCGL for Scotia was determined to be 60 dpm/100 cm² (disintegrations per minute per 100 square centimeters) for alpha emitters and 40 dpm/100 cm² for beta emitters. These DCGLs were used to analyze survey data to determine if the facilities can be released for unrestricted use. Since the exposure associated with the radionuclides of concern is largely contributed from the inhalation pathway via alpha radiation (99.6%), meeting the DCGL for alpha radiation ensures that the annual exposure to a member of the critical group is less than 25 mrem/yr (ERS Solutions, Inc. 2004).

The results of static measurements were assessed first against the $DCGL_{\alpha}$ and then could have been evaluated using the WRS test to evaluate the null hypothesis that the levels of residual radioactivity in the survey units exceed that of the reference area by more than the DCGL for average gross contamination. However, since all static measurements collected were less than the $DCGL_{\alpha}$ the WRS test was not necessary.

4.0 BACKGROUND DETERMINATION

Three background reference area survey units (SU 0a) were designated for the OA 300 outside storage pad area. SU 0a consists of three separate surveys of 30 random static alpha and beta measurements and alpha scanning measurements. SU 0b is the background survey unit for the floors of SUs 2 – 6. These reference area background survey units consist of 3 separate surveys of 30 random alpha and beta static and alpha and gamma scanning measurements each taken in 3 separate warehouse sections (Section 1 of Building 503, Section 4 of Building 404 and Building 23). SU 0c is the background survey unit for the walls and ceilings in the buildings and consists of one survey of 30 random alpha and beta static measurements collected from the walls of Section 1 of Building 503. Figure 2-1 shows the background areas used for the survey.

The background survey units were chosen due to their similarity in construction materials, construction date and lack of history of storing or handling radioactive materials. To determine background levels the background reference areas were scanned for alpha and gamma radiation, and static measurements were collected for alpha and beta radiation. For comparability of results, alpha and beta static and alpha and gamma scan measurements were collected from the background reference area using each of the detectors and survey methodologies used to survey the survey units. Table 4-1 summarizes the mean background values applicable for each type of measurement, depending on the detector that was used. It also provides a correlation of reference areas to survey units.

Table 4-1. Background Measurements

Survey Type	Detector Type and Serial Number	Minimum (cpm)	Maximum (cpm)	Mean (cpm)	Applicable Survey Unit
Alpha Scan	SHP380-AB, 1160	0	15	7.5	1
Alpha Scan	Ludlum 2221, 239-1F, PR114130	140	400	373	2, 3, 4, 5, 6
Gamma Scan	Ludlum 2350-1, 44-10, PR182331	7,000	11,000	9,333	2, 3, 4, 5, 6
Alpha Static ^a	SHP380-AB, 1160	4.5	18.5	9.6	1
Alpha Static ^a	SHP380-AB, 1160	4.5	14.5	8.5	2, 3, 4, 5, 6
Alpha Static ^a	SHP380-AB, 1090	7.9	20.7	13.7	2a, 3a, 4a, 5a, 6a
Beta Static ^a	SHP380-AB, 1160	241.0	342.0	286.8	1
Beta Static ^a	SHP380-AB, 1160	212.0	315.0	251.0	2, 3, 4, 5, 6
Beta Static ^a	SHP380-AB, 1090	274.0	354.0	321.2	2a, 3a, 4a, 5a, 6a

^a Static measurements recorded in cpm/100 cm².

cm² = square centimeters

cpm = counts per minute

NR = not recorded

SU = survey unit

5.0 SITE SURVEY TECHNIQUES

The objective of the radiological investigation for the DNSC Scotia was to determine whether or not the storage and handling of licensed radioactive material has resulted in residual radioactivity in excess of the DCGL that would preclude unrestricted release of the facilities. To assist in this decision, three types of surveys were performed; alpha and gamma scanning, alpha and beta static measurements, and alpha and beta swipe measurements. In addition, soil samples were collected from SU 1 (Open Area) and analyzed via gamma and alpha spectroscopy. The details of how these surveys were performed are discussed in the following sections.

5.1 Scanning Surveys

Scan grids of 7 feet by 30 feet were established for SU 1 for the alpha scanning portion of the survey. Scan grids of 20 feet by 20 feet were established for SUs 2 – 6 for the alpha scanning portions of the survey. Photo 5-1 shows scanning of a warehouse floor surface using an alpha detector.

The alpha scanning surveys performed were conducted manually by personnel traversing the survey unit in a defined serpentine pattern with intervals of 2 feet between each pass. This pattern resulted in an overlapping of the detector field of view and up to 100% coverage of the survey unit. In some survey units debris made 100% alpha scanning impossible. The detector was held close to the ground surface (~1 centimeter [cm] or 0.5 inches) and moved in a pattern while walking at a speed that allowed the detection of the investigation level of 3 times the $DCGL_{\alpha}$ (hot spot $DCGL_{\alpha}$ of 180 dpm/100 cm²). Because of the larger detector area (582 cm² versus 100 cm²) the $DCGL_{\alpha}$ was modified and resulted in a value of 1,048 dpm. A scan rate of approximately 0.25 meters per second was used for alpha scanning based upon the probability to detect the modified $DCGL_{\alpha}$ at the 60% confidence level established in the *Radiological Survey and Sampling Plan* (ERS Solutions, Inc. 2004). Minimum and maximum count per minute (cpm) values were recorded for each scan grid.



Photo 5-1. Alpha scanning in a warehouse

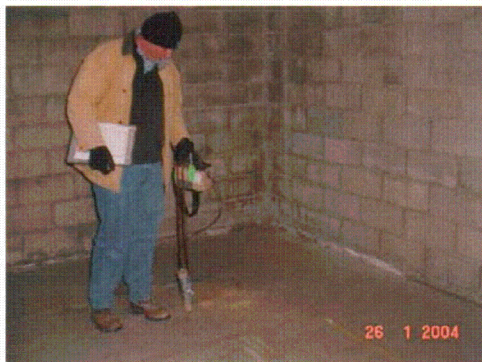


Photo 5-2. Gamma scanning in a warehouse. Illustrates interface between floor and walls.

Gamma scanning surveys were conducted over cracks and seams of the floors in the buildings in SUs 2 – 6. Photo 5-2 shows scanning of a warehouse floor surface using a gamma detector. Scanning was conducted manually using a 2-inch by 2-inch thallium activated sodium iodide (NaI [Tl]) detector. The detector was held close to the ground surface (~15 cm or 6 inches) and moved in a pattern while walking at a speed that allowed the detection of residual radioactivity in excess of the minimum detectable count rate (MDCR). A scan rate of approximately 0.5 meters per second was used for distributed gamma emitting contaminants. Minimum and maximum cpm values were recorded for each scan grid.

The scanning surveyors were trained to:

- Listen for increases in the audible count rate
- Travel at a rate of not more than 0.25 meters per second; and
- Observe the meter readings for increases.

5.2 STATIC MEASUREMENTS



Photo 5-3. Collection of static measurements at SU 1. Photo shows differences in surface material (i.e., rocks, gravel).

One alpha and one beta static measurement were collected from each of the designated locations; static measurements were collected from a total of 350 locations during the radiological survey (Photo 5-3).

A total of 30 static measurements were collected in SU 1 (Figure 5-1); 139 were collected on the floor surface in SUs 2, 3, 4, 5, and 6 (Figures 5-2 and 5-3); 151 were collected from the walls in SUs 2a, 3a, 4a, 5a, and 6a (Figure 5-4); and 30 were collected from the rafters in SUs 2b, 3b, 4b, 5b, and 6b (Figures 5-5 and 5-6). Static measurements were marked on the surface by use of marking paint or chalk with distances measured using a measuring wheel. Prior to collecting the static measurement, the surface was swept clean of dust and debris to limit the interference with alpha counting as shown in Photo 5-4.

The number of static measurements to be taken in each survey unit was 30 following the guidance from NUREG 1757 volume 2, appendix B, *Simple Approaches for Conducting Final Radiological Surveys* (U.S. NRC, 2003). Static measurement locations were determined using triangular grid patterns and a random start location. (Random numbers within the range of the SU dimensions were generated and used as the coordinates of the starting location.). The grid spacing was designed to evenly space the survey points across the survey unit after placement of the random starting location. This type of arrangement was selected because it is the preferred arrangement as detailed in the MARSSIM. The grid spacing was determined as follows:



Photo 5-4. Floor preparation prior to static measurement collection.

$$\text{spacing} = \sqrt{\text{Area} / (0.866 \cdot n)} \quad \text{Equation 5-1}$$

Where:

n	=	number of static measurement locations
spacing	=	distance between measurement locations (meters)
Area	=	area (meters ²)

Alpha and beta static measurements were collected using a Eberline E600 with a SHP380AB beta scintillation detector (100 cm²). Alpha and beta static measurements were recorded at the measurement location for two minutes.

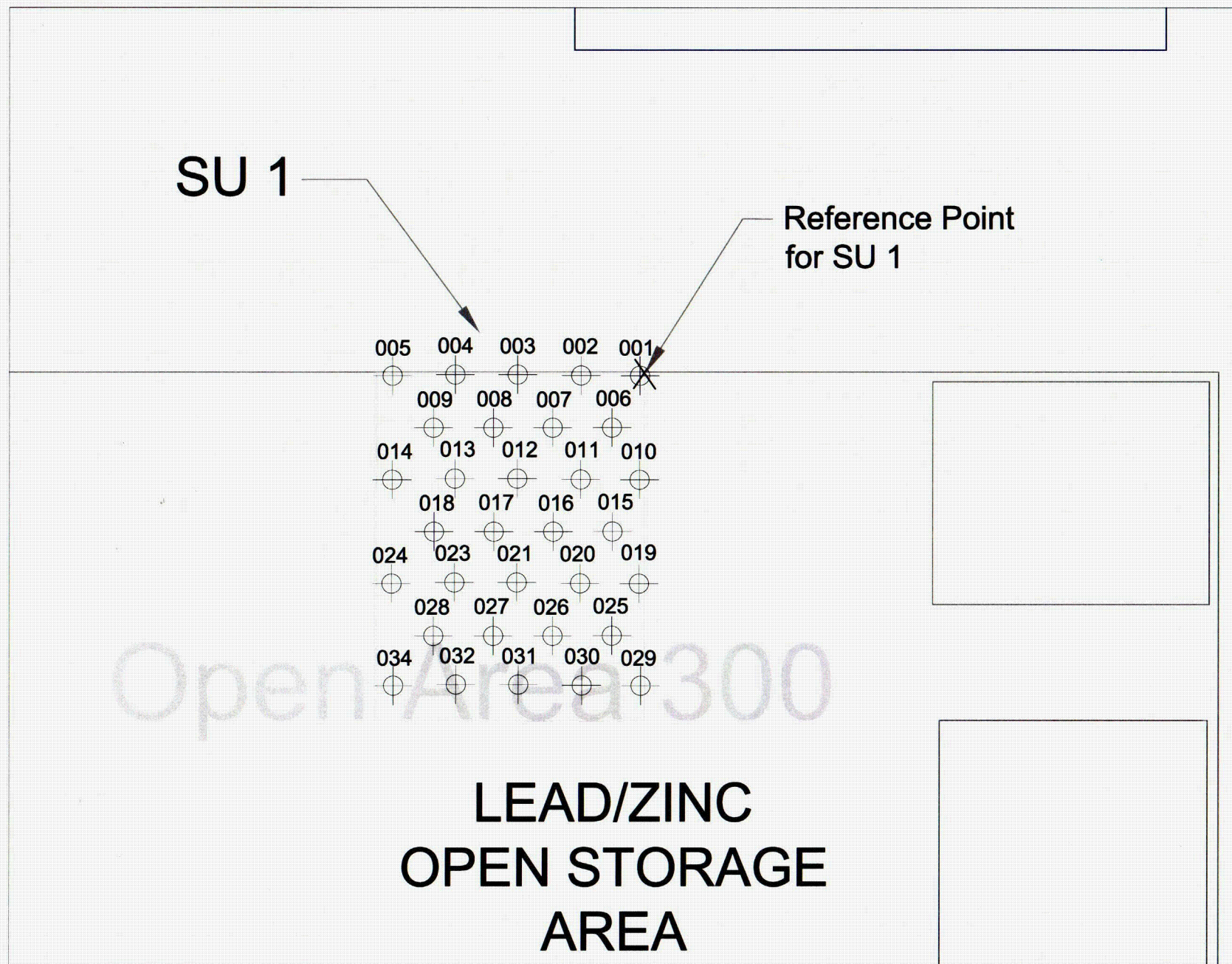


Figure 5-1. Static and Swipe Measurement Locations for SU 1 for Open Area 300.

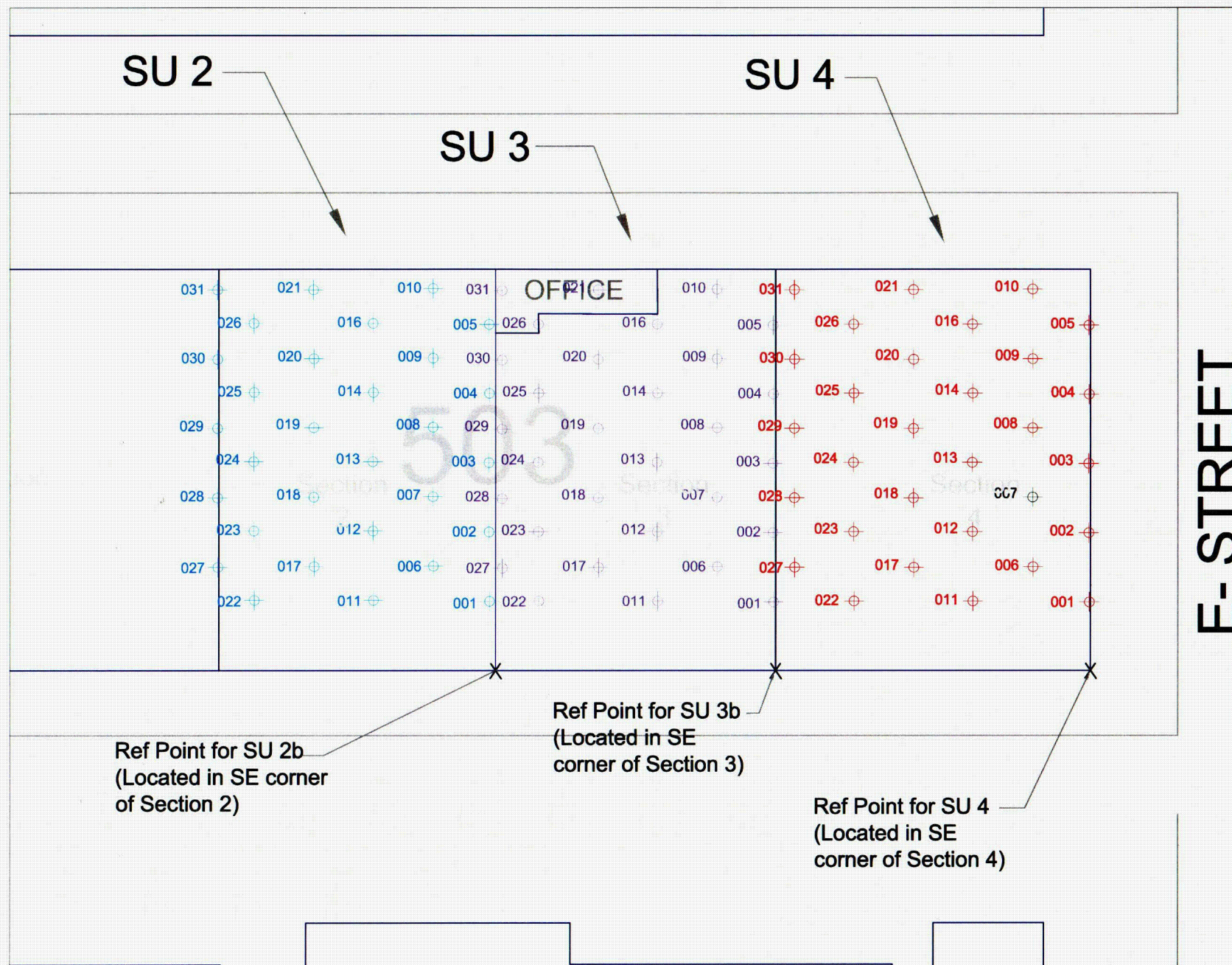


Figure 5-2. Static and Swipe Measurement Locations for SUs 2, 3, and 4 in Building 503.

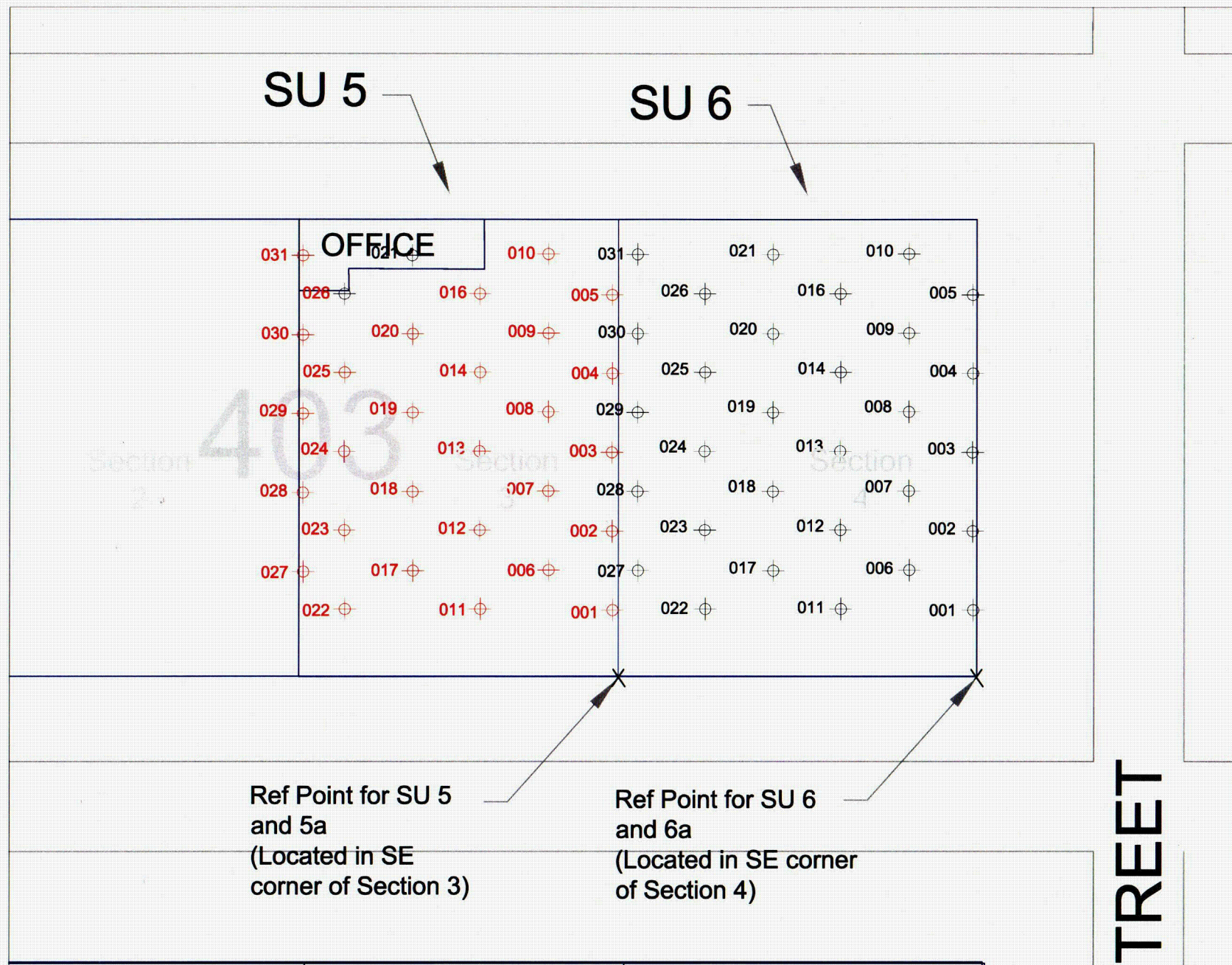
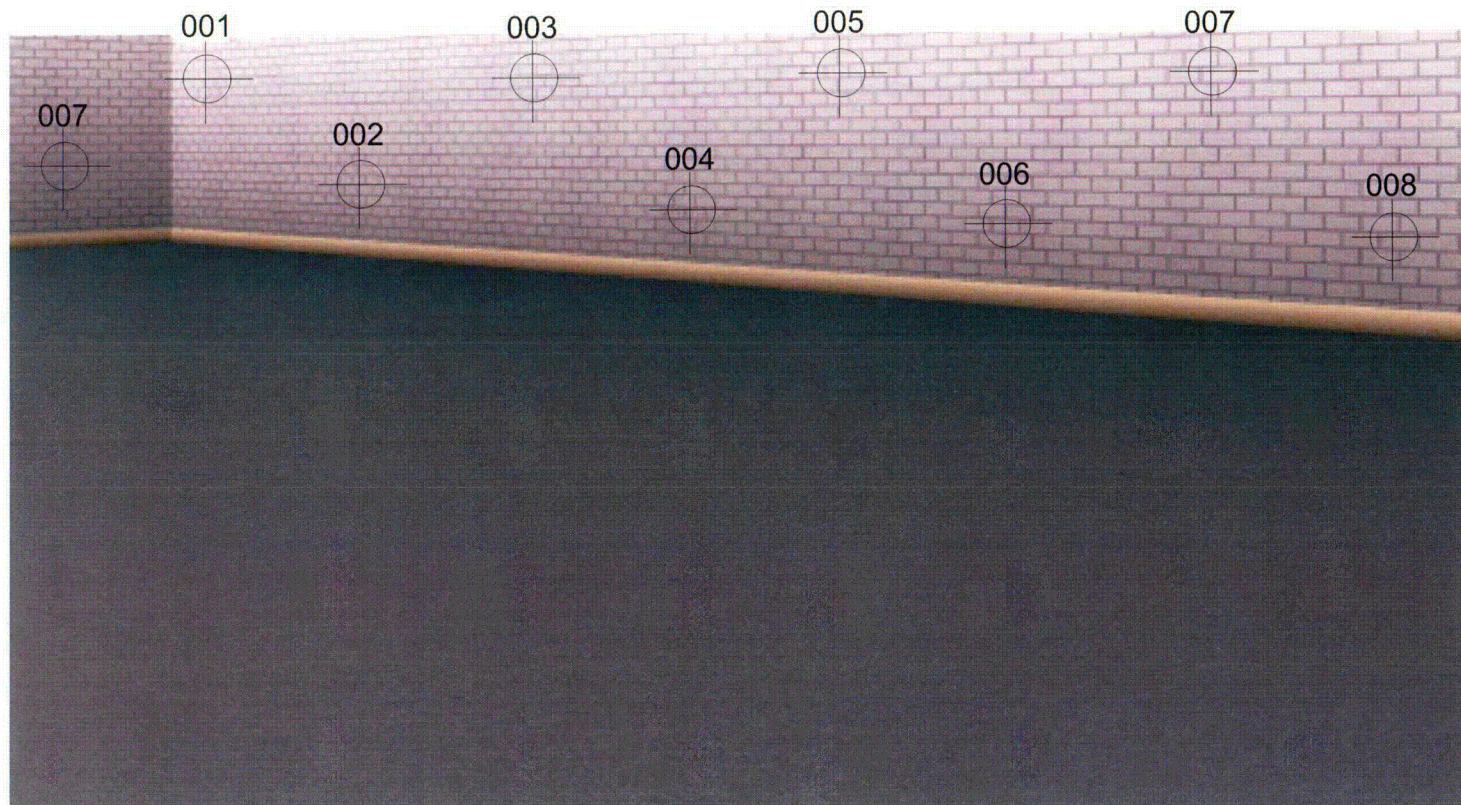


Figure 5-3. Static and Swipe Measurement Locations for SUs 5 and 6 in Building 403.



Static and swipe measurement location positions for walls.
Static measurements were arranged in a pattern of one up and one down.
Eight locations were located along two opposing walls and seven each located from the other opposing walls.
Locations shown are approximate.

Figure 5-4. Sample Pattern for Wall Static and Swipe Measurements For SUs 2a through 6a.

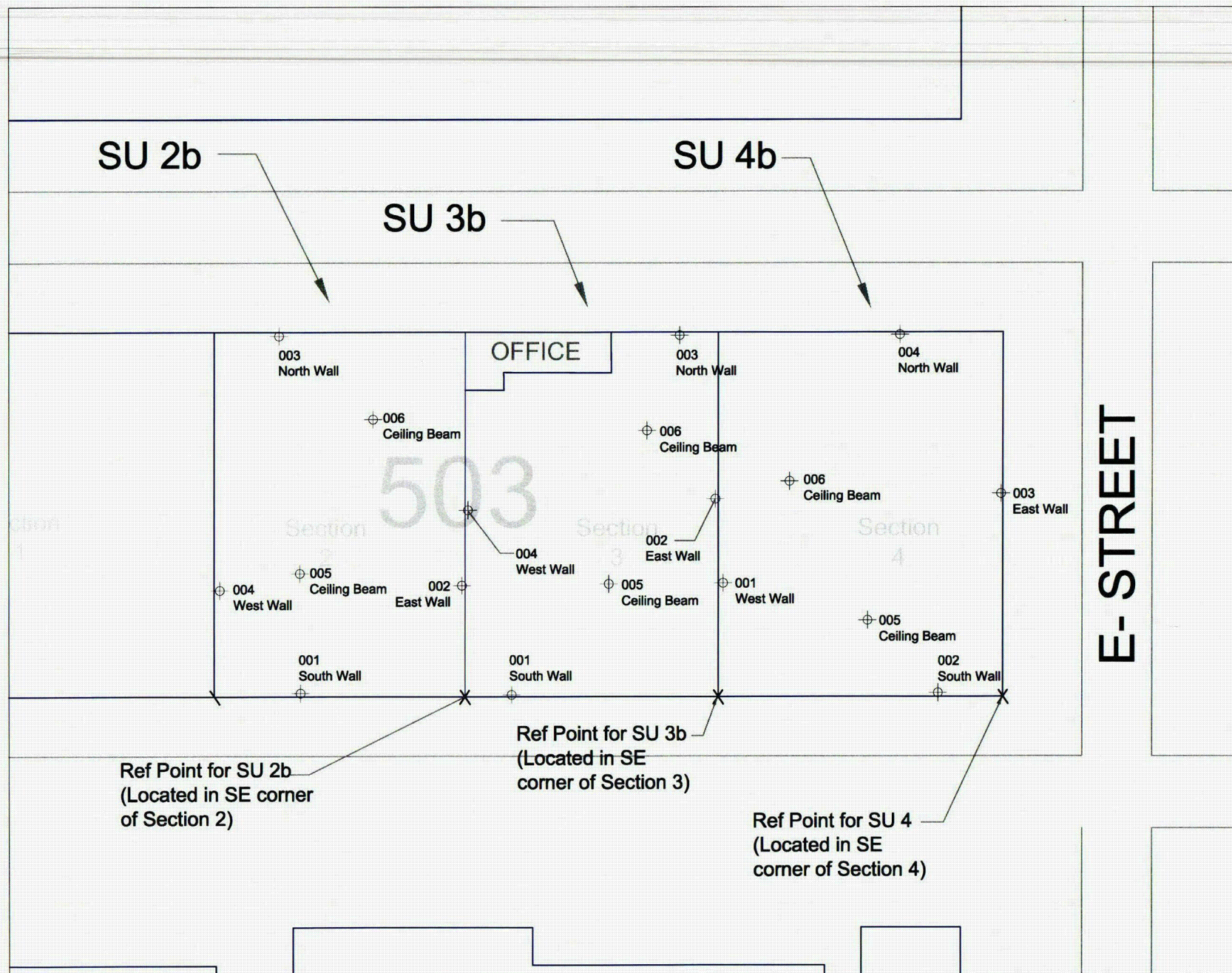


Figure 5-5. Static and Swipe Measurement Locations for SUs 2b, 3b, and 4b in Building 503.

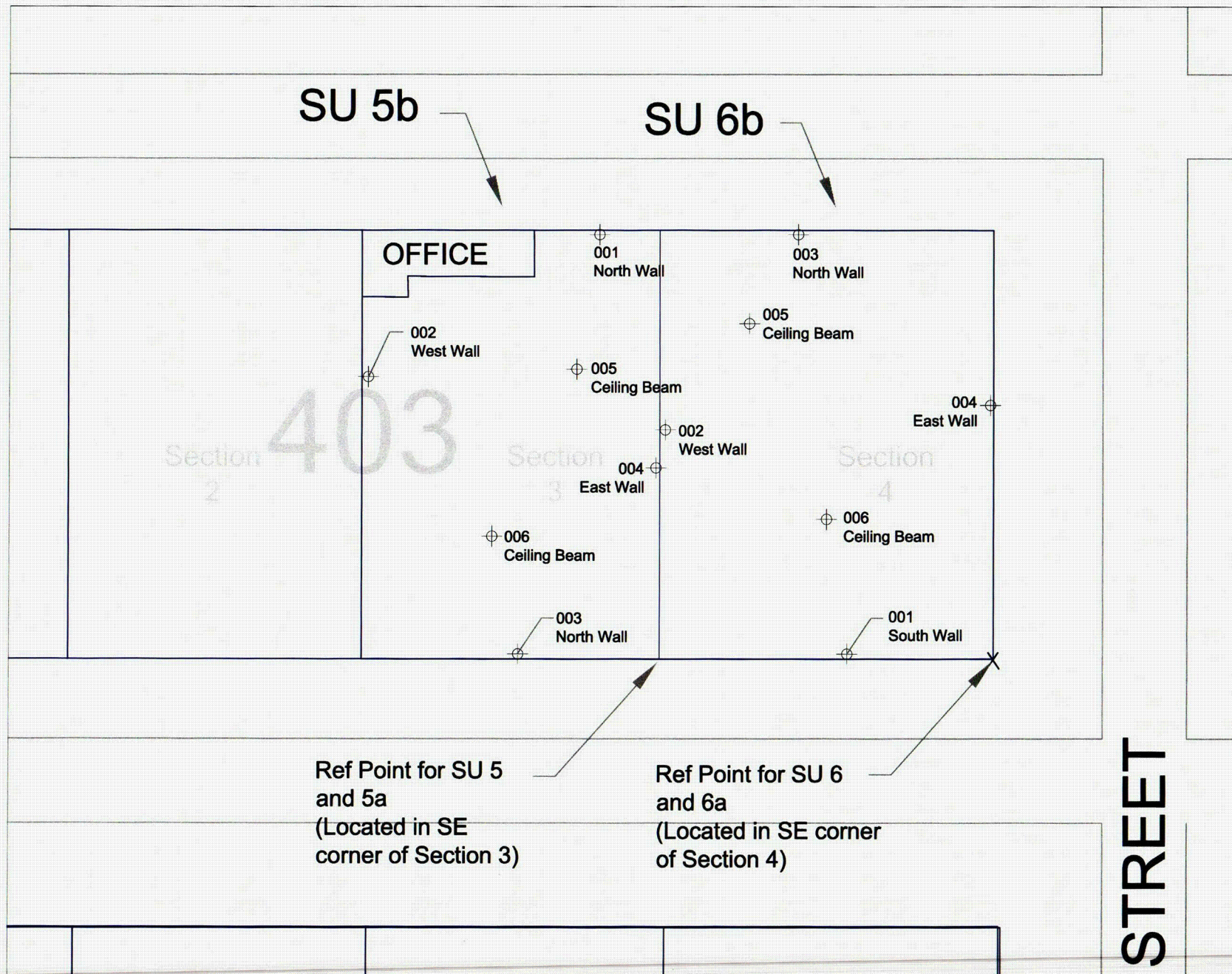


Figure 5-6. Static and Swipe Measurement Locations for SUs 5b and 6b in Building 403.

Static measurements were taken by first sweeping the location to remove rocks or debris then placing the detector in contact with the surface to be surveyed, taking a discrete measurement for a predetermined time interval and recording the reading. Results of static measurements are discussed in this report as values in disintegrations per minute per 100 square centimeters (dpm/100 cm²). The static measurement results and calculations are included in the appendix to this document. Although not isotope-specific, static surveys are considered a quantitative measurement of the amount of radioactive material present.

5.3 Swipe Survey

A total of 330 swipe samples were collected from SUs 2 – 6. Photo 5-5 shows the collection of a swipe sample from a wall surface in a warehouse. Alpha and beta swipe samples were collected at the same locations as the static measurements. Swipe samples were collected to provide a semiquantitative measure of removable activity. Swipe samples were obtained by wiping an area with a dry filter paper while applying moderate pressure. The area of concern for swipe samples was usually 100 cm² (4 square inches [in²]). Either dry paper or cloth filters with diameters ranging from approximately 30 millimeters (mm) to 50 mm were used for the swipe samples. The swipe samples were then placed into envelopes or other individual containers to prevent cross-contamination while they awaited analysis.



Photo 5-5. Swipe sample collection on wall surface.

The gross alpha and beta swipes were analyzed using a Protean model IPC-9025 automatic swipe counter or a HandECount scaler with an alpha/beta scintillation detector. Each alpha and beta swipe was counted for between one and ten minutes to obtain the gross count rate (in cpm). The background count rate for the instrument was then subtracted and the results converted to dpm and compared to the appropriate DCGL (see Section 7.3 of this report).

5.4 Solid Samples

A total of 12 surface soil samples (including 2 background samples) were collected from the area surrounding OA 300 on the northern side (Figure 5-7). The northern side was selected to sample because OA 300 slopes to this direction and runoff from rain would have taken any potential contamination in this direction. Surface soil samples were collected at depths of surface to 2 to 4 inches (gravel and rocks were encountered at 2 to 4 inches in depth).

The soil samples were analyzed by gamma and alpha spectroscopy following the methods established in the Health and Safety Laboratory (HASL) 300 for EPA 901.1 and EML A-01-R, respectively by Severn Trent Laboratories of Saint Louis. The intent of the sampling was to verify that the soils surrounding the storage area were non-impacted by the storage of radioactive material. The sample results were compared to the screening values from NUREG 1757 Volume 1, Appendix B.

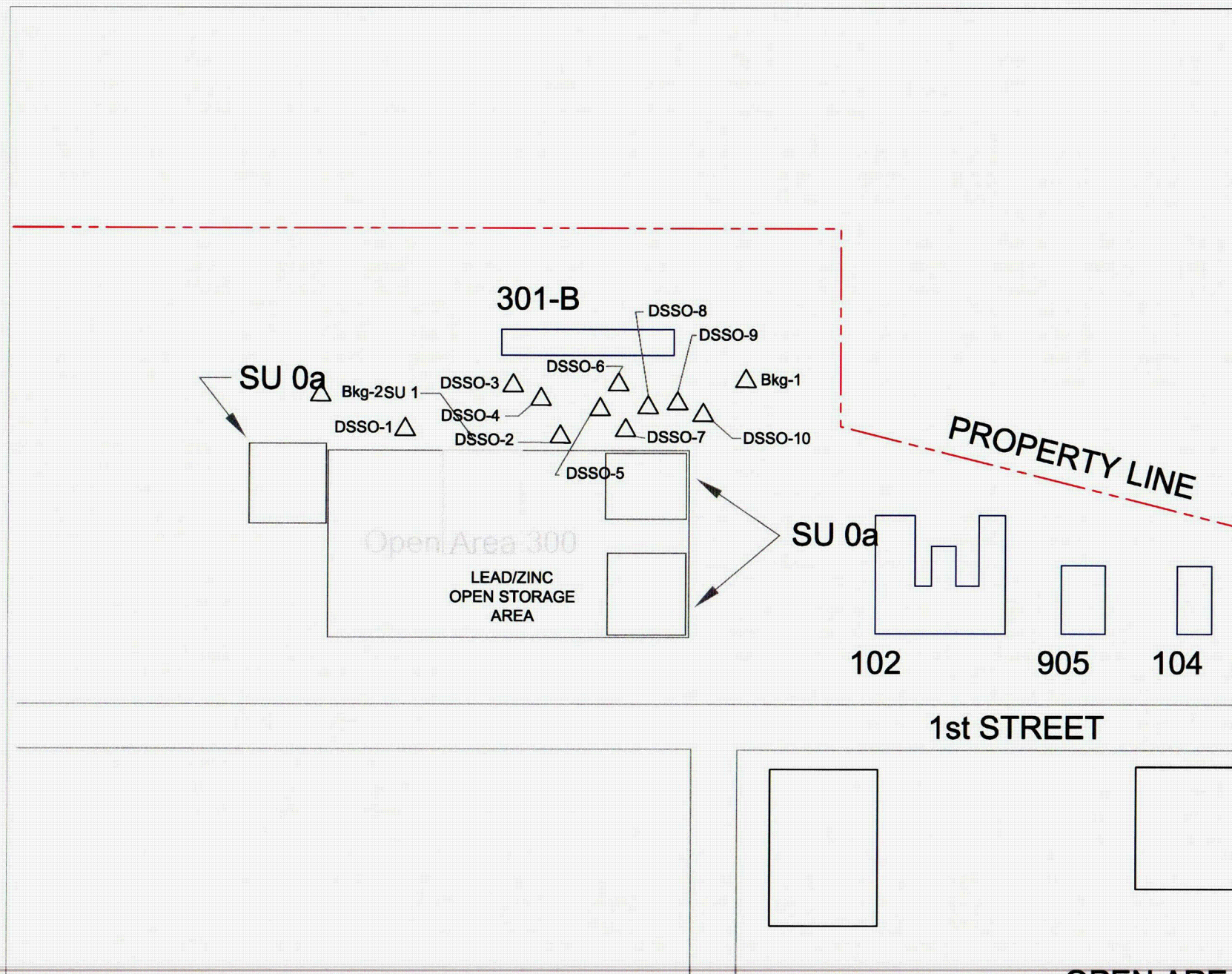


Figure 5-7. Soil Sample Locations for Open Area 300.

5.5 Instrumentation

Instrumentation used for the surveys was subject to standard quality assurance (QA) tests. Background, battery checks, efficiency determinations, and daily source checks were performed for all instruments. Calibration certificates, minimum detectable activity (MDA) and minimum detectable count rate (MDCR) calculations are included in the appendix to this document.

Alpha scanning instrumentation for the outside area (OA 300) consisted of an Eberline E600 with a SHP380AB alpha/beta scintillation detector (100 cm²). Alpha scanning instrumentation for SUs 2 – 6 consisted of a Ludlum Model 2221 instrument with a Ludlum Model 239-1F detector. For the gamma scan, a Ludlum Model 2350-1 ratemeter instrument was connected to a 2-inch by 2-inch NaI(Tl) detector Ludlum Model 44-10. Alpha and beta static measurements were collected using a Eberline E600 with a SHP380AB alpha/beta scintillation detector with an active area of 100 cm². The MDA and count times for the static measurements and the MDCR for scanning surveys were calculated based upon the reference area data. MDAs and MDCRS were calculated utilizing the methodologies contained in U.S. NRC NUREG-1507, *Minimum Detectable Concentrations with Typical Radiation Survey Instruments for Various Contaminants and Field Conditions* (U.S. NRC, 1998). The determination of these values is described further in Section 6.0.

Swipe samples were analyzed using a Protean model IPC-9025 automatic swipe counter with an alpha/beta scintillation detector or a HandECount scaler with an alpha/beta scintillation detector. The scaler setup was subject to rigorous quality control tests. These tests included background determination, MDA calculation, source checks, and chi-square determination. The daily source check was compared to the check established after calibration to ensure measurements were within $\pm 20\%$ of the established average.

Detailed information about the instruments that were used, including detectors, MDAs, MDCRs, detector efficiencies, and calibration due dates are listed in Table 5-1.

Table 5-1. Survey Instrumentation

Measurement Type	Instrument Type	Minimum Detectable Activity or Minimum Detectable Count rate ^a	Detector Efficiencies	Survey Unit	Calibration Due Date ^b
Alpha Scan	SHP-380AB, 1160	53.3% probability ^c	44.3%	1	2/11/05
Alpha Scan	Ludlum 2221, 239-1F, PR114130	99.7% probability ^c	35%	2, 3, 4, 5, 6	12/12/05
Gamma Scan	Ludlum 2350-1, 44-10, PR182331	324 cpm	NA	2, 3, 4, 5, 6	9/27/04
Alpha Static Measurement	SHP-380AB, 1160	26 dpm/100 cm ²	44.3%	0a, 0b, 1, 4, 5, 6, 6a	2/11/05
Alpha Static Measurement	SHP-380AB, 1090	25 dpm/100 cm ²	43.6%	0c, 2, 2a, 2b, 3, 3a, 3b, 4a, 4b, 5a, 5b, 6b	4/27/05
Beta Static Measurement	SHP-380AB, 1160	380 dpm/100 cm ²	15%	0a, 0b, 1, 4, 5, 6, 6a	2/11/05
Beta Static Measurement	SHP-380AB, 1090	382 dpm/100 cm ²	14%	0c, 2, 2a, 2b, 3, 3a, 3b, 4a, 4b, 5a, 5b, 6b	4/27/05
Alpha/Beta Swipe Measurement	Protean IPC 9025	Alpha: 0.03 to 0.14 dpm/100 cm ² Beta: 0.05 to 0.16 dpm/100 cm ²	29.1% to 30.4% 34.5% to 43.2%	2, 2a, 3, 3a, 4, 4a, 5a, 6a	NA
Alpha/Beta Swipe Measurement	HandECount Scaler 131	Alpha: 0.05 to 0.06 dpm/100 cm ² Beta: 0.38 to 0.45 dpm/100 cm ²	29.3% to 30.4% 18.4% to 19.6%	3b, 5b, 6	NA
Alpha/Beta Swipe Measurement	HandECount Scaler 132	Alpha: 0.05 to 0.08 dpm/100 cm ² Beta: 0.33 to 0.45 dpm/100 cm ²	20.5% to 30.5% 20.6% to 30.5%	2b, 4b, 5, 6, 6b	NA

^a Minimum detectable activities were calculated in accordance with NUREG-1507, "Minimum Detectable Concentrations with Typical Radiation Survey Instruments for Various Contaminants and Field Conditions" (U.S. NRC, 1998).

^b Detectors are required to be calibrated once every 12 months. Calibration due date indicates the date by which the detector must be calibrated again.

^c Represents the probability of detecting an area of contamination at a predetermined DCGL for given scan rates.

cm² = square centimeters

cpm = counts per minute

dpm = disintegrations per minute

6.0 MINIMUM DETECTABLE ACTIVITIES DETERMINATIONS

MDA and MDCRs were calculated utilizing the methodologies contained in U.S. NRC NUREG 1507, *Minimum Detectable Concentrations with Typical Radiation Survey Instruments for Various Contaminants and Field Conditions* (U.S. NRC, 1998). This methodology is the same as that contained in MARSSIM, Section 6.

6.1 STATIC MINIMUM DETECTABLE ACTIVITIES

Information regarding the alpha and beta static measurement instruments is contained in Table 5-1. The formula for calculating static MDAs is shown in Equation 6-1.

$$MDA = \frac{2.71 + 4.65 (B_r * t)^{1/2}}{t * E * A / 100} \quad \text{Equation 6-1}$$

Where:

- B_r = background count rate (cpm)
- t = count time (minutes)
- A = probe area (cm²)
- E = total efficiency (detector efficiency x source efficiency)

Minimum detectable activity calculations for static measurements are included in the appendix to this document.

6.2 SWIPE MINIMUM DETECTABLE ACTIVITY

The MDA equation for swipe analysis takes into account that the background count time and the sample count time are equivalent. When the background count time and the sample count time are different, the following MDA formula (Equation 6-2), taken from NUREG 1507, Equation 3-10, is as follows:

$$MDA = \frac{3 + 3.29 \sqrt{B_r * T_s \left(1 + \frac{T_s}{T_b} \right)}}{E * T_s} \quad \text{Equation 6-2}$$

Where:

- B_r = background count rate
- T_s = sample count time
- T_b = background count time
- E = total efficiency (detector efficiency x source efficiency)

Minimum detectable activity calculations for swipe samples are included in the appendix to this report.

6.3 SCANNING MINIMUM DETECTABLE COUNTRATE

The MDCR is the minimum level of activity, measured in cpm, which can be detected by the detector with a specified level of confidence. For gamma scanning surveys, the calculation of the MDCR must account for several variables. These include the count rate during the observation interval, the efficiency of the surveyor, and the detectability associated with the desired false-positive and true-positive rates. The formula for calculating the gamma scanning MDCR is Equation 6-9 in MARSSIM, and is presented in this report as Equation 6-3:

$$MDCR = \frac{S_i \times 60 / i}{(\rho)^{1/2}} \quad \text{Equation 6-3}$$

Where:

MDCR = minimum detectable count rate
 S_i = minimum detectable number of net source counts in the interval the source is under the detector
 i = observation interval
 ρ = surveyor efficiency

Minimum detectable count rate calculations are included in the appendix to this report.

6.4 ALPHA SCANNING PROBABILITY OF DETECTION

Since the time a contaminated area is under the probe varies and the background count rate of some alpha instruments is less than 1 cpm using a 100 cm² detector, it is not practical to determine a fixed MDC for scanning. Instead, it is more useful to determine the probability of detecting an area of contamination at a predetermined DCGL for given scan rates. (U.S. NRC, 2000).

Many portable proportional counters have background count rates on the order of 5 to 10 cpm, and a single count should not cause a surveyor to investigate further. A counting period long enough to establish that a single count indicates an elevated contamination level would be prohibitively inefficient. If a surveyor did stop for every count, and subsequently waited a sufficiently long period to make sure that the previous count either was or wasn't caused by an elevated contamination level, little or no progress would be made. For these types of instruments, the surveyor usually will need to get at least 2 counts while passing over the source area before stopping for further investigation.

At DNSC Scotia it was determined that the reference area background for the outside area (SU 0a) was 9.6 cpm using a 100 cm² detector. The probability of obtaining 2 counts above a background of 9.6 cpm is calculated using equation 6-14 of MARSSIM shown below.

The reference area background for the warehouse floors (SU 0b) was 373 cpm using a 582 cm² detector. The probability of obtaining 12 counts (normalized to a 582 cm² detector) above a background of 373 cpm is calculated using equation 6-14 of MARSSIM shown below.

The two alpha MDCR calculations are contained in the appendix to this report.

$$P = 1 - \left[1 + \left(\frac{(GE + B)t}{60} \right) \right] \times \left(e^{\frac{-(GE+B)t}{60}} \right)$$

Where:

- G = Contamination Activity (dpm) – DCGL
- E = Detector Efficiency (4 π)
- B = Background Count rate (cpm)
- t = d/v
- d = Width of detector in direction of scan (cm)
- v = scan speed (cm/sec)

Once the surveyor determines that the counts have been recorded and the guideline level of contamination is present the surveyor will stop and perform a static count for a predetermined period of time to ensure the probability of getting another count is at least 90%. This time interval is calculated by equation 6-13 of MARSSIM as shown below.

$$t = \frac{13,800}{CAE}$$

Where

- C = Contamination Guideline (dpm/100 cm²)
- A = Physical Probe Area (cm²)
- E = Detector Efficiency (4 π)

7.0 DATA INTERPRETATION PROCEDURES

The data was analyzed for completeness and to ensure that no individual alpha static measurement exceeded the $DCGL_{\alpha}$. Release of the facilities is based upon individual survey units. At DNSC Scotia, a total of sixteen (16) survey units have been identified.

7.1 STATIC MEASUREMENTS

The results of static measurements were assessed first against the $DCGL_{\alpha}$ (60 dpm/100 cm²) and then if necessary would have been evaluated using the WRS test to evaluate the null hypothesis that the levels of residual radioactivity in the survey units exceed that of the reference area by more than the DCGL for average gross contamination. Since all static measurements were less than the $DCGL_{\alpha}$ the WRS test was not used.

7.2 SCANNING DATA

Scanning data were used both to support static measurements and identify potential areas of elevated activity.

The investigation level for alpha scanning was the $DCGL_{\alpha}$ (180 dpm/100 cm²; or for the larger detector, 1,048 dpm/582 cm²). This level is equal to three times the $DCGL_{\alpha}$ following the guidance provided in Appendix B of NUREG 1757, volume 2 (U.S. NRC, 2003). If the scanning results exceeded the $DCGL_{\alpha}$, then the location would have been rescanned and/or direct static measurements performed at that location.

For the gamma scanning surveys, an investigation level of twice the mean background was selected as a decision point in determining if an area warranted closer examination. Areas with scan readings less than twice the mean background level were considered areas of normal levels of natural radioactivity. Areas with scanning readings exceeding twice the mean background scanning level warranted closer examination of the scanning data and further investigation of the area. All data points that exceeded twice background were initially considered positive (i.e., an area with residual radioactivity exceeding the twice background mean) and were investigated to determine whether the data points were true-positive or false-positive readings.

7.3 SWIPE SAMPLE RESULTS

Swipe samples are initially reported in cpm/100 cm² (swipe samples are collected from an approximate area of 100 cm²). To compare swipe results directly to the DCGLs (6 dpm/100 cm² for alpha; or 4 dpm/100 cm² for beta), the results were converted to dpm/100 cm² using Equation 7-1.

$$dpm/100\text{ cm}^2 = \frac{cpm_{(gross)}/100\text{ cm}^2 - cpm_{(background)}}{\text{detector efficiency}} \quad \text{Equation 7-1}$$

Where:

$$\begin{aligned} cpm_{(gross)}/100\text{ cm}^2 &= \text{counts per minute recorded in the survey unit} \\ cpm_{(background)} &= \text{instrument background for the swipe counter} \end{aligned}$$

For swipe data, the background is an instrument background and is determined at the time of sample analysis.

7.4 SOLID SAMPLE DATA

Surface soil samples collected from the soil surrounding OA 300 were analyzed via gamma spectroscopy and the results were compared to the soil screening values from NUREG 1757 Volume 1, Appendix B. Sample data were reported in picoCuries per gram (pCi/g) for comparison to screening values. Since samples analyzed via gamma spectroscopy exceeded the screening levels, alpha spectroscopy of the samples was requested to ensure the accuracy of the alpha constituents.

8.0 SURVEY RESULTS

Results of the scanning data from all survey units indicate that no residual radioactivity remains in these survey units. All alpha static measurements were less than the release criteria. All swipe samples were less than the applicable criteria for removable activity (except one sample determined to be indicative of natural variation). The scanning, static measurement, and swipe sample results are included in the appendix to this report.

8.1 SCANNING SURVEY DATA

Each grid (measuring 20 feet by 20 feet) within SUs 2 – 6 was alpha and gamma scanned and the minimum, maximum, and average cpm recorded by grid. The results of scanning surveys were evaluated as described in Section 7.0 of this report, the results of which are discussed below. The raw instrument measurements were converted to net cpm by subtracting the background radiation levels.

8.1.1 ALPHA SCANNING SURVEY DATA

No trends were observed in the scanning data of SUs 1 – 6 that warranted further investigation. The range of the scanning data as indicated in Table 8-1 is consistent with the range determined in the background reference area listed in Table 4-1. Therefore, the alpha scanning survey of these survey units is complete. Table 8-1 summarizes the alpha scanning results for all survey units.

Survey Unit 1

A total of 30 grids were scanned during the alpha scan of SU 1. For SU 1, the range of alpha scan rates recorded for all scan grids was between -7.5 and 7.5 net cpm.

Survey Unit 2

A total of 70 grids were scanned during the alpha scan of SU 2. The mean count rate for this survey unit was -19.8 net cpm. The data ranged from a high of 52 net cpm to a low of -98 net cpm.

Survey Unit 3

A total of 66 grids were scanned during the alpha scan of SU 3. The mean count rate for this survey unit was -5.6 net cpm. The data ranged from a high of 52 net cpm to a low of -48 net cpm.

Survey Unit 4

A total of 80 grids were scanned during the alpha scan of SU 4. The mean count rate for this survey unit was -42.4 net cpm. The data ranged from a high of 52 net cpm to a low of -148 net cpm.

Survey Unit 5

A total of 66 grids were scanned during the alpha scan of SU 5. The mean count rate for this survey unit was -11.6 net cpm. The data ranged from a high of 52 net cpm to a low of -73 net cpm.

Survey Unit 6

A total of 80 grids were scanned during the alpha scan of SU 6. The mean count rate for this survey unit was -3.3 net cpm. The data ranged from a high of 127 net cpm to a low of -73 net cpm.

Table 8-1. Alpha Scanning Results

	Alpha (net cpm)					
	SU 1	SU 2	SU 3	SU 4	SU 5	SU 6
Average	0	-19.8	-5.6	-42.4	-11.6	-3.3
Minimum	-7.5	-98.0	-48.0	-148.0	-73.0	-73.0
Maximum	7.5	52.0	52.0	52.0	52.0	127.0
Number of Data Points	30	70	66	80	66	80
cpm = counts per minute						
SU = Survey Unit						

8.1.2 GAMMA SCANNING SURVEY DATA

Gamma scanning measurements were taken over all cracks and seams of SUs 2 – 6 using a 2-inch x 2-inch NaI(Tl) detector (detector PR182331). The scan MDCR for all survey units was calculated to be 324 cpm. No trends were observed in the scanning data of SUs 2 – 6 that warranted further investigation. The range of the scanning data as indicated in Table 8-2 is consistent with the range determined in the background reference area listed in Table 4-1. Therefore, the gamma scanning survey of these survey units is complete. Table 8-2 summarizes the gamma scanning results for all survey units.

Survey Unit 2

A total of 70 grids were scanned during the gamma scan of SU 2. The mean count rate for this survey unit was -876 net cpm. The data ranged from a high of 1,667 net cpm to a low of -1,333 net cpm.

Survey Unit 3

A total of 66 grids were scanned during the gamma scan of SU 3. The mean count rate for this survey unit was -666 net cpm. The data ranged from a high of 1,667 net cpm to a low of -1,333 net cpm.

Survey Unit 4

A total of 80 grids were scanned during the gamma scan of SU 4. The mean count rate for this survey unit was -458 net cpm. The data ranged from a high of 1,667 net cpm to a low of -1,333 net cpm.

Survey Unit 5

A total of 66 grids were scanned during the gamma scan of SU 5. The mean count rate for this survey unit was -575 net cpm. The data ranged from a high of 1,667 net cpm to a low of -1,833 net cpm.

Survey Unit 6

A total of 80 grids were scanned during the gamma scan of SU 6. The mean count rate for this survey unit was -733 net cpm. The data ranged from a high of 1,667 net cpm to a low of -2,333 net cpm.

Table 8-2. Gamma Scanning Results

	Gamma (net cpm)				
	SU 2	SU 3	SU 4	SU 5	SU 6
Average	-876	-666	-458	-575	-733
Minimum	-1,333	-1,333	-1,333	-1,833	-2,333
Maximum	1,667	1,667	1,667	1,667	1,667
Number of Data Points	70	66	80	66	80

cpm = counts per minute
SU = Survey Unit

8.2 STATIC MEASUREMENT DATA

Alpha and beta static measurements were collected from all 16 survey units. The static measurement results were compared to the $DCGL_{\alpha}$ to ensure all results were less than the release criteria. All alpha static measurements for all survey units were less than the $DCGL_{\alpha}$. Table 8-3 provides a summary of the alpha and beta static measurement data collected in SUs 1 through 6 (including subunits a and b).

Table 8-3. Summary of Static Measurement Data

Survey Unit	Alpha Static Measurements (dpm/100 cm ²)			Beta Static Measurements (dpm/100 cm ²)		
	Minimum	Maximum	Average	Minimum	Maximum	Average
SU 1	-18.8	-1.6	-7.9	-525.3	-198.7	-410.9
SU 2	-4.6	12.6	1.4	-107.1	335.7	88.0
SU 2a	-19.4	16.7	0.6	-258.6	355.7	34.7
SU 2b	-17.9	3.4	-7.7	-1,551.4	-65.7	-676.4
SU 3	-12.6	10.3	-2.2	-642.9	257.1	19.3
SU 3a	-18.8	0.7	-9.4	-1,222.9	177.1	-181.2
SU 3b	-20.2	12.6	-3.1	-1558.6	-208.6	-666.9
SU 4	-4.5	15.8	5.8	20.0	540.0	233.6
SU 4a	-15.4	1.8	-5.7	-358.6	162.9	-22.4
SU 4b	-20.2	19.5	-1.2	-1,458.6	-172.9	-652.6
SU 5	-14.0	0.7	-9.1	-526.7	-206.7	-385.3
SU 5a	-22.6	13.8	-0.1	-1,315.7	41.4	-273.3
SU 5b	-20.2	-3.4	-11.7	-1,480.0	-51.4	-583.6
SU 6	-15.1	-2.3	-9.6	-493.3	-153.3	-322.0
SU 6a	-25.9	-2.0	-17.3	-681.3	-321.3	-508.7
SU 6b	-21.3	3.4	-6.2	-1,551.4	-51.4	-649.0

dpm = disintegrations per minute

SU = survey unit

cm² = square centimeters

8.3 SWIPE MEASUREMENT DATA

A total of 330 swipe samples were collected during the radiological survey and analyzed for gross alpha and beta radiation using a Protean IPC 9025 or a HandECount scaler with an alpha/beta scintillation detector. A total of 150 swipe samples were collected from the floors of SUs 2 through 6; 150 swipe samples were collected from the walls of SUs 2a through 6b; and 30 swipe samples were collected from the rafters of SUs 2b through 6b.

Only one of the swipe sample results exceeded the $DCGL_{\alpha}$ of 6 dpm/100 cm². Wall sample location 25 in SU 3a had an alpha swipe sample result of 6.8 dpm/100 cm². All nearby swipe locations (see locations 22 through 30) had swipe results of between -0.1 and 3.3 dpm. All alpha static results for locations 22 through 30 were negative values and not indicative of increased levels of radiation. This suggests that the single result of 6.8 dpm/100 cm² represents a natural variation in background and not contamination.

The swipe sample results are summarized in Table 8-4.

Table 8-4. Summary of Swipe Measurement Data				
Survey Unit	Alpha Swipe Measurements (dpm/100 cm ²)		Beta Swipe Measurements (dpm/100 cm ²)	
	Min	Max	Min	Max
SU 2	-0.1	3.3	-3.0	6.4
SU 2a	-0.1	3.3	-3.0	6.4
SU 2b	0.5	2.1	77.1	85.8
SU 3	-0.1	3.3	-3.0	4.1
SU 3a	-0.1	6.8	-3.0	15.8
SU 3b	0.3	0.7	126.6	135.7
SU 4	-0.6	1.7	-1.5	4.4
SU 4a	-0.6	1.7	-1.5	5.3
SU 4b	1.0	1.9	72.4	83.0
SU 5	0.3	2.3	17.5	99.0
SU 5a	-0.2	1.1	-2.3	2.8
SU 5b	0.1	0.8	126.6	131.6
SU 6	0.3	2.4	73.6	153.6
SU 6a	-0.2	1.8	-1.9	2.3
SU 6b	1.1	2.4	73.6	99.0

dpm = disintegrations per minute
 SU = survey unit
 cm² = square centimeters

8.4 SOIL SAMPLE DATA

A total of 12 soil samples were collected from the northern end of OA 300. The soil samples were analyzed by gamma and alpha spectroscopy following the methods established in the HASL 300 for EPA 901.1 and EML A-01-R, respectively by Severn Trent Laboratories of Saint Louis. The intent of the sampling was to verify that the soils surrounding the storage area were non-impacted by the storage of radioactive material. The sample results were compared to the screening values from NUREG 1757 Volume 1, Appendix B.

Sample results on average exceeded the screening values for both uranium and thorium. However, further analysis of the data indicates that the licensed radioactive material stored on OA 300 was not the source for the elevated measurements. This conclusion is based upon the relative ratios of thorium and uranium in the samples of the licensed material and the soil samples. Additionally, when the average sample concentration was analyzed through the DandD program the resulting exposure was less than the limit established in the LTR.

DNSC collected samples from the lots of radioactive material stored at the Scotia depot in order to determine if they required licensing by the NRC. A total of 63 samples were collected from the different lots of columbium/tantalum. These samples indicated that on average the licensed material possessed a total thorium to total uranium ratio of 0.06 with a range of between 0 and 0.83. From these samples it was clear that the predominant radionuclide for the licensed material was uranium 238 (61%) with thorium 232 next (38%) (ERS Solutions, Inc. 2004). Table 8-5 shows the data from the lot sampling of the columbium/tantalum.

Thorium Content (%)	Uranium Content (%)	Thorium Activity (Curies)	Uranium Activity (Curies)	Total curies	Th/U Ratio
0.0080	0.0750	0.0001	0.0024	0.0025	0.041667
0.0060	0.0480	0	0.0008	0.0008	0
0.0140	0.0470	0.001	0.0012	0.0022	0.833333
0.0060	0.0760	0	0.0004	0.0004	0
0.1040	0.0430	0.0007	0.0009	0.0016	0.777778
0.0080	0.0500	0	0.0003	0.0003	0
0.0310	0.0870	0	0.0004	0.0004	0
0.0120	0.0740	0.0001	0.0011	0.0012	0.090909
0.0060	0.0540	0	0.0004	0.0004	0
0.0080	0.0500	0.0001	0.0013	0.0014	0.076923
0.0060	0.5000	0	0.0004	0.0004	0
0.0080	0.0460	0	0.0008	0.0008	0
0.0100	0.0580	0.0002	0.004	0.0042	0.05
0.0640	0.1380	0.0002	0.0012	0.0014	0.166667
0.0120	0.0670	0.0002	0.0035	0.0037	0.057143
0.0050	0.0880	0	0.0026	0.0026	0
0.0100	0.0570	0.0002	0.004	0.0042	0.05
0.0080	0.0600	0	0.0007	0.0007	0
0.0500	0.1070	0.0005	0.0034	0.0039	0.147059
0.0060	0.0540	0.0001	0.0038	0.0039	0.026316
0.0140	0.0600	0.0003	0.0042	0.0045	0.071429

Table 8-5. (Continued)

Thorium Content (%)	Uranium Content (%)	Thorium Activity (Curies)	Uranium Activity (Curies)	Total curies	Th/U Ratio
0.0030	0.0570	0.0001	0.004	0.0041	0.025
0.0050	0.0590	0.0001	0.0041	0.0042	0.02439
0.0580	0.0830	0.0013	0.0058	0.0071	0.224138
0.0170	0.0730	0.0001	0.002	0.0021	0.05
0.0030	0.0530	0	0.0003	0.0003	0
0.0100	0.0590	0	0.0006	0.0006	0
0.0040	0.0590	0.0001	0.004	0.0041	0.025
0.0060	0.0480	0	0.0012	0.0012	0
0.0610	0.0970	0.0012	0.0062	0.0074	0.193548
0.0240	0.1080	0	0.0003	0.0003	0
0.0040	0.0520	0	0.0005	0.0005	0
0.0030	0.0520	0	0.0005	0.0005	0
0.0030	0.1320	0	0.0015	0.0015	0
0.0120	0.0470	0.0001	0.0014	0.0015	0.071429
0.0040	0.0540	0	0.0005	0.0005	0
0.0050	0.1410	0	0.0008	0.0008	0
0.0022	0.2430	0.0001	0.0042	0.0043	0.02381
0.0190	0.0830	0.0001	0.0014	0.0015	0.071429
0.0110	0.0770	0	0.0006	0.0006	0
0.0150	0.0620	0	0.0005	0.0005	0
0.0080	0.0480	0	0.0009	0.0009	0
0.0090	0.0810	0	0.0009	0.0009	0
0.0170	0.0480	0	0.0004	0.0004	0
0.0670	0.1240	0.0002	0.0014	0.0016	0.142857
0.0050	0.0850	0	0.0012	0.0012	0
0.0050	0.0860	0	0.0022	0.0022	0
0.0020	0.0800	0	0.0004	0.0004	0
0.0140	0.0900	0	0.0005	0.0005	0
0.0070	0.0640	0	0.0006	0.0006	0
0.0200	0.0880	0.0004	0.0061	0.0065	0.065574
0.0120	0.0530	0	0.0003	0.0003	0
0.0330	0.1340	0.0002	0.0027	0.0029	0.074074
0.0050	0.0470	0	0.0003	0.0003	0
0.0080	0.0580	0	0.0005	0.0005	0
0.0110	0.0480	0	0.0007	0.0007	0
0.0060	0.0470	0	0.0004	0.0004	0
0.0140	0.0590	0.0001	0.0015	0.0016	0.066667
0.0780	0.2820	0.0009	0.0108	0.0117	0.083333
0.0060	0.0500	0.0001	0.0026	0.0027	0.038462
0.0800	0.2840	0.0001	0.0016	0.0017	0.0625
0.0310	0.1340	0.0001	0.0008	0.0009	0.125
Averages					
0.0178	0.0882	0.000145	0.001855	0.002	0.060588

In contrast, the soil samples collected from around the storage pad indicated a higher concentration of thorium than uranium as shown in Table 8-6. Based upon the average total thorium and uranium concentrations of 2.09 pCi/g and 1.13 pCi/g, respectively, the thorium to uranium ratio for the soil samples averaged 1.85. This discrepancy in the constituent makeup of the soil samples versus the samples taken of the columbium/tantalum clearly indicates that the concentrations found in the soil samples were not caused by the licensed material stored on the pad.

Table 8-6. Soil Sample Alpha Spectroscopy Data

Sample No.	U-234 Conc. (pCi/g)	U-235 Conc. (pCi/g)	U-238 Conc. (pCi/g)	Th-228 Conc. (pCi/g)	Th-230 Conc. (pCi/g)	Th-232 Conc. (pCi/g)
1	0.49	0.005	0.53	0.38	0.96	0.46
1D	0.37	0.85	0.41	0.57	0.02	0.54
2	0.69	0.008	0.71	0.66	1.22	0.69
3	2.19	0.14	2.21	2.73	2.76	2.98
4	2.08	0.16	2.23	2.86	3.02	2.95
5	2.14	0.077	2.31	2.62	2.77	2.71
6	2.25	0.104	2.31	2.90	2.97	2.70
7	2.00	0.16	1.91	2.52	2.81	2.64
8	1.30	0.072	1.39	1.85	2.56	1.95
9	1.90	0.08	2.14	2.83	2.81	2.83
10	2.04	0.095	1.91	2.10	2.71	1.99
Average	1.59	0.16	1.64	2.00	2.24	2.04
Background						
11	0.38	0.063	0.50	0.36	0.34	0.45
12	1.36	0.029	1.45	1.33	1.89	1.27

The area immediately behind the storage pad was once a road providing access to the building behind the storage pad (no access to the storage pad was available in this area). The soil in the area was very rocky making the collection of samples at depths greater than 4 inches (10 cm) impossible to obtain. The increased measurements were most likely caused by the naturally occurring radioactive material associated with the road bed. This is further supported by the gamma count rate measurements obtained at the areas where the samples were collected. Background soil measurements using the sodium iodide detector ranged from 7,000 to 8,000 cpm. Measurements taken at the sample locations ranged from 11,000 to 13,000 cpm. These measurements are more consistent with road surfaces.

The results of the alpha spectroscopy analysis of the soil samples exceeded the default screening values specified in NUREG 1757, Volume 1, Appendix B; however as stated above, the soil data also does not represent the licensed material. Since the mixture of radionuclides in the soil data does not represent the same mix as the licensed material, it was decided to perform a dose assessment to analyze the results utilizing the DandD program.

The default screening values were based on a residential scenario with a cultivated area of 25,800 square feet (2,400 square meters) (U.S. NRC, 2003). The area of interest for the Scotia depot was significantly smaller (585 m²) than that used to develop the screening values. In the dose assessment, the actual size of the survey unit (585 m²) and the average concentrations of the soil samples were used. It should be noted that the actual area of the samples (42 m²) was even smaller than the size

of the survey unit. Default values from DandD were used for the remaining values of the calculation. The appendix provides the detailed summary from the DandD program assessment. Based upon the assessment, a dose of 20.1 mrem/yr would be received for an individual living and farming the area.

The results of the alpha spectroscopy analysis of the soil samples indicated concentrations of uranium and thorium in excess of the NRC screening values specified in NUREG 1757, Volume 1, Appendix B. However, the results also indicate that the mixture of radionuclides is not representative of the licensed radioactive material that was stored in the survey unit. The cause of the increased values appears to be naturally occurring radioactive material in the area sampled. Additionally, analysis of the potential dose impact of the material indicates that it does not exceed the LTR value of 25 mrem/yr. Therefore, no further action is warranted for this material. The appendix contains the laboratory alpha spectroscopy report.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The results of the radiological survey of the DNSC Scotia depot indicate no residual radiological contamination is present at 16 survey units (SUs 1 through 6, including subunits a and b). The measured activities of alpha radiation levels do not exceed the appropriate release criteria as defined in Section 3 of this report. All survey units meet the release criteria as all alpha static measurements were less than the $DCGL_{\alpha}$. Therefore, it is recommended that SUs 1 through 6 (including subunits a and b) as discussed in this report be released for unrestricted use.

10.0 REFERENCES

- ERS Solutions, Inc. 2004. *Radiological Survey and Sampling Plan, Scotia, NY*. Final. February.
- Schlein, 1992. *The Health Physics and Radiological Health Handbook*. Revised edition.
- U.S. NRC, 1982. *Guideline for Decontamination of Facilities and Equipment Prior to the Release for Unrestricted Use or Termination of Licenses for Byproduct, Source or Special Nuclear Material*.
- U.S. NRC, 1998. NUREG 1507, *Minimum Detectable Concentrations with Typical Radiation Survey Instruments for Various Contaminants and Field Conditions*. June.
- U.S. NRC, 2000. *Multi-Agency Radiation Survey and Site Investigation Manual*, EPA/402/R-97-016, Revision 1. August.
- U.S. NRC, 2003. *Consolidated NMSS Decommissioning Guidance*, NUREG 1757 Volumes 1 and 2

Appendix A
Instrument Calibration Certificates

EBERLINE E-600 CALIBRATION REPORT - V4.03

*α B Probe
cpm setup*

04/27/04 14:19:43

E-600 Serial Number : 2356
Program Version : E600 V4.02
Calibration Date/Due Date : 04/27/04 to 04/27/05
Scaler Precision : 10%
Lower Threshold Cal. Points : 1.80 mV and 6.00 mV
Upper Threshold Cal. Points : 6.00 mV and 60.0 mV
Lower Threshold Slope : 0.8571
Lower Threshold Intercept : -0.0952 mV
Lower Threshold Span : 0.1111 mV (≤ 0.5) to 5.10 mV (≥ 5).
0) Upper Threshold Slope : 0.9481
Upper Threshold Intercept : -0.5926 mV
Upper Threshold Span : 0.6250 mV (≤ 1.5) to 60.0 mV (≥ 50)
.0) Alarm Editing : Enabled
Latching Alarms : Disabled
Auto Ranging : Enabled
Beep on Auto-Range : No
Ignore E-600 Cal. Date : No
Ignore Probe Cal. Date : No
Ratemeter Mode Support : Enabled
Integrate Mode Support : Enabled
Scaler Mode Support : Enabled
Peak Hold Mode Support : Enabled
Background Update Mode Support : Enabled
Log ID Source : Internal/Aux.
Star Key Ratemeter Function : Zero Display
Star Key Integrate Function : Zero Display
Scaler Display Units : Rate
Scaler Counting Mode : Fixed Time
Smart Probe Serial Number : 1090
Type : SHP380AB
Calibration Date/Due Date : 04/27/04 to 04/27/05
Dead Time : 8.00 usec
Surface Area : 100 cm²
Max High Voltage : 1000 Vdc
Overrange : 80000 cps

Probe SHP380AB 1090 continued...

Channel 1

Channel Type	: Alpha
Rate Units	: cpm
Response Times	: 30,15,5 secs
High Voltage	: 596 Vdc
Lower Threshold	: 1.80 mV
Upper Threshold	: 22.1 mV
Selected Window	: Upper
Upper Cal. Constant	: 1.00 counts/count
Scaler Time	: 60 secs
Lower to Upper Crossover	: 0.0010
Upper to Lower Crossover	: 0.0547

Channel 2

Channel Type	: Beta
Rate Units	: cpm
Response Times	: 30,15,5 secs
High Voltage	: 596 Vdc
Lower Threshold	: 1.80 mV
Upper Threshold	: 22.1 mV
Selected Window	: Lower
Lower Cal. Constant	: 1.00 counts/count
Scaler Time	: 60 secs
Lower to Upper Crossover	: 0.0010
Upper to Lower Crossover	: 0.0547

Channel 3

Channel Type	: Alpha/Beta
Rate Units	: cpm
Response Times	: 30,15,5 secs
High Voltage	: 596 Vdc
Lower Threshold	: 1.80 mV
Upper Threshold	: 22.1 mV
Selected Window	: Both
Lower Cal. Constant	: 1.00 counts/count
Upper Cal. Constant	: 1.00 counts/count
Scaler Time	: 60 secs
Lower to Upper Crossover	: 0.0010
Upper to Lower Crossover	: 0.0547

Calibration Sources are Traceable to the National Institute
of Standards and Technology

Alpha Source: Pu-239 S/N 129C %Eff: 43.6

Beta Source : Tc-99 S/N 933 %Eff: 14

Gamma Source: N/A %Eff:

Cable Length: 36 inches

Signature: Lite Kysia Date: 4-22-04

EBERLINE E-600 CALIBRATION REPORT - V4.03

02/11/04 07:32:08

E-600 Serial Number : 2556
Program Version : E600 V4.02
Calibration Date/Due Date : 02/11/04 to 02/11/05
Scaler Precision : 10%
Lower Threshold Cal. Points : 1.80 mV and 6.00 mV
Upper Threshold Cal. Points : 6.00 mV and 60.0 mV
Lower Threshold Slope : 1.05
Lower Threshold Intercept : -0.2571 mV
Lower Threshold Span : 0.2449 mV (≤ 0.5) to 5.10 mV (≥ 5).

Upper Threshold Slope : 1.02
Upper Threshold Intercept : -0.8889 mV
Upper Threshold Span : 0.8715 mV (≤ 1.5) to 59.7 mV (≥ 50)

Alarm Editing : Enabled
Latching Alarms : Enabled
Auto Ranging : Enabled
Beep on Auto-Range : No
Ignore E-600 Cal. Date : No
Ignore Probe Cal. Date : No
Ratemeter Mode Support : Enabled
Integrate Mode Support : Enabled
Scaler Mode Support : Enabled
Peak Hold Mode Support : Enabled
Background Update Mode Support : Enabled
Log ID Source : Internal/Aux.
Star Key Ratemeter Function : Zero Display
Star Key Integrate Function : Zero Display
Scaler Display Units : Rate
Scaler Counting Mode : Fixed Time

Smart Probe Serial Number : 1160
Type : SHP-380AB
Calibration Date/Due Date : 02/11/04 to 02/11/05
Dead Time : 8.00 usec
Surface Area : 100 cm²
Max High Voltage : 1000 Vdc
Overrange : 80000 cps

Probe SHP-380AB 1160 continued...

Channel 1

Channel Type	: Alpha
Rate Units	: cpm
Response Times	: 30,15,5 secs
High Voltage	: 498 Vdc
Lower Threshold	: 1.80 mV
Upper Threshold	: 22.1 mV
Selected Window	: Upper
Upper Cal. Constant	: 1.00 counts/count
Scaler Time	: 120 secs
Lower to Upper Crossover	: 0.0012
Upper to Lower Crossover	: 0.0533

Channel 2

Channel Type	: Beta
Rate Units	: cpm
Response Times	: 30,15,5 secs
High Voltage	: 498 Vdc
Lower Threshold	: 1.80 mV
Upper Threshold	: 22.1 mV
Selected Window	: Lower
Lower Cal. Constant	: 1.00 counts/count
Scaler Time	: 120 secs
Lower to Upper Crossover	: 0.0012
Upper to Lower Crossover	: 0.0533

Channel 3

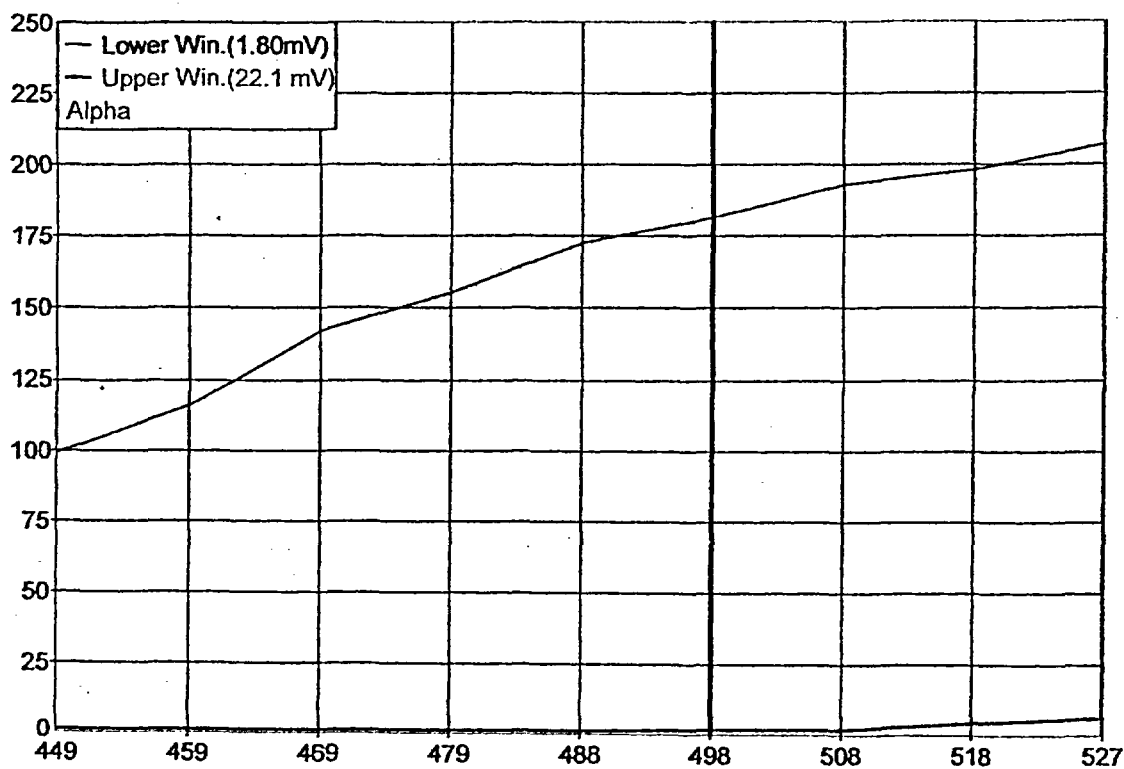
Channel Type	: Alpha/Beta
Rate Units	: cpm
Response Times	: 30,15,5 secs
High Voltage	: 498 Vdc
Lower Threshold	: 1.80 mV
Upper Threshold	: 22.1 mV
Selected Window	: Both
Lower Cal. Constant	: 1.00 counts/count
Upper Cal. Constant	: 1.00 counts/count
Scaler Time	: 120 secs
Lower to Upper Crossover	: 0.0012
Upper to Lower Crossover	: 0.0533

Calibration Sources are Traceable to the National Institute
of Standards and Technology

Alpha Source: Pu-239 S/N 8093 @ 87,700 cpm %Eff: 44.3Beta Source : Tc-99 S/N 932 @ 67,700 cpm %Eff: 15Gamma Source: N/A %Eff: Cable Length: 36 inchesSignature: Fit Tapia Date: 2-11-04

SHP380AB

Voltage Plateau Curve



498: 180.32
0.45

Voltage



Environmental Restoration Group, Inc.
8809 Washington NE, Ste. 150
Albuquerque, NM 87113

ph: 505.298.4224
fax: 505.797-1404
web: www.ERGOffice.com

EQUIPMENT PACKING SLIP

Company Name: Defense Logistics Agency

Order Number: 322

Contact Name: Ed Green

P.O. or Reference Number: 0059-04-01

Contact Telephone: 916-402-3509

Date Ordered: 1/21/2004

Shipping Method: FedEx 3Day

Date Shipped: 1/21/2004

Shipping Number: 2370-1226-7

Date of Delivery:

Ship To Information:

Ed Green
Defense Logistics Agency
GSA Depot Bld 12, Route 5, Amsterdam Rd
Scotia, NY 12302
916-402-3509

Billing Address:

ERS Solutions
Accounts Payable
8652 Daimler Way
Sacramento, CA 95828

Equipment Enclosed:

Instrument	Serial Number
Ludlum 2221	108846
Ludlum 239-1F	PR114130
Ludlum 43-37	PR160159

Special Instructions:

None

Certificate of Calibration

Voltage Plateau Form

ERG

Environmental Restoration Group, Inc.
12809 Arroyo De Vista NE
Albuquerque, NM 87111
(505) 298-4224

Detector Mfg.: Ludlum Model: 43-37 Serial No: PR160159
Counter Mfg.: Ludlum Model: 2221 Serial No: 108846

Temp.: 32 °F Rel. Humidity: 100 % Bar. Pressure: 29.90 in. of Hg

Threshold Setting: 4 mV

Alpha Source: ☒ Th230 @ 13,500 dpm sn: 4098-02 ☐ Other: _____

Beta Source: ☒ Tc99 @ 18,100 dpm sn: 4099-03 ☐ Other: _____

Geometry / Distance to source: ≈ 2mm

Count Time: _____ minute(s)

High Voltage	Alpha Source Gross Counts	Beta Source Gross Counts	Background Counts
1400	2778	551	103
1500	3779	2652	345
1550	4177	3992	620
1600	4728	5348	1143
1650	5468	6124	1707
1700	5523	6442	1954
1800	46802	45858	15537

Alpha Recommended Operating Voltage: 1600 volts

Beta Recommended Operating Voltage: 1600 volts

Calibrated By: [Signature]

Calibration Date: 12 DEC 03

Reviewed By: Charles PZ

Calibration Due: 12 DEC 04

Date: 12/12/03

Certificate of Calibration

Ratemeter / Scaler Certificate of Calibration

ERG

Environmental Restoration Group, Inc.
12809 Arroyo De Vista NE
Albuquerque, NM 87111
(505) 298-4224

Manufacturer: Ludlum Model: 2221 Serial No.: 108846

All Ranges Calibrated Electronically; Ludlum Pulser Generator S.N. 97743

Reset ☐ Audio ☒ Mechanical ☒ Battery ☒ Window Operation ☒

High Voltage 500v ☒ 1000v ☒ 1500v ☐

Instrument found within tolerance (+/- 10%) Yes ☒ No ☐

Reference Setting	Ratemeter	Instrument "As found reading"
400 Kcpm	<u>400 Kcpm</u>	<u>400 Kcpm</u>
100 Kcpm	<u>100 Kcpm</u>	<u>100 Kcpm</u>
40 Kcpm	<u>40 Kcpm</u>	<u>40 Kcpm</u>
10 Kcpm	<u>10 Kcpm</u>	<u>10 Kcpm</u>
4 Kcpm	<u>4 Kcpm</u>	<u>4 Kcpm</u>
1 Kcpm	<u>1 Kcpm</u>	<u>1 Kcpm</u>
400 cpm	<u>400 cpm</u>	<u>400 cpm</u>
100 cpm	<u>100 cpm</u>	<u>100 cpm</u>

Reference Setting	Integrated Counts (1-minute count)	Log Scale Count Rate	Instrument "As found reading"
400 Kcpm	<u>400390</u>	<u>400 K</u>	<u>+/- 10%</u>
40 Kcpm	<u>40025</u>	<u>40 Kcpm</u>	<u>↓</u>
4 Kcpm	<u>4011</u>	<u>4 K</u>	<u>↓</u>
400 cpm	<u>400</u>	<u>400</u>	<u>↓</u>

Calibrated By: [Signature]

Calibration Date: 14 NOV 03

Calibration Due: 14 NOV 04

Reviewed By: Kenneth E. Bahr

Date: 11/14/07



Designer and Manufacturer
of
Scientific and Industrial
Instruments

CERTIFICATE OF CALIBRATION

LUDLUM MEASUREMENTS, INC.

POST OFFICE BOX 810 PH. 325-235-5494
501 OAK STREET FAX NO. 325-235-4672
SWEETWATER, TEXAS 79556, U.S.A.

CUSTOMER URS CORPORATION

ORDER NO. 202766 / 275102

Ludlum Measurements, Inc. Model 2350-1

Serial No. 175858

Cal. Date 27-Sep-03 Cal Due Date 27-Sep-04 Cal. Interval 1 Year Meterface n/a

Check mark ☒ applies to applicable Instr. and/or detector IAW mfg. spec. T. 71 °F RH 50 % Alt 700.8 mm Hg

☐ New Instrument ☐ Instrument Received ☒ Within Toler. +10% ☐ 10-20% ☐ Out of Tol. ☐ Requiring Repair ☐ Other-See comments

☒ Mechanical check

☒ Input Sens. Linearity

☒ F/S Resp. check

☒ Reset check

☒ Window Operation

☒ Audio check

☒ Alarm Setting check

☒ Battery check (Min. Volt) 4.4 VDC

☒ Ratemeter Linearity check

☒ Integrated Dose check

☒ Recycle Mode check

☒ Data Log check

☒ Overload check

☒ Scaler Readout check

Threshold
Dial Ratio 100 = 10 mV

☒ Calibrated in accordance with LMI SOP 14.8 rev 12/05/89.

☒ Calibrated in accordance with LMI SOP 14.9 rev 02/07/97.

☒ HV Readout (2 points) Ref./Inst. 500 / 499 V Ref./Inst. 2000 / 2000 V

COMMENTS: Firmware: 37122N28

I/O Firmware: 37123N05

12-a-16

Gamma Calibration: GM detectors positioned perpendicular to source except for M 44-9 in which the front of probe faces source.

	Probe Model	Serial #	High Voltage	Threshold	Units/ Time Base	Dead Time Correction Factor	Calibration Constant	Linearity ±10%*
Detector #1	LMI44-10	PR182331	950	100	4 / 2	7.525337E-06	5.149013E+10	☒
Detector #2	LMI44-10	PR182331	950	100	7 / 1	7.525337E-06	1.000000E+00	
Detector #3	PK/CS-137	PR182331	657	642	7 / 1	0.000000E+00	1.000000E+00	
Detector #4	LMI44-20	PR182712	900	100	4 / 2	1.159567E-05	1.263021E+11	☒
Detector #5	LMI44-20	PR182712	900	100	7 / 1	1.159567E-05	1.000000E+00	
Detector #6	LMI44-17	PR182744	750	100	7 / 1	0.000000E+00	1.000000E+00	
Detector #								
Detector #								
Detector #								
Detector #								

Units: 0 - rad, 1 - Gray, 2 - rem, 3 - Sv, 4 - R, 5 - C/Kg, 6 - Disintegrations, 7 - Counts, 8 - Ci/cm sq., 9 - Bq/cm sq.

Time Base: 0 - Seconds, 1 - Minutes, 2 - Hours

* See attached detector documentation, if applicable.

Digital Readout	REFERENCE CAL POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*	REFERENCE CAL POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*
	400 K cpm	39923 (6)	39923 (6)	400 cpm	40 (6)	40 (6)
	40 K cpm	3993 (1)	3993 (1)	40 cpm	4 (1)	4 (1)
	4 K cpm	399 (1)	399 (1)			

Ludlum Measurements, Inc. certifies that the above instrument has been calibrated by standards traceable to the National Institute of Standards and Technology, or to the calibration facilities of other International Standards Organization members, or have been derived from accepted values of natural physical constants or have been derived by the ratio type of calibration techniques. The calibration system conforms to the requirements of ANSI/NCSL Z540-1-1994 and ANSI N323-1978. State of Texas Calibration License No. LO-1963

Reference Instruments and/or Sources: Cs-137 Gamma S/N

☐ 1162 ☐ G112 ☐ M565 ☐ 5105 ☐ T1008 ☐ T879 ☐ E552 ☐ E551 ☐ Neutron Am-241 Be S/N T-304

☐ Alpha S/N ☐ Beta S/N ☐ Other

☒ m 500 S/N 134709

☒ Multimeter S/N 57390613

ated By: Conrad Galindo

Date 27 Sep 03

owed By: W. J. R. H. S.

Date 30 Sep 03



Designer and Manufacturer
of
Scientific and Industrial
Instruments

LUDLUM MEASUREMENTS, INC.

POST OFFICE BOX 810 PH. 325-235-5494
501 OAK STREET FAX NO. 325-235-4672
SWEETWATER, TEXAS 79556, U.S.A.

Model 2350 Bench Test Data

Customer URS CORPORATION Date 27-Sep-03 Order #. 202766 / 275102

Model 2350-1 Serial No. 175858 Detector 44-10 Serial No. PR182331

Source B-137 1.9mei

High Voltage 950 V As Found NA V. Input 10.00 mV As Found NA mV.

Cal. Constant 5.149013E+10 as found NA

Dead Time 7.525337E-06 as found NA

Alarm Setting: Ratemeter 1000000000.000000 as found NA

Scaler 1000000.000000 as found NA

Integrated dose 1000000000.0000 as found NA

Overload ☐ On ☐ Off as found ☐ On ☐ Off Window 1000 off as found NA

Detector Received: ☐ Within Toler. +10% ☐ 10-20% ☐ Out of Tol. ☐ Requiring Repair ☒ Other-See comments

Reference Point	"As Found" Readings: Meter Reading	After Adjustment Readings: Meter Reading
<u>2000 uR/hr</u>	<u>NA</u>	<u>1.89 uR/hr</u>
<u>1000 uR/hr</u>	<u>/</u>	<u>1.07</u>
<u>500 uR/hr</u>	<u>/</u>	<u>576 uR/hr</u>
<u>200 uR/hr</u>	<u>/</u>	<u>207</u>
<u>100 uR/hr</u>	<u>/</u>	<u>105</u>

Other No detector Setup

Signature Conrad Jalindo Date 27 Sep 03

Bench Test Data For Detector

Detector 44-10 Serial No. PR182331

Customer URS CORPORATION

Order #. 202766 / 275102

Counter 2350-1 Serial No. 175858

Counter Input Sensitivity 10.00 mV

Count Time 6 seconds Distance Source to Detector Surface

Other Cal Constant = 1.000000E+00 Dead Time = 7.525337E-06

[illegible]

Signature Conrad Galindo

Date 27 Sep 03

Appendix B

Static Data

DNSC Scotia
SU 0a Alpha Background Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Log Mode	Channel Type	Gross cpm	Survey Unit
1	8/13/2003	7:05:00	1160	Scaler	Alpha	14.50	0a
2	8/13/2003	7:08:00	1160	Scaler	Alpha	14.50	0a
3	8/13/2003	7:10:00	1160	Scaler	Alpha	14.50	0a
4	8/13/2003	7:13:00	1160	Scaler	Alpha	15.00	0a
5	8/13/2003	7:15:00	1160	Scaler	Alpha	11.00	0a
6	8/13/2003	7:18:00	1160	Scaler	Alpha	10.50	0a
7	8/13/2003	7:21:00	1160	Scaler	Alpha	14.50	0a
8	8/13/2003	7:24:00	1160	Scaler	Alpha	11.50	0a
9	8/13/2003	7:27:00	1160	Scaler	Alpha	9.00	0a
10	8/13/2003	7:30:00	1160	Scaler	Alpha	13.50	0a
11	8/13/2003	7:32:00	1160	Scaler	Alpha	10.00	0a
12	8/13/2003	7:37:00	1160	Scaler	Alpha	10.00	0a
13	8/13/2003	7:39:00	1160	Scaler	Alpha	11.50	0a
14	8/13/2003	7:42:00	1160	Scaler	Alpha	8.50	0a
15	8/13/2003	7:45:00	1160	Scaler	Alpha	11.00	0a
16	8/13/2003	7:47:00	1160	Scaler	Alpha	11.50	0a
17	8/13/2003	7:50:00	1160	Scaler	Alpha	11.50	0a
18	8/13/2003	7:53:00	1160	Scaler	Alpha	16.00	0a
19	8/13/2003	7:55:00	1160	Scaler	Alpha	10.50	0a
20	8/13/2003	7:59:00	1160	Scaler	Alpha	12.00	0a
21	8/13/2003	8:01:00	1160	Scaler	Alpha	9.00	0a
22	8/13/2003	8:04:00	1160	Scaler	Alpha	10.50	0a
23	8/13/2003	8:07:00	1160	Scaler	Alpha	11.50	0a
24	8/13/2003	8:10:00	1160	Scaler	Alpha	18.50	0a
25	8/13/2003	8:12:00	1160	Scaler	Alpha	10.50	0a
26	8/13/2003	8:15:00	1160	Scaler	Alpha	14.50	0a
27	8/13/2003	8:18:00	1160	Scaler	Alpha	7.00	0a
28	8/13/2003	8:21:00	1160	Scaler	Alpha	9.50	0a
29	8/13/2003	8:23:00	1160	Scaler	Alpha	10.50	0a
30	8/13/2003	8:26:00	1160	Scaler	Alpha	13.00	0a
31	8/13/2003	8:53:00	1160	Scaler	Alpha	9.50	0a
32	8/13/2003	8:56:00	1160	Scaler	Alpha	9.50	0a
33	8/13/2003	9:04:00	1160	Scaler	Alpha	4.50	0a
34	8/13/2003	9:07:00	1160	Scaler	Alpha	4.50	0a
35	8/13/2003	9:09:00	1160	Scaler	Alpha	7.50	0a
36	8/13/2003	9:12:00	1160	Scaler	Alpha	9.00	0a
37	8/13/2003	9:15:00	1160	Scaler	Alpha	7.00	0a
38	8/13/2003	9:20:00	1160	Scaler	Alpha	9.50	0a
39	8/13/2003	9:23:00	1160	Scaler	Alpha	7.00	0a
40	8/13/2003	9:25:00	1160	Scaler	Alpha	11.00	0a
41	8/13/2003	9:28:00	1160	Scaler	Alpha	10.50	0a
42	8/13/2003	9:31:00	1160	Scaler	Alpha	8.50	0a
43	8/13/2003	9:35:00	1160	Scaler	Alpha	11.00	0a
44	8/13/2003	9:38:00	1160	Scaler	Alpha	5.00	0a
45	8/13/2003	9:40:00	1160	Scaler	Alpha	8.00	0a
46	8/13/2003	9:43:00	1160	Scaler	Alpha	7.00	0a
47	8/13/2003	9:46:00	1160	Scaler	Alpha	12.00	0a
48	8/13/2003	9:49:00	1160	Scaler	Alpha	10.50	0a
49	8/13/2003	9:51:00	1160	Scaler	Alpha	5.50	0a

DNSC Scotia
SU 0a Alpha Background Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Log Mode	Channel Type	Gross cpm	Survey Unit
50	8/13/2003	9:54:00	1160	Scaler	Alpha	10.00	0a
51	8/13/2003	9:57:00	1160	Scaler	Alpha	8.50	0a
52	8/13/2003	10:00:00	1160	Scaler	Alpha	10.00	0a
53	8/13/2003	10:03:00	1160	Scaler	Alpha	6.50	0a
54	8/13/2003	10:06:00	1160	Scaler	Alpha	9.50	0a
55	8/13/2003	10:09:00	1160	Scaler	Alpha	9.50	0a
56	8/13/2003	10:11:00	1160	Scaler	Alpha	8.00	0a
57	8/13/2003	10:14:00	1160	Scaler	Alpha	10.00	0a
58	8/13/2003	10:17:00	1160	Scaler	Alpha	9.50	0a
59	8/13/2003	10:21:00	1160	Scaler	Alpha	8.50	0a
60	8/13/2003	10:23:00	1160	Scaler	Alpha	5.00	0a
61	8/13/2003	10:57:00	1160	Scaler	Alpha	10.00	0a
62	8/13/2003	11:00:00	1160	Scaler	Alpha	6.50	0a
63	8/13/2003	11:02:00	1160	Scaler	Alpha	9.50	0a
64	8/13/2003	11:05:00	1160	Scaler	Alpha	8.50	0a
65	8/13/2003	11:08:00	1160	Scaler	Alpha	10.50	0a
66	8/13/2003	11:11:00	1160	Scaler	Alpha	9.50	0a
67	8/13/2003	11:16:00	1160	Scaler	Alpha	12.50	0a
68	8/13/2003	11:20:00	1160	Scaler	Alpha	6.50	0a
69	8/13/2003	11:22:00	1160	Scaler	Alpha	10.50	0a
70	8/13/2003	11:25:00	1160	Scaler	Alpha	6.50	0a
71	8/13/2003	11:27:00	1160	Scaler	Alpha	8.00	0a
72	8/13/2003	11:30:00	1160	Scaler	Alpha	9.00	0a
73	8/13/2003	11:33:00	1160	Scaler	Alpha	8.50	0a
74	8/13/2003	11:35:00	1160	Scaler	Alpha	9.00	0a
75	8/13/2003	11:38:00	1160	Scaler	Alpha	7.50	0a
76	8/13/2003	11:41:00	1160	Scaler	Alpha	8.50	0a
77	8/13/2003	11:43:00	1160	Scaler	Alpha	10.50	0a
78	8/13/2003	11:46:00	1160	Scaler	Alpha	10.50	0a
79	8/13/2003	11:48:00	1160	Scaler	Alpha	9.00	0a
80	8/13/2003	11:51:00	1160	Scaler	Alpha	9.00	0a
81	8/13/2003	11:54:00	1160	Scaler	Alpha	10.50	0a
82	8/13/2003	11:57:00	1160	Scaler	Alpha	8.50	0a
83	8/13/2003	11:59:00	1160	Scaler	Alpha	5.50	0a
84	8/13/2003	12:02:00	1160	Scaler	Alpha	6.50	0a
85	8/13/2003	12:05:00	1160	Scaler	Alpha	7.50	0a
86	8/13/2003	12:08:00	1160	Scaler	Alpha	9.50	0a
87	8/13/2003	12:10:00	1160	Scaler	Alpha	7.50	0a
88	8/13/2003	12:13:00	1160	Scaler	Alpha	9.50	0a
89	8/13/2003	12:15:00	1160	Scaler	Alpha	7.00	0a
90	8/13/2003	12:18:00	1160	Scaler	Alpha	6.00	0a

Average 9.6
Min 4.5
Max 18.5
Std Dev 2.6
Critical Value 17.4
Count 90

DNSC Scotia
SU 0a Beta Background Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Log Mode	Channel Type	Gross cpm	Survey Unit
1	8/13/2003	7:05:00	1160	Scaler	Beta	292.00	0a
2	8/13/2003	7:08:00	1160	Scaler	Beta	342.00	0a
3	8/13/2003	7:11:00	1160	Scaler	Beta	305.00	0a
4	8/13/2003	7:13:00	1160	Scaler	Beta	306.00	0a
5	8/13/2003	7:16:00	1160	Scaler	Beta	289.00	0a
6	8/13/2003	7:18:00	1160	Scaler	Beta	281.00	0a
7	8/13/2003	7:21:00	1160	Scaler	Beta	307.00	0a
8	8/13/2003	7:24:00	1160	Scaler	Beta	287.00	0a
9	8/13/2003	7:27:00	1160	Scaler	Beta	311.00	0a
10	8/13/2003	7:30:00	1160	Scaler	Beta	281.00	0a
11	8/13/2003	7:32:00	1160	Scaler	Beta	284.00	0a
12	8/13/2003	7:36:00	1160	Scaler	Beta	332.00	0a
13	8/13/2003	7:39:00	1160	Scaler	Beta	301.00	0a
14	8/13/2003	7:42:00	1160	Scaler	Beta	284.00	0a
15	8/13/2003	7:45:00	1160	Scaler	Beta	322.00	0a
16	8/13/2003	7:47:00	1160	Scaler	Beta	309.00	0a
17	8/13/2003	7:50:00	1160	Scaler	Beta	296.00	0a
18	8/13/2003	7:52:00	1160	Scaler	Beta	307.00	0a
19	8/13/2003	7:56:00	1160	Scaler	Beta	289.00	0a
20	8/13/2003	7:58:00	1160	Scaler	Beta	301.00	0a
21	8/13/2003	8:01:00	1160	Scaler	Beta	328.00	0a
22	8/13/2003	8:04:00	1160	Scaler	Beta	295.00	0a
23	8/13/2003	8:07:00	1160	Scaler	Beta	310.00	0a
24	8/13/2003	8:09:00	1160	Scaler	Beta	283.00	0a
25	8/13/2003	8:12:00	1160	Scaler	Beta	292.00	0a
26	8/13/2003	8:15:00	1160	Scaler	Beta	309.00	0a
27	8/13/2003	8:18:00	1160	Scaler	Beta	280.00	0a
28	8/13/2003	8:21:00	1160	Scaler	Beta	247.00	0a
29	8/13/2003	8:24:00	1160	Scaler	Beta	288.00	0a
30	8/13/2003	8:26:00	1160	Scaler	Beta	288.00	0a
31	8/13/2003	8:53:00	1160	Scaler	Beta	281.00	0a
32	8/13/2003	8:56:00	1160	Scaler	Beta	275.00	0a
33	8/13/2003	9:04:00	1160	Scaler	Beta	299.00	0a
34	8/13/2003	9:07:00	1160	Scaler	Beta	288.00	0a
35	8/13/2003	9:09:00	1160	Scaler	Beta	252.00	0a
36	8/13/2003	9:12:00	1160	Scaler	Beta	287.00	0a
37	8/13/2003	9:17:00	1160	Scaler	Beta	290.00	0a
38	8/13/2003	9:20:00	1160	Scaler	Beta	268.00	0a
39	8/13/2003	9:23:00	1160	Scaler	Beta	276.00	0a
40	8/13/2003	9:25:00	1160	Scaler	Beta	293.00	0a
41	8/13/2003	9:28:00	1160	Scaler	Beta	311.00	0a
42	8/13/2003	9:31:00	1160	Scaler	Beta	281.00	0a
43	8/13/2003	9:35:00	1160	Scaler	Beta	270.00	0a
44	8/13/2003	9:38:00	1160	Scaler	Beta	270.00	0a
45	8/13/2003	9:41:00	1160	Scaler	Beta	275.00	0a
46	8/13/2003	9:43:00	1160	Scaler	Beta	291.00	0a
47	8/13/2003	9:46:00	1160	Scaler	Beta	290.00	0a
48	8/13/2003	9:48:00	1160	Scaler	Beta	284.00	0a
49	8/13/2003	9:51:00	1160	Scaler	Beta	271.00	0a

DN SC Scotia
SU 0a Beta Background Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Log Mode	Channel Type	Gross cpm	Survey Unit
50	8/13/2003	9:54:00	1160	Scaler	Beta	291.00	0a
51	8/13/2003	9:57:00	1160	Scaler	Beta	301.00	0a
52	8/13/2003	10:00:00	1160	Scaler	Beta	289.00	0a
53	8/13/2003	10:03:00	1160	Scaler	Beta	272.00	0a
54	8/13/2003	10:06:00	1160	Scaler	Beta	284.00	0a
55	8/13/2003	10:09:00	1160	Scaler	Beta	258.00	0a
56	8/13/2003	10:11:00	1160	Scaler	Beta	285.00	0a
57	8/13/2003	10:14:00	1160	Scaler	Beta	281.00	0a
58	8/13/2003	10:17:00	1160	Scaler	Beta	249.00	0a
59	8/13/2003	10:21:00	1160	Scaler	Beta	265.00	0a
60	8/13/2003	10:23:00	1160	Scaler	Beta	281.00	0a
61	8/13/2003	10:57:00	1160	Scaler	Beta	299.00	0a
62	8/13/2003	11:00:00	1160	Scaler	Beta	310.00	0a
63	8/13/2003	11:03:00	1160	Scaler	Beta	301.00	0a
64	8/13/2003	11:05:00	1160	Scaler	Beta	297.00	0a
65	8/13/2003	11:08:00	1160	Scaler	Beta	293.00	0a
66	8/13/2003	11:11:00	1160	Scaler	Beta	298.00	0a
67	8/13/2003	11:16:00	1160	Scaler	Beta	255.00	0a
68	8/13/2003	11:19:00	1160	Scaler	Beta	276.00	0a
69	8/13/2003	11:22:00	1160	Scaler	Beta	266.00	0a
70	8/13/2003	11:25:00	1160	Scaler	Beta	241.00	0a
71	8/13/2003	11:28:00	1160	Scaler	Beta	275.00	0a
72	8/13/2003	11:30:00	1160	Scaler	Beta	290.00	0a
73	8/13/2003	11:33:00	1160	Scaler	Beta	260.00	0a
74	8/13/2003	11:35:00	1160	Scaler	Beta	265.00	0a
75	8/13/2003	11:38:00	1160	Scaler	Beta	265.00	0a
76	8/13/2003	11:38:00	1160	Scaler	Beta	265.00	0a
77	8/13/2003	11:41:00	1160	Scaler	Beta	299.00	0a
78	8/13/2003	11:43:00	1160	Scaler	Beta	308.00	0a
79	8/13/2003	11:46:00	1160	Scaler	Beta	289.00	0a
80	8/13/2003	11:49:00	1160	Scaler	Beta	291.00	0a
81	8/13/2003	11:51:00	1160	Scaler	Beta	273.00	0a
82	8/13/2003	11:54:00	1160	Scaler	Beta	282.00	0a
83	8/13/2003	11:57:00	1160	Scaler	Beta	294.00	0a
84	8/13/2003	11:59:00	1160	Scaler	Beta	279.00	0a
85	8/13/2003	12:02:00	1160	Scaler	Beta	294.00	0a
86	8/13/2003	12:05:00	1160	Scaler	Beta	293.00	0a
87	8/13/2003	12:07:00	1160	Scaler	Beta	276.00	0a
88	8/13/2003	12:10:00	1160	Scaler	Beta	286.00	0a
89	8/13/2003	12:13:00	1160	Scaler	Beta	269.00	0a
90	8/13/2003	12:15:00	1160	Scaler	Beta	269.00	0a
91	8/13/2003	12:17:00	1160	Scaler	Beta	289.00	0a

Average 286.8
Min 241.0
Max 342.0
Std Dev 18.1
Critical Value 341.1
Count 91

DNSC Scotia
SU 0b Background Alpha Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Log Mode	Channel Type	Gross cpm	Survey Unit
1	8/12/2003	7:59:00	1160	Scaler	Alpha	7.0	SU 0b
2	8/12/2003	7:59:00	1160	Scaler	Alpha	8.0	SU 0b
3	8/12/2003	7:59:00	1160	Scaler	Alpha	7.0	SU 0b
4	8/12/2003	8:02:00	1160	Scaler	Alpha	8.5	SU 0b
5	8/12/2003	8:04:00	1160	Scaler	Alpha	7.0	SU 0b
6					Alpha	6.5	SU 0b
7	8/12/2003	8:10:00	1160	Scaler	Alpha	6.0	SU 0b
8					Alpha	6.5	SU 0b
9	8/12/2003	8:15:00	1160	Scaler	Alpha	7.5	SU 0b
10					Alpha	7.5	SU 0b
11	8/12/2003	8:20:00	1160	Scaler	Alpha	9.5	SU 0b
12					Alpha	6.5	SU 0b
13	8/12/2003	8:25:00	1160	Scaler	Alpha	7.0	SU 0b
14					Alpha	4.5	SU 0b
15	8/12/2003	8:33:00	1160	Scaler	Alpha	9.5	SU 0b
16					Alpha	8.0	SU 0b
17	8/12/2003	8:38:00	1160	Scaler	Alpha	10.0	SU 0b
18					Alpha	7.5	SU 0b
19	8/12/2003	8:43:00	1160	Scaler	Alpha	8.5	SU 0b
20					Alpha	10.5	SU 0b
21	8/12/2003	8:49:00	1160	Scaler	Alpha	12.0	SU 0b
22					Alpha	8.5	SU 0b
23	8/12/2003	8:55:00	1160	Scaler	Alpha	9.0	SU 0b
24					Alpha	9.0	SU 0b
25	8/12/2003	9:01:00	1160	Scaler	Alpha	8.5	SU 0b
26					Alpha	7.0	SU 0b
27	8/12/2003	9:07:00	1160	Scaler	Alpha	7.0	SU 0b
28	8/12/2003	9:11:00	1160	Scaler	Alpha	6.0	SU 0b
29					Alpha	6.5	SU 0b
30	8/12/2003	9:54:00	1160	Scaler	Alpha	7.5	SU 0b
31					Alpha	9.5	SU 0b
32	8/12/2003	9:59:00	1160	Scaler	Alpha	7.0	SU 0b
33					Alpha	10.5	SU 0b
34	8/12/2003	10:04:00	1160	Scaler	Alpha	10.0	SU 0b
35					Alpha	12.5	SU 0b
36	8/12/2003	10:12:00	1160	Scaler	Alpha	8.0	SU 0b
37					Alpha	12.5	SU 0b
38	8/12/2003	10:17:00	1160	Scaler	Alpha	5.5	SU 0b
39					Alpha	8.5	SU 0b
40	8/12/2003	10:22:00	1160	Scaler	Alpha	8.5	SU 0b
41					Alpha	7.0	SU 0b
42	8/12/2003	10:27:00	1160	Scaler	Alpha	8.5	SU 0b
43					Alpha	8.0	SU 0b
44	8/12/2003	10:32:00	1160	Scaler	Alpha	11.5	SU 0b
45					Alpha	6.0	SU 0b
46	8/12/2003	10:38:00	1160	Scaler	Alpha	7.0	SU 0b
47					Alpha	4.5	SU 0b
48	8/12/2003	10:43:00	1160	Scaler	Alpha	5.5	SU 0b
49					Alpha	6.0	SU 0b

DNSC Scotia
SU 0b Background Alpha Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Log Mode	Channel Type	Gross cpm	Survey Unit
50	8/12/2003	10:48:00	1160	Scaler	Alpha	6.5	SU 0b
51					Alpha	9.5	SU 0b
52	8/12/2003	10:54:00	1160	Scaler	Alpha	5.0	SU 0b
53					Alpha	9.5	SU 0b
54	8/12/2003	10:59:00	1160	Scaler	Alpha	8.5	SU 0b
55					Alpha	7.0	SU 0b
56	8/12/2003	11:04:00	1160	Scaler	Alpha	10.0	SU 0b
57					Alpha	10.5	SU 0b
58					Alpha	7.5	SU 0b
59					Alpha	5.0	SU 0b
60	8/12/2003	11:58:00	1160	Scaler	Alpha	8.5	SU 0b
61					Alpha	6.5	SU 0b
62					Alpha	8.5	SU 0b
63	8/12/2003	12:06:00	1160	Scaler	Alpha	11.5	SU 0b
64					Alpha	8.5	SU 0b
65	8/12/2003	12:11:00	1160	Scaler	Alpha	9.5	SU 0b
66					Alpha	7.0	SU 0b
67	8/12/2003	12:16:00	1160	Scaler	Alpha	14.5	SU 0b
68					Alpha	8.0	SU 0b
69	8/12/2003	12:21:00	1160	Scaler	Alpha	10.0	SU 0b
70					Alpha	9.0	SU 0b
71	8/12/2003	12:26:00	1160	Scaler	Alpha	6.0	SU 0b
72					Alpha	13.5	SU 0b
73					Alpha	10.5	SU 0b
74					Alpha	10.5	SU 0b
75	8/12/2003	12:37:00	1160	Scaler	Alpha	14.5	SU 0b
76					Alpha	10.5	SU 0b
77	8/12/2003	12:42:00	1160	Scaler	Alpha	8.0	SU 0b
78					Alpha	9.5	SU 0b
79	8/12/2003	12:47:00	1160	Scaler	Alpha	6.0	SU 0b
80					Alpha	9.0	SU 0b
81	8/12/2003	12:52:00	1160	Scaler	Alpha	11.5	SU 0b
82					Alpha	13.5	SU 0b
83	8/12/2003	12:58:00	1160	Scaler	Alpha	9.5	SU 0b
84					Alpha	10.5	SU 0b
85	8/12/2003	13:03:00	1160	Scaler	Alpha	5.5	SU 0b
86					Alpha	6.5	SU 0b
87	8/12/2003	13:08:00	1160	Scaler	Alpha	11.5	SU 0b
88					Alpha	9.5	SU 0b

Average 8.5
Min 4.5
Max 14.5
Std Dev 2.2
Critical Value 15.1
Count 88

DNSC Scotia
SU 0b Background Beta Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Log Mode	Channel Type	Gross cpm	Survey Unit
1	8/12/2003	7:59:00	1160	Scaler	Beta	260.0	SU 0b
2	8/12/2003	7:59:00	1160	Scaler	Beta	242.0	SU 0b
3	8/12/2003	7:59:00	1160	Scaler	Beta	264.0	SU 0b
4	8/12/2003	8:02:00	1160	Scaler	Beta	233.0	SU 0b
5					Beta	232.0	SU 0b
6	8/12/2003	8:08:00	1160	Scaler	Beta	227.0	SU 0b
7					Beta	229.0	SU 0b
8	8/12/2003	8:13:00	1160	Scaler	Beta	233.0	SU 0b
9					Beta	251.0	SU 0b
10	8/12/2003	8:18:00	1160	Scaler	Beta	232.0	SU 0b
11					Beta	233.0	SU 0b
12	8/12/2003	8:23:00	1160	Scaler	Beta	232.0	SU 0b
13					Beta	256.0	SU 0b
14	8/12/2003	8:27:00	1160	Scaler	Beta	236.0	SU 0b
15					Beta	236.0	SU 0b
16	8/12/2003	8:36:00	1160	Scaler	Beta	257.0	SU 0b
17					Beta	265.0	SU 0b
18	8/12/2003	8:41:00	1160	Scaler	Beta	260.0	SU 0b
19					Beta	250.0	SU 0b
20	8/12/2003	8:46:00	1160	Scaler	Beta	256.0	SU 0b
21					Beta	235.0	SU 0b
22	8/12/2003	8:52:00	1160	Scaler	Beta	247.0	SU 0b
23					Beta	257.0	SU 0b
24	8/12/2003	8:58:00	1160	Scaler	Beta	212.0	SU 0b
25					Beta	275.0	SU 0b
26	8/12/2003	9:04:00	1160	Scaler	Beta	250.0	SU 0b
27					Beta	261.0	SU 0b
28					Beta	236.0	SU 0b
29	8/12/2003	9:52:00	1160	Scaler	Beta	245.0	SU 0b
30					Beta	220.0	SU 0b
31	8/12/2003	9:57:00	1160	Scaler	Beta	244.0	SU 0b
32					Beta	242.0	SU 0b
33	8/12/2003	10:02:00	1160	Scaler	Beta	241.0	SU 0b
34					Beta	224.0	SU 0b
35	8/12/2003	10:07:00	1160	Scaler	Beta	226.0	SU 0b
36					Beta	237.0	SU 0b
37	8/12/2003	10:14:00	1160	Scaler	Beta	239.0	SU 0b
38					Beta	226.0	SU 0b
39	8/12/2003	10:19:00	1160	Scaler	Beta	218.0	SU 0b
40					Beta	230.0	SU 0b
41	8/12/2003	10:24:00	1160	Scaler	Beta	241.0	SU 0b
42					Beta	234.0	SU 0b
43	8/12/2003	10:30:00	1160	Scaler	Beta	229.0	SU 0b
44					Beta	233.0	SU 0b
45	8/12/2003	10:35:00	1160	Scaler	Beta	226.0	SU 0b
46					Beta	230.0	SU 0b
47	8/12/2003	10:40:00	1160	Scaler	Beta	239.0	SU 0b
48					Beta	243.0	SU 0b
49	8/12/2003	10:46:00	1160	Scaler	Beta	230.0	SU 0b

DNSC Scotia
SU 0b Background Beta Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Log Mode	Channel Type	Gross cpm	Survey Unit
50					Beta	253.0	SU 0b
51	8/12/2003	10:51:00	1160	Scaler	Beta	236.0	SU 0b
52					Beta	218.0	SU 0b
53	8/12/2003	10:56:00	1160	Scaler	Beta	235.0	SU 0b
54					Beta	230.0	SU 0b
55	8/12/2003	11:02:00	1160	Scaler	Beta	231.0	SU 0b
56					Beta	237.0	SU 0b
57	8/12/2003	11:07:00	1160	Scaler	Beta	239.0	SU 0b
58	8/12/2003	11:10:00	1160	Scaler	Beta	248.0	SU 0b
59	8/12/2003	11:55:00	1160	Scaler	Beta	301.0	SU 0b
60					Beta	269.0	SU 0b
61	8/12/2003	12:00:00	1160	Scaler	Beta	266.0	SU 0b
62	8/12/2003	12:03:00	1160	Scaler	Beta	213.0	SU 0b
63					Beta	296.0	SU 0b
64	8/12/2003	12:08:00	1160	Scaler	Beta	274.0	SU 0b
65					Beta	294.0	SU 0b
66	8/12/2003	12:14:00	1160	Scaler	Beta	282.0	SU 0b
67					Beta	270.0	SU 0b
68	8/12/2003	12:18:00	1160	Scaler	Beta	260.0	SU 0b
69					Beta	296.0	SU 0b
70	8/12/2003	12:24:00	1160	Scaler	Beta	266.0	SU 0b
71					Beta	286.0	SU 0b
72	8/12/2003	12:29:00	1160	Scaler	Beta	271.0	SU 0b
73	8/12/2003	13:29:00	1160	Scaler	Beta	273.0	SU 0b
74	8/12/2003	12:34:00	1160	Scaler	Beta	265.0	SU 0b
75					Beta	245.0	SU 0b
76	8/12/2003	12:39:00	1160	Scaler	Beta	248.0	SU 0b
77					Beta	271.0	SU 0b
78	8/12/2003	12:45:00	1160	Scaler	Beta	306.0	SU 0b
79					Beta	268.0	SU 0b
80	8/12/2003	12:50:00	1160	Scaler	Beta	282.0	SU 0b
81					Beta	285.0	SU 0b
82	8/12/2003	12:55:00	1160	Scaler	Beta	280.0	SU 0b
83					Beta	277.0	SU 0b
84	8/12/2003	13:01:00	1160	Scaler	Beta	263.0	SU 0b
85					Beta	257.0	SU 0b
86	8/12/2003	13:06:00	1160	Scaler	Beta	271.0	SU 0b
87					Beta	258.0	SU 0b
88	8/12/2003	13:11:00	1160	Scaler	Beta	315.0	SU 0b

Average	251.0
Min	212.0
Max	315.0
Std Dev	22.5
Critical Value	318.6
Count	88

DNSC Scotia
SU 0c Alpha Background Static Measurements

Survey Location	Log Date	Log Time	Probe S/N	Log Mode	Channel Type	Gross cpm	Survey Unit
125	1/28/2004	10:35:00	1090	Scaler	Alpha	11.5	SU 0c
127	1/28/2004	10:40:00	1090	Scaler	Alpha	15.5	SU 0c
129	1/28/2004	10:42:00	1090	Scaler	Alpha	16.5	SU 0c
131	1/28/2004	10:44:00	1090	Scaler	Alpha	16.5	SU 0c
133	1/28/2004	10:46:00	1090	Scaler	Alpha	20.7	SU 0c
135	1/28/2004	10:48:00	1090	Scaler	Alpha	8.5	SU 0c
137	1/28/2004	10:50:00	1090	Scaler	Alpha	18.9	SU 0c
139	1/28/2004	10:53:00	1090	Scaler	Alpha	12.5	SU 0c
141	1/28/2004	10:55:00	1090	Scaler	Alpha	13.5	SU 0c
143	1/28/2004	10:58:00	1090	Scaler	Alpha	11.5	SU 0c
145	1/28/2004	11:00:00	1090	Scaler	Alpha	11.5	SU 0c
147	1/28/2004	11:03:00	1090	Scaler	Alpha	9.5	SU 0c
149	1/28/2004	11:05:00	1090	Scaler	Alpha	14.0	SU 0c
151	1/28/2004	11:08:00	1090	Scaler	Alpha	13.0	SU 0c
153	1/28/2004	11:10:00	1090	Scaler	Alpha	16.0	SU 0c
155	1/28/2004	11:12:00	1090	Scaler	Alpha	20.0	SU 0c
157	1/28/2004	11:13:00	1090	Scaler	Alpha	18.0	SU 0c
159	1/28/2004	11:14:00	1090	Scaler	Alpha	13.0	SU 0c
161	1/28/2004	11:15:00	1090	Scaler	Alpha	12.0	SU 0c
163	1/28/2004	11:18:00	1090	Scaler	Alpha	14.9	SU 0c
165	1/28/2004	11:19:00	1090	Scaler	Alpha	17.0	SU 0c
167	1/28/2004	11:20:00	1090	Scaler	Alpha	10.1	SU 0c
169	1/28/2004	11:21:00	1090	Scaler	Alpha	10.5	SU 0c
171	1/28/2004	11:23:00	1090	Scaler	Alpha	10.2	SU 0c
173	1/28/2004	11:24:00	1090	Scaler	Alpha	12.0	SU 0c
175	1/28/2004	11:25:00	1090	Scaler	Alpha	7.9	SU 0c
177	1/28/2004	11:26:00	1090	Scaler	Alpha	10.0	SU 0c
179	1/28/2004	11:27:00	1090	Scaler	Alpha	14.9	SU 0c
181	1/28/2004	11:28:00	1090	Scaler	Alpha	17.5	SU 0c

Average	13.7
Min	7.9
Max	20.7
Std Dev	3.4
Critical Value	23.9
Count	29

DNSC Scotia
SU 0c Beta Background Static Measurements

Survey Location	Log Date	Log Time	Probe S/N	Log Mode	Channel Type	Gross cpm	Survey Unit
126	1/28/2004	10:36:00	1090	Scaler	Beta	348.0	SU 0c
128	1/28/2004	10:40:00	1090	Scaler	Beta	354.0	SU 0c
130	1/28/2004	10:42:00	1090	Scaler	Beta	326.0	SU 0c
132	1/28/2004	10:44:00	1090	Scaler	Beta	329.0	SU 0c
134	1/28/2004	10:46:00	1090	Scaler	Beta	328.0	SU 0c
136	1/28/2004	10:48:00	1090	Scaler	Beta	344.0	SU 0c
138	1/28/2004	10:50:00	1090	Scaler	Beta	338.0	SU 0c
140	1/28/2004	10:53:00	1090	Scaler	Beta	313.0	SU 0c
142	1/28/2004	10:56:00	1090	Scaler	Beta	333.0	SU 0c
144	1/28/2004	10:58:00	1090	Scaler	Beta	294.0	SU 0c
146	1/28/2004	11:00:00	1090	Scaler	Beta	327.0	SU 0c
148	1/28/2004	11:03:00	1090	Scaler	Beta	313.0	SU 0c
150	1/28/2004	11:05:00	1090	Scaler	Beta	277.0	SU 0c
152	1/28/2004	11:08:00	1090	Scaler	Beta	274.0	SU 0c
154	1/28/2004	11:10:00	1090	Scaler	Beta	318.0	SU 0c
156	1/28/2004	11:12:00	1090	Scaler	Beta	322.0	SU 0c
158	1/28/2004	11:13:00	1090	Scaler	Beta	309.0	SU 0c
160	1/28/2004	11:14:00	1090	Scaler	Beta	323.0	SU 0c
162	1/28/2004	11:15:00	1090	Scaler	Beta	335.0	SU 0c
164	1/28/2004	11:18:00	1090	Scaler	Beta	324.0	SU 0c
166	1/28/2004	11:19:00	1090	Scaler	Beta	317.0	SU 0c
168	1/28/2004	11:20:00	1090	Scaler	Beta	318.0	SU 0c
170	1/28/2004	11:21:00	1090	Scaler	Beta	325.0	SU 0c
172	1/28/2004	11:23:00	1090	Scaler	Beta	329.0	SU 0c
174	1/28/2004	11:24:00	1090	Scaler	Beta	339.0	SU 0c
176	1/28/2004	11:25:00	1090	Scaler	Beta	310.0	SU 0c
178	1/28/2004	11:26:00	1090	Scaler	Beta	285.0	SU 0c
180	1/28/2004	11:27:00	1090	Scaler	Beta	335.0	SU 0c
182	1/28/2004	11:28:00	1090	Scaler	Beta	327.0	SU 0c

Average	321.2
Min	274.0
Max	354.0
Std Dev	18.9
Critical Value	378.0
Count	29

DNSC Scotia
SU 1 Alpha Static Measurement Data

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/29/2004	5:32:00	1160	Alpha	10.30	9.6	0.70	44.3%	2	SU 1
2	6/29/2004	5:35:00	1160	Alpha	7.27	9.6	-2.33	44.3%	-5	SU 1
3	6/29/2004	5:46:00	1160	Alpha	5.77	9.6	-3.83	44.3%	-9	SU 1
4	6/29/2004	5:49:00	1160	Alpha	4.78	9.6	-4.82	44.3%	-11	SU 1
5	6/29/2004	5:52:00	1160	Alpha	4.78	9.6	-4.82	44.3%	-11	SU 1
6	6/29/2004	5:55:00	1160	Alpha	3.50	9.6	-6.10	44.3%	-14	SU 1
7	6/29/2004	5:59:00	1160	Alpha	2.27	9.6	-7.33	44.3%	-17	SU 1
8	6/29/2004	6:02:00	1160	Alpha	7.78	9.6	-1.82	44.3%	-4	SU 1
9	6/29/2004	6:04:00	1160	Alpha	3.28	9.6	-6.32	44.3%	-14	SU 1
10	6/29/2004	6:07:00	1160	Alpha	5.77	9.6	-3.83	44.3%	-9	SU 1
11	6/29/2004	6:09:00	1160	Alpha	5.27	9.6	-4.33	44.3%	-10	SU 1
12	6/29/2004	6:12:00	1160	Alpha	6.50	9.6	-3.10	44.3%	-7	SU 1
13	6/29/2004	6:14:00	1160	Alpha	6.29	9.6	-3.31	44.3%	-7	SU 1
14	6/29/2004	6:17:00	1160	Alpha	5.00	9.6	-4.60	44.3%	-10	SU 1
15	6/29/2004	6:19:00	1160	Alpha	5.78	9.6	-3.82	44.3%	-9	SU 1
16	6/29/2004	6:25:00	1160	Alpha	7.00	9.6	-2.60	44.3%	-6	SU 1
17	6/29/2004	6:29:00	1160	Alpha	7.76	9.6	-1.84	44.3%	-4	SU 1
18	6/29/2004	6:32:00	1160	Alpha	7.00	9.6	-2.60	44.3%	-6	SU 1
19	6/29/2004	6:34:00	1160	Alpha	10.20	9.6	0.60	44.3%	1	SU 1
20	6/29/2004	6:38:00	1160	Alpha	5.77	9.6	-3.83	44.3%	-9	SU 1
21	6/29/2004	6:40:00	1160	Alpha	4.77	9.6	-4.83	44.3%	-11	SU 1
22	6/29/2004	6:43:00	1160	Alpha	7.00	9.6	-2.60	44.3%	-6	SU 1
23	6/29/2004	6:45:00	1160	Alpha	8.28	9.6	-1.32	44.3%	-3	SU 1
24	6/29/2004	6:49:00	1160	Alpha	5.50	9.6	-4.10	44.3%	-9	SU 1
25	6/29/2004	6:51:00	1160	Alpha	8.79	9.6	-0.81	44.3%	-2	SU 1
26	6/29/2004	6:54:00	1160	Alpha	7.28	9.6	-2.32	44.3%	-5	SU 1
27	6/29/2004	6:56:00	1160	Alpha	4.27	9.6	-5.33	44.3%	-12	SU 1
28	6/29/2004	6:58:00	1160	Alpha	1.29	9.6	-8.31	44.3%	-19	SU 1
29	6/29/2004	7:01:00	1160	Alpha	7.28	9.6	-2.32	44.3%	-5	SU 1
30	6/29/2004	7:03:00	1160	Alpha	6.29	9.6	-3.31	44.3%	-7	SU 1

Average	6.09	Average	-7.91
Min	1.29	Min	-18.76
Max	10.30	Max	1.58
Std Dev	2.06	Std Dev	4.64

DNSC Scotia
SU 1 Beta Static Measurement Data

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/29/2004	5:32:00	1160	Beta	226.0	286.8	-60.8	15.0%	-405.3	SU 1
2	6/29/2004	5:35:00	1160	Beta	231.0	286.8	-55.8	15.0%	-372.0	SU 1
3	6/29/2004	5:46:00	1160	Beta	232.0	286.8	-54.8	15.0%	-365.3	SU 1
4	6/29/2004	5:49:00	1160	Beta	219.0	286.8	-67.8	15.0%	-452.0	SU 1
5	6/29/2004	5:52:00	1160	Beta	224.0	286.8	-62.8	15.0%	-418.7	SU 1
6	6/29/2004	5:55:00	1160	Beta	235.0	286.8	-51.8	15.0%	-345.3	SU 1
7	6/29/2004	5:59:00	1160	Beta	229.0	286.8	-57.8	15.0%	-385.3	SU 1
8	6/29/2004	6:02:00	1160	Beta	216.0	286.8	-70.8	15.0%	-472.0	SU 1
9	6/29/2004	6:04:00	1160	Beta	217.0	286.8	-69.8	15.0%	-465.3	SU 1
10	6/29/2004	6:07:00	1160	Beta	227.0	286.8	-59.8	15.0%	-398.7	SU 1
11	6/29/2004	6:09:00	1160	Beta	232.0	286.8	-54.8	15.0%	-365.3	SU 1
12	6/29/2004	6:12:00	1160	Beta	243.0	286.8	-43.8	15.0%	-292.0	SU 1
13	6/29/2004	6:14:00	1160	Beta	213.0	286.8	-73.8	15.0%	-492.0	SU 1
14	6/29/2004	6:17:00	1160	Beta	223.0	286.8	-63.8	15.0%	-425.3	SU 1
15	6/29/2004	6:19:00	1160	Beta	216.0	286.8	-70.8	15.0%	-472.0	SU 1
16	6/29/2004	6:25:00	1160	Beta	216.0	286.8	-70.8	15.0%	-472.0	SU 1
17	6/29/2004	6:29:00	1160	Beta	237.0	286.8	-49.8	15.0%	-332.0	SU 1
18	6/29/2004	6:32:00	1160	Beta	230.0	286.8	-56.8	15.0%	-378.7	SU 1
19	6/29/2004	6:34:00	1160	Beta	257.0	286.8	-29.8	15.0%	-198.7	SU 1
20	6/29/2004	6:37:00	1160	Beta	227.0	286.8	-59.8	15.0%	-398.7	SU 1
21	6/29/2004	6:40:00	1160	Beta	227.0	286.8	-59.8	15.0%	-398.7	SU 1
22	6/29/2004	6:43:00	1160	Beta	235.0	286.8	-51.8	15.0%	-345.3	SU 1
23	6/29/2004	6:45:00	1160	Beta	224.0	286.8	-62.8	15.0%	-418.7	SU 1
24	6/29/2004	6:49:00	1160	Beta	216.0	286.8	-70.8	15.0%	-472.0	SU 1
25	6/29/2004	6:51:00	1160	Beta	208.0	286.8	-78.8	15.0%	-525.3	SU 1
26	6/29/2004	6:54:00	1160	Beta	218.0	286.8	-68.8	15.0%	-458.7	SU 1
27	6/29/2004	6:56:00	1160	Beta	226.0	286.8	-60.8	15.0%	-405.3	SU 1
28	6/29/2004	6:58:00	1160	Beta	214.0	286.8	-72.8	15.0%	-485.3	SU 1
29	6/29/2004	7:01:00	1160	Beta	223.0	286.8	-63.8	15.0%	-425.3	SU 1
30	6/29/2004	7:03:00	1160	Beta	214.0	286.8	-72.8	15.0%	-485.3	SU 1

Average	225.2	Average	-410.9
Min	208.0	Min	-525.3
Max	257.0	Max	-198.7
Std Dev	10.2	Std Dev	68.2

DNSC Scotia
SU 2 Alpha Static Measurement Data

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	1/28/2004	7:22:00	1090	Alpha	10	8.5	1.0	43.6%	2.3	SU 2
2	1/28/2004	7:24:00	1090	Alpha	10	8.5	1.0	43.6%	2.3	SU 2
3	1/28/2004	7:26:00	1090	Alpha	7	8.5	-2.0	43.6%	-4.6	SU 2
4	1/28/2004	7:29:00	1090	Alpha	8	8.5	-1.0	43.6%	-2.3	SU 2
5	1/28/2004	7:31:00	1090	Alpha	8	8.5	-1.0	43.6%	-2.2	SU 2
6	1/28/2004	7:34:00	1090	Alpha	14	8.5	5.5	43.6%	12.6	SU 2
7	1/28/2004	7:36:00	1090	Alpha	9	8.5	0.5	43.6%	1.1	SU 2
8	1/28/2004	7:38:00	1090	Alpha	10	8.5	1.5	43.6%	3.4	SU 2
9	1/28/2004	7:41:00	1090	Alpha	9	8.5	0.5	43.6%	1.1	SU 2
10	1/28/2004	7:44:00	1090	Alpha	8	8.5	-0.5	43.6%	-1.1	SU 2
11	1/28/2004	7:47:00	1090	Alpha	9	8.5	0.5	43.6%	1.1	SU 2
12	1/28/2004	7:50:00	1090	Alpha	8	8.5	-0.5	43.6%	-1.1	SU 2
13	1/28/2004	8:02:00	1090	Alpha	8	8.5	-1.0	43.6%	-2.3	SU 2
14	1/28/2004	8:04:00	1090	Alpha	11	8.5	2.0	43.6%	4.6	SU 2
15	1/28/2004	8:07:00	1090	Alpha	13	8.5	4.0	43.6%	9.2	SU 2
16	1/28/2004	8:09:00	1090	Alpha	11	8.5	2.0	43.6%	4.6	SU 2
17	1/28/2004	8:12:00	1090	Alpha	9	8.5	0.0	43.6%	0.0	SU 2
18	1/28/2004	8:14:00	1090	Alpha	8	8.5	-0.5	43.6%	-1.1	SU 2
19	1/28/2004	8:17:00	1090	Alpha	8	8.5	-0.1	43.6%	-0.2	SU 2

Average 9.1
Min 6.5
Max 14.0
Std Dev 1.8
Count 19

Average 1.4
Min -4.6
Max 12.6
Std Dev 4.1
Count 19

DNSC Scotia
SU 2 Beta Static Measurement Data

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	1/28/2004	7:21:00	1090	Beta	251	251	0.0	14.0%	0.0	SU 2
2	1/28/2004	7:24:00	1090	Beta	238	251	-13.0	14.0%	-92.9	SU 2
3	1/28/2004	7:26:00	1090	Beta	265	251	14.0	14.0%	100.0	SU 2
4	1/28/2004	7:29:00	1090	Beta	250	251	-1.0	14.0%	-7.1	SU 2
5	1/28/2004	7:31:00	1090	Beta	248	251	-3.0	14.0%	-21.4	SU 2
6	1/28/2004	7:34:00	1090	Beta	246	251	-5.0	14.0%	-35.7	SU 2
7	1/28/2004	7:36:00	1090	Beta	274	251	23.0	14.0%	164.3	SU 2
8	1/28/2004	7:39:00	1090	Beta	285	251	34.0	14.0%	242.9	SU 2
9	1/28/2004	7:41:00	1090	Beta	268	251	17.0	14.0%	121.4	SU 2
10	1/28/2004	7:45:00	1090	Beta	236	251	-15.0	14.0%	-107.1	SU 2
11	1/28/2004	7:47:00	1090	Beta	263	251	12.0	14.0%	85.7	SU 2
12	1/28/2004	7:50:00	1090	Beta	243	251	-8.0	14.0%	-57.1	SU 2
13	1/28/2004	8:01:00	1090	Beta	257	251	6.0	14.0%	42.9	SU 2
14	1/28/2004	8:04:00	1090	Beta	269	251	18.0	14.0%	128.6	SU 2
15	1/28/2004	8:06:00	1090	Beta	275	251	24.0	14.0%	171.4	SU 2
16	1/28/2004	8:10:00	1090	Beta	273	251	22.0	14.0%	157.1	SU 2
17	1/28/2004	8:12:00	1090	Beta	287	251	36.0	14.0%	257.1	SU 2
18	1/28/2004	8:14:00	1090	Beta	277	251	26.0	14.0%	185.7	SU 2
19	1/28/2004	8:17:00	1090	Beta	298	251	47.0	14.0%	335.7	SU 2

Average 263.3
Min 236.0
Max 298.0
Std Dev 17.1
Count 19

Average 88.0
Min -107.1
Max 335.7
Std Dev 121.8
Count 19

DNSC Scotia
SU 2a Alpha Static Measurement Data

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	1/28/2004	8:19:00	1090	Alpha	16	13.7	1.8	43.6%	4.1	SU 2a
2	1/28/2004	8:21:00	1090	Alpha	16	13.7	2.3	43.6%	5.3	SU 2a
3	1/28/2004	8:23:00	1090	Alpha	15	13.7	0.8	43.6%	1.8	SU 2a
4	1/28/2004	8:26:00	1090	Alpha	11	13.7	-2.7	43.6%	-6.2	SU 2a
5	1/28/2004	8:28:00	1090	Alpha	17	13.7	3.3	43.6%	7.6	SU 2a
6	1/28/2004	8:30:00	1090	Alpha	14	13.7	0.3	43.6%	0.7	SU 2a
7	1/28/2004	8:37:00	1090	Alpha	14	13.7	0.4	43.6%	0.9	SU 2a
8	1/28/2004	8:39:00	1090	Alpha	14	13.7	-0.2	43.6%	-0.5	SU 2a
9	1/28/2004	8:42:00	1090	Alpha	14	13.7	0.3	43.6%	0.7	SU 2a
10	1/28/2004	8:44:00	1090	Alpha	15	13.7	1.3	43.6%	3.0	SU 2a
11	1/28/2004	8:46:00	1090	Alpha	12	13.7	-1.7	43.6%	-3.9	SU 2a
12	1/28/2004	8:49:00	1090	Alpha	14	13.7	0.3	43.6%	0.7	SU 2a
13	1/28/2004	8:50:00	1090	Alpha	13	13.7	-0.3	43.6%	-0.7	SU 2a
14	1/28/2004	8:51:00	1090	Alpha	12	13.7	-1.4	43.6%	-3.2	SU 2a
15	1/28/2004	8:53:00	1090	Alpha	12	13.7	-1.3	43.6%	-3.0	SU 2a
16	1/28/2004	8:54:00	1090	Alpha	5	13.7	-8.5	43.6%	-19.4	SU 2a
17	1/28/2004	8:55:00	1090	Alpha	13	13.7	-0.9	43.6%	-2.1	SU 2a
18	1/28/2004	8:57:00	1090	Alpha	16	13.7	2.3	43.6%	5.3	SU 2a
19	1/28/2004	8:58:00	1090	Alpha	15	13.7	0.8	43.6%	1.8	SU 2a
20	1/28/2004	9:00:00	1090	Alpha	18	13.7	4.1	43.6%	9.4	SU 2a
21	1/28/2004	9:01:00	1090	Alpha	18	13.7	4.1	43.6%	9.4	SU 2a
22	1/28/2004	9:02:00	1090	Alpha	15	13.7	0.8	43.6%	1.8	SU 2a
23	1/28/2004	9:05:00	1090	Alpha	12	13.7	-2.2	43.6%	-5.0	SU 2a
24	1/28/2004	9:07:00	1090	Alpha	15	13.7	1.3	43.6%	3.0	SU 2a
25	1/28/2004	9:09:00	1090	Alpha	13	13.7	-0.8	43.6%	-1.8	SU 2a
26	1/28/2004	9:11:00	1090	Alpha	12	13.7	-1.7	43.6%	-3.9	SU 2a
27	1/28/2004	9:13:00	1090	Alpha	15	13.7	1.7	43.6%	3.9	SU 2a
28	1/28/2004	9:16:00	1090	Alpha	13	13.7	-1.2	43.6%	-2.8	SU 2a
29	1/28/2004	9:18:00	1090	Alpha	14	13.7	-0.2	43.6%	-0.5	SU 2a
30	1/28/2004	9:20:00	1090	Alpha	21	13.7	7.3	43.6%	16.7	SU 2a
31	1/28/2004	9:24:00	1090	Alpha	14	13.7	0.3	43.6%	0.7	SU 2a
32	1/28/2004	9:26:00	1090	Alpha	14	13.7	0.7	43.6%	1.6	SU 2a
33	1/28/2004	9:28:00	1090	Alpha	11	13.7	-3.0	43.6%	-6.9	SU 2a

Average 13.9
Min 5.2
Max 21.0
Std Dev 2.6
Count 33

Average 0.6
Min -19.4
Max 16.7
Std Dev 6.0
Count 33

DNSC Scotia
SU 2a Beta Static Measurement Data

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	1/28/2004	8:19:00	1090	Beta	320	321.2	-1.2	14.0%	-8.6	SU 2a
2	1/28/2004	8:21:00	1090	Beta	325	321.2	3.8	14.0%	27.1	SU 2a
3	1/28/2004	8:24:00	1090	Beta	337	321.2	15.8	14.0%	112.9	SU 2a
4	1/28/2004	8:26:00	1090	Beta	336	321.2	14.8	14.0%	105.7	SU 2a
5	1/28/2004	8:28:00	1090	Beta	304	321.2	-17.2	14.0%	-122.9	SU 2a
6	1/28/2004	8:30:00	1090	Beta	348	321.2	26.8	14.0%	191.4	SU 2a
7	1/28/2004	8:37:00	1090	Beta	333	321.2	11.8	14.0%	84.3	SU 2a
8	1/28/2004	8:39:00	1090	Beta	306	321.2	-15.2	14.0%	-108.6	SU 2a
9	1/28/2004	8:42:00	1090	Beta	330	321.2	8.8	14.0%	62.9	SU 2a
10	1/28/2004	8:44:00	1090	Beta	327	321.2	5.8	14.0%	41.4	SU 2a
11	1/28/2004	8:46:00	1090	Beta	335	321.2	13.8	14.0%	98.6	SU 2a
12	1/28/2004	8:49:00	1090	Beta	320	321.2	-1.2	14.0%	-8.6	SU 2a
13	1/28/2004	8:50:00	1090	Beta	315	321.2	-6.2	14.0%	-44.3	SU 2a
14	1/28/2004	8:51:00	1090	Beta	313	321.2	-8.2	14.0%	-58.6	SU 2a
15	1/28/2004	8:53:00	1090	Beta	354	321.2	32.8	14.0%	234.3	SU 2a
16	1/28/2004	8:54:00	1090	Beta	343	321.2	21.8	14.0%	155.7	SU 2a
17	1/28/2004	8:55:00	1090	Beta	331	321.2	9.8	14.0%	70.0	SU 2a
18	1/28/2004	8:57:00	1090	Beta	310	321.2	-11.2	14.0%	-80.0	SU 2a
19	1/28/2004	8:58:00	1090	Beta	334	321.2	12.8	14.0%	91.4	SU 2a
20	1/28/2004	9:00:00	1090	Beta	350	321.2	28.8	14.0%	205.7	SU 2a
21	1/28/2004	9:01:00	1090	Beta	316	321.2	-5.2	14.0%	-37.1	SU 2a
22	1/28/2004	9:02:00	1090	Beta	346	321.2	24.8	14.0%	177.1	SU 2a
23	1/28/2004	9:05:00	1090	Beta	371	321.2	49.8	14.0%	355.7	SU 2a
24	1/28/2004	9:07:00	1090	Beta	322	321.2	0.8	14.0%	5.7	SU 2a
25	1/28/2004	9:09:00	1090	Beta	320	321.2	-1.2	14.0%	-8.6	SU 2a
26	1/28/2004	9:11:00	1090	Beta	310	321.2	-11.2	14.0%	-80.0	SU 2a
27	1/28/2004	9:13:00	1090	Beta	323	321.2	1.8	14.0%	12.9	SU 2a
28	1/28/2004	9:16:00	1090	Beta	335	321.2	13.8	14.0%	98.6	SU 2a
29	1/28/2004	9:18:00	1090	Beta	336	321.2	14.8	14.0%	105.7	SU 2a
30	1/28/2004	9:20:00	1090	Beta	327	321.2	5.8	14.0%	41.4	SU 2a
31	1/28/2004	9:24:00	1090	Beta	285	321.2	-36.2	14.0%	-258.6	SU 2a
32	1/28/2004	9:26:00	1090	Beta	301	321.2	-20.2	14.0%	-144.3	SU 2a
33	1/28/2004	9:28:00	1090	Beta	297	321.2	-24.2	14.0%	-172.9	SU 2a

Average 326.1
Min 285.0
Max 371.0
Std Dev 17.6
Count 33

Average 34.7
Min -258.6
Max 355.7
Std Dev 126.0
Count 33

DNSC Scotia
SU 2b Alpha Static Measurement Data

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	6:56:00	1090	Alpha	11.20	13.7	-2.5	43.6%	-5.7	SU 2b
2	6/30/2004	7:00:00	1090	Alpha	15.20	13.7	1.5	43.6%	3.4	SU 2b
3	6/30/2004	7:04:00	1090	Alpha	13.70	13.7	0.0	43.6%	0.0	SU 2b
4	6/30/2004	7:09:00	1090	Alpha	9.22	13.7	-4.5	43.6%	-10.3	SU 2b
5	6/30/2004	7:13:00	1090	Alpha	6.90	13.7	-6.8	43.6%	-15.6	SU 2b
6	6/30/2004	7:18:00	1090	Alpha	5.90	13.7	-7.8	43.6%	-17.9	SU 2b

Average 10.4
Min 5.9
Max 15.2
Std Dev 3.4
Count 6

Average -7.7
Min -17.9
Max 3.4
Std Dev 7.7
Count 6

DNSC Scotia
SU 2b Beta Static Measurement Data

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	6:56:00	1090	Beta	286.00	321.2	-35.2	14.0%	-251.4	SU 2b
2	6/30/2004	7:00:00	1090	Beta	312.00	321.2	-9.2	14.0%	-65.7	SU 2b
3	6/30/2004	7:04:00	1090	Beta	274.00	321.2	-47.2	14.0%	-337.1	SU 2b
4	6/30/2004	7:09:00	1090	Beta	279.00	321.2	-42.2	14.0%	-301.4	SU 2b
5	6/30/2004	7:13:00	1090	Beta	104.00	321.2	-217.2	14.0%	-1551.4	SU 2b
6	6/30/2004	7:18:00	1090	Beta	104.00	321.2	-217.2	14.0%	-1551.4	SU 2b

Average 226.5
Min 104.0
Max 312.0
Std Dev 87.4
Count 6

Average -676.4
Min -1,551.4
Max -65.7
Std Dev 624.6
Count 6

DNSC Scotia
SU 4b Beta Static Measurement Data

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	7:49:00	1090	Beta	277.0	321.2	-44.2	14.0%	-315.7	SU 4b
2	6/30/2004	7:54:00	1090	Beta	293.0	321.2	-28.2	14.0%	-201.4	SU 4b
3	6/30/2004	7:58:00	1090	Beta	277.0	321.2	-44.2	14.0%	-315.7	SU 4b
4	6/30/2004	8:03:00	1090	Beta	297.0	321.2	-24.2	14.0%	-172.9	SU 4b
5	6/30/2004	8:07:00	1090	Beta	118.0	321.2	-203.2	14.0%	-1451.4	SU 4b
6	6/30/2004	8:11:00	1090	Beta	117.0	321.2	-204.2	14.0%	-1458.6	SU 4b

Average 229.8
Min 117.0
Max 297.0
Std Dev 79.8
Count 6

Average -652.6
Min -1,458.6
Max -172.9
Std Dev 569.9
Count 6

DNSC Scotia
SU 5 Alpha Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	8:21:00	1160	Alpha	6.0	8.5	-2.5	44.3%	-5.6	SU 5
2	6/30/2004	8:23:00	1160	Alpha	2.8	8.5	-5.7	44.3%	-12.9	SU 5
3	6/30/2004	8:25:00	1160	Alpha	4.5	8.5	-4.0	44.3%	-9.0	SU 5
4	6/30/2004	8:28:00	1160	Alpha	6.3	8.5	-2.2	44.3%	-5.0	SU 5
5	6/30/2004	8:30:00	1160	Alpha	3.0	8.5	-5.5	44.3%	-12.4	SU 5
6	6/30/2004	8:32:00	1160	Alpha	5.8	8.5	-2.7	44.3%	-6.1	SU 5
7	6/30/2004	8:35:00	1160	Alpha	4.0	8.5	-4.5	44.3%	-10.2	SU 5
8	6/30/2004	8:37:00	1160	Alpha	4.8	8.5	-3.7	44.3%	-8.3	SU 5
9	6/30/2004	8:40:00	1160	Alpha	3.0	8.5	-5.5	44.3%	-12.4	SU 5
10	6/30/2004	8:42:00	1160	Alpha	4.3	8.5	-4.2	44.3%	-9.5	SU 5
11	6/30/2004	8:45:00	1160	Alpha	4.5	8.5	-4.0	44.3%	-9.0	SU 5
12	6/30/2004	8:47:00	1160	Alpha	2.3	8.5	-6.2	44.3%	-14.0	SU 5
13	6/30/2004	8:49:00	1160	Alpha	6.3	8.5	-2.2	44.3%	-4.9	SU 5
14	6/30/2004	8:52:00	1160	Alpha	4.3	8.5	-4.2	44.3%	-9.5	SU 5
15	6/30/2004	8:54:00	1160	Alpha	6.5	8.5	-2.0	44.3%	-4.5	SU 5
16	6/30/2004	8:57:00	1160	Alpha	4.8	8.5	-3.7	44.3%	-8.3	SU 5
17	6/30/2004	8:59:00	1160	Alpha	3.8	8.5	-4.7	44.3%	-10.6	SU 5
18	6/30/2004	9:01:00	1160	Alpha	3.3	8.5	-5.2	44.3%	-11.7	SU 5
19	6/30/2004	9:04:00	1160	Alpha	3.5	8.5	-5.0	44.3%	-11.3	SU 5
20	6/30/2004	9:06:00	1160	Alpha	5.8	8.5	-2.7	44.3%	-6.1	SU 5
21	6/30/2004	9:09:00	1160	Alpha	3.3	8.5	-5.2	44.3%	-11.8	SU 5
22	6/30/2004	9:11:00	1160	Alpha	4.3	8.5	-4.2	44.3%	-9.5	SU 5
23	6/30/2004	9:13:00	1160	Alpha	3.3	8.5	-5.2	44.3%	-11.7	SU 5
24	6/30/2004	9:16:00	1160	Alpha	8.8	8.5	0.3	44.3%	0.7	SU 5
25	6/30/2004	9:18:00	1160	Alpha	3.5	8.5	-5.0	44.3%	-11.3	SU 5
26	6/30/2004	9:21:00	1160	Alpha	2.8	8.5	-5.7	44.3%	-12.8	SU 5
27	6/30/2004	9:24:00	1160	Alpha	4.0	8.5	-4.5	44.3%	-10.2	SU 5
28	6/30/2004	9:27:00	1160	Alpha	2.8	8.5	-5.7	44.3%	-12.9	SU 5
29	6/30/2004	9:29:00	1160	Alpha	7.3	8.5	-1.2	44.3%	-2.7	SU 5
30	6/30/2004	9:32:00	1160	Alpha	3.8	8.5	-4.7	44.3%	-10.6	SU 5

Average 4.5
Min 2.3
Max 8.8
Std Dev 1.5
Count 30.0

Average -9.1
Min -14.0
Max 0.7
Std Dev 3.4
Count 30.0

DNSC Scotia
SU 5 Beta Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	8:21:00	1160	Beta	211.0	251.0	-40.0	15.0%	-266.7	SU 5
2	6/30/2004	8:23:00	1160	Beta	199.0	251.0	-52.0	15.0%	-346.7	SU 5
3	6/30/2004	8:25:00	1160	Beta	203.0	251.0	-48.0	15.0%	-320.0	SU 5
4	6/30/2004	8:28:00	1160	Beta	202.0	251.0	-49.0	15.0%	-326.7	SU 5
5	6/30/2004	8:30:00	1160	Beta	183.0	251.0	-68.0	15.0%	-453.3	SU 5
6	6/30/2004	8:33:00	1160	Beta	191.0	251.0	-60.0	15.0%	-400.0	SU 5
7	6/30/2004	8:35:00	1160	Beta	192.0	251.0	-59.0	15.0%	-393.3	SU 5
8	6/30/2004	8:37:00	1160	Beta	183.0	251.0	-68.0	15.0%	-453.3	SU 5
9	6/30/2004	8:40:00	1160	Beta	196.0	251.0	-55.0	15.0%	-366.7	SU 5
10	6/30/2004	8:42:00	1160	Beta	197.0	251.0	-54.0	15.0%	-360.0	SU 5
11	6/30/2004	8:45:00	1160	Beta	196.0	251.0	-55.0	15.0%	-366.7	SU 5
12	6/30/2004	8:47:00	1160	Beta	209.0	251.0	-42.0	15.0%	-280.0	SU 5
13	6/30/2004	8:49:00	1160	Beta	176.0	251.0	-75.0	15.0%	-500.0	SU 5
14	6/30/2004	8:52:00	1160	Beta	203.0	251.0	-48.0	15.0%	-320.0	SU 5
15	6/30/2004	8:54:00	1160	Beta	185.0	251.0	-66.0	15.0%	-440.0	SU 5
16	6/30/2004	8:57:00	1160	Beta	183.0	251.0	-68.0	15.0%	-453.3	SU 5
17	6/30/2004	8:59:00	1160	Beta	180.0	251.0	-71.0	15.0%	-473.3	SU 5
18	6/30/2004	9:01:00	1160	Beta	172.0	251.0	-79.0	15.0%	-526.7	SU 5
19	6/30/2004	9:04:00	1160	Beta	180.0	251.0	-71.0	15.0%	-473.3	SU 5
20	6/30/2004	9:06:00	1160	Beta	193.0	251.0	-58.0	15.0%	-386.7	SU 5
21	6/30/2004	9:09:00	1160	Beta	220.0	251.0	-31.0	15.0%	-206.7	SU 5
22	6/30/2004	9:11:00	1160	Beta	188.0	251.0	-63.0	15.0%	-420.0	SU 5
23	6/30/2004	9:13:00	1160	Beta	179.0	251.0	-72.0	15.0%	-480.0	SU 5
24	6/30/2004	9:16:00	1160	Beta	181.0	251.0	-70.0	15.0%	-466.7	SU 5
25	6/30/2004	9:18:00	1160	Beta	197.0	251.0	-54.0	15.0%	-360.0	SU 5
26	6/30/2004	9:21:00	1160	Beta	192.0	251.0	-59.0	15.0%	-393.3	SU 5
27	6/30/2004	9:24:00	1160	Beta	219.0	251.0	-32.0	15.0%	-213.3	SU 5
28	6/30/2004	9:27:00	1160	Beta	195.0	251.0	-56.0	15.0%	-373.3	SU 5
29	6/30/2004	9:29:00	1160	Beta	197.0	251.0	-54.0	15.0%	-360.0	SU 5
30	6/30/2004	9:32:00	1160	Beta	194.0	251.0	-57.0	15.0%	-380.0	SU 5

Average 193.2
Min 172.0
Max 220.0
Std Dev 11.8
Count 30.0

Average -385.3
Min -526.7
Max -206.7
Std Dev 78.6
Count 30.0

DNSC Scotia
SU 5a Alpha Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	9:19:00	1090	Alpha	18.70	13.7	5.0	43.6%	11.5	SU 5a
2	6/30/2004	9:21:00	1090	Alpha	12.20	13.7	-1.5	43.6%	-3.4	SU 5a
3	6/30/2004	9:24:00	1090	Alpha	18.30	13.7	4.6	43.6%	10.6	SU 5a
4	6/30/2004	9:26:00	1090	Alpha	17.20	13.7	3.5	43.6%	8.0	SU 5a
5	6/30/2004	9:29:00	1090	Alpha	16.70	13.7	3.0	43.6%	6.9	SU 5a
6	6/30/2004	9:31:00	1090	Alpha	13.70	13.7	0.0	43.6%	0.0	SU 5a
7	6/30/2004	9:34:00	1090	Alpha	11.20	13.7	-2.5	43.6%	-5.7	SU 5a
8	6/30/2004	9:36:00	1090	Alpha	12.70	13.7	-1.0	43.6%	-2.3	SU 5a
9	6/30/2004	9:38:00	1090	Alpha	16.20	13.7	2.5	43.6%	5.7	SU 5a
10	6/30/2004	9:41:00	1090	Alpha	14.70	13.7	1.0	43.6%	2.3	SU 5a
11	6/30/2004	9:43:00	1090	Alpha	13.70	13.7	0.0	43.6%	0.0	SU 5a
12	6/30/2004	9:46:00	1090	Alpha	14.70	13.7	1.0	43.6%	2.3	SU 5a
13	6/30/2004	9:48:00	1090	Alpha	15.20	13.7	1.5	43.6%	3.4	SU 5a
14	6/30/2004	9:51:00	1090	Alpha	13.70	13.7	0.0	43.6%	0.0	SU 5a
15	6/30/2004	9:53:00	1090	Alpha	16.70	13.7	3.0	43.6%	6.9	SU 5a
16	6/30/2004	9:55:00	1090	Alpha	10.20	13.7	-3.5	43.6%	-8.0	SU 5a
17	6/30/2004	9:58:00	1090	Alpha	13.70	13.7	0.0	43.6%	0.0	SU 5a
18	6/30/2004	10:00:00	1090	Alpha	16.20	13.7	2.5	43.6%	5.7	SU 5a
19	6/30/2004	10:02:00	1090	Alpha	15.70	13.7	2.0	43.6%	4.6	SU 5a
20	6/30/2004	10:05:00	1090	Alpha	8.70	13.7	-5.0	43.6%	-11.5	SU 5a
21	6/30/2004	10:07:00	1090	Alpha	6.21	13.7	-7.5	43.6%	-17.2	SU 5a
22	6/30/2004	10:09:00	1090	Alpha	19.70	13.7	6.0	43.6%	13.8	SU 5a
23	6/30/2004	10:12:00	1090	Alpha	12.20	13.7	-1.5	43.6%	-3.4	SU 5a
24	6/30/2004	10:14:00	1090	Alpha	6.86	13.7	-6.8	43.6%	-15.7	SU 5a
25	6/30/2004	10:16:00	1090	Alpha	3.86	13.7	-9.8	43.6%	-22.6	SU 5a
26	6/30/2004	10:19:00	1090	Alpha	14.20	13.7	0.5	43.6%	1.1	SU 5a
27	6/30/2004	10:21:00	1090	Alpha	10.70	13.7	-3.0	43.6%	-6.9	SU 5a
28	6/30/2004	10:23:00	1090	Alpha	15.70	13.7	2.0	43.6%	4.6	SU 5a
29	6/30/2004	10:26:00	1090	Alpha	16.20	13.7	2.5	43.6%	5.7	SU 5a

Average 13.6
Min 3.9
Max 19.7
Std Dev 3.7
Count 29.0

Average -0.1
Min -22.6
Max 13.8
Std Dev 8.5
Count 29.0

DNCS Scotia
SU 5a Beta Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	9:19:00	1090	Beta	317.0	321.2	-4.2	14.0%	-30.0	SU 5a
2	6/30/2004	9:21:00	1090	Beta	306.0	321.2	-15.2	14.0%	-108.6	SU 5a
3	6/30/2004	9:24:00	1090	Beta	235.0	321.2	-86.2	14.0%	-615.7	SU 5a
4	6/30/2004	9:26:00	1090	Beta	327.0	321.2	5.8	14.0%	41.4	SU 5a
5	6/30/2004	9:29:00	1090	Beta	295.0	321.2	-26.2	14.0%	-187.1	SU 5a
6	6/30/2004	9:31:00	1090	Beta	293.0	321.2	-28.2	14.0%	-201.4	SU 5a
7	6/30/2004	9:34:00	1090	Beta	265.0	321.2	-56.2	14.0%	-401.4	SU 5a
8	6/30/2004	9:36:00	1090	Beta	292.0	321.2	-29.2	14.0%	-208.6	SU 5a
9	6/30/2004	9:38:00	1090	Beta	297.0	321.2	-24.2	14.0%	-172.9	SU 5a
10	6/30/2004	9:41:00	1090	Beta	298.0	321.2	-23.2	14.0%	-165.7	SU 5a
11	6/30/2004	9:43:00	1090	Beta	289.0	321.2	-32.2	14.0%	-230.0	SU 5a
12	6/30/2004	9:46:00	1090	Beta	296.0	321.2	-25.2	14.0%	-180.0	SU 5a
13	6/30/2004	9:48:00	1090	Beta	289.0	321.2	-32.2	14.0%	-230.0	SU 5a
14	6/30/2004	9:50:00	1090	Beta	286.0	321.2	-35.2	14.0%	-251.4	SU 5a
15	6/30/2004	9:53:00	1090	Beta	290.0	321.2	-31.2	14.0%	-222.9	SU 5a
16	6/30/2004	9:55:00	1090	Beta	296.0	321.2	-25.2	14.0%	-180.0	SU 5a
17	6/30/2004	9:58:00	1090	Beta	301.0	321.2	-20.2	14.0%	-144.3	SU 5a
18	6/30/2004	10:00:00	1090	Beta	314.0	321.2	-7.2	14.0%	-51.4	SU 5a
19	6/30/2004	10:02:00	1090	Beta	294.0	321.2	-27.2	14.0%	-194.3	SU 5a
20	6/30/2004	10:05:00	1090	Beta	300.0	321.2	-21.2	14.0%	-151.4	SU 5a
21	6/30/2004	10:07:00	1090	Beta	294.0	321.2	-27.2	14.0%	-194.3	SU 5a
22	6/30/2004	10:09:00	1090	Beta	287.0	321.2	-34.2	14.0%	-244.3	SU 5a
23	6/30/2004	10:12:00	1090	Beta	280.0	321.2	-41.2	14.0%	-294.3	SU 5a
24	6/30/2004	10:14:00	1090	Beta	137.0	321.2	-184.2	14.0%	-1315.7	SU 5a
25	6/30/2004	10:16:00	1090	Beta	139.0	321.2	-182.2	14.0%	-1301.4	SU 5a
26	6/30/2004	10:19:00	1090	Beta	291.0	321.2	-30.2	14.0%	-215.7	SU 5a
27	6/30/2004	10:21:00	1090	Beta	310.0	321.2	-11.2	14.0%	-80.0	SU 5a
28	6/30/2004	10:23:00	1090	Beta	291.0	321.2	-30.2	14.0%	-215.7	SU 5a
29	6/30/2004	10:26:00	1090	Beta	296.0	321.2	-25.2	14.0%	-180.0	SU 5a

Average 282.9
Min 137.0
Max 327.0
Std Dev 42.5
Count 29.0

Average -273.3
Min -1315.7
Max 41.4
Std Dev 303.6
Count 29.0

DNSC Scotia
SU 5b Alpha Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	5:51:00	1090	Alpha	12.2	13.7	-1.5	43.6%	-3.4	SU 5b
2	6/30/2004	5:57:00	1090	Alpha	10.7	13.7	-3.0	43.6%	-6.9	SU 5b
3	6/30/2004	6:03:00	1090	Alpha	10.7	13.7	-3.0	43.6%	-6.9	SU 5b
4	6/30/2004	6:08:00	1090	Alpha	7.2	13.7	-6.5	43.6%	-14.9	SU 5b
5	6/30/2004	6:13:00	1090	Alpha	5.9	13.7	-7.8	43.6%	-18.0	SU 5b
6	6/30/2004	6:19:00	1090	Alpha	4.9	13.7	-8.8	43.6%	-20.2	SU 5b

Average 8.6
Min 4.9
Max 12.2
Std Dev 2.7
Count 6

Average -11.7
Min -20.2
Max -3.4
Std Dev 6.3
Count 6

DNSC Scotia
SU 5b Beta Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	5:51:00	1090	Beta	302.0	321.2	-19.2	14.0%	-137.1	SU 5b
2	6/30/2004	5:57:00	1090	Beta	289.0	321.2	-32.2	14.0%	-230.0	SU 5b
3	6/30/2004	6:03:00	1090	Beta	289.0	321.2	-32.2	14.0%	-230.0	SU 5b
4	6/30/2004	6:08:00	1090	Beta	314.0	321.2	-7.2	14.0%	-51.4	SU 5b
5	6/30/2004	6:13:00	1090	Beta	129.0	321.2	-192.2	14.0%	-1372.9	SU 5b
6	6/30/2004	6:19:00	1090	Beta	114.0	321.2	-207.2	14.0%	-1480.0	SU 5b

Average 239.5
Min 114.0
Max 314.0
Std Dev 84.0
Count 6

Average -583.6
Min -1,480.0
Max -51.4
Std Dev 599.9
Count 6

DNSC Scotia
SU 6 Alpha Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	4:37:00	1160	Alpha	2.8	8.5	-5.7	44.3%	-12.9	SU 6
2	6/30/2004	4:39:00	1160	Alpha	3.3	8.5	-5.2	44.3%	-11.8	SU 6
3	6/30/2004	4:42:00	1160	Alpha	3.3	8.5	-5.2	44.3%	-11.7	SU 6
4	6/30/2004	4:45:00	1160	Alpha	5.3	8.5	-3.2	44.3%	-7.2	SU 6
5	6/30/2004	4:48:00	1160	Alpha	5.8	8.5	-2.7	44.3%	-6.1	SU 6
6	6/30/2004	4:53:00	1160	Alpha	3.3	8.5	-5.2	44.3%	-11.7	SU 6
7	6/30/2004	4:56:00	1160	Alpha	2.8	8.5	-5.7	44.3%	-12.9	SU 6
8	6/30/2004	4:59:00	1160	Alpha	3.3	8.5	-5.2	44.3%	-11.7	SU 6
9	6/30/2004	5:01:00	1160	Alpha	4.3	8.5	-4.2	44.3%	-9.5	SU 6
10	6/30/2004	5:03:00	1160	Alpha	2.5	8.5	-6.0	44.3%	-13.5	SU 6
11	6/30/2004	5:06:00	1160	Alpha	2.8	8.5	-5.7	44.3%	-12.9	SU 6
12	6/30/2004	5:09:00	1160	Alpha	7.5	8.5	-1.0	44.3%	-2.3	SU 6
13	6/30/2004	5:11:00	1160	Alpha	4.8	8.5	-3.7	44.3%	-8.4	SU 6
14	6/30/2004	5:13:00	1160	Alpha	5.8	8.5	-2.7	44.3%	-6.0	SU 6
15	6/30/2004	5:15:00	1160	Alpha	5.3	8.5	-3.2	44.3%	-7.2	SU 6
16	6/30/2004	5:19:00	1160	Alpha	5.3	8.5	-3.2	44.3%	-7.2	SU 6
17	6/30/2004	5:21:00	1160	Alpha	2.8	8.5	-5.7	44.3%	-12.8	SU 6
18	6/30/2004	5:23:00	1160	Alpha	5.5	8.5	-3.0	44.3%	-6.8	SU 6
19	6/30/2004	5:26:00	1160	Alpha	3.8	8.5	-4.7	44.3%	-10.6	SU 6
20	6/30/2004	5:28:00	1160	Alpha	4.3	8.5	-4.2	44.3%	-9.5	SU 6
21	6/30/2004	5:31:00	1160	Alpha	6.3	8.5	-2.2	44.3%	-5.0	SU 6
22	6/30/2004	5:33:00	1160	Alpha	4.5	8.5	-4.0	44.3%	-9.0	SU 6
23	6/30/2004	5:36:00	1160	Alpha	3.8	8.5	-4.7	44.3%	-10.6	SU 6
24	6/30/2004	5:38:00	1160	Alpha	3.0	8.5	-5.5	44.3%	-12.4	SU 6
25	6/30/2004	5:40:00	1160	Alpha	1.8	8.5	-6.7	44.3%	-15.1	SU 6
26	6/30/2004	5:43:00	1160	Alpha	3.3	8.5	-5.2	44.3%	-11.7	SU 6
27	6/30/2004	5:45:00	1160	Alpha	3.3	8.5	-5.2	44.3%	-11.8	SU 6
28	6/30/2004	5:48:00	1160	Alpha	7.5	8.5	-1.0	44.3%	-2.3	SU 6
29	6/30/2004	5:50:00	1160	Alpha	4.8	8.5	-3.7	44.3%	-8.4	SU 6
30	6/30/2004	5:52:00	1160	Alpha	4.8	8.5	-3.7	44.3%	-8.4	SU 6

Average 4.3
Min 1.8
Max 7.5
Std Dev 1.4
Count 30.0

Average -9.6
Min -15.1
Max -2.3
Std Dev 3.2
Count 30.0

DNSC Scotia
SU 6 Beta Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	4:37:00	1160	Beta	221.0	251.0	-30.0	15.0%	-200.0	SU 6
2	6/30/2004	4:39:00	1160	Beta	219.0	251.0	-32.0	15.0%	-213.3	SU 6
3	6/30/2004	4:42:00	1160	Beta	196.0	251.0	-55.0	15.0%	-366.7	SU 6
4	6/30/2004	4:45:00	1160	Beta	213.0	251.0	-38.0	15.0%	-253.3	SU 6
5	6/30/2004	4:48:00	1160	Beta	225.0	251.0	-26.0	15.0%	-173.3	SU 6
6	6/30/2004	4:53:00	1160	Beta	177.0	251.0	-74.0	15.0%	-493.3	SU 6
7	6/30/2004	4:56:00	1160	Beta	228.0	251.0	-23.0	15.0%	-153.3	SU 6
8	6/30/2004	4:58:00	1160	Beta	200.0	251.0	-51.0	15.0%	-340.0	SU 6
9	6/30/2004	5:01:00	1160	Beta	191.0	251.0	-60.0	15.0%	-400.0	SU 6
10	6/30/2004	5:03:00	1160	Beta	215.0	251.0	-36.0	15.0%	-240.0	SU 6
11	6/30/2004	5:06:00	1160	Beta	196.0	251.0	-55.0	15.0%	-366.7	SU 6
12	6/30/2004	5:09:00	1160	Beta	186.0	251.0	-65.0	15.0%	-433.3	SU 6
13	6/30/2004	5:11:00	1160	Beta	201.0	251.0	-50.0	15.0%	-333.3	SU 6
14	6/30/2004	5:13:00	1160	Beta	184.0	251.0	-67.0	15.0%	-446.7	SU 6
15	6/30/2004	5:16:00	1160	Beta	203.0	251.0	-48.0	15.0%	-320.0	SU 6
16	6/30/2004	5:19:00	1160	Beta	197.0	251.0	-54.0	15.0%	-360.0	SU 6
17	6/30/2004	5:21:00	1160	Beta	187.0	251.0	-64.0	15.0%	-426.7	SU 6
18	6/30/2004	5:23:00	1160	Beta	194.0	251.0	-57.0	15.0%	-380.0	SU 6
19	6/30/2004	5:26:00	1160	Beta	209.0	251.0	-42.0	15.0%	-280.0	SU 6
20	6/30/2004	5:28:00	1160	Beta	191.0	251.0	-60.0	15.0%	-400.0	SU 6
21	6/30/2004	5:31:00	1160	Beta	204.0	251.0	-47.0	15.0%	-313.3	SU 6
22	6/30/2004	5:33:00	1160	Beta	194.0	251.0	-57.0	15.0%	-380.0	SU 6
23	6/30/2004	5:36:00	1160	Beta	182.0	251.0	-69.0	15.0%	-460.0	SU 6
24	6/30/2004	5:38:00	1160	Beta	205.0	251.0	-46.0	15.0%	-306.7	SU 6
25	6/30/2004	5:40:00	1160	Beta	213.0	251.0	-38.0	15.0%	-253.3	SU 6
26	6/30/2004	5:43:00	1160	Beta	198.0	251.0	-53.0	15.0%	-353.3	SU 6
27	6/30/2004	5:45:00	1160	Beta	216.0	251.0	-35.0	15.0%	-233.3	SU 6
28	6/30/2004	5:48:00	1160	Beta	205.0	251.0	-46.0	15.0%	-306.7	SU 6
29	6/30/2004	5:50:00	1160	Beta	204.0	251.0	-47.0	15.0%	-313.3	SU 6
30	6/30/2004	5:52:00	1160	Beta	227.0	251.0	-24.0	15.0%	-160.0	SU 6

Average 202.7
Min 177.0
Max 228.0
Std Dev 13.5
Count 30.0

Average -322.0
Min -493.3
Max -153.3
Std Dev 90.0
Count 30.0

DNSC Scotia
SU 6a Alpha Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	5:55:00	1160	Alpha	6.3	13.7	-7.5	44.3%	-16.8	SU 6a
2	6/30/2004	6:00:00	1160	Alpha	9.0	13.7	-4.7	44.3%	-10.6	SU 6a
3	6/30/2004	6:04:00	1160	Alpha	5.3	13.7	-8.4	44.3%	-19.0	SU 6a
4	6/30/2004	6:06:00	1160	Alpha	9.5	13.7	-4.2	44.3%	-9.5	SU 6a
5	6/30/2004	6:08:00	1160	Alpha	7.3	13.7	-6.4	44.3%	-14.5	SU 6a
6	6/30/2004	6:11:00	1160	Alpha	6.2	13.7	-7.5	44.3%	-16.8	SU 6a
7	6/30/2004	6:14:00	1160	Alpha	7.8	13.7	-6.0	44.3%	-13.4	SU 6a
8	6/30/2004	6:16:00	1160	Alpha	8.0	13.7	-5.7	44.3%	-12.9	SU 6a
9	6/30/2004	6:18:00	1160	Alpha	2.2	13.7	-11.5	44.3%	-25.9	SU 6a
10	6/30/2004	6:21:00	1160	Alpha	6.0	13.7	-7.7	44.3%	-17.4	SU 6a
11	6/30/2004	6:23:00	1160	Alpha	5.8	13.7	-7.9	44.3%	-17.9	SU 6a
12	6/30/2004	6:25:00	1160	Alpha	4.2	13.7	-9.5	44.3%	-21.4	SU 6a
13	6/30/2004	6:27:00	1160	Alpha	7.3	13.7	-6.4	44.3%	-14.5	SU 6a
14	6/30/2004	6:31:00	1160	Alpha	7.5	13.7	-6.2	44.3%	-14.0	SU 6a
15	6/30/2004	6:33:00	1160	Alpha	6.3	13.7	-7.4	44.3%	-16.8	SU 6a
16	6/30/2004	6:35:00	1160	Alpha	3.5	13.7	-10.2	44.3%	-23.0	SU 6a
17	6/30/2004	6:37:00	1160	Alpha	3.7	13.7	-10.0	44.3%	-22.5	SU 6a
18	6/30/2004	6:40:00	1160	Alpha	3.3	13.7	-10.4	44.3%	-23.5	SU 6a
19	6/30/2004	6:42:00	1160	Alpha	5.3	13.7	-8.4	44.3%	-19.1	SU 6a
20	6/30/2004	6:45:00	1160	Alpha	4.0	13.7	-9.7	44.3%	-21.9	SU 6a
21	6/30/2004	6:47:00	1160	Alpha	12.8	13.7	-0.9	44.3%	-2.0	SU 6a
22	6/30/2004	6:49:00	1160	Alpha	6.5	13.7	-7.2	44.3%	-16.3	SU 6a
23	6/30/2004	6:52:00	1160	Alpha	8.3	13.7	-5.4	44.3%	-12.3	SU 6a
24	6/30/2004	6:54:00	1160	Alpha	6.5	13.7	-7.2	44.3%	-16.3	SU 6a
25	6/30/2004	6:57:00	1160	Alpha	3.3	13.7	-10.4	44.3%	-23.5	SU 6a
26	6/30/2004	7:01:00	1160	Alpha	6.5	13.7	-7.2	44.3%	-16.3	SU 6a
27	6/30/2004	7:03:00	1160	Alpha	4.8	13.7	-8.9	44.3%	-20.2	SU 6a
28	6/30/2004	7:05:00	1160	Alpha	8.7	13.7	-5.0	44.3%	-11.2	SU 6a
29	6/30/2004	7:08:00	1160	Alpha	2.8	13.7	-10.9	44.3%	-24.7	SU 6a
30	6/30/2004	7:08:00	1160	Alpha	3.0	13.7	-10.7	44.3%	-24.2	SU 6a
31	6/30/2004	7:10:00	1160	Alpha	5.3	13.7	-8.4	44.3%	-19.0	SU 6a

Average 6.0
Min 2.2
Max 12.8
Std Dev 2.3
Count 31.0

Average -17.3
Min -25.9
Max -2.0
Std Dev 5.2
Count 31.0

DNSC Scotia
SU 6a Beta Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	5:55:00	1160	Beta	248.0	321.2	-73.2	15.0%	-488.0	SU 6a
2	6/30/2004	6:00:00	1160	Beta	250.0	321.2	-71.2	15.0%	-474.7	SU 6a
3	6/30/2004	6:04:00	1160	Beta	231.0	321.2	-90.2	15.0%	-601.3	SU 6a
4	6/30/2004	6:06:00	1160	Beta	244.0	321.2	-77.2	15.0%	-514.7	SU 6a
5	6/30/2004	6:08:00	1160	Beta	219.0	321.2	-102.2	15.0%	-681.3	SU 6a
6	6/30/2004	6:11:00	1160	Beta	263.0	321.2	-58.2	15.0%	-388.0	SU 6a
7	6/30/2004	6:14:00	1160	Beta	248.0	321.2	-73.2	15.0%	-488.0	SU 6a
8	6/30/2004	6:16:00	1160	Beta	243.0	321.2	-78.2	15.0%	-521.3	SU 6a
9	6/30/2004	6:18:00	1160	Beta	256.0	321.2	-65.2	15.0%	-434.7	SU 6a
10	6/30/2004	6:20:00	1160	Beta	262.0	321.2	-59.2	15.0%	-394.7	SU 6a
11	6/30/2004	6:23:00	1160	Beta	227.0	321.2	-94.2	15.0%	-628.0	SU 6a
12	6/30/2004	6:25:00	1160	Beta	264.0	321.2	-57.2	15.0%	-381.3	SU 6a
13	6/30/2004	6:27:00	1160	Beta	242.0	321.2	-79.2	15.0%	-528.0	SU 6a
14	6/30/2004	6:31:00	1160	Beta	235.0	321.2	-86.2	15.0%	-574.7	SU 6a
15	6/30/2004	6:33:00	1160	Beta	240.0	321.2	-81.2	15.0%	-541.3	SU 6a
16	6/30/2004	6:35:00	1160	Beta	258.0	321.2	-63.2	15.0%	-421.3	SU 6a
17	6/30/2004	6:38:00	1160	Beta	261.0	321.2	-60.2	15.0%	-401.3	SU 6a
18	6/30/2004	6:40:00	1160	Beta	234.0	321.2	-87.2	15.0%	-581.3	SU 6a
19	6/30/2004	6:42:00	1160	Beta	237.0	321.2	-84.2	15.0%	-561.3	SU 6a
20	6/30/2004	6:44:00	1160	Beta	249.0	321.2	-72.2	15.0%	-481.3	SU 6a
21	6/30/2004	6:47:00	1160	Beta	248.0	321.2	-73.2	15.0%	-488.0	SU 6a
22	6/30/2004	6:49:00	1160	Beta	241.0	321.2	-80.2	15.0%	-534.7	SU 6a
23	6/30/2004	6:52:00	1160	Beta	243.0	321.2	-78.2	15.0%	-521.3	SU 6a
24	6/30/2004	6:54:00	1160	Beta	263.0	321.2	-58.2	15.0%	-388.0	SU 6a
25	6/30/2004	6:57:00	1160	Beta	233.0	321.2	-88.2	15.0%	-588.0	SU 6a
26	6/30/2004	7:00:00	1160	Beta	221.0	321.2	-100.2	15.0%	-668.0	SU 6a
27	6/30/2004	7:03:00	1160	Beta	244.0	321.2	-77.2	15.0%	-514.7	SU 6a
28	6/30/2004	7:05:00	1160	Beta	273.0	321.2	-48.2	15.0%	-321.3	SU 6a
29	6/30/2004	7:10:00	1160	Beta	225.0	321.2	-96.2	15.0%	-641.3	SU 6a

Average 244.9
Min 219.0
Max 273.0
Std Dev 13.6
Count 29.0

Average -508.7
Min -681.3
Max -321.3
Std Dev 90.6
Count 29.0

DNSC Scotia
SU 6b Alpha Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	6:24:00	1090	Alpha	15.2	13.7	1.5	43.6%	3.4	SU 6b
2	6/30/2004	6:29:00	1090	Alpha	14.7	13.7	1.0	43.6%	2.3	SU 6b
3	6/30/2004	6:33:00	1090	Alpha	11.7	13.7	-2.0	43.6%	-4.6	SU 6b
4	6/30/2004	6:38:00	1090	Alpha	11.7	13.7	-2.0	43.6%	-4.6	SU 6b
5	6/30/2004	6:43:00	1090	Alpha	4.4	13.7	-9.3	43.6%	-21.3	SU 6b
6	6/30/2004	6:46:00	1090	Alpha	8.4	13.7	-5.3	43.6%	-12.2	SU 6b

Average 11.0
Min 4.4
Max 15.2
Std Dev 3.7
Count 6

Average -6.2
Min -21.3
Max 3.4
Std Dev 8.5
Count 6

DNSC Scotia
SU 6b Beta Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	6:24:00	1090	Beta	314.0	321.2	-7.2	14.0%	-51.4	SU 6b
2	6/30/2004	6:29:00	1090	Beta	272.0	321.2	-49.2	14.0%	-351.4	SU 6b
3	6/30/2004	6:33:00	1090	Beta	305.0	321.2	-16.2	14.0%	-115.7	SU 6b
4	6/30/2004	6:38:00	1090	Beta	274.0	321.2	-47.2	14.0%	-337.1	SU 6b
5	6/30/2004	6:43:00	1090	Beta	104.0	321.2	-217.2	14.0%	-1551.4	SU 6b
6	6/30/2004	6:46:00	1090	Beta	113.0	321.2	-208.2	14.0%	-1487.1	SU 6b

Average 230.3
Min 104.0
Max 314.0
Std Dev 87.5
Count 6

Average -649.0
Min -1,551.4
Max -51.4
Std Dev 625.1
Count 6

Appendix C

Scan Data

DNSC Scotia
SU 0b Alpha Scan Background Measurement Data

Survey Unit	Grid Cell	Date	Meter	Probe	Type of Survey	Min	Max	Surveyor
0b	A1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	400	CAG
0b	A2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	350	CAG
0b	A3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	375	CAG
0b	A4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	350	CAG
0b	A5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	350	CAG
0b	A6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	375	CAG
0b	A7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	140	375	CAG
0b	B4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	400	CAG
0b	B5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	400	CAG
0b	B6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	375	CAG
0b	C4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	350	CAG
0b	C5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	375	CAG

Average Range	164	373
Minimum	140	350
Maximum	200	400

DNSC Scotia
SU 0b Gamma Scan Background Measurement Data

SU	Grid Cell	Date	Meter	Probe	S/N	Cal Due Date	Type of Survey	Min	Max	Surveyor
0b	A1	27-Jan-04	Ludlum 2350-1	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	CAG
0b	A5	27-Jan-04	Ludlum 2350-1	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	CAG
0b	A6	27-Jan-04	Ludlum 2350-1	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	CAG
0b	A7	27-Jan-04	Ludlum 2350-1	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	CAG
0b	A10	27-Jan-04	Ludlum 2350-1	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	CAG
0b	B5	27-Jan-04	Ludlum 2350-1	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	CAG
0b	B6	27-Jan-04	Ludlum 2350-1	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	CAG
0b	C5	27-Jan-04	Ludlum 2350-1	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	CAG
0b	C6	27-Jan-04	Ludlum 2350-1	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	CAG

Average Range	7,778	9,333
Minimum	7,000	8,000
Maximum	9,000	11,000

DNSC Scotia
SU 2 Alpha Scan Measurement Data

SU	Grid Cell	Date	Meter	Probe	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
2	A1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	300	373	-73	CAG
2	A2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	250	350	373	-23	CAG
2	A3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	225	375	373	2	CAG
2	A4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
2	A5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	350	373	-23	CAG
2	A6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
2	A7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	250	375	373	2	CAG
2	A8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	250	350	373	-23	CAG
2	A9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	325	373	-48	CAG
2	A10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	350	373	-23	CAG
2	B1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	325	373	-48	CAG
2	B2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	300	373	-73	CAG
2	B3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	300	373	-73	CAG
2	B4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	325	373	-48	CAG
2	B5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	350	373	-23	CAG
2	B6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	250	325	373	-48	CAG
2	B7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	250	300	373	-73	CAG
2	B8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	275	373	-98	CAG
2	B9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	300	373	-73	CAG
2	B10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	225	375	373	2	CAG
2	C1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
2	C2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
2	C3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
2	C4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	350	373	-23	CAG
2	C5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	250	325	373	-48	CAG
2	C6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
2	C7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	250	325	373	-48	CAG
2	C8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
2	C9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	350	373	-23	CAG
2	C10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	350	373	-23	CAG
2	D1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	400	373	27	CAG
2	D2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
2	D3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
2	D4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
2	D5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
2	D6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	350	373	-23	CAG
2	D7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
2	D8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
2	D9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	250	325	373	-48	CAG
2	D10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
2	E1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
2	E2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
2	E3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
2	E4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
2	E5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
2	E6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	400	373	27	CAG
2	E7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
2	E8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
2	E9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
2	E10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	250	325	373	-48	CAG
2	F1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	400	373	27	CAG
2	F2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
2	F3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
2	F4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG

DNSC Scotia
SU 2 Alpha Scan Measurement Data

SU	Grid Cell	Date	Meter	Probe	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
2	F5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	400	373	27	CAG
2	F6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	325	373	-48	CAG
2	F7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	350	373	-23	CAG
2	F8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
2	F9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	300	373	-73	CAG
2	F10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	350	373	-23	CAG
2	G1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	425	373	52	CAG
2	G2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	400	373	27	CAG
2	G3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
2	G4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
2	G5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
2	G6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
2	G7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
2	G8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	325	373	-48	CAG
2	G9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	350	373	-23	CAG
2	G10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	375	373	2	CAG

Average -19.8
 Min -98.0
 Max 52.0
 Std Dev 30.4
 Count 70

DNSC Scotia
SU 2 Gamma Scan Measurement Data

SU	Grid Cell	Date	Meter	S/N	Probe	S/N	Cal Due Date	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
2	A1	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	9,333	1,667	CAG
2	A2	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,000	9,333	667	CAG
2	A3	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	A4	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	A5	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	A6	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	A7	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	A8	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	A9	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	A10	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	9,333	1,667	CAG
2	B1	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	B2	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	B3	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	B4	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	B5	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	B6	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
2	B7	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	B8	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	B9	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	B10	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	C1	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
2	C2	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	C3	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	C4	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	C5	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
2	C6	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	C7	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
2	C8	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	C9	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	C10	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	D1	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	D2	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	D3	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
2	D4	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	D5	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	D6	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	D7	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	D8	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG

DNSC Scotia
SU 2 Gamma Scan Measurement Data

SU	Grid Cell	Date	Meter	S/N	Probe	S/N	Cal Due Date	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
2	D9	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
2	D10	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	E1	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	E2	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	E3	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	E4	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	E5	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
2	E6	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
2	E7	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	E8	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	E9	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	E10	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
2	F1	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,500	8,500	9,333	-833	CAG
2	F2	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	F3	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	F4	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	F5	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
2	F6	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	F7	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
2	F8	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	F9	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,500	9,333	-833	CAG
2	F10	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	G1	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
2	G2	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	G3	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	G4	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	G5	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	G6	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	G7	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
2	G8	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
2	G9	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
2	G10	26-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG

Average -876
Min -1,333
Max 1,667
Std Dev 745
Count 70

DNSC Scotia
SU 3 Alpha Scan Measurement Data

SU	Grid Cell	Date	Meter	Probe	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
3	A1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	A2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	A3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	350	373	-23	CAG
3	A4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	425	373	52	CAG
3	A5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
3	A6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
3	A7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
3	A8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	A9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	350	373	-23	CAG
3	A10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
3	B1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	B2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
3	B3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
3	B4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	375	373	2	CAG
3	B5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	400	373	27	CAG
3	B6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
3	B7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	350	373	-23	CAG
3	B8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
3	B9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	400	373	27	CAG
3	B10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
3	C1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
3	C2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	C3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
3	C4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
3	C5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
3	C6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	C7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	C8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
3	C9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
3	C10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	400	373	27	CAG
3	D1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
3	D2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
3	D3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	375	373	2	CAG
3	D4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
3	D5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	D6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	350	373	-23	CAG
3	D7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
3	D8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	D9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	D10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	N/A	N/A	373	N/A	CAG
3	E1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	400	373	27	CAG
3	E2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	350	373	-23	CAG
3	E3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	E4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	E5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	350	373	-23	CAG
3	E6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
3	E7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	E8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
3	E9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
3	E10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	N/A	N/A	373	N/A	CAG
3	F1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	375	373	2	CAG
3	F2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
3	F3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	F4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
3	F5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
3	F6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG

DNSC Scotia
SU 3 Alpha Scan Measurement Data

SU	Grid Cell	Date	Meter	Probe	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
3	F7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	350	373	-23	CAG
3	F8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
3	F9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
3	F10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	N/A	N/A	373	N/A	CAG
3	G1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
3	G2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	400	373	27	CAG
3	G3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
3	G4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
3	G5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	400	373	27	CAG
3	G6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
3	G7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	375	373	2	CAG
3	G8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	400	373	27	CAG
3	G9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
3	G10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	N/A	N/A	373	N/A	CAG

Average -5.6
Min -48.0
Max 52.0
Std Dev 24.7
Count 66

DNSC Scotia
SU 3 Gamma Scan Measurement Data

SU	Grid Cell	Date	Meter	S/N	Probe	S/N	Cal Due Date	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
3	A1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	9,333	1,667	CAG
3	A2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	9,333	1,667	CAG
3	A3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
3	A4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
3	A5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
3	A6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
3	A7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
3	A8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
3	A9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,000	9,333	667	CAG
3	A10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	9,333	1,667	CAG
3	B1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
3	B2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	B3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	B4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
3	B5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	B6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	B7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	B8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
3	B9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
3	B10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
3	C1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
3	C2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
3	C3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	C4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	C5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	C6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	C7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	C8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	C9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	C10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
3	D1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,000	9,333	667	CAG
3	D2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	D3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	D4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	D5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	D6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
3	D7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	D8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG

DNSC Scotia
SU 3 Gamma Scan Measurement Data

SU	Grid Cell	Date	Meter	S/N	Probe	S/N	Cal Due Date	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
3	D9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	D10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	N/A	N/A	9,333	N/A	CAG
3	E1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
3	E2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	E3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	E4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	E5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	E6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
3	E7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	E8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	E9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	E10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	N/A	N/A	9,333	N/A	CAG
3	F1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
3	F2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	F3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	F4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	F5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
3	F6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
3	F7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
3	F8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
3	F9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	F10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	N/A	N/A	9,333	N/A	CAG
3	G1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,000	9,333	667	CAG
3	G2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	G3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
3	G4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
3	G5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
3	G6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
3	G7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
3	G8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	6,000	8,000	9,333	-1,333	CAG
3	G9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
3	G10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	N/A	N/A	9,333	N/A	CAG

Average -666
Min -1,333
Max 1,667
Std Dev 865
Count 66

DN SC Scotia
SU 3 Alpha Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	1/29/2004	8:09:00	1090	Alpha	7.8	8.5	-0.7	43.6%	-1.5	SU 3
2	1/29/2004	8:11:00	1090	Alpha	6.5	8.5	-2.0	43.6%	-4.6	SU 3
3	1/29/2004	8:14:00	1090	Alpha	8.0	8.5	-0.5	43.6%	-1.1	SU 3
4	1/29/2004	8:16:00	1090	Alpha	8.5	8.5	0.0	43.6%	0.0	SU 3
5	1/29/2004	8:18:00	1090	Alpha	5.5	8.5	-3.0	43.6%	-6.9	SU 3
6	1/29/2004	8:21:00	1090	Alpha	8.5	8.5	0.0	43.6%	0.0	SU 3
7	1/29/2004	8:24:00	1090	Alpha	7.5	8.5	-1.0	43.6%	-2.3	SU 3
8	1/29/2004	8:26:00	1090	Alpha	5.0	8.5	-3.5	43.6%	-8.0	SU 3
9	1/29/2004	8:29:00	1090	Alpha	5.5	8.5	-3.0	43.6%	-6.9	SU 3
10	1/29/2004	8:31:00	1090	Alpha	9.5	8.5	1.0	43.6%	2.3	SU 3
11	1/29/2004	8:33:00	1090	Alpha	7.5	8.5	-1.0	43.6%	-2.3	SU 3
12	1/29/2004	8:36:00	1090	Alpha	5.5	8.5	-3.0	43.6%	-6.9	SU 3
13	1/29/2004	8:38:00	1090	Alpha	6.5	8.5	-2.0	43.6%	-4.6	SU 3
14	1/29/2004	8:40:00	1090	Alpha	7.5	8.5	-1.0	43.6%	-2.3	SU 3
15	1/29/2004	8:43:00	1090	Alpha	13.0	8.5	4.5	43.6%	10.3	SU 3
16	1/29/2004	8:45:00	1090	Alpha	13.0	8.5	4.5	43.6%	10.3	SU 3
17	1/29/2004	8:47:00	1090	Alpha	6.5	8.5	-2.0	43.6%	-4.6	SU 3
18	1/29/2004	8:50:00	1090	Alpha	7.5	8.5	-1.0	43.6%	-2.3	SU 3
19	1/29/2004	8:52:00	1090	Alpha	7.5	8.5	-1.0	43.6%	-2.3	SU 3
20	1/29/2004	8:54:00	1090	Alpha	7.5	8.5	-1.0	43.6%	-2.3	SU 3
21	1/29/2004	8:56:00	1090	Alpha	4.0	8.5	-4.5	43.6%	-10.3	SU 3
22	1/29/2004	8:59:00	1090	Alpha	7.5	8.5	-1.0	43.6%	-2.3	SU 3
23	1/29/2004	9:01:00	1090	Alpha	9.5	8.5	1.0	43.6%	2.3	SU 3
24	1/29/2004	9:03:00	1090	Alpha	6.0	8.5	-2.5	43.6%	-5.7	SU 3
25	1/29/2004	9:05:00	1090	Alpha	8.0	8.5	-0.5	43.6%	-1.1	SU 3
26	1/29/2004	9:08:00	1090	Alpha	7.0	8.5	-1.5	43.6%	-3.4	SU 3
27	1/29/2004	9:10:00	1090	Alpha	10.0	8.5	1.5	43.6%	3.4	SU 3
28	1/29/2004	9:12:00	1090	Alpha	10.0	8.5	1.5	43.6%	3.4	SU 3
29	1/29/2004	9:17:00	1090	Alpha	7.0	8.5	-1.5	43.6%	-3.4	SU 3
30	1/29/2004	9:19:00	1090	Alpha	3.0	8.5	-5.5	43.6%	-12.6	SU 3

Average 7.5
Min 3.0
Max 13.0
Std Dev 2.2
Count 30.0

Average -2.2
Min -12.6
Max 10.3
Std Dev 5.0
Count 30.0

DNSC Scotia
SU 3 Beta Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	1/29/2004	8:09:00	1090	Beta	285.0	251	34.0	14.0%	242.9	SU 3
2	1/29/2004	8:11:00	1090	Beta	244.0	251	-7.0	14.0%	-50.0	SU 3
3	1/29/2004	8:14:00	1090	Beta	256.0	251	5.0	14.0%	35.7	SU 3
4	1/29/2004	8:16:00	1090	Beta	233.0	251	-18.0	14.0%	-128.6	SU 3
5	1/29/2004	8:19:00	1090	Beta	274.0	251	23.0	14.0%	164.3	SU 3
6	1/29/2004	8:21:00	1090	Beta	270.0	251	19.0	14.0%	135.7	SU 3
7	1/29/2004	8:24:00	1090	Beta	262.0	251	11.0	14.0%	78.6	SU 3
8	1/29/2004	8:26:00	1090	Beta	243.0	251	-8.0	14.0%	-57.1	SU 3
9	1/29/2004	8:29:00	1090	Beta	258.0	251	7.0	14.0%	50.0	SU 3
10	1/29/2004	8:31:00	1090	Beta	243.0	251	-8.0	14.0%	-57.1	SU 3
11	1/29/2004	8:33:00	1090	Beta	242.0	251	-9.0	14.0%	-64.3	SU 3
12	1/29/2004	8:36:00	1090	Beta	242.0	251	-9.0	14.0%	-64.3	SU 3
13	1/29/2004	8:38:00	1090	Beta	243.0	251	-8.0	14.0%	-57.1	SU 3
14	1/29/2004	8:40:00	1090	Beta	245.0	251	-6.0	14.0%	-42.9	SU 3
15	1/29/2004	8:43:00	1090	Beta	222.0	251	-29.0	14.0%	-207.1	SU 3
16	1/29/2004	8:45:00	1090	Beta	247.0	251	-4.0	14.0%	-28.6	SU 3
17	1/29/2004	8:47:00	1090	Beta	249.0	251	-2.0	14.0%	-14.3	SU 3
18	1/29/2004	8:50:00	1090	Beta	239.0	251	-12.0	14.0%	-85.7	SU 3
19	1/29/2004	8:52:00	1090	Beta	265.0	251	14.0	14.0%	100.0	SU 3
20	1/29/2004	8:54:00	1090	Beta	265.0	251	14.0	14.0%	100.0	SU 3
21	1/29/2004	8:57:00	1090	Beta	283.0	251	32.0	14.0%	228.6	SU 3
22	1/29/2004	8:59:00	1090	Beta	281.0	251	30.0	14.0%	214.3	SU 3
23	1/29/2004	9:01:00	1090	Beta	265.0	251	14.0	14.0%	100.0	SU 3
24	1/29/2004	9:03:00	1090	Beta	287.0	251	36.0	14.0%	257.1	SU 3
25	1/29/2004	9:06:00	1090	Beta	262.0	251	11.0	14.0%	78.6	SU 3
26	1/29/2004	9:08:00	1090	Beta	274.0	251	23.0	14.0%	164.3	SU 3
27	1/29/2004	9:10:00	1090	Beta	275.0	251	24.0	14.0%	171.4	SU 3
28	1/29/2004	9:12:00	1090	Beta	265.0	251	14.0	14.0%	100.0	SU 3
29	1/29/2004	9:17:00	1090	Beta	231.0	251	-20.0	14.0%	-142.9	SU 3
30	1/29/2004	9:19:00	1090	Beta	161.0	251	-90.0	14.0%	-642.9	SU 3

Average 253.7
Min 161.0
Max 287.0
Std Dev 24.2
Count 30.0

Average 19.3
Min -642.9
Max 257.1
Std Dev 172.6
Count 30.0

DNSC Scotia
SU 3a Alpha Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	1/29/2004	9:22:00	1090	Alpha	7.5	13.7	-6.2	43.6%	-14.2	SU 3a
2	1/29/2004	9:24:00	1090	Alpha	5.5	13.7	-8.2	43.6%	-18.8	SU 3a
3	1/29/2004	9:27:00	1090	Alpha	8.5	13.7	-5.2	43.6%	-11.9	SU 3a
4	1/29/2004	9:29:00	1090	Alpha	7.2	13.7	-6.5	43.6%	-14.9	SU 3a
5	1/29/2004	9:35:00	1090	Alpha	8.0	13.7	-5.7	43.6%	-13.1	SU 3a
6	1/29/2004	9:38:00	1090	Alpha	10.4	13.7	-3.3	43.6%	-7.6	SU 3a
7	1/29/2004	9:40:00	1090	Alpha	9.5	13.7	-4.2	43.6%	-9.6	SU 3a
8	1/29/2004	9:42:00	1090	Alpha	8.0	13.7	-5.7	43.6%	-13.1	SU 3a
9	1/29/2004	9:45:00	1090	Alpha	13.5	13.7	-0.2	43.6%	-0.5	SU 3a
10	1/29/2004	9:48:00	1090	Alpha	8.0	13.7	-5.7	43.6%	-13.1	SU 3a
11	1/29/2004	9:51:00	1090	Alpha	10.0	13.7	-3.7	43.6%	-8.5	SU 3a
12	1/29/2004	9:53:00	1090	Alpha	10.5	13.7	-3.2	43.6%	-7.3	SU 3a
13	1/29/2004	9:56:00	1090	Alpha	10.5	13.7	-3.2	43.6%	-7.3	SU 3a
14	1/29/2004	9:58:00	1090	Alpha	8.0	13.7	-5.7	43.6%	-13.1	SU 3a
15	1/29/2004	10:00:00	1090	Alpha	9.5	13.7	-4.2	43.6%	-9.6	SU 3a
16	1/29/2004	10:03:00	1090	Alpha	11.5	13.7	-2.2	43.6%	-5.0	SU 3a
17	1/29/2004	10:05:00	1090	Alpha	10.5	13.7	-3.2	43.6%	-7.3	SU 3a
18	1/29/2004	10:07:00	1090	Alpha	13.0	13.7	-0.7	43.6%	-1.6	SU 3a
19	1/29/2004	10:09:00	1090	Alpha	14.0	13.7	0.3	43.6%	0.7	SU 3a
20	1/29/2004	10:12:00	1090	Alpha	9.5	13.7	-4.2	43.6%	-9.6	SU 3a
21	1/29/2004	10:14:00	1090	Alpha	12.5	13.7	-1.2	43.6%	-2.8	SU 3a
22	1/29/2004	10:16:00	1090	Alpha	10.5	13.7	-3.2	43.6%	-7.3	SU 3a
23	1/29/2004	10:18:00	1090	Alpha	5.5	13.7	-8.2	43.6%	-18.8	SU 3a
24	1/29/2004	10:21:00	1090	Alpha	8.5	13.7	-5.2	43.6%	-11.9	SU 3a
25	1/29/2004	10:23:00	1090	Alpha	7.5	13.7	-6.2	43.6%	-14.2	SU 3a
26	1/29/2004	10:25:00	1090	Alpha	8.0	13.7	-5.7	43.6%	-13.1	SU 3a
27	1/29/2004	10:28:00	1090	Alpha	10.0	13.7	-3.7	43.6%	-8.5	SU 3a
28	1/29/2004	10:30:00	1090	Alpha	10.0	13.7	-3.7	43.6%	-8.5	SU 3a
29	1/29/2004	10:32:00	1090	Alpha	10.0	13.7	-3.7	43.6%	-8.5	SU 3a
30	1/29/2004	10:34:00	1090	Alpha	12.0	13.7	-1.7	43.6%	-3.9	SU 3a

Average 9.6
Min 5.5
Max 14.0
Std Dev 2.1
Count 30.0

Average -9.4
Min -18.8
Max 0.7
Std Dev 4.8
Count 30.0

DNSC Scotia
SU 3a Beta Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	1/29/2004	9:22:00	1090	Beta	150.0	321.2	-171.2	14.0%	-1222.9	SU 3a
2	1/29/2004	9:24:00	1090	Beta	156.0	321.2	-165.2	14.0%	-1180.0	SU 3a
3	1/29/2004	9:29:00	1090	Beta	163.0	321.2	-158.2	14.0%	-1130.0	SU 3a
4	1/29/2004	9:35:00	1090	Beta	238.0	321.2	-83.2	14.0%	-594.3	SU 3a
5	1/29/2004	9:37:00	1090	Beta	329.0	321.2	7.8	14.0%	55.7	SU 3a
6	1/29/2004	9:40:00	1090	Beta	307.0	321.2	-14.2	14.0%	-101.4	SU 3a
7	1/29/2004	9:42:00	1090	Beta	311.0	321.2	-10.2	14.0%	-72.9	SU 3a
8	1/29/2004	9:45:00	1090	Beta	319.0	321.2	-2.2	14.0%	-15.7	SU 3a
9	1/29/2004	9:48:00	1090	Beta	301.0	321.2	-20.2	14.0%	-144.3	SU 3a
10	1/29/2004	9:51:00	1090	Beta	296.0	321.2	-25.2	14.0%	-180.0	SU 3a
11	1/29/2004	9:53:00	1090	Beta	318.0	321.2	-3.2	14.0%	-22.9	SU 3a
12	1/29/2004	9:56:00	1090	Beta	327.0	321.2	5.8	14.0%	41.4	SU 3a
13	1/29/2004	9:58:00	1090	Beta	312.0	321.2	-9.2	14.0%	-65.7	SU 3a
14	1/29/2004	10:00:00	1090	Beta	330.0	321.2	8.8	14.0%	62.9	SU 3a
15	1/29/2004	10:03:00	1090	Beta	324.0	321.2	2.8	14.0%	20.0	SU 3a
16	1/29/2004	10:05:00	1090	Beta	342.0	321.2	20.8	14.0%	148.6	SU 3a
17	1/29/2004	10:07:00	1090	Beta	315.0	321.2	-6.2	14.0%	-44.3	SU 3a
18	1/29/2004	10:09:00	1090	Beta	287.0	321.2	-34.2	14.0%	-244.3	SU 3a
19	1/29/2004	10:12:00	1090	Beta	328.0	321.2	6.8	14.0%	48.6	SU 3a
20	1/29/2004	10:14:00	1090	Beta	346.0	321.2	24.8	14.0%	177.1	SU 3a
21	1/29/2004	10:16:00	1090	Beta	336.0	321.2	14.8	14.0%	105.7	SU 3a
22	1/29/2004	10:18:00	1090	Beta	320.0	321.2	-1.2	14.0%	-8.6	SU 3a
23	1/29/2004	10:21:00	1090	Beta	319.0	321.2	-2.2	14.0%	-15.7	SU 3a
24	1/29/2004	10:23:00	1090	Beta	286.0	321.2	-35.2	14.0%	-251.4	SU 3a
25	1/29/2004	10:25:00	1090	Beta	316.0	321.2	-5.2	14.0%	-37.1	SU 3a
26	1/29/2004	10:28:00	1090	Beta	304.0	321.2	-17.2	14.0%	-122.9	SU 3a
27	1/29/2004	10:30:00	1090	Beta	297.0	321.2	-24.2	14.0%	-172.9	SU 3a
28	1/29/2004	10:32:00	1090	Beta	300.0	321.2	-21.2	14.0%	-151.4	SU 3a
29	1/29/2004	10:34:00	1090	Beta	302.0	321.2	-19.2	14.0%	-137.1	SU 3a

Average 295.8
Min 150.0
Max 346.0
Std Dev 51.5
Count 29.0

Average -181.2
Min -1222.9
Max 177.1
Std Dev 368.1
Count 29.0

DNSC Scotia
SU 3b Alpha Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	7:23:00	1090	Alpha	12.2	13.7	-1.5	43.6%	-3.4	SU 3b
2	6/30/2004	7:27:00	1090	Alpha	19.2	13.7	5.5	43.6%	12.6	SU 3b
3	6/30/2004	7:31:00	1090	Alpha	13.7	13.7	0.0	43.6%	0.0	SU 3b
4	6/30/2004	7:35:00	1090	Alpha	15.2	13.7	1.5	43.6%	3.4	SU 3b
5	6/30/2004	7:39:00	1090	Alpha	8.9	13.7	-4.8	43.6%	-11.1	SU 3b
6	6/30/2004	7:44:00	1090	Alpha	4.9	13.7	-8.8	43.6%	-20.2	SU 3b

Average 12.3
Min 4.9
Max 19.2
Std Dev 4.6
Count 6

Average -3.1
Min -20.2
Max 12.6
Std Dev 10.4
Count 6

DNSC Scotia
SU 3b Beta Static Measurements

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	7:23:00	1090	Beta	288.0	321.2	-33.2	14.0%	-237.1	SU 3b
2	6/30/2004	7:27:00	1090	Beta	292.0	321.2	-29.2	14.0%	-208.6	SU 3b
3	6/30/2004	7:31:00	1090	Beta	282.0	321.2	-39.2	14.0%	-280.0	SU 3b
4	6/30/2004	7:35:00	1090	Beta	286.0	321.2	-35.2	14.0%	-251.4	SU 3b
5	6/30/2004	7:39:00	1090	Beta	116.0	321.2	-205.2	14.0%	-1465.7	SU 3b
6	6/30/2004	7:44:00	1090	Beta	103.0	321.2	-218.2	14.0%	-1558.6	SU 3b

Average 227.8
Min 103.0
Max 292.0
Std Dev 83.8
Count 6

Average -666.9
Min -1,558.6
Max -208.6
Std Dev 598.6
Count 6

DNSC Scotia
SU 4 Alpha Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	1/26/2004	13:33:00	1160	Alpha	10.0	8.5	1.5	44.3%	3.4	SU 4
2	1/26/2004	13:35:00	1160	Alpha	14.0	8.5	5.5	44.3%	12.4	SU 4
3	1/26/2004	13:39:00	1160	Alpha	7.0	8.5	-1.5	44.3%	-3.4	SU 4
4	1/26/2004	13:41:00	1160	Alpha	12.5	8.5	4.0	44.3%	9.0	SU 4
5	1/26/2004	13:44:00	1160	Alpha	11.5	8.5	3.0	44.3%	6.8	SU 4
6	1/26/2004	13:47:00	1160	Alpha	9.0	8.5	0.5	44.3%	1.1	SU 4
7	1/26/2004	13:52:00	1160	Alpha	9.5	8.5	1.0	44.3%	2.3	SU 4
8	1/26/2004	13:54:00	1160	Alpha	8.0	8.5	-0.5	44.3%	-1.1	SU 4
9	1/26/2004	13:56:00	1160	Alpha	11.0	8.5	2.5	44.3%	5.6	SU 4
10	1/26/2004	13:59:00	1160	Alpha	13.0	8.5	4.5	44.3%	10.2	SU 4
11	1/26/2004	14:02:00	1160	Alpha	15.0	8.5	6.5	44.3%	14.7	SU 4
12	1/26/2004	14:04:00	1160	Alpha	11.5	8.5	3.0	44.3%	6.8	SU 4
13	1/26/2004	14:07:00	1160	Alpha	8.0	8.5	-0.5	44.3%	-1.1	SU 4
14	1/26/2004	14:10:00	1160	Alpha	12.0	8.5	3.5	44.3%	7.9	SU 4
15	1/26/2004	14:12:00	1160	Alpha	11.0	8.5	2.5	44.3%	5.6	SU 4
16	1/26/2004	14:15:00	1160	Alpha	9.0	8.5	0.5	44.3%	1.1	SU 4
17	1/26/2004	14:17:00	1160	Alpha	8.0	8.5	-0.5	44.3%	-1.1	SU 4
18	1/26/2004	14:20:00	1160	Alpha	13.5	8.5	5.0	44.3%	11.3	SU 4
19	1/26/2004	14:22:00	1160	Alpha	6.5	8.5	-2.0	44.3%	-4.5	SU 4
20	1/26/2004	14:25:00	1160	Alpha	10.5	8.5	2.0	44.3%	4.5	SU 4
21	1/26/2004	14:28:00	1160	Alpha	10.5	8.5	2.0	44.3%	4.5	SU 4
22	1/26/2004	14:30:00	1160	Alpha	14.5	8.5	6.0	44.3%	13.5	SU 4
23	1/26/2004	14:33:00	1160	Alpha	15.5	8.5	7.0	44.3%	15.8	SU 4
24	1/26/2004	14:35:00	1160	Alpha	13.0	8.5	4.5	44.3%	10.2	SU 4
25	1/26/2004	14:38:00	1160	Alpha	10.0	8.5	1.5	44.3%	3.4	SU 4
26	1/26/2004	14:40:00	1160	Alpha	12.5	8.5	4.0	44.3%	9.0	SU 4
27	1/26/2004	14:43:00	1160	Alpha	10.0	8.5	1.5	44.3%	3.4	SU 4
28	1/26/2004	14:45:00	1160	Alpha	14.5	8.5	6.0	44.3%	13.5	SU 4
29	1/26/2004	14:48:00	1160	Alpha	9.5	8.5	1.0	44.3%	2.3	SU 4
30	1/26/2004	14:50:00	1160	Alpha	12.0	8.5	3.5	44.3%	7.9	SU 4

Average 11.1
Min 6.5
Max 15.5
Std Dev 2.4
Count 30.0

Average 5.8
Min -4.5
Max 15.8
Std Dev 5.4
Count 30.0

DNSC Scotia
SU 4 Beta Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	1/26/2004	13:33:00	1160	Beta	292.0	251	41.0	15.0%	273.3	SU 4
2	1/26/2004	13:35:00	1160	Beta	269.0	251	18.0	15.0%	120.0	SU 4
3	1/26/2004	13:39:00	1160	Beta	275.0	251	24.0	15.0%	160.0	SU 4
4	1/26/2004	13:41:00	1160	Beta	276.0	251	25.0	15.0%	166.7	SU 4
5	1/26/2004	13:44:00	1160	Beta	300.0	251	49.0	15.0%	326.7	SU 4
6	1/26/2004	13:47:00	1160	Beta	276.0	251	25.0	15.0%	166.7	SU 4
7	1/26/2004	13:51:00	1160	Beta	283.0	251	32.0	15.0%	213.3	SU 4
8	1/26/2004	13:54:00	1160	Beta	283.0	251	32.0	15.0%	213.3	SU 4
9	1/26/2004	13:56:00	1160	Beta	302.0	251	51.0	15.0%	340.0	SU 4
10	1/26/2004	13:59:00	1160	Beta	294.0	251	43.0	15.0%	286.7	SU 4
11	1/26/2004	14:02:00	1160	Beta	281.0	251	30.0	15.0%	200.0	SU 4
12	1/26/2004	14:04:00	1160	Beta	268.0	251	17.0	15.0%	113.3	SU 4
13	1/26/2004	14:07:00	1160	Beta	276.0	251	25.0	15.0%	166.7	SU 4
14	1/26/2004	14:10:00	1160	Beta	254.0	251	3.0	15.0%	20.0	SU 4
15	1/26/2004	14:12:00	1160	Beta	283.0	251	32.0	15.0%	213.3	SU 4
16	1/26/2004	14:15:00	1160	Beta	294.0	251	43.0	15.0%	286.7	SU 4
17	1/26/2004	14:17:00	1160	Beta	290.0	251	39.0	15.0%	260.0	SU 4
18	1/26/2004	14:20:00	1160	Beta	274.0	251	23.0	15.0%	153.3	SU 4
19	1/26/2004	14:22:00	1160	Beta	282.0	251	31.0	15.0%	206.7	SU 4
20	1/26/2004	14:25:00	1160	Beta	307.0	251	56.0	15.0%	373.3	SU 4
21	1/26/2004	14:27:00	1160	Beta	278.0	251	27.0	15.0%	180.0	SU 4
22	1/26/2004	14:30:00	1160	Beta	274.0	251	23.0	15.0%	153.3	SU 4
23	1/26/2004	14:33:00	1160	Beta	287.0	251	36.0	15.0%	240.0	SU 4
24	1/26/2004	14:35:00	1160	Beta	269.0	251	18.0	15.0%	120.0	SU 4
25	1/26/2004	14:38:00	1160	Beta	309.0	251	58.0	15.0%	386.7	SU 4
26	1/26/2004	14:40:00	1160	Beta	297.0	251	46.0	15.0%	306.7	SU 4
27	1/26/2004	14:43:00	1160	Beta	299.0	251	48.0	15.0%	320.0	SU 4
28	1/26/2004	14:45:00	1160	Beta	284.0	251	33.0	15.0%	220.0	SU 4
29	1/26/2004	14:48:00	1160	Beta	293.0	251	42.0	15.0%	280.0	SU 4
30	1/26/2004	14:50:00	1160	Beta	332.0	251	81.0	15.0%	540.0	SU 4

Average 286.0
Min 254.0
Max 332.0
Std Dev 15.1
Count 30.0

Average 233.6
Min 20.0
Max 540.0
Std Dev 100.6
Count 30.0

DNSC Scotia
SU 4a Alpha Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	1/29/2004	6:54:00	1090	Alpha	13.0	13.7	-0.7	43.6%	-1.6	SU 4a
2	1/29/2004	6:56:00	1090	Alpha	10.5	13.7	-3.2	43.6%	-7.3	SU 4a
3	1/29/2004	6:59:00	1090	Alpha	10.5	13.7	-3.2	43.6%	-7.3	SU 4a
4	1/29/2004	7:01:00	1090	Alpha	13.0	13.7	-0.7	43.6%	-1.6	SU 4a
5	1/29/2004	7:04:00	1090	Alpha	8.0	13.7	-5.7	43.6%	-13.1	SU 4a
6	1/29/2004	7:06:00	1090	Alpha	14.0	13.7	0.3	43.6%	0.7	SU 4a
7	1/29/2004	7:09:00	1090	Alpha	11.5	13.7	-2.2	43.6%	-5.0	SU 4a
8	1/29/2004	7:11:00	1090	Alpha	10.5	13.7	-3.2	43.6%	-7.3	SU 4a
9	1/29/2004	7:14:00	1090	Alpha	14.0	13.7	0.3	43.6%	0.7	SU 4a
10	1/29/2004	7:16:00	1090	Alpha	9.0	13.7	-4.7	43.6%	-10.8	SU 4a
11	1/29/2004	7:19:00	1090	Alpha	12.0	13.7	-1.7	43.6%	-3.9	SU 4a
12	1/29/2004	7:21:00	1090	Alpha	13.0	13.7	-0.7	43.6%	-1.6	SU 4a
13	1/29/2004	7:23:00	1090	Alpha	11.5	13.7	-2.2	43.6%	-5.0	SU 4a
14	1/29/2004	7:26:00	1090	Alpha	11.0	13.7	-2.7	43.6%	-6.2	SU 4a
15	1/29/2004	7:28:00	1090	Alpha	8.5	13.7	-5.2	43.6%	-11.9	SU 4a
16	1/29/2004	7:30:00	1090	Alpha	11.5	13.7	-2.2	43.6%	-5.0	SU 4a
17	1/29/2004	7:34:00	1090	Alpha	11.0	13.7	-2.7	43.6%	-6.2	SU 4a
18	1/29/2004	7:37:00	1090	Alpha	12.0	13.7	-1.7	43.6%	-3.9	SU 4a
19	1/29/2004	7:39:00	1090	Alpha	7.0	13.7	-6.7	43.6%	-15.4	SU 4a
20	1/29/2004	7:41:00	1090	Alpha	9.0	13.7	-4.7	43.6%	-10.8	SU 4a
21	1/29/2004	7:44:00	1090	Alpha	14.5	13.7	0.8	43.6%	1.8	SU 4a
22	1/29/2004	7:46:00	1090	Alpha	11.0	13.7	-2.7	43.6%	-6.2	SU 4a
23	1/29/2004	7:49:00	1090	Alpha	12.0	13.7	-1.7	43.6%	-3.9	SU 4a
24	1/29/2004	7:51:00	1090	Alpha	8.0	13.7	-5.7	43.6%	-13.1	SU 4a
25	1/29/2004	7:53:00	1090	Alpha	9.0	13.7	-4.7	43.6%	-10.8	SU 4a
26	1/29/2004	7:56:00	1090	Alpha	8.5	13.7	-5.2	43.6%	-11.9	SU 4a
27	1/29/2004	7:58:00	1090	Alpha	13.0	13.7	-0.7	43.6%	-1.6	SU 4a
28	1/29/2004	8:00:00	1090	Alpha	14.5	13.7	0.8	43.6%	1.8	SU 4a
29	1/29/2004	8:03:00	1090	Alpha	14.0	13.7	0.3	43.6%	0.7	SU 4a

Average 11.2
Min 7.0
Max 14.5
Std Dev 2.1
Count 29.0

Average -5.7
Min -15.4
Max 1.8
Std Dev 4.8
Count 29.0

DNSC Scotia
SU 4a Beta Static Measurement Data

Sample Location	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	1/29/2004	6:54:00	1090	Beta	305.0	321.2	-16.2	14.0%	-115.7	SU 4a
2	1/29/2004	6:57:00	1090	Beta	283.0	321.2	-38.2	14.0%	-272.9	SU 4a
3	1/29/2004	6:59:00	1090	Beta	328.0	321.2	6.8	14.0%	48.6	SU 4a
4	1/29/2004	7:01:00	1090	Beta	315.0	321.2	-6.2	14.0%	-44.3	SU 4a
5	1/29/2004	7:04:00	1090	Beta	323.0	321.2	1.8	14.0%	12.9	SU 4a
6	1/29/2004	7:06:00	1090	Beta	338.0	321.2	16.8	14.0%	120.0	SU 4a
7	1/29/2004	7:09:00	1090	Beta	317.0	321.2	-4.2	14.0%	-30.0	SU 4a
8	1/29/2004	7:12:00	1090	Beta	335.0	321.2	13.8	14.0%	98.6	SU 4a
9	1/29/2004	7:14:00	1090	Beta	296.0	321.2	-25.2	14.0%	-180.0	SU 4a
10	1/29/2004	7:16:00	1090	Beta	312.0	321.2	-9.2	14.0%	-65.7	SU 4a
11	1/29/2004	7:19:00	1090	Beta	308.0	321.2	-13.2	14.0%	-94.3	SU 4a
12	1/29/2004	7:21:00	1090	Beta	298.0	321.2	-23.2	14.0%	-165.7	SU 4a
13	1/29/2004	7:24:00	1090	Beta	315.0	321.2	-6.2	14.0%	-44.3	SU 4a
14	1/29/2004	7:26:00	1090	Beta	322.0	321.2	0.8	14.0%	5.7	SU 4a
15	1/29/2004	7:28:00	1090	Beta	327.0	321.2	5.8	14.0%	41.4	SU 4a
16	1/29/2004	7:31:00	1090	Beta	318.0	321.2	-3.2	14.0%	-22.9	SU 4a
17	1/29/2004	7:34:00	1090	Beta	271.0	321.2	-50.2	14.0%	-358.6	SU 4a
18	1/29/2004	7:37:00	1090	Beta	318.0	321.2	-3.2	14.0%	-22.9	SU 4a
19	1/29/2004	7:39:00	1090	Beta	317.0	321.2	-4.2	14.0%	-30.0	SU 4a
20	1/29/2004	7:41:00	1090	Beta	314.0	321.2	-7.2	14.0%	-51.4	SU 4a
21	1/29/2004	7:44:00	1090	Beta	341.0	321.2	19.8	14.0%	141.4	SU 4a
22	1/29/2004	7:46:00	1090	Beta	337.0	321.2	15.8	14.0%	112.9	SU 4a
23	1/29/2004	7:49:00	1090	Beta	340.0	321.2	18.8	14.0%	134.3	SU 4a
24	1/29/2004	7:51:00	1090	Beta	330.0	321.2	8.8	14.0%	62.9	SU 4a
25	1/29/2004	7:53:00	1090	Beta	309.0	321.2	-12.2	14.0%	-87.1	SU 4a
26	1/29/2004	7:56:00	1090	Beta	344.0	321.2	22.8	14.0%	162.9	SU 4a
27	1/29/2004	7:58:00	1090	Beta	326.0	321.2	4.8	14.0%	34.3	SU 4a
28	1/29/2004	8:00:00	1090	Beta	315.0	321.2	-6.2	14.0%	-44.3	SU 4a
29	1/29/2004	8:03:00	1090	Beta	322.0	321.2	0.8	14.0%	5.7	SU 4a

Average 318.1
Min 271.0
Max 344.0
Std Dev 16.5
Count 29.0

Average -22.4
Min -358.6
Max 162.9
Std Dev 118.1
Count 29.0

DNSC Scotia
SU 4b Alpha Static Measurement Data

Location No.	Log Date	Log Time	Probe S/N	Channel Type	Gross cpm	Background	Net cpm	Efficiency	dpm	Survey Unit
1	6/30/2004	7:49:00	1090	Alpha	22.2	13.7	8.5	43.6%	19.5	SU 4b
2	6/30/2004	7:55:00	1090	Alpha	12.2	13.7	-1.5	43.6%	-3.4	SU 4b
3	6/30/2004	7:58:00	1090	Alpha	15.7	13.7	2.0	43.6%	4.6	SU 4b
4	6/30/2004	8:03:00	1090	Alpha	14.2	13.7	0.5	43.6%	1.1	SU 4b
5	6/30/2004	8:07:00	1090	Alpha	9.9	13.7	-3.8	43.6%	-8.8	SU 4b
6	6/30/2004	8:11:00	1090	Alpha	4.9	13.7	-8.8	43.6%	-20.2	SU 4b

Average 13.2
Min 4.9
Max 22.2
Std Dev 5.3
Count 6

Average -1.2
Min -20.2
Max 19.5
Std Dev 12.2
Count 6

DNSC Scotia
SU 4 Alpha Scan Measurement Data

SU	Grid Cell	Date	Meter	Probe	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
3	A1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	325	373	-48	CAG
3	A2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	300	373	-73	CAG
3	A3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	125	250	373	-123	CAG
3	A4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	250	373	-123	CAG
3	A5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	375	373	2	CAG
3	A6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	400	373	27	CAG
3	A7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	350	373	-23	CAG
3	A8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	325	373	-48	CAG
3	A9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	350	373	-23	CAG
3	A10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	225	400	373	27	CAG
3	B1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	375	373	2	CAG
3	B2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	250	373	-123	CAG
3	B3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	300	373	-73	CAG
3	B4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	275	373	-98	CAG
3	B5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	400	373	27	CAG
3	B6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	400	373	27	CAG
3	B7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	325	373	-48	CAG
3	B8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	300	373	-73	CAG
3	B9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	325	373	-48	CAG
3	B10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	400	373	27	CAG
3	C1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	275	373	-98	CAG
3	C2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	225	325	373	-48	CAG
3	C3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	275	373	-98	CAG
3	C4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	300	373	-73	CAG
3	C5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	425	373	52	CAG
3	C6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	400	373	27	CAG
3	C7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	300	373	-73	CAG
3	C8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	325	373	-48	CAG
3	C9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	300	373	-73	CAG
3	C10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	300	373	-73	CAG
3	D1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	300	373	-73	CAG
3	D2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	300	373	-73	CAG
3	D3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	350	373	-23	CAG
3	D4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	325	373	-48	CAG
3	D5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	350	373	-23	CAG
3	D6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	350	373	-23	CAG
3	D7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	300	373	-73	CAG
3	D8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	300	373	-73	CAG
3	D9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	300	373	-73	CAG
3	D10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	400	373	27	CAG
3	E1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	325	373	-48	CAG
3	E2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	375	373	2	CAG
3	E3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	250	325	373	-48	CAG
3	E4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	350	373	-23	CAG
3	E5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	275	373	-98	CAG
3	E6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	350	373	-23	CAG
3	E7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	300	373	-73	CAG
3	E8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	225	350	373	-23	CAG
3	E9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	375	373	2	CAG
3	E10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	275	373	-98	CAG
3	F1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	400	373	27	CAG
3	F2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	275	373	-98	CAG
3	F3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	300	373	-73	CAG
3	F4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	325	373	-48	CAG
3	F5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	225	373	-148	CAG
3	F6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	325	373	-48	CAG

DNSC Scotia
SU 4 Alpha Scan Measurement Data

SU	Grid Cell	Date	Meter	Probe	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
3	F7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	350	373	-23	CAG
3	F8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	250	375	373	2	CAG
3	F9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	400	373	27	CAG
3	F10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	350	373	-23	CAG
3	G1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	300	373	-73	CAG
3	G2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	275	373	-98	CAG
3	G3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	225	373	-148	CAG
3	G4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	275	373	-98	CAG
3	G5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	375	373	2	CAG
3	G6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	400	373	27	CAG
3	G7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	350	373	-23	CAG
3	G8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	325	373	-48	CAG
3	G9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	425	373	52	CAG
3	G10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	325	373	-48	CAG
3	H1	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	275	373	-98	CAG
3	H2	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	250	373	-123	CAG
3	H3	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	300	373	-73	CAG
3	H4	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	425	373	52	CAG
3	H5	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	350	373	-23	CAG
3	H6	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	375	373	2	CAG
3	H7	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	325	373	-48	CAG
3	H8	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	150	350	373	-23	CAG
3	H9	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	175	325	373	-48	CAG
3	H10	27-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	200	400	373	27	CAG

Average -42.4
Min -148.0
Max 52.0
Std Dev 48.7
Count 80

DNSC Scotia
SU 4 Gamma Scan Measurement Data

SU	Grid Cell	Date	Meter	S/N	Probe	S/N	Cal Due Date	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
4	A1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	9,333	1,667	CAG
4	A2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
4	A3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	A4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	A5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	A6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	A7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	A8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	A9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	A10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	9,333	1,667	CAG
4	B1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	B2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	B3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	B4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	B5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	B6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	B7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	B8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
4	B9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	B10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,000	9,333	667	CAG
4	C1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	8,000	9,333	-1,333	CAG
4	C2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	C3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	C4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	C5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	C6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	C7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	C8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	C9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	C10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	D1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
4	D2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
4	D3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	D4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
4	D5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	D6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	D7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG

DNSC Scotia
SU 4 Gamma Scan Measurement Data

SU	Grid Cell	Date	Meter	S/N	Probe	S/N	Cal Due Date	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
4	D8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	D9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	D10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
4	E1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	E2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	E3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	E4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	E5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	E6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	E7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	E8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	E9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	E10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	F1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	F2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	F3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	F4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	F5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	F6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
4	F7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
4	F8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	F9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	F10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,000	9,333	667	CAG
4	G1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	G2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	G3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	G4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	G5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	G6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	G7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	G8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
4	G9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	G10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,000	9,333	667	CAG
4	H1	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	H2	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	H3	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,000	9,333	667	CAG
4	H4	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG

DNSC Scotia
SU 4 Gamma Scan Measurement Data

SU	Grid Cell	Date	Meter	S/N	Probe	S/N	Cal Due Date	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
4	H5	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
4	H6	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	H7	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	H8	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	H9	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
4	H10	27-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,000	9,333	667	CAG

Average -458
Min -1,333
Max 1,667
Std Dev 714
Count 80

DNSC Scotia
SU 5 Alpha Scan Measurement Data

SU	Grid Cell	Date	Meter	Probe	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
5	A1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	A2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
5	A3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
5	A4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
5	A5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	425	373	52	CAG
5	A6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	425	373	52	CAG
5	A7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
5	A8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
5	A9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
5	A10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	B1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	300	373	-73	CAG
5	B2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	300	373	-73	CAG
5	B3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	250	300	373	-73	CAG
5	B4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
5	B5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	300	373	-73	CAG
5	B6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
5	B7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	B8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	B9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	B10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	C1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
5	C2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	C3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
5	C4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	C5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
5	C6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	C7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
5	C8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
5	C9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
5	C10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
5	D1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
5	D2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
5	D3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	D4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
5	D5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	D6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	D7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
5	D8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	D9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
5	D10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	N/A	N/A	373	N/A	CAG
5	E1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	E2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
5	E3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	E4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	300	373	-73	CAG
5	E5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	375	373	2	CAG
5	E6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
5	E7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	E8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	E9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
5	E10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	N/A	N/A	373	N/A	CAG
5	F1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	400	373	27	CAG
5	F2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	375	373	2	CAG
5	F3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
5	F4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	375	373	2	CAG
5	F5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	375	373	2	CAG
5	F6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG

DNSC Scotia
SU 5 Alpha Scan Measurement Data

SU	Grid Cell	Date	Meter	Probe	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
5	F7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
5	F8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
5	F9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	F10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	N/A	N/A	373	N/A	CAG
5	G1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
5	G2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	425	373	52	CAG
5	G3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
5	G4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	400	373	27	CAG
5	G5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	375	373	2	CAG
5	G6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	400	373	27	CAG
5	G7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
5	G8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
5	G9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
5	G10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	N/A	N/A	373	N/A	CAG

Average -11.6
Min -73.0
Max 52.0
Std Dev 31.5
Count 66

DNSC Scotia
SU 5 Gamma Scan Measurement Data

SU	Grid Cell	Date	Meter	S/N	Probe	S/N	Cal Due Date	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
5	A1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	10,000	11,000	9,333	1,667	CAG
5	A2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,000	9,333	667	CAG
5	A3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
5	A4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	A5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
5	A6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	A7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,500	9,333	167	CAG
5	A8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	A9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	A10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
5	B1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
5	B2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
5	B3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	B4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	B5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	B6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	B7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	B8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	B9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	B10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
5	C1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
5	C2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	C3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	C4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	C5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	C6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	C7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	C8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	C9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	C10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	D1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
5	D2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	D3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	D4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	D5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	D6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	D7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	D8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	D9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	D10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	N/A	N/A	9,333	N/A	CAG

DNSC Scotia
SU 5 Gamma Scan Measurement Data

SU	Grid Cell	Date	Meter	S/N	Probe	S/N	Cal Due Date	Type of Survey	Min	Max	Bkqd	Net cpm	Surveyor
5	E1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
5	E2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	E3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	E4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	E5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	E6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	E7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	E8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	7,500	9,333	-1,833	CAG
5	E9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	E10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	N/A	N/A	9,333	N/A	CAG
5	F1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,000	9,333	667	CAG
5	F2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
5	F3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	F4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	F5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	F6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	F7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	F8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	F9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	F10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	N/A	N/A	9,333	N/A	CAG
5	G1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	10,000	11,000	9,333	1,667	CAG
5	G2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	G3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	G4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
5	G5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
5	G6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	G7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	G8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
5	G9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
5	G10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	N/A	N/A	9,333	N/A	CAG

Average -575
Min -1,833
Max 1,667
Std Dev 818
Count 66

DNSC Scotia
SU 6 Alpha Scan Measurement Data

SU	Grid Cell	Date	Meter	Probe	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
6	A1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	400	500	373	127	CAG
6	A2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	375	500	373	127	CAG
6	A3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	A4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	300	373	-73	CAG
6	A5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	400	400	373	27	CAG
6	A6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	500	373	127	CAG
6	A7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
6	A8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
6	A9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
6	A10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	400	500	373	127	CAG
6	B1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	400	373	27	CAG
6	B2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	300	373	-73	CAG
6	B3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	B4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
6	B5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
6	B6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
6	B7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	B8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
6	B9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	B10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	400	373	27	CAG
6	C1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
6	C2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
6	C3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
6	C4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	C5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
6	C6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	300	373	-73	CAG
6	C7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
6	C8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	C9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	C10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
6	D1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	D2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
6	D3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	D4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	D5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	300	373	-73	CAG
6	D6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	300	373	-73	CAG
6	D7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	D8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	375	373	2	CAG
6	D9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
6	D10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
6	E1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	E2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	E3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	350	373	-23	CAG
6	E4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	E5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
6	E6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	350	373	-23	CAG
6	E7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	325	373	-48	CAG
6	E8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
6	E9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	375	373	2	CAG
6	E10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
6	F1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	425	373	52	CAG
6	F2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	425	373	52	CAG
6	F3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
6	F4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	375	373	2	CAG
6	F5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
6	F6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG

DNSC Scotia
SU 6 Alpha Scan Measurement Data

SU	Grid Cell	Date	Meter	Probe	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
6	F7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
6	F8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
6	F9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	275	325	373	-48	CAG
6	F10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
6	G1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	G2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
6	G3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	G4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	G5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	G6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	375	373	2	CAG
6	G7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	G8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
6	G9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
6	G10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
6	H1	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	375	400	373	27	CAG
6	H2	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	350	400	373	27	CAG
6	H3	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
6	H4	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
6	H5	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	H6	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	325	375	373	2	CAG
6	H7	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	350	373	-23	CAG
6	H8	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	375	373	2	CAG
6	H9	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	300	400	373	27	CAG
6	H10	28-Jan-04	Ludlum 2221	Ludlum 239-1F	Alpha	375	425	373	52	CAG

Average -3.3
Min -73.0
Max 127.0
Std Dev 43.8
Count 80

DNSC Scotia
SU 6 Gamma Scan Measurement Data

SU	Grid Cell	Date	Meter	S/N	Probe	S/N	Cal Due Date	Type of Survey	Min	Max	Bkqd	Net cpm	Surveyor
6	A1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	9,333	1,667	CAG
6	A2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	9,000	9,333	-333	CAG
6	A3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
6	A4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	7,000	9,333	-2,333	CAG
6	A5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	A6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	A7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	7,000	9,333	-2,333	CAG
6	A8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	A9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
6	A10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	9,333	1,667	CAG
6	B1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	B2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	7,000	9,333	-2,333	CAG
6	B3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	B4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	B5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	B6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	B7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	B8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	B9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
6	B10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,500	9,333	1,167	CAG
6	C1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
6	C2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	C3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	C4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	C5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	C6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	8,000	9,333	-1,333	CAG
6	C7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	C8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	C9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	C10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
6	D1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	D2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	8,000	9,333	-1,333	CAG
6	D3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	D4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	D5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	D6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	D7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	D8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	D9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,500	9,000	9,333	-333	CAG
6	D10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
6	E1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
6	E2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	8,000	9,333	-1,333	CAG
6	E3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	8,000	9,333	-1,333	CAG

**DNSC Scotia
SU 6 Gamma Scan Measurement Data**

SU	Grid Cell	Date	Meter	S/N	Probe	S/N	Cal Due Date	Type of Survey	Min	Max	Bkgd	Net cpm	Surveyor
6	E4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	7,500	9,333	-1,833	CAG
6	E5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	E6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	E7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	E8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	7,500	9,333	-1,833	CAG
6	E9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
6	E10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
6	F1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
6	F2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,500	8,500	9,333	-833	CAG
6	F3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	F4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	F5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	F6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	F7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	9,000	9,333	-333	CAG
6	F8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	8,000	9,333	-1,333	CAG
6	F9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,500	9,333	-833	CAG
6	F10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
6	G1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,500	9,333	167	CAG
6	G2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	8,000	9,333	-1,333	CAG
6	G3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	G4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,500	9,333	-833	CAG
6	G5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,500	9,333	-833	CAG
6	G6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
6	G7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	G8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	7,000	8,000	9,333	-1,333	CAG
6	G9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
6	G10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
6	H1	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	9,333	1,667	CAG
6	H2	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	10,000	9,333	667	CAG
6	H3	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	9,000	9,333	-333	CAG
6	H4	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
6	H5	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
6	H6	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	9,000	9,333	-333	CAG
6	H7	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
6	H8	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
6	H9	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	8,000	10,000	9,333	667	CAG
6	H10	28-Jan-04	Ludlum 2350-1	175858	Ludlum 44-10	PR 182331	27-Sep-04	Gamma	9,000	11,000	9,333	1,667	CAG

Average -733
Min -2,333
Max 1,667
Std Dev 950
Count 80

Appendix D
Swipe Data

DNSC Scotia
Alpha/Beta Swipe Measurement Data
SUs 2 through 6 (including subunits a and b)

Date	Time	SU	Samp ID	Gross Alpha Counts	Alpha Bkg	Alpha Net CPM	Alpha Eff (%)	Alpha Activity (dpm)	Alpha MDA	Gross Beta Counts	Beta Bkg	Beta Net CPM	Beta Eff (%)	Beta Activity (dpm)	Beta MDA	Count Time (secs)	S/N
2/3/2004	12:59	2	1	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:00	2	2	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:02	2	3	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	13:03	2	4	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	13:04	2	5	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:06	2	6	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	13:07	2	7	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	13:09	2	8	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:10	2	9	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:12	2	10	0	0.03	-0.03	29.1%	-0.1	0.12	4	1.27	2.733	42.5%	6.43	0.16	60	9025
2/3/2004	13:13	2	11	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:15	2	12	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	13:16	2	13	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:18	2	14	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	13:19	2	15	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	13:21	2	16	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:22	2	17	0	0.03	-0.03	29.1%	-0.1	0.12	4	1.27	2.733	42.5%	6.43	0.16	60	9025
2/3/2004	13:24	2	18	1	0.03	0.97	29.1%	3.3	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	13:25	2	19	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:26	2	20	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	13:28	2	21	0	0.03	-0.03	29.1%	-0.1	0.12	3	1.27	1.733	42.5%	4.08	0.16	60	9025
2/3/2004	13:29	2	22	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:31	2	23	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	13:32	2	24	0	0.03	-0.03	29.1%	-0.1	0.12	3	1.27	1.733	42.5%	4.08	0.16	60	9025
2/3/2004	13:34	2	25	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:35	2	26	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:37	2	27	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	13:38	2	28	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:40	2	29	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:41	2	30	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	13:44	3	1	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:46	3	2	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:47	3	3	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025

DNSC Scotia
Alpha/Beta Swipe Measurement Data
SUs 2 through 6 (including subunits a and b)

Date	Time	SU	Samp ID	Gross Alpha Counts	Alpha Bkg	Alpha Net CPM	Alpha Eff (%)	Alpha Activity (dpm)	Alpha MDA	Gross Beta Counts	Beta Bkg	Beta Net CPM	Beta Eff (%)	Beta Activity (dpm)	Beta MDA	Count Time (secs)	S/N
2/3/2004	13:49	3	4	1	0.03	0.97	29.1%	3.3	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:50	3	5	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:52	3	6	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:53	3	7	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	13:55	3	8	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	13:56	3	9	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	13:57	3	10	1	0.03	0.97	29.1%	3.3	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	13:59	3	11	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:00	3	12	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	14:02	3	13	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	14:03	3	14	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:05	3	15	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:06	3	16	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	14:08	3	17	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:09	3	18	1	0.03	0.97	29.1%	3.3	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	14:11	3	19	0	0.03	-0.03	29.1%	-0.1	0.12	3	1.27	1.733	42.5%	4.08	0.16	60	9025
2/3/2004	14:12	3	20	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:14	3	21	1	0.03	0.97	29.1%	3.3	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:15	3	22	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	14:17	3	23	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	14:18	3	24	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:19	3	25	1	0.03	0.97	29.1%	3.3	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	14:21	3	26	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:22	3	27	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:24	3	28	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:25	3	29	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:27	3	30	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/4/2004	10:57	4	1	0	0.17	-0.17	30.2%	-0.6	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025
2/4/2004	11:00	4	2	0	0.17	-0.17	30.2%	-0.6	0.14	1.3	0.50	0.833	34.5%	2.42	0.16	180	9025
2/4/2004	11:04	4	3	0	0.17	-0.17	30.2%	-0.6	0.14	1.7	0.50	1.167	34.5%	3.39	0.16	180	9025
2/4/2004	11:07	4	4	0	0.17	-0.17	30.2%	-0.6	0.14	0.3	0.50	-0.167	34.5%	-0.48	0.16	180	9025
2/4/2004	11:11	4	5	0	0.17	-0.17	30.2%	-0.6	0.14	1.7	0.50	1.167	34.5%	3.39	0.16	180	9025
2/4/2004	11:14	4	6	0.333	0.17	0.17	30.2%	0.5	0.14	0.7	0.50	0.167	34.5%	0.48	0.16	180	9025

DNSC Scotia
Alpha/Beta Swipe Measurement Data
SUs 2 through 6 (including subunits a and b)

Date	Time	SU	Samp ID	Gross Alpha Counts	Alpha Bkg	Alpha Net CPM	Alpha Eff (%)	Alpha Activity (dpm)	Alpha MDA	Gross Beta Counts	Beta Bkg	Beta Net CPM	Beta Eff (%)	Beta Activity (dpm)	Beta MDA	Count Time (secs)	S/N
2/4/2004	11:18	4	7	0	0.17	-0.17	30.2%	-0.6	0.14	1.3	0.50	0.833	34.5%	2.42	0.16	180	9025
2/4/2004	11:21	4	8	0	0.17	-0.17	30.2%	-0.6	0.14	0.3	0.50	-0.167	34.5%	-0.48	0.16	180	9025
2/4/2004	11:25	4	9	0	0.17	-0.17	30.2%	-0.6	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025
2/4/2004	11:28	4	10	0	0.17	-0.17	30.2%	-0.6	0.14	1.7	0.50	1.167	34.5%	3.39	0.16	180	9025
2/4/2004	11:32	4	11	0	0.17	-0.17	30.2%	-0.6	0.14	0.7	0.50	0.167	34.5%	0.48	0.16	180	9025
2/4/2004	11:35	4	12	0.667	0.17	0.50	30.2%	1.7	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025
2/4/2004	11:39	4	13	0.667	0.17	0.50	30.2%	1.7	0.14	0.3	0.50	-0.167	34.5%	-0.48	0.16	180	9025
2/4/2004	11:42	4	14	0.333	0.17	0.17	30.2%	0.5	0.14	1.7	0.50	1.167	34.5%	3.39	0.16	180	9025
2/4/2004	11:46	4	15	0	0.17	-0.17	30.2%	-0.6	0.14	1	0.50	0.500	34.5%	1.45	0.16	180	9025
2/4/2004	11:49	4	16	0	0.17	-0.17	30.2%	-0.6	0.14	1.3	0.50	0.833	34.5%	2.42	0.16	180	9025
2/4/2004	11:52	4	17	0	0.17	-0.17	30.2%	-0.6	0.14	0.7	0.50	0.167	34.5%	0.48	0.16	180	9025
2/4/2004	11:56	4	18	0	0.17	-0.17	30.2%	-0.6	0.14	2	0.50	1.500	34.5%	4.35	0.16	180	9025
2/4/2004	11:59	4	19	0.333	0.17	0.17	30.2%	0.5	0.14	0.3	0.50	-0.167	34.5%	-0.48	0.16	180	9025
2/4/2004	12:03	4	20	0	0.17	-0.17	30.2%	-0.6	0.14	2	0.50	1.500	34.5%	4.35	0.16	180	9025
2/4/2004	12:06	4	21	0	0.17	-0.17	30.2%	-0.6	0.14	1	0.50	0.500	34.5%	1.45	0.16	180	9025
2/4/2004	12:10	4	22	0	0.17	-0.17	30.2%	-0.6	0.14	1	0.50	0.500	34.5%	1.45	0.16	180	9025
2/4/2004	12:13	4	23	0	0.17	-0.17	30.2%	-0.6	0.14	1	0.50	0.500	34.5%	1.45	0.16	180	9025
2/4/2004	12:17	4	24	0	0.17	-0.17	30.2%	-0.6	0.14	0.7	0.50	0.167	34.5%	0.48	0.16	180	9025
2/4/2004	12:20	4	25	0	0.17	-0.17	30.2%	-0.6	0.14	1.3	0.50	0.833	34.5%	2.42	0.16	180	9025
2/4/2004	12:24	4	26	0	0.17	-0.17	30.2%	-0.6	0.14	0.7	0.50	0.167	34.5%	0.48	0.16	180	9025
2/4/2004	12:27	4	27	0	0.17	-0.17	30.2%	-0.6	0.14	0.3	0.50	-0.167	34.5%	-0.48	0.16	180	9025
2/4/2004	12:31	4	28	0	0.17	-0.17	30.2%	-0.6	0.14	1	0.50	0.500	34.5%	1.45	0.16	180	9025
2/4/2004	12:34	4	29	0	0.17	-0.17	30.2%	-0.6	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025
2/4/2004	12:38	4	30	0	0.17	-0.17	30.2%	-0.6	0.14	0.7	0.50	0.167	34.5%	0.48	0.16	180	9025
7/10/2004	17:39	5	1	0.6	0.01	0.59	61.5%	1.0	0.08	36	0.59	35.41	40.4%	17.52	0.33	300	132
7/10/2004	17:44	5	2	1.2	0.01	1.19	61.5%	1.9	0.08	38.8	0.59	38.21	40.4%	94.52	0.33	300	132
7/10/2004	17:49	5	3	1.2	0.01	1.19	61.5%	1.9	0.08	28	0.59	27.41	40.4%	67.80	0.33	300	132
7/10/2004	18:00	5	4	0.4	0.01	0.39	61.5%	0.6	0.08	32	0.59	31.41	40.4%	77.70	0.33	300	132
7/10/2004	18:08	5	5	0.8	0.01	0.79	61.5%	1.3	0.08	35.8	0.59	35.21	40.4%	87.10	0.33	300	132
7/10/2004	18:14	5	6	0.4	0.01	0.39	61.5%	0.6	0.08	36	0.59	35.41	40.4%	87.59	0.33	300	132
7/10/2004	18:19	5	7	0.8	0.01	0.79	61.5%	1.3	0.08	32.4	0.59	31.81	40.4%	78.69	0.33	300	132
7/10/2004	18:24	5	8	0.8	0.01	0.79	61.5%	1.3	0.08	38.4	0.59	37.81	40.4%	93.53	0.33	300	132
7/10/2004	18:29	5	9	0.6	0.01	0.59	61.5%	1.0	0.08	31.8	0.59	31.21	40.4%	77.20	0.33	300	132

DNSC Scotia
Alpha/Beta Swipe Measurement Data
SUs 2 through 6 (including subunits a and b)

Date	Time	SU	Samp ID	Gross Alpha Counts	Alpha Bkg	Alpha Net CPM	Alpha Eff (%)	Alpha Activity (dpm)	Alpha MDA	Gross Beta Counts	Beta Bkg	Beta Net CPM	Beta Eff (%)	Beta Activity (dpm)	Beta MDA	Count Time (secs)	S/N
7/10/2004	18:34	5	10	0.8	0.01	0.79	61.5%	1.3	0.08	33.2	0.59	32.61	40.4%	80.67	0.33	300	132
7/10/2004	18:39	5	11	0.6	0.01	0.59	61.5%	1.0	0.08	31.8	0.59	31.21	40.4%	77.20	0.33	300	132
7/10/2004	18:45	5	12	0.6	0.01	0.59	61.5%	1.0	0.08	36.4	0.59	35.81	40.4%	88.58	0.33	300	132
7/10/2004	18:50	5	13	1	0.01	0.99	61.5%	1.6	0.08	34.4	0.59	33.81	40.4%	83.64	0.33	300	132
7/10/2004	18:55	5	14	0.8	0.01	0.79	61.5%	1.3	0.08	33.8	0.59	33.21	40.4%	82.15	0.33	300	132
7/10/2004	19:01	5	15	1	0.01	0.99	61.5%	1.6	0.08	39.2	0.59	38.61	40.4%	95.51	0.33	300	132
7/10/2004	19:06	5	16	1.4	0.01	1.39	61.5%	2.3	0.08	33.2	0.59	32.61	40.4%	80.67	0.33	300	132
7/10/2004	19:11	5	17	0.8	0.01	0.79	61.5%	1.3	0.08	31.8	0.59	31.21	40.4%	77.20	0.33	300	132
7/10/2004	19:16	5	18	1	0.01	0.99	61.5%	1.6	0.08	40.6	0.59	40.01	40.4%	98.97	0.33	300	132
7/10/2004	19:22	5	19	0.6	0.01	0.59	61.5%	1.0	0.08	38.8	0.59	38.21	40.4%	94.52	0.33	300	132
7/10/2004	19:27	5	20	0.4	0.01	0.39	61.5%	0.6	0.08	34.6	0.59	34.01	40.4%	84.13	0.33	300	132
7/10/2004	19:32	5	21	0.2	0.01	0.19	61.5%	0.3	0.08	32	0.59	31.41	40.4%	77.70	0.33	300	132
7/10/2004	19:37	5	22	1.2	0.01	1.19	61.5%	1.9	0.08	34	0.59	33.41	40.4%	82.65	0.33	300	132
7/10/2004	19:42	5	23	0.4	0.01	0.39	61.5%	0.6	0.08	33.8	0.59	33.21	40.4%	82.15	0.33	300	132
7/10/2004	19:48	5	24	1	0.01	0.99	61.5%	1.6	0.08	38.4	0.59	37.81	40.4%	93.53	0.33	300	132
7/10/2004	19:53	5	25	0.8	0.01	0.79	61.5%	1.3	0.08	35	0.59	34.41	40.4%	85.12	0.33	300	132
7/10/2004	19:58	5	26	0.4	0.01	0.39	61.5%	0.6	0.08	37.6	0.59	37.01	40.4%	91.55	0.33	300	132
7/10/2004	20:03	5	27	0.8	0.01	0.79	61.5%	1.3	0.08	31.8	0.59	31.21	40.4%	77.20	0.33	300	132
7/10/2004	20:09	5	28	1.2	0.01	1.19	61.5%	1.9	0.08	35.8	0.59	35.21	40.4%	87.10	0.33	300	132
7/10/2004	20:19	5	29	0.8	0.01	0.79	61.5%	1.3	0.08	34.6	0.59	34.01	40.4%	84.13	0.33	300	132
7/10/2004	20:24	5	30	1.2	0.01	1.19	61.5%	1.9	0.08	35.8	0.59	35.21	40.4%	87.10	0.33	300	132
7/16/2004	22:22	6	1	1.5	0.01	1.49	61.5%	2.4	0.06	33.8	0.60	33.238	40.4%	82.2	0.45	360	132
7/16/2004	22:28	6	2	1.3	0.01	1.32	61.5%	2.1	0.06	30.3	0.60	29.738	40.4%	73.6	0.45	360	132
7/16/2004	22:35	6	3	0.8	0.01	0.82	61.5%	1.3	0.06	39.8	0.60	39.238	40.4%	97.1	0.45	360	132
7/16/2004	22:41	6	4	0.8	0.01	0.82	61.5%	1.3	0.06	34.8	0.60	34.238	40.4%	84.7	0.45	360	132
7/16/2004	22:47	6	5	1	0.01	0.99	61.5%	1.6	0.06	34.0	0.60	33.404	40.4%	82.6	0.45	360	132
7/16/2004	22:53	6	6	0.7	0.01	0.65	61.5%	1.1	0.06	39.3	0.60	38.738	40.4%	95.8	0.45	360	132
7/16/2004	19:29	6	7	0.7	0.02	0.65	58.6%	1.1	0.06	36.8	0.54	36.295	24.4%	148.8	0.45	360	131
7/16/2004	19:40	6	8	0.3	0.02	0.32	58.6%	0.5	0.06	37.7	0.54	37.129	24.4%	152.2	0.45	360	131
7/16/2004	19:51	6	9	0.2	0.02	0.15	58.6%	0.3	0.06	37.3	0.54	36.795	24.4%	150.9	0.45	360	131
7/16/2004	20:02	6	10	0.8	0.02	0.82	58.6%	1.4	0.06	35.0	0.54	34.462	24.4%	141.3	0.45	360	131
7/16/2004	20:14	6	11	0.7	0.02	0.65	58.6%	1.1	0.06	34.8	0.54	34.295	24.4%	140.6	0.45	360	131
7/16/2004	20:25	6	12	0.7	0.02	0.65	58.6%	1.1	0.06	34.5	0.54	33.962	24.4%	139.3	0.45	360	131

DNSC Scotia
Alpha/Beta Swipe Measurement Data
SUs 2 through 6 (including subunits a and b)

Date	Time	SU	Samp ID	Gross Alpha Counts	Alpha Bkg	Alpha Net CPM	Alpha Eff (%)	Alpha Activity (dpm)	Alpha MDA	Gross Beta Counts	Beta Bkg	Beta Net CPM	Beta Eff (%)	Beta Activity (dpm)	Beta MDA	Count Time (secs)	S/N
7/16/2004	20:36	6	13	0.5	0.02	0.49	58.6%	0.8	0.06	36.7	0.54	36.129	24.4%	148.1	0.45	360	131
7/16/2004	20:46	6	14	1	0.02	0.99	58.6%	1.7	0.06	37.3	0.54	36.795	24.4%	150.9	0.45	360	131
7/16/2004	20:56	6	15	0.7	0.02	0.65	58.6%	1.1	0.06	37.7	0.54	37.129	24.4%	152.2	0.45	360	131
7/16/2004	21:07	6	16	0.8	0.02	0.82	58.6%	1.4	0.06	34.7	0.54	34.129	24.4%	139.9	0.45	360	131
7/16/2004	21:17	6	17	0.8	0.02	0.82	58.6%	1.4	0.06	34.5	0.54	33.962	24.4%	139.3	0.45	360	131
7/16/2004	21:27	6	18	0.7	0.02	0.65	58.6%	1.1	0.06	34.8	0.54	34.295	24.4%	140.6	0.45	360	131
7/16/2004	21:38	6	19	0.5	0.02	0.49	58.6%	0.8	0.06	36.0	0.54	35.462	24.4%	145.4	0.45	360	131
7/16/2004	21:48	6	20	1	0.02	0.99	58.6%	1.7	0.06	35.5	0.54	34.962	24.4%	143.4	0.45	360	131
7/16/2004	21:58	6	21	0.5	0.02	0.49	58.6%	0.8	0.06	36.0	0.54	35.462	24.4%	145.4	0.45	360	131
7/16/2004	22:09	6	22	0.5	0.02	0.49	58.6%	0.8	0.06	36.5	0.54	35.962	24.4%	147.5	0.45	360	131
7/16/2004	22:19	6	23	0.3	0.02	0.32	58.6%	0.5	0.06	37.3	0.54	36.795	24.4%	150.9	0.45	360	131
7/16/2004	22:29	6	24	0.3	0.02	0.32	58.6%	0.5	0.06	37.5	0.54	36.962	24.4%	151.6	0.45	360	131
7/16/2004	22:39	6	25	0.7	0.02	0.65	58.6%	1.1	0.06	37.3	0.54	36.795	24.4%	150.9	0.45	360	131
7/16/2004	22:50	6	26	0.3	0.02	0.32	58.6%	0.5	0.06	38.0	0.54	37.462	24.4%	153.6	0.45	360	131
7/16/2004	23:00	6	27	0.5	0.02	0.49	58.6%	0.8	0.06	34.5	0.54	33.962	24.4%	139.3	0.45	360	131
7/16/2004	23:10	6	28	0.3	0.02	0.32	58.6%	0.5	0.06	34.2	0.54	33.629	24.4%	137.9	0.45	360	131
7/16/2004	23:21	6	29	0.2	0.02	0.15	58.6%	0.3	0.06	36.3	0.54	35.795	24.4%	146.8	0.45	360	131
7/16/2004	23:31	6	30	0.5	0.02	0.49	58.6%	0.8	0.06	35.7	0.54	35.129	24.4%	144.0	0.45	360	131
2/3/2004	12:13	2a	1	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	12:14	2a	2	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:16	2a	3	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:17	2a	4	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:19	2a	5	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	12:20	2a	6	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:22	2a	7	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	12:23	2a	8	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:24	2a	9	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:26	2a	10	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:27	2a	11	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:29	2a	12	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:30	2a	13	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	12:32	2a	14	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	12:33	2a	15	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025

DNSC Scotia
Alpha/Beta Swipe Measurement Data
SUs 2 through 6 (including subunits a and b)

Date	Time	SU	Samp ID	Gross Alpha Counts	Alpha Bkg	Alpha Net CPM	Alpha Eff (%)	Alpha Activity (dpm)	Alpha MDA	Gross Beta Counts	Beta Bkg	Beta Net CPM	Beta Eff (%)	Beta Activity (dpm)	Beta MDA	Count Time (secs)	S/N
2/3/2004	12:35	2a	16	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	12:36	2a	17	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:38	2a	18	1	0.03	0.97	29.1%	3.3	0.12	4	1.27	2.733	42.5%	6.43	0.16	60	9025
2/3/2004	12:39	2a	19	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	12:41	2a	20	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	12:42	2a	21	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	12:44	2a	22	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	12:45	2a	23	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:46	2a	24	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:48	2a	25	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	12:49	2a	26	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	12:51	2a	27	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:52	2a	28	0	0.03	-0.03	29.1%	-0.1	0.12	3	1.27	1.733	42.5%	4.08	0.16	60	9025
2/3/2004	12:54	2a	29	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	12:55	2a	30	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
7/15/2004	17:56	2b	1	0.5	0.01	0.49	61.5%	0.8	0.05	35	0.54	34.46	40.4%	85.26	0.37	600	132
7/15/2004	18:09	2b	2	1.3	0.01	1.29	61.5%	2.1	0.05	35.2	0.54	34.66	40.4%	85.75	0.37	600	132
7/15/2004	18:21	2b	3	0.3	0.01	0.29	61.5%	0.5	0.05	32.4	0.54	31.86	40.4%	78.83	0.37	600	132
7/15/2004	18:32	2b	4	0.5	0.01	0.49	61.5%	0.8	0.05	34.8	0.54	34.26	40.4%	84.76	0.37	600	132
7/15/2004	18:43	2b	5	0.5	0.01	0.49	61.5%	0.8	0.05	31.7	0.54	31.16	40.4%	77.09	0.37	600	132
7/15/2004	18:54	2b	6	0.3	0.01	0.29	61.5%	0.5	0.05	32.9	0.54	32.36	40.4%	80.06	0.37	600	132
2/3/2004	14:32	3a	1	0	0.03	-0.03	29.1%	-0.1	0.12	3	1.27	1.733	42.5%	4.08	0.16	60	9025
2/3/2004	14:34	3a	2	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	14:35	3a	3	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:36	3a	4	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:38	3a	5	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	14:39	3a	6	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:41	3a	7	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:42	3a	8	0	0.03	-0.03	29.1%	-0.1	0.12	3	1.27	1.733	42.5%	4.08	0.16	60	9025
2/3/2004	14:44	3a	9	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	14:45	3a	10	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	14:47	3a	11	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	14:48	3a	12	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025

DNSC Scotia
Alpha/Beta Swipe Measurement Data
SUs 2 through 6 (including subunits a and b)

Date	Time	SU	Samp ID	Gross Alpha Counts	Alpha Bkg	Alpha Net CPM	Alpha Eff (%)	Alpha Activity (dpm)	Alpha MDA	Gross Beta Counts	Beta Bkg	Beta Net CPM	Beta Eff (%)	Beta Activity (dpm)	Beta MDA	Count Time (secs)	S/N
2/3/2004	14:50	3a	13	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	14:51	3a	14	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	14:53	3a	15	0	0.03	-0.03	29.1%	-0.1	0.12	8	1.27	6.733	42.5%	15.84	0.16	60	9025
2/3/2004	14:54	3a	16	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:56	3a	17	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	14:57	3a	18	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	14:58	3a	19	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	15:00	3a	20	0	0.03	-0.03	29.1%	-0.1	0.12	4	1.27	2.733	42.5%	6.43	0.16	60	9025
2/3/2004	15:01	3a	21	0	0.03	-0.03	29.1%	-0.1	0.12	4	1.27	2.733	42.5%	6.43	0.16	60	9025
2/3/2004	15:03	3a	22	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	15:04	3a	23	0	0.03	-0.03	29.1%	-0.1	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	15:06	3a	24	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	15:07	3a	25	2	0.03	1.97	29.1%	6.8	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	15:09	3a	26	0	0.03	-0.03	29.1%	-0.1	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
2/3/2004	15:10	3a	27	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	15:12	3a	28	0	0.03	-0.03	29.1%	-0.1	0.12	0	1.27	-1.267	42.5%	-2.98	0.16	60	9025
2/3/2004	15:13	3a	29	1	0.03	0.97	29.1%	3.3	0.12	1	1.27	-0.267	42.5%	-0.63	0.16	60	9025
2/3/2004	15:15	3a	30	1	0.03	0.97	29.1%	3.3	0.12	2	1.27	0.733	42.5%	1.72	0.16	60	9025
7/15/2004	18:09	3b	1	0.4	0.01	0.39	58.6%	0.7	0.05	32	0.52	31.482	24.4%	129.1	0.38	600	131
7/15/2004	18:21	3b	2	0.2	0.01	0.19	58.6%	0.3	0.05	33.6	0.52	33.082	24.4%	135.7	0.38	600	131
7/15/2004	18:32	3b	3	0.3	0.01	0.29	58.6%	0.5	0.05	31.5	0.52	30.982	24.4%	127.0	0.38	600	131
7/15/2004	18:43	3b	4	0.4	0.01	0.39	58.6%	0.7	0.05	33.1	0.52	32.582	24.4%	133.6	0.38	600	131
7/15/2004	18:54	3b	5	0.3	0.01	0.29	58.6%	0.5	0.05	33.2	0.52	32.682	24.4%	134.0	0.38	600	131
7/15/2004	19:04	3b	6	0.3	0.01	0.29	58.6%	0.5	0.05	31.4	0.52	30.882	24.4%	126.6	0.38	600	131
2/4/2004	13:37	4a	1	0	0.17	-0.17	30.2%	-0.6	0.14	1.7	0.50	1.167	34.5%	3.39	0.16	180	9025
2/4/2004	13:40	4a	2	0.333	0.17	0.17	30.2%	0.5	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025
2/4/2004	13:44	4a	3	0	0.17	-0.17	30.2%	-0.6	0.14	2	0.50	1.500	34.5%	4.35	0.16	180	9025
2/4/2004	13:47	4a	4	0.667	0.17	0.50	30.2%	1.7	0.14	0.3	0.50	-0.167	34.5%	-0.48	0.16	180	9025
2/4/2004	13:51	4a	5	0.333	0.17	0.17	30.2%	0.5	0.14	0.3	0.50	-0.167	34.5%	-0.48	0.16	180	9025
2/4/2004	13:54	4a	6	0	0.17	-0.17	30.2%	-0.6	0.14	0.3	0.50	-0.167	34.5%	-0.48	0.16	180	9025
2/4/2004	13:58	4a	7	0.333	0.17	0.17	30.2%	0.5	0.14	0.7	0.50	0.167	34.5%	0.48	0.16	180	9025
2/4/2004	14:01	4a	8	0	0.17	-0.17	30.2%	-0.6	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025
2/4/2004	14:05	4a	9	0	0.17	-0.17	30.2%	-0.6	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025

DNSC Scotia
Alpha/Beta Swipe Measurement Data
SUs 2 through 6 (including subunits a and b)

Date	Time	SU	Samp ID	Gross Alpha Counts	Alpha Bkg	Alpha Net CPM	Alpha Eff (%)	Alpha Activity (dpm)	Alpha MDA	Gross Beta Counts	Beta Bkg	Beta Net CPM	Beta Eff (%)	Beta Activity (dpm)	Beta MDA	Count Time (secs)	S/N
2/4/2004	14:08	4a	10	0.333	0.17	0.17	30.2%	0.5	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025
2/4/2004	14:12	4a	11	0	0.17	-0.17	30.2%	-0.6	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025
2/4/2004	14:15	4a	12	0	0.17	-0.17	30.2%	-0.6	0.14	1	0.50	0.500	34.5%	1.45	0.16	180	9025
2/4/2004	14:19	4a	13	0	0.17	-0.17	30.2%	-0.6	0.14	2.3	0.50	1.833	34.5%	5.32	0.16	180	9025
2/4/2004	14:22	4a	14	0	0.17	-0.17	30.2%	-0.6	0.14	1.3	0.50	0.833	34.5%	2.42	0.16	180	9025
2/4/2004	14:26	4a	15	0	0.17	-0.17	30.2%	-0.6	0.14	1.7	0.50	1.167	34.5%	3.39	0.16	180	9025
2/4/2004	14:29	4a	16	0	0.17	-0.17	30.2%	-0.6	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025
2/4/2004	14:32	4a	17	0	0.17	-0.17	30.2%	-0.6	0.14	1	0.50	0.500	34.5%	1.45	0.16	180	9025
2/4/2004	14:36	4a	18	0.333	0.17	0.17	30.2%	0.5	0.14	2	0.50	1.500	34.5%	4.35	0.16	180	9025
2/4/2004	14:39	4a	19	0	0.17	-0.17	30.2%	-0.6	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025
2/4/2004	14:43	4a	20	0.333	0.17	0.17	30.2%	0.5	0.14	1.7	0.50	1.167	34.5%	3.39	0.16	180	9025
2/4/2004	14:46	4a	21	0	0.17	-0.17	30.2%	-0.6	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025
2/4/2004	14:50	4a	22	0.333	0.17	0.17	30.2%	0.5	0.14	1.3	0.50	0.833	34.5%	2.42	0.16	180	9025
2/4/2004	14:53	4a	23	0	0.17	-0.17	30.2%	-0.6	0.14	0	0.50	-0.500	34.5%	-1.45	0.16	180	9025
2/4/2004	14:57	4a	24	0.333	0.17	0.17	30.2%	0.5	0.14	0.3	0.50	-0.167	34.5%	-0.48	0.16	180	9025
2/4/2004	15:00	4a	25	0.333	0.17	0.17	30.2%	0.5	0.14	1.3	0.50	0.833	34.5%	2.42	0.16	180	9025
2/4/2004	15:04	4a	26	0	0.17	-0.17	30.2%	-0.6	0.14	1.3	0.50	0.833	34.5%	2.42	0.16	180	9025
2/4/2004	15:07	4a	27	0	0.17	-0.17	30.2%	-0.6	0.14	0.7	0.50	0.167	34.5%	0.48	0.16	180	9025
2/4/2004	15:11	4a	28	0	0.17	-0.17	30.2%	-0.6	0.14	1.7	0.50	1.167	34.5%	3.39	0.16	180	9025
2/4/2004	15:14	4a	29	0.333	0.17	0.17	30.2%	0.5	0.14	0.3	0.50	-0.167	34.5%	-0.48	0.16	180	9025
2/4/2004	15:18	4a	30	0	0.17	-0.17	30.2%	-0.6	0.14	0.3	0.50	-0.167	34.5%	-0.48	0.16	180	9025
7/15/2004	19:04	4b	1	0.8	0.01	0.79	61.5%	1.3	0.05	32.4	0.54	31.86	40.4%	78.83	0.37	600	132
7/15/2004	19:14	4b	2	0.9	0.01	0.89	61.5%	1.4	0.05	34	0.54	33.46	40.4%	82.78	0.37	600	132
7/15/2004	19:24	4b	3	0.6	0.01	0.59	61.5%	1.0	0.05	29.8	0.54	29.26	40.4%	72.39	0.37	600	132
7/15/2004	19:35	4b	4	0.9	0.01	0.89	61.5%	1.4	0.05	32.1	0.54	31.56	40.4%	78.08	0.37	600	132
7/15/2004	19:50	4b	5	0.6	0.01	0.59	61.5%	1.0	0.05	34.1	0.54	33.56	40.4%	83.03	0.37	600	132
7/15/2004	20:00	4b	6	1.2	0.01	1.19	61.5%	1.9	0.05	32.8	0.54	32.26	40.4%	79.82	0.37	600	132
7/23/2004	12:48	5a	1	0.2	0.07	0.13	30.4%	0.4	0.03	1	1.00	0.000	43.2%	0.00	0.05	300	9025
7/23/2004	12:53	5a	2	0.2	0.07	0.13	30.4%	0.4	0.03	1.4	1.00	0.400	43.2%	0.93	0.05	300	9025
7/23/2004	12:59	5a	3	0	0.07	-0.07	30.4%	-0.2	0.03	0.8	1.00	-0.200	43.2%	-0.46	0.05	300	9025
7/23/2004	13:04	5a	4	0	0.07	-0.07	30.4%	-0.2	0.03	0.6	1.00	-0.400	43.2%	-0.93	0.05	300	9025
7/23/2004	13:09	5a	5	0	0.07	-0.07	30.4%	-0.2	0.03	1.6	1.00	0.600	43.2%	1.39	0.05	300	9025
7/23/2004	13:15	5a	6	0.2	0.07	0.13	30.4%	0.4	0.03	1.2	1.00	0.200	43.2%	0.46	0.05	300	9025

DNSC Scotia
Alpha/Beta Swipe Measurement Data
SUs 2 through 6 (including subunits a and b)

Date	Time	SU	Samp ID	Gross Alpha Counts	Alpha Bkg	Alpha Net CPM	Alpha Eff (%)	Alpha Activity (dpm)	Alpha MDA	Gross Beta Counts	Beta Bkg	Beta Net CPM	Beta Eff (%)	Beta Activity (dpm)	Beta MDA	Count Time (secs)	S/N
7/23/2004	13:20	5a	7	0	0.07	-0.07	30.4%	-0.2	0.03	0.6	1.00	-0.400	43.2%	-0.93	0.05	300	9025
7/23/2004	13:26	5a	8	0	0.07	-0.07	30.4%	-0.2	0.03	1	1.00	0.000	43.2%	0.00	0.05	300	9025
7/23/2004	13:31	5a	9	0.4	0.07	0.33	30.4%	1.1	0.03	0.8	1.00	-0.200	43.2%	-0.46	0.05	300	9025
7/23/2004	13:37	5a	10	0.2	0.07	0.13	30.4%	0.4	0.03	0.6	1.00	-0.400	43.2%	-0.93	0.05	300	9025
7/23/2004	13:42	5a	11	0	0.07	-0.07	30.4%	-0.2	0.03	0.6	1.00	-0.400	43.2%	-0.93	0.05	300	9025
7/23/2004	13:48	5a	12	0	0.07	-0.07	30.4%	-0.2	0.03	2.2	1.00	1.200	43.2%	2.78	0.05	300	9025
7/23/2004	13:53	5a	13	0.2	0.07	0.13	30.4%	0.4	0.03	1.8	1.00	0.800	43.2%	1.85	0.05	300	9025
7/23/2004	13:59	5a	14	0	0.07	-0.07	30.4%	-0.2	0.03	0.8	1.00	-0.200	43.2%	-0.46	0.05	300	9025
7/23/2004	14:04	5a	15	0	0.07	-0.07	30.4%	-0.2	0.03	0.4	1.00	-0.600	43.2%	-1.39	0.05	300	9025
7/23/2004	14:10	5a	16	0	0.07	-0.07	30.4%	-0.2	0.03	0	1.00	-1.000	43.2%	-2.31	0.05	300	9025
7/23/2004	14:15	5a	17	0	0.07	-0.07	30.4%	-0.2	0.03	0.8	1.00	-0.200	43.2%	-0.46	0.05	300	9025
7/23/2004	14:21	5a	18	0	0.07	-0.07	30.4%	-0.2	0.03	0.6	1.00	-0.400	43.2%	-0.93	0.05	300	9025
7/23/2004	14:26	5a	19	0.4	0.07	0.33	30.4%	1.1	0.03	0.8	1.00	-0.200	43.2%	-0.46	0.05	300	9025
7/23/2004	14:31	5a	20	0.2	0.07	0.13	30.4%	0.4	0.03	1.4	1.00	0.400	43.2%	0.93	0.05	300	9025
7/23/2004	14:37	5a	21	0	0.07	-0.07	30.4%	-0.2	0.03	0.8	1.00	-0.200	43.2%	-0.46	0.05	300	9025
7/23/2004	14:42	5a	22	0	0.07	-0.07	30.4%	-0.2	0.03	1	1.00	0.000	43.2%	0.00	0.05	300	9025
7/23/2004	14:48	5a	23	0	0.07	-0.07	30.4%	-0.2	0.03	1.2	1.00	0.200	43.2%	0.46	0.05	300	9025
7/23/2004	14:53	5a	24	0	0.07	-0.07	30.4%	-0.2	0.03	2.2	1.00	1.200	43.2%	2.78	0.05	300	9025
7/23/2004	14:59	5a	25	0	0.07	-0.07	30.4%	-0.2	0.03	1.6	1.00	0.600	43.2%	1.39	0.05	300	9025
7/23/2004	15:04	5a	26	0	0.07	-0.07	30.4%	-0.2	0.03	0.4	1.00	-0.600	43.2%	-1.39	0.05	300	9025
7/23/2004	15:10	5a	27	0.2	0.07	0.13	30.4%	0.4	0.03	1	1.00	0.000	43.2%	0.00	0.05	300	9025
7/23/2004	15:15	5a	28	0	0.07	-0.07	30.4%	-0.2	0.03	1.4	1.00	0.400	43.2%	0.93	0.05	300	9025
7/23/2004	15:21	5a	29	0	0.07	-0.07	30.4%	-0.2	0.03	0.6	1.00	-0.400	43.2%	-0.93	0.05	300	9025
7/23/2004	15:26	5a	30	0	0.07	-0.07	30.4%	-0.2	0.03	1.2	1.00	0.200	43.2%	0.46	0.05	300	9025
7/15/2004	19:14	5b	1	0.1	0.01	0.09	58.6%	0.1	0.05	31.9	0.52	31.382	24.4%	128.7	0.38	600	131
7/15/2004	19:24	5b	2	0.3	0.01	0.29	58.6%	0.5	0.05	32.5	0.52	31.982	24.4%	131.1	0.38	600	131
7/15/2004	19:35	5b	3	0.2	0.01	0.19	58.6%	0.3	0.05	31.6	0.52	31.082	24.4%	127.5	0.38	600	131
7/15/2004	19:50	5b	4	0.3	0.01	0.29	58.6%	0.5	0.05	32.6	0.52	32.082	24.4%	131.6	0.38	600	131
7/15/2004	20:00	5b	5	0.5	0.01	0.49	58.6%	0.8	0.05	31.4	0.52	30.882	24.4%	126.6	0.38	600	131
7/15/2004	20:12	5b	6	0.2	0.01	0.19	58.6%	0.3	0.05	32.4	0.52	31.882	24.4%	130.7	0.38	600	131
7/26/2004	11:08	6a	1	0	0.07	-0.07	30.4%	-0.2	0.03	0.6	1.00	-0.400	43.2%	-0.93	0.05	300	9025
7/26/2004	11:13	6a	2	0.4	0.07	0.33	30.4%	1.1	0.03	1.4	1.00	0.400	43.2%	0.93	0.05	300	9025
7/26/2004	11:19	6a	3	0	0.07	-0.07	30.4%	-0.2	0.03	0.2	1.00	-0.800	43.2%	-1.85	0.05	300	9025

DNSC Scotia
Alpha/Beta Swipe Measurement Data
SUs 2 through 6 (including subunits a and b)

Date	Time	SU	Samp ID	Gross Alpha Counts	Alpha Bkg	Alpha Net CPM	Alpha Eff (%)	Alpha Activity (dpm)	Alpha MDA	Gross Beta Counts	Beta Bkg	Beta Net CPM	Beta Eff (%)	Beta Activity (dpm)	Beta MDA	Count Time (secs)	S/N
7/26/2004	11:24	6a	4	0	0.07	-0.07	30.4%	-0.2	0.03	0.2	1.00	-0.800	43.2%	-1.85	0.05	300	9025
7/26/2004	11:30	6a	5	0.4	0.07	0.33	30.4%	1.1	0.03	0.2	1.00	-0.800	43.2%	-1.85	0.05	300	9025
7/26/2004	11:35	6a	6	0.2	0.07	0.13	30.4%	0.4	0.03	1.4	1.00	0.400	43.2%	0.93	0.05	300	9025
7/26/2004	11:41	6a	7	0.2	0.07	0.13	30.4%	0.4	0.03	1.2	1.00	0.200	43.2%	0.46	0.05	300	9025
7/26/2004	11:46	6a	8	0	0.07	-0.07	30.4%	-0.2	0.03	1	1.00	0.000	43.2%	0.00	0.05	300	9025
7/26/2004	11:52	6a	9	0	0.07	-0.07	30.4%	-0.2	0.03	0.6	1.00	-0.400	43.2%	-0.93	0.05	300	9025
7/26/2004	11:57	6a	10	0	0.07	-0.07	30.4%	-0.2	0.03	1.8	1.00	0.800	43.2%	1.85	0.05	300	9025
7/26/2004	12:03	6a	11	0	0.07	-0.07	30.4%	-0.2	0.03	0.4	1.00	-0.600	43.2%	-1.39	0.05	300	9025
7/26/2004	12:08	6a	12	0.6	0.07	0.53	30.4%	1.8	0.03	1.6	1.00	0.600	43.2%	1.39	0.05	300	9025
7/26/2004	12:14	6a	13	0.2	0.07	0.13	30.4%	0.4	0.03	1.4	1.00	0.400	43.2%	0.93	0.05	300	9025
7/26/2004	12:19	6a	14	0.2	0.07	0.13	30.4%	0.4	0.03	0.4	1.00	-0.600	43.2%	-1.39	0.05	300	9025
7/26/2004	12:24	6a	15	0.2	0.07	0.13	30.4%	0.4	0.03	1.4	1.00	0.400	43.2%	0.93	0.05	300	9025
7/26/2004	12:30	6a	16	0.6	0.07	0.53	30.4%	1.8	0.03	1	1.00	0.000	43.2%	0.00	0.05	300	9025
7/26/2004	12:35	6a	17	0	0.07	-0.07	30.4%	-0.2	0.03	0.6	1.00	-0.400	43.2%	-0.93	0.05	300	9025
7/26/2004	12:41	6a	18	0	0.07	-0.07	30.4%	-0.2	0.03	0.4	1.00	-0.600	43.2%	-1.39	0.05	300	9025
7/26/2004	12:46	6a	19	0	0.07	-0.07	30.4%	-0.2	0.03	1.2	1.00	0.200	43.2%	0.46	0.05	300	9025
7/26/2004	12:52	6a	20	0	0.07	-0.07	30.4%	-0.2	0.03	0.2	1.00	-0.800	43.2%	-1.85	0.05	300	9025
7/26/2004	12:57	6a	21	0	0.07	-0.07	30.4%	-0.2	0.03	1	1.00	0.000	43.2%	0.00	0.05	300	9025
7/26/2004	13:03	6a	22	0.4	0.07	0.33	30.4%	1.1	0.03	2	1.00	1.000	43.2%	2.31	0.05	300	9025
7/26/2004	13:08	6a	23	0.4	0.07	0.33	30.4%	1.1	0.03	1	1.00	0.000	43.2%	0.00	0.05	300	9025
7/26/2004	13:14	6a	24	0.2	0.07	0.13	30.4%	0.4	0.03	1.2	1.00	0.200	43.2%	0.46	0.05	300	9025
7/26/2004	13:19	6a	25	0	0.07	-0.07	30.4%	-0.2	0.03	1.2	1.00	0.200	43.2%	0.46	0.05	300	9025
7/26/2004	13:25	6a	26	0	0.07	-0.07	30.4%	-0.2	0.03	1	1.00	0.000	43.2%	0.00	0.05	300	9025
7/26/2004	13:30	6a	27	0	0.07	-0.07	30.4%	-0.2	0.03	1	1.00	0.000	43.2%	0.00	0.05	300	9025
7/26/2004	13:36	6a	28	0	0.07	-0.07	30.4%	-0.2	0.03	0.4	1.00	-0.600	43.2%	-1.39	0.05	300	9025
7/26/2004	13:41	6a	29	0	0.07	-0.07	30.4%	-0.2	0.03	0.8	1.00	-0.200	43.2%	-0.46	0.05	300	9025
7/26/2004	13:46	6a	30	0.4	0.07	0.33	30.4%	1.1	0.03	1	1.00	0.000	43.2%	0.00	0.05	300	9025
7/16/2004	22:22	6b	1	1.5	0.01	1.49	61.5%	2.4	0.06	40.6	0.60	40.00	40.4%	98.97	0.45	360	132
7/16/2004	22:28	6b	2	1.3	0.01	1.32	61.5%	2.1	0.06	30.3	0.60	29.74	40.4%	73.57	0.45	360	132
7/16/2004	22:35	6b	3	0.8	0.01	0.82	61.5%	1.3	0.06	39.8	0.60	39.24	40.4%	97.07	0.45	360	132
7/16/2004	22:41	6b	4	0.8	0.01	0.82	61.5%	1.3	0.06	34.8	0.60	34.24	40.4%	84.70	0.45	360	132
7/16/2004	22:47	6b	5	1.0	0.01	0.99	61.5%	1.6	0.06	34.0	0.60	33.40	40.4%	82.64	0.45	360	132
7/16/2004	22:53	6b	6	0.7	0.01	0.65	61.5%	1.1	0.06	39.3	0.60	38.74	40.4%	95.83	0.45	360	132

Appendix E
Solid Sample Data



STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. SP083304F0059

Defense National Stockpile

Lot #: F4I300355

ERS Solutions, Inc.

ERS Solutions, Inc.
1415 21st Street, Suite C
Sacramento, CA 95814

SEVERN TRENT LABORATORIES, INC.



Billy Tierney
Project Manager

October 12, 2004

Case Narrative
LOT NUMBER: F4I300355

This report contains the analytical results for the 12 samples received under chain of custody by STL St. Louis on September 30, 2004. These samples are associated with your Defense National Stockpile project.

The analytical results included in this report meet all applicable quality control procedure requirements.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by STL St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

There are no conformance issues associated with the analysis of these samples.

METHODS SUMMARY

F4I300355

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Isotopic Thorium by Alpha Spectroscopy	EML A-01-R MOD	
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	

References:

EML "ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL"
 HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY

SAMPLE SUMMARY

F4I300355

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GRJGM	001	DSSO-1	06/29/04	
GRJGR	002	DSSO-2	06/29/04	
GRJGW	003	DSSO-3	06/29/04	
GRJG0	004	DSSO-4	06/29/04	
GRJG2	005	DSSO-5	06/29/04	
GRJG5	006	DSSO-6	06/29/04	
GRJG8	007	DSSO-7	06/29/04	
GRJHD	008	DSSO-8	06/29/04	
GRJHE	009	DSSO-9	06/29/04	
GRJHH	010	DSSO-10	06/29/04	
GRJHJ	011	DSSO-11	06/29/04	
GRJHK	012	DSSO-12	06/29/04	

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ERS Solutions, Inc.

Client Sample ID: DSSO-1

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-001
Work Order: GRJGM
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 09/30/04 0000

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso URANIUM (SHORT CT) DOE A-01-R MOD								
				pCi/g		A-01-R MOD		
Uranium 234	0.49	J	0.17	0.11	10/02/04	10/07/04	4276075	82
Uranium 235	0.005	U	0.037	0.082	10/02/04	10/07/04	4276075	82
Uranium 238	0.53	J	0.16	0.05	10/02/04	10/07/04	4276075	82
Iso THORIUM (SHORT CT) DOE A-01-R MOD								
				pCi/g		A-01-R MOD		
Thorium 228	0.38	J	0.13	0.06	10/02/04	10/07/04	4276073	86
Thorium 230	0.96	J	0.22	0.03	10/02/04	10/07/04	4276073	86
Thorium 232	0.46	J	0.15	0.03	10/02/04	10/07/04	4276073	86

NOTE(S)

Data are incomplete without the case narrative.

is determined by instrument performance only.
d results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.
U Result is less than the sample detection limit.

ERS Solutions, Inc.

Client Sample ID: DSSO-1 DUP

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-001X
Work Order: GRJGM
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 09/30/04 0000

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso THORIUM (SHORT CT) DOE A-01-R MOD				pCi/g	A-01-R MOD			
Thorium 228	0.37	J	0.14	0.08	10/02/04	10/07/04	4276073	77
Thorium 230	0.85	J	0.22	0.05	10/02/04	10/07/04	4276073	77
Thorium 232	0.41	J	0.15	0.03	10/02/04	10/07/04	4276073	77
Iso URANIUM (SHORT CT) DOE A-01-R MOD				pCi/g	A-01-R MOD			
Uranium 234	0.57	J	0.18	0.1	10/02/04	10/07/04	4276075	97
Uranium 235	0.020	U	0.049	0.085	10/02/04	10/07/04	4276075	97
Uranium 238	0.54	J	0.17	0.07	10/02/04	10/07/04	4276075	97

NOTE(S)

Data are incomplete without the case narrative.

C is determined by instrument performance only.
Jld results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.
U Result is less than the sample detection limit.

ERS Solutions, Inc.

Client Sample ID: DSSO-2

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-002
Work Order: GRJGR
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 09/30/04 0000

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Uranium 234	0.69	J	0.19	0.08	10/02/04	10/07/04	4276075	84
Uranium 235	0.008	U	0.035	0.075	10/02/04	10/07/04	4276075	84
Uranium 238	0.71	J	0.19	0.06	10/02/04	10/07/04	4276075	84
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Thorium 228	0.66	J	0.18	0.05	10/02/04	10/07/04	4276073	78
Thorium 230	1.22		0.26	0.06	10/02/04	10/07/04	4276073	78
Thorium 232	0.69	J	0.19	0.05	10/02/04	10/07/04	4276073	78

NOTE(S)

Data are incomplete without the case narrative.

J is determined by instrument performance only.
Uld results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.
U Result is less than the sample detection limit.

ERS Solutions, Inc.

Client Sample ID: DSS0-3

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-003

Work Order: GRJGW

Matrix: SOLID

Date Collected: 06/29/04 0000

Date Received: 09/30/04 0000

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Uranium 234	2.19		0.38	0.04	10/02/04	10/07/04	4276075	70
Uranium 235	0.14	J	0.10	0.07	10/02/04	10/07/04	4276075	70
Uranium 238	2.21		0.38	0.06	10/02/04	10/07/04	4276075	70
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Thorium 228	2.73		0.50	0.09	10/02/04	10/07/04	4276073	56
Thorium 230	2.76		0.51	0.08	10/02/04	10/07/04	4276073	56
Thorium 232	2.98		0.53	0.07	10/02/04	10/07/04	4276073	56

NOTE(S)

Data are incomplete without the case narrative.

C is determined by instrument performance only.

Old results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

ERS Solutions, Inc.

Client Sample ID: DSSO-4

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-004
Work Order: GRJG0
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 09/30/04 0000

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Uranium 234	2.08		0.37	0.06	10/02/04	10/07/04	4276075	70
Uranium 235	0.16	J	0.11	0.04	10/02/04	10/07/04	4276075	70
Uranium 238	2.23		0.38	0.07	10/02/04	10/07/04	4276075	70
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Thorium 228	2.86		0.51	0.13	10/02/04	10/07/04	4276073	57
Thorium 230	3.02		0.53	0.07	10/02/04	10/07/04	4276073	57
Thorium 232	2.95		0.52	0.04	10/02/04	10/07/04	4276073	57

NOTE(S)

Data are incomplete without the case narrative.

DC is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

ERS Solutions, Inc.

Client Sample ID: DSSO-5

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-005
Work Order: GRJG2
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 09/30/04 0000

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Uranium 234	2.14		0.36	0.03	10/02/04	10/07/04	4276075	72
Uranium 235	0.077	J	0.076	0.042	10/02/04	10/07/04	4276075	72
Uranium 238	2.31		0.38	0.03	10/02/04	10/07/04	4276075	72
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Thorium 228	2.62		0.48	0.08	10/02/04	10/07/04	4276073	59
Thorium 230	2.77		0.50	0.04	10/02/04	10/07/04	4276073	59
Thorium 232	2.71		0.49	0.04	10/02/04	10/07/04	4276073	59

NOTE(S)

Data are incomplete without the case narrative.

J is determined by instrument performance only.
Old results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

ERS Solutions, Inc.

Client Sample ID: DSSO-6

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-006
Work Order: GRJG5
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 09/30/04 0000

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Uranium 234	2.25		0.40	0.06	10/02/04	10/07/04	4276075	67
Uranium 235	0.104	J	0.092	0.047	10/02/04	10/07/04	4276075	67
Uranium 238	2.31		0.40	0.06	10/02/04	10/07/04	4276075	67
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Thorium 228	2.90		0.55	0.14	10/02/04	10/07/04	4276073	51
Thorium 230	2.97		0.55	0.08	10/02/04	10/07/04	4276073	51
Thorium 232	2.70		0.52	0.09	10/02/04	10/07/04	4276073	51

NOTE(S)

Data are incomplete without the case narrative.

is determined by instrument performance only.

Old results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

ERS Solutions, Inc.

Client Sample ID: DSSO-7

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-007
Work Order: GRJG8
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 09/30/04 0000

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Uranium 234	2.00		0.34	0.07	10/02/04	10/07/04	4276075	78
Uranium 235	0.16	J	0.10	0.08	10/02/04	10/07/04	4276075	78
Uranium 238	1.91		0.34	0.08	10/02/04	10/07/04	4276075	78
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Thorium 228	2.52		0.48	0.12	10/02/04	10/07/04	4276073	56
Thorium 230	2.81		0.51	0.07	10/02/04	10/07/04	4276073	56
Thorium 232	2.64		0.49	0.04	10/02/04	10/07/04	4276073	56

NOTE(S)

Data are incomplete without the case narrative.

J is determined by instrument performance only.

Jld results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

ERS Solutions, Inc.

Client Sample ID: DSSO-8

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-008

Date Collected: 06/29/04 0000

Work Order: GRJHD

Date Received: 09/30/04 0000

Matrix: SOLID

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso URANIUM (SHORT CT) DOE A-01-R MOD				pCi/g		A-01-R MOD		
Uranium 234	1.30		0.27	0.05	10/02/04	10/07/04	4276075	77
Uranium 235	0.072	J	0.069	0.066	10/02/04	10/07/04	4276075	77
Uranium 238	1.39		0.28	0.05	10/02/04	10/07/04	4276075	77
Iso THORIUM (SHORT CT) DOE A-01-R MOD				pCi/g		A-01-R MOD		
Thorium 228	1.85		0.40	0.12	10/02/04	10/07/04	4276073	54
Thorium 230	2.56		0.49	0.05	10/02/04	10/07/04	4276073	54
Thorium 232	1.95		0.41	0.05	10/02/04	10/07/04	4276073	54

NOTE(S)

Data are incomplete without the case narrative.

J is determined by instrument performance only.

Jold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

ERS Solutions, Inc.

Client Sample ID: DSSO-9

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-009
Work Order: GRJHE
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 09/30/04 0000

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Uranium 234	1.90		0.35	0.04	10/02/04	10/07/04	4276075	72
Uranium 235	0.080	J	0.079	0.044	10/02/04	10/07/04	4276075	72
Uranium 238	2.14		0.37	0.07	10/02/04	10/07/04	4276075	72
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Thorium 228	2.83		0.54	0.11	10/02/04	10/07/04	4276073	52
Thorium 230	2.81		0.53	0.08	10/02/04	10/07/04	4276073	52
Thorium 232	2.83		0.54	0.05	10/02/04	10/07/04	4276073	52

NOTE(S)

Data are incomplete without the case narrative.

DC is determined by instrument performance only.

bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

ERS Solutions, Inc.

Client Sample ID: DSSO-10

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-010
Work Order: GRJHH
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 09/30/04 0000

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Uranium 234	2.04		0.34	0.06	10/02/04	10/07/04	4276075	82
Uranium 235	0.095	J	0.076	0.062	10/02/04	10/07/04	4276075	82
Uranium 238	1.91		0.32	0.06	10/02/04	10/07/04	4276075	82
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Thorium 228	2.10		0.39	0.08	10/02/04	10/07/04	4276073	69
Thorium 230	2.71		0.46	0.09	10/02/04	10/07/04	4276073	69
Thorium 232	1.99		0.38	0.06	10/02/04	10/07/04	4276073	69

NOTE(S)

Data are incomplete without the case narrative.

J is determined by instrument performance only.

bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

ERS Solutions, Inc.

Client Sample ID: DSSO-11

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-011
Work Order: GRJHJ
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 09/30/04 0000

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Uranium 234	0.38	J	0.13	0.04	10/02/04	10/07/04	4276075	90
Uranium 235	0.063	J	0.061	0.034	10/02/04	10/07/04	4276075	90
Uranium 238	0.50	J	0.15	0.04	10/02/04	10/07/04	4276075	90
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Thorium 228	0.36	J	0.13	0.08	10/02/04	10/07/04	4276073	91
Thorium 230	0.34	J	0.12	0.05	10/02/04	10/07/04	4276073	91
Thorium 232	0.45	J	0.14	0.04	10/02/04	10/07/04	4276073	91

NOTE(S)

Data are incomplete without the case narrative.

J is determined by instrument performance only.

Jold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

ERS Solutions, Inc.

Client Sample ID: DSS0-12

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4I300355-012
Work Order: GRJHK
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 09/30/04 0000

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Uranium 234	1.36		0.27	0.05	10/02/04	10/07/04	4276075	80
Uranium 235	0.029	U	0.051	0.040	10/02/04	10/07/04	4276075	80
Uranium 238	1.45		0.28	0.03	10/02/04	10/07/04	4276075	80
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g		A-01-R MOD			
Thorium 228	1.33		0.28	0.08	10/02/04	10/07/04	4276073	79
Thorium 230	1.89		0.34	0.03	10/02/04	10/07/04	4276073	79
Thorium 232	1.27		0.27	0.05	10/02/04	10/07/04	4276073	79

NOTE(S)

Data are incomplete without the case narrative.

C is determined by instrument performance only.

Old results are greater than the MDC

U Result is less than the sample detection limit.

METHOD BLANK REPORT

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F4I300355
Matrix: SOLID

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Lab Sample ID			
					Prep Date	Analysis Date	Batch #	Yld %
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g	A-01-R MOD	F4J020000-073B			
Thorium 228	0.034	U	0.051	0.073	10/02/04	10/07/04	4276073	94
Thorium 230	0.160	J	0.083	0.027	10/02/04	10/07/04	4276073	94
Thorium 232	0.045	U	0.046	0.051	10/02/04	10/07/04	4276073	94
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g	A-01-R MOD	F4J020000-075B			
Uranium 234	0.063	J	0.053	0.050	10/02/04	10/07/04	4276075	91
Uranium 235	0.012	U	0.034	0.033	10/02/04	10/07/04	4276075	91
Uranium 238	0.007	U	0.021	0.043	10/02/04	10/07/04	4276075	91

NOTE(S)

are incomplete without the case narrative.

is determined using instrument performance only
Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.
U Result is less than the sample detection limit.

Laboratory Control Sample Report

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F4I300355
Matrix: SOLID

Parameter	Spike Amount	Result	Total Uncert.	MDC	% Yld	% Rec	Lab Sample ID
			(2 σ +/-)				QC Control Limits
Iso THORIUM (SHORT CT) DOE A-01-R MOD			pCi/g	A-01-R MOD			F4J020000-073C
Thorium 230	58.5	59.4	6.3	0.4	89	102	(75 - 130)
	Batch #:	4276073		Analysis Date:	10/07/04		
Iso URANIUM (SHORT CT) DOE A-01-R MOD			pCi/g	A-01-R MOD			F4J020000-075C
Uranium 234	19.6	18.1	2.6	0.3	99	93	(70 - 130)
Uranium 238	19.6	17.0	2.5	0.2	99	87	(70 - 130)
	Batch #:	4276075		Analysis Date:	10/07/04		

NOTE(S)

MDC is determined by instrument performance only
Calculations are performed before rounding to avoid round-off error in calculated results

DUPLICATE EVALUATION REPORT

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F4I300355
Matrix: SOLID

Date Sampled: 06/29/04
Date Received: 09/30/04

Parameter	SAMPLE Result		Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result		Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision	
Iso THORIUM (SHORT CT) DOE A-01-R MOD				pCi/g	A-01-R MOD				F4I300355-001	
Thorium 228	0.38	J	0.13	86	0.37	J	0.14	77	2	%RPD
Thorium 230	0.96	J	0.22	86	0.85	J	0.22	77	11	%RPD
Thorium 232	0.46	J	0.15	86	0.41	J	0.15	77	12	%RPD
Batch #:		4276073 (Sample)			4276073 (Duplicate)					
Iso URANIUM (SHORT CT) DOE A-01-R MOD				pCi/g	A-01-R MOD				F4I300355-001	
Uranium 234	0.49	J	0.17	82	0.57	J	0.18	97	14	%RPD
Uranium 235	0.005	U	0.037	82	0.020	U	0.049	97	123	%RPD
Uranium 238	0.53	J	0.16	82	0.54	J	0.17	97	2	%RPD
Batch #:		4276075 (Sample)			4276075 (Duplicate)					

NOTE(S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

- J Result is greater than sample detection limit but less than stated reporting limit.
- U Result is less than the sample detection limit.

ANALYTICAL REPORT

PROJECT NO. SP083304F0059

Defense National Stockpile

Lot #: F4G070328

Jim Reese

**Environmental Radiological &
Occupational Safety Solutions
1415 21st Street
Suite C
Sacramento, CA 95828**

SEVERN TRENT LABORATORIES, INC.

**Billy Tierney
Project Manager**

July 19, 2004

METHODS SUMMARY

F4G070328

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Gamma Spectroscopy - Cesium-137 & Hits	EPA 901.1 MOD	
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

EPA "EASTERN ENVIRONMENTAL RADIATION FACILITY RADIOCHEMISTRY
PROCEDURES MANUAL" US EPA EPA 520/5-84-006 AUGUST 1984

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SAMPLE SUMMARY

F4G070328

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GKMD7	001	DSSO-1	06/29/04	
GKMEK	002	DSSO-2	06/29/04	
GKMEM	003	DSSO-3	06/29/04	
GKMEN	004	DSSO-4	06/29/04	
GKMEP	005	DSSO-5	06/29/04	
GKMEQ	006	DSSO-6	06/29/04	
GKMER	007	DSSO-7	06/29/04	
GKMET	008	DSSO-8	06/29/04	
GKMEV	009	DSSO-9	06/29/04	
GKMEW	010	DSSO-10	06/29/04	
GKMEX	011	DSSO-11	06/29/04	
GKME0	012	DSSO-12	06/29/04	

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-1

General Chemistry

Lot-Sample #....: F4G070328-001

Work Order #....: GKMD7

Matrix.....: SOLID

Date Sampled....: 06/29/04

Date Received...: 07/07/04

% Moisture.....: 11

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	11.2	0.10	%	MCAWW 160.3 MOD	07/08-07/09/04	4190403

Dilution Factor: 1

Analysis Time...: 00:22

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-2

General Chemistry

Lot-Sample #....: F4G070328-002

Work Order #....: GKMEK

Matrix.....: SOLID

Date Sampled....: 06/29/04

Date Received...: 07/07/04

% Moisture.....: 11

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	11.0	0.10	%	MCAWW 160.3 MOD	07/08-07/09/04	4190403
		Dilution Factor: 1		Analysis Time...: 00:22		

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-3

General Chemistry

Lot-Sample #....: F4G070328-003

Work Order #....: GKMEM

Matrix.....: SOLID

Date Sampled...: 06/29/04

Date Received...: 07/07/04

% Moisture.....: 13

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	13.0	0.10	%	MCAWW 160.3 MOD	07/08-07/09/04	4190403
		Dilution Factor: 1		Analysis Time...: 00:22		

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-4

General Chemistry

Lot-Sample #....: F4G070328-004

Work Order #....: GK MEN

Matrix.....: SOLID

Date Sampled....: 06/29/04

Date Received...: 07/07/04

% Moisture.....: 14

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	13.7	0.10	%	MCAWW 160.3 MOD	07/08-07/09/04	4190403
		Dilution Factor: 1		Analysis Time...: 00:22		

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-5

General Chemistry

Lot-Sample #....: F4G070328-005

Work Order #....: GKMEP

Matrix.....: SOLID

Date Sampled....: 06/29/04

Date Received...: 07/07/04

% Moisture.....: 12

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	11.7	0.10	%	MCAWW 160.3 MOD	07/08-07/09/04	4190403
		Dilution Factor: 1		Analysis Time...: 00:22		

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-6

General Chemistry

Lot-Sample #....: F4G070328-006

Work Order #....: GKMEQ

Matrix.....: SOLID

Date Sampled....: 06/29/04

Date Received...: 07/07/04

% Moisture.....: 12

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	11.9	0.10	%	MCAWW 160.3 MOD	07/08-07/09/04	4190403
		Dilution Factor: 1		Analysis Time...: 00:22		

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-7

General Chemistry

Lot-Sample #....: F4G070328-007
Date Sampled....: 06/29/04
% Moisture.....: 15

Work Order #....: GKMER
Date Received...: 07/07/04

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	14.7	0.10	%	MCAWW 160.3 MOD	07/08-07/09/04	4190403
		Dilution Factor: 1		Analysis Time...: 00:22		

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-8

General Chemistry

Lot-Sample #....: F4G070328-008

Work Order #....: GKMET

Matrix.....: SOLID

Date Sampled...: 06/29/04

Date Received...: 07/07/04

% Moisture.....: 12

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	12.5	0.10	%	MCAWW 160.3 MOD	07/08-07/09/04	4190403

Dilution Factor: 1 Analysis Time...: 00:22

Cash in Advance / Prepaid Sales

Client Sample ID: DSS0-9

General Chemistry

Lot-Sample #....: F4G070328-009
Date Sampled....: 06/29/04
% Moisture.....: 13

Work Order #....: GKMEV
Date Received...: 07/07/04

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	13.0	0.10	%	MCAWW 160.3 MOD	07/08-07/09/04	4190403
		Dilution Factor: 1		Analysis Time...: 00:22		

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-10

General Chemistry

Lot-Sample #....: F4G070328-010 Work Order #....: GKMEW Matrix.....: SOLID
Date Sampled....: 06/29/04 Date Received...: 07/07/04
% Moisture.....: 13

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	12.8	0.10	%	MCAWW 160.3 MOD	07/08-07/09/04	4190403
		Dilution Factor: 1		Analysis Time...: 00:22		

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-11

General Chemistry

Lot-Sample #....: F4G070328-011
Date Sampled....: 06/29/04
% Moisture.....: 10

Work Order #....: GKMEX
Date Received...: 07/07/04

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	10	0.10	%	MCAWW 160.3 MOD	07/08-07/09/04	4190403
		Dilution Factor: 1		Analysis Time...: 00:22		

Cash in Advance / Prepaid Sales

Client Sample ID: DSS0-12

General Chemistry

Lot-Sample #...: F4G070328-012

Work Order #...: GKME0

Matrix.....: SOLID

Date Sampled...: 06/29/04

Date Received...: 07/07/04

% Moisture.....: 16

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	15.6	0.10	%	MCAWW 160.3 MOD	07/08-07/09/04	4190403
		Dilution Factor: 1		Analysis Time...: 00:22		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: F4G070328 Work Order #....: GKJTW-SMP Matrix.....: SOLID

GKJTW-DUP

Date Sampled....: 06/18/04 09:30 Date Received...: 07/06/04

% Moisture.....: 27

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Percent Moisture	26.7	24.6	%	8.1	(0-30)	MCAWW 160.3 MOD	07/08-07/09/04	4190403
Dilution Factor: 1						Analysis Time...: 00:22		

SD Lot-Sample #: F4G060129-003

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-1

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-001
Work Order: GKMD7
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 07/07/04 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Potassium 40	16.5		2.3	0.4	07/09/04	07/13/04	4191263	
Uranium 238	0.003	U	0.38	0.69	07/09/04	07/13/04	4191263	
--- Other Detected Radionuclides ---								
Actinium 228	0.25		0.22	0.24	07/09/04	07/13/04	4191263	
Beryllium 7	0.52		0.30	0.44	07/09/04	07/13/04	4191263	
Bismuth 214	0.39		0.11	0.09	07/09/04	07/13/04	4191263	
Lead 210	2.23		0.997	0.97	07/09/04	07/13/04	4191263	
Lead 212	0.323		0.063	0.062	07/09/04	07/13/04	4191263	
Lead 214	0.50		0.12	0.08	07/09/04	07/13/04	4191263	
Radium (226)	0.49		0.16	0.18	07/09/04	07/13/04	4191263	
Radium 228	0.33		0.25	0.28	07/09/04	07/13/04	4191263	
Thallium 208	0.090		0.048	0.050	07/09/04	07/13/04	4191263	

NOTE(S)

are incomplete without the case narrative.

is determined by instrument performance only.
Bold results are greater than the MDC

U Result is less than the sample detection limit.

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-1 DUP

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-001X

Work Order: GKMD7

Matrix: SOLID

Date Collected: 06/29/04 0000

Date Received: 07/07/04 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/g		901.1 MOD			
Potassium 40	18.4		2.6	0.5	07/09/04	07/13/04	4191263	
Uranium 238	0.14	U	0.49	0.87	07/09/04	07/13/04	4191263	
--- Other Detected Radionuclides ---								
Bismuth 214	0.56		0.14	0.09	07/09/04	07/13/04	4191263	
Lead 210	2.4		2.1	1.7	07/09/04	07/13/04	4191263	
Lead 212	0.369		0.076	0.080	07/09/04	07/13/04	4191263	
Lead 214	0.42		0.13	0.11	07/09/04	07/13/04	4191263	
Radium (226)	0.32		0.21	0.20	07/09/04	07/13/04	4191263	
Radium 228	0.40		0.29	0.33	07/09/04	07/13/04	4191263	
Thallium 208	0.147		0.054	0.063	07/09/04	07/13/04	4191263	

NOTE(S)

*a are incomplete without the case narrative.

is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-2

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-002

Work Order: GKMEK

Matrix: SOLID

Date Collected: 06/29/04 0000

Date Received: 07/07/04 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Potassium 40	18.5		2.6	0.7	07/09/04	07/13/04	4191263	
Uranium 238	-0.17	U	0.52	0.89	07/09/04	07/13/04	4191263	
--- Other Detected Radionuclides ---								
Actinium 228	0.57		0.31	0.25	07/09/04	07/13/04	4191263	
Bismuth 214	0.57		0.14	0.12	07/09/04	07/13/04	4191263	
Lead 212	0.37		0.10	0.09	07/09/04	07/13/04	4191263	
Lead 214	0.55		0.14	0.11	07/09/04	07/13/04	4191263	
Thallium 208	0.123		0.047	0.052	07/09/04	07/13/04	4191263	

NOTE(S)

Data are incomplete without the case narrative.

C is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-3

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-003

Work Order: GKMEM

Matrix: SOLID

Date Collected: 06/29/04 0000

Date Received: 07/07/04 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD		
Potassium 40	15.0		1.9	0.4	07/09/04	07/14/04	4191263	
Uranium 238	1.52		0.71	0.76	07/09/04	07/14/04	4191263	
--- Other Detected Radionuclides ---								
Actinium 228	2.69		0.75	0.19	07/09/04	07/14/04	4191263	
Bismuth 214	2.04		0.32	0.08	07/09/04	07/14/04	4191263	
Lead 210	3.37		0.95	1.0	07/09/04	07/14/04	4191263	
Lead 212	2.37		0.31	0.06	07/09/04	07/14/04	4191263	
Lead 214	2.16		0.28	0.09	07/09/04	07/14/04	4191263	
Radium (226)	2.38		0.33	0.15	07/09/04	07/14/04	4191263	
Radium 228	2.09		0.36	0.25	07/09/04	07/14/04	4191263	
Thallium 208	0.81		0.13	0.05	07/09/04	07/14/04	4191263	
Thorium 232	2.42		0.39	0.26	07/09/04	07/14/04	4191263	
Thorium 234	2.82		0.46	0.46	07/09/04	07/14/04	4191263	

NOTE(S)

Data are incomplete without the case narrative.

is determined by instrument performance only.

bold results are greater than the MDC

Cash in Advance / Prepaid Sales

Client Sample ID: DSS0-4

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-004

Work Order: GKMEN

Matrix: SOLID

Date Collected: 06/29/04 0000

Date Received: 07/07/04 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/g		901.1 MOD			
Potassium 40	15.7		2.1	0.5	07/09/04	07/14/04	4191263	
Uranium 238	1.67		0.76	0.78	07/09/04	07/14/04	4191263	
--- Other Detected Radionuclides ---								
Actinium 228	2.80		0.77	0.19	07/09/04	07/14/04	4191263	
Bismuth 212	1.71		0.48	0.38	07/09/04	07/14/04	4191263	
Bismuth 214	2.25		0.31	0.09	07/09/04	07/14/04	4191263	
Lead 210	2.7		1.0	1.1	07/09/04	07/14/04	4191263	
Lead 212	2.67		0.34	0.07	07/09/04	07/14/04	4191263	
Lead 214	2.42		0.31	0.09	07/09/04	07/14/04	4191263	
Radium (226)	2.37		0.30	0.16	07/09/04	07/14/04	4191263	
Radium 228	2.24		0.31	0.27	07/09/04	07/14/04	4191263	
Thallium 208	0.95		0.15	0.05	07/09/04	07/14/04	4191263	
Thorium 232	2.58		0.37	0.27	07/09/04	07/14/04	4191263	
Uranium 234	3.89		0.58	0.50	07/09/04	07/14/04	4191263	

NOTE(S)

Results are incomplete without the case narrative.

Results are determined by instrument performance only.

Bold results are greater than the MDC

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-5

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-005

Work Order: GKMEP

Matrix: SOLID

Date Collected: 06/29/04 0000

Date Received: 07/07/04 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/g		901.1 MOD			
Potassium 40	12.8		1.8	0.5	07/09/04	07/15/04	4191263	
Uranium 238	1.71		0.92	0.90	07/09/04	07/15/04	4191263	
--- Other Detected Radionuclides ---								
Actinium 228	2.25		0.64	0.20	07/09/04	07/15/04	4191263	
Bismuth 212	1.26		0.39	0.45	07/09/04	07/15/04	4191263	
Bismuth 214	2.05		0.29	0.10	07/09/04	07/15/04	4191263	
Lead 210	3.0		1.8	1.4	07/09/04	07/15/04	4191263	
Lead 212	2.30		0.30	0.08	07/09/04	07/15/04	4191263	
Lead 214	2.05		0.28	0.10	07/09/04	07/15/04	4191263	
Radium (226)	2.16		0.35	0.20	07/09/04	07/15/04	4191263	
Radium 228	1.97		0.37	0.32	07/09/04	07/15/04	4191263	
Thallium 208	0.72		0.12	0.06	07/09/04	07/15/04	4191263	
Thorium 232	2.11		0.38	0.34	07/09/04	07/15/04	4191263	
Thorium 234	2.46		0.47	0.57	07/09/04	07/15/04	4191263	

NOTE(S)

Data are incomplete without the case narrative.

C is determined by instrument performance only.

Bold results are greater than the MDC

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-6

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-006

Work Order: GKMEQ

Matrix: SOLID

Date Collected: 06/29/04 0000

Date Received: 07/07/04 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Potassium 40	14.0		1.8	0.5	07/09/04	07/14/04	4191263	
Uranium 238	1.34		0.89	0.74	07/09/04	07/14/04	4191263	
--- Other Detected Radionuclides ---								
Actinium 228	2.26		0.62	0.18	07/09/04	07/14/04	4191263	
Bismuth 212	1.30		0.37	0.36	07/09/04	07/14/04	4191263	
Bismuth 214	1.90		0.26	0.08	07/09/04	07/14/04	4191263	
Lead 210	1.45		0.90	1.3	07/09/04	07/14/04	4191263	
Lead 212	2.17		0.28	0.07	07/09/04	07/14/04	4191263	
Lead 214	1.90		0.25	0.08	07/09/04	07/14/04	4191263	
Radium (226)	2.14		0.31	0.14	07/09/04	07/14/04	4191263	
Radium 228	1.98		0.33	0.24	07/09/04	07/14/04	4191263	
Thallium 208	0.75		0.12	0.04	07/09/04	07/14/04	4191263	
Thorium 229	0.33		0.21	0.18	07/09/04	07/14/04	4191263	
Thorium 232	2.06		0.33	0.24	07/09/04	07/14/04	4191263	
Thorium 234	2.63		0.45	0.47	07/09/04	07/14/04	4191263	

NOTE(S)

are incomplete without the case narrative.

is determined by instrument performance only.
Bold results are greater than the MDC

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-7

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-007

Date Collected: 06/29/04 0000

Work Order: GKMER

Date Received: 07/07/04 0915

Matrix: SOLID

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/g		901.1 MOD			
Potassium 40	14.0		1.8	0.4	07/09/04	07/14/04	4191263	
Uranium 238	1.99		0.996	0.75	07/09/04	07/14/04	4191263	
--- Other Detected Radionuclides ---								
Actinium 228	2.85		0.80	0.17	07/09/04	07/14/04	4191263	
Bismuth 212	1.87		0.50	0.35	07/09/04	07/14/04	4191263	
Bismuth 214	2.19		0.33	0.09	07/09/04	07/14/04	4191263	
Lead 210	2.7		1.3	1.0	07/09/04	07/14/04	4191263	
Lead 212	2.55		0.33	0.07	07/09/04	07/14/04	4191263	
Lead 214	2.37		0.31	0.09	07/09/04	07/14/04	4191263	
Radium (226)	2.49		0.38	0.14	07/09/04	07/14/04	4191263	
Radium 228	2.29		0.37	0.27	07/09/04	07/14/04	4191263	
Thallium 208	0.86		0.15	0.05	07/09/04	07/14/04	4191263	
Thorium 232	2.50		0.39	0.25	07/09/04	07/14/04	4191263	
Thorium 234	2.03		0.35	0.59	07/09/04	07/14/04	4191263	

NOTE(S)

Results are incomplete without the case narrative.

Results are determined by instrument performance only.

Bold results are greater than the MDC

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-8

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-008

Work Order: GKMET

Matrix: SOLID

Date Collected: 06/29/04 0000

Date Received: 07/07/04 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Potassium 40	16.6		2.1	0.4	07/09/04	07/14/04	4191263	
Uranium 238	1.07		0.62	0.80	07/09/04	07/14/04	4191263	
--- Other Detected Radionuclides ---								
Actinium 228	2.04		0.57	0.15	07/09/04	07/14/04	4191263	
Bismuth 212	0.96		0.37	0.33	07/09/04	07/14/04	4191263	
Bismuth 214	1.54		0.22	0.08	07/09/04	07/14/04	4191263	
Lead 210	2.3		1.1	1.2	07/09/04	07/14/04	4191263	
Lead 212	1.64		0.21	0.06	07/09/04	07/14/04	4191263	
Lead 214	1.38		0.19	0.08	07/09/04	07/14/04	4191263	
Radium (226)	1.42		0.22	0.14	07/09/04	07/14/04	4191263	
Radium 228	1.59		0.31	0.24	07/09/04	07/14/04	4191263	
Thallium 208	0.582		0.093	0.043	07/09/04	07/14/04	4191263	
Thorium 232	1.87		0.30	0.23	07/09/04	07/14/04	4191263	

NOTE(S)

are incomplete without the case narrative.

is determined by instrument performance only.
Bold results are greater than the MDC

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-9

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-009
Work Order: GKMEV
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 07/07/04 0915

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/g		901.1 MOD			
Potassium 40	13.6		1.8	0.4	07/09/04	07/14/04	4191263	
Uranium 238	1.24		0.61	0.63	07/09/04	07/14/04	4191263	
--- Other Detected Radionuclides ---								
Actinium 228	2.19		0.61	0.17	07/09/04	07/14/04	4191263	
Bismuth 212	0.92		0.35	0.33	07/09/04	07/14/04	4191263	
Bismuth 214	1.82		0.26	0.07	07/09/04	07/14/04	4191263	
Lead 210	2.3		1.1	0.8	07/09/04	07/14/04	4191263	
Lead 212	2.04		0.26	0.05	07/09/04	07/14/04	4191263	
Lead 214	1.78		0.23	0.07	07/09/04	07/14/04	4191263	
Radium (226)	1.77		0.23	0.13	07/09/04	07/14/04	4191263	
Thallium 208	0.68		0.11	0.04	07/09/04	07/14/04	4191263	
Thorium 232	1.94		0.29	0.24	07/09/04	07/14/04	4191263	
Thorium 234	2.52		0.40	0.39	07/09/04	07/14/04	4191263	

NOTE (S)

are incomplete without the case narrative.

is determined by instrument performance only.

Bold results are greater than the MDC

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-10

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-010

Work Order: GKMEW

Matrix: SOLID

Date Collected: 06/29/04 0000

Date Received: 07/07/04 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD		
Potassium 40	12.9		1.9	0.6	07/09/04	07/15/04	4191263	
Uranium 238	1.88		0.87	0.86	07/09/04	07/15/04	4191263	
--- Other Detected Radionuclides ---								
Actinium 228	2.51		0.72	0.21	07/09/04	07/15/04	4191263	
Bismuth 212	1.59		0.50	0.46	07/09/04	07/15/04	4191263	
Bismuth 214	2.00		0.30	0.10	07/09/04	07/15/04	4191263	
Lead 210	2.3		1.2	1.2	07/09/04	07/15/04	4191263	
Lead 212	2.21		0.28	0.07	07/09/04	07/15/04	4191263	
Lead 214	2.11		0.28	0.09	07/09/04	07/15/04	4191263	
Radium (226)	2.14		0.28	0.17	07/09/04	07/15/04	4191263	
Radium 228	1.83		0.36	0.31	07/09/04	07/15/04	4191263	
Thallium 208	0.71		0.13	0.06	07/09/04	07/15/04	4191263	
Thorium 232	1.83		0.33	0.31	07/09/04	07/15/04	4191263	
Uranium 234	2.97		0.50	0.51	07/09/04	07/15/04	4191263	

NOTE(S)

*a are incomplete without the case narrative.

is determined by instrument performance only.
Bold results are greater than the MDC

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-11

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-011
Work Order: GKMEX
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 07/07/04 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Potassium 40	13.6		1.6	0.2	07/09/04	07/14/04	4191263	
Uranium 238	0.17	U	0.22	0.40	07/09/04	07/14/04	4191263	
--- Other Detected Radionuclides ---								
Actinium 228	0.45		0.17	0.10	07/09/04	07/14/04	4191263	
Bismuth 212	0.27		0.17	0.21	07/09/04	07/14/04	4191263	
Bismuth 214	0.438		0.083	0.048	07/09/04	07/14/04	4191263	
Lead 210	1.0		0.53	0.50	07/09/04	07/14/04	4191263	
Lead 212	0.427		0.062	0.034	07/09/04	07/14/04	4191263	
Lead 214	0.406		0.070	0.044	07/09/04	07/14/04	4191263	
Radium (226)	0.42		0.10	0.08	07/09/04	07/14/04	4191263	
Radium 228	0.39		0.12	0.14	07/09/04	07/14/04	4191263	
Thallium 208	0.117		0.034	0.028	07/09/04	07/14/04	4191263	
Thorium 232	0.303		0.094	0.16	07/09/04	07/14/04	4191263	

NOTE (S)

are incomplete without the case narrative.

is determined by instrument performance only.
Bold results are greater than the MDC

U Result is less than the sample detection limit.

Cash in Advance / Prepaid Sales

Client Sample ID: DSSO-12

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G070328-012
Work Order: GKME0
Matrix: SOLID

Date Collected: 06/29/04 0000
Date Received: 07/07/04 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Potassium 40	14.0		2.0	3.1	07/09/04	07/13/04	4191263	
Uranium 238	0.99	J	0.52	0.96	07/09/04	07/13/04	4191263	
--- Other Detected Radionuclides ---								
Actinium 228	0.91		0.36	0.22	07/09/04	07/13/04	4191263	
Bismuth 214	0.85		0.17	0.10	07/09/04	07/13/04	4191263	
Lead 210	2.2		1.3	1.1	07/09/04	07/13/04	4191263	
Lead 212	0.90		0.14	0.09	07/09/04	07/13/04	4191263	
Lead 214	1.00		0.17	0.1	07/09/04	07/13/04	4191263	
Radium (226)	1.02		0.21	0.17	07/09/04	07/13/04	4191263	
Radium 228	0.84		0.29	0.30	07/09/04	07/13/04	4191263	
Thallium 208	0.292		0.081	0.061	07/09/04	07/13/04	4191263	
Thorium 232	0.79		0.30	0.42	07/09/04	07/13/04	4191263	

NOTE(S)

ata are incomplete without the case narrative.

OC is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

METHOD BLANK REPORT

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F4G070328
Matrix: SOLID

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Lab Sample ID		
						Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/g	901.1 MOD	F4G090000-263B			
Potassium 40	0.27	U	0.28	0.75	07/09/04	07/11/04	4191263	
Uranium 238	0.18	U	0.28	0.62	07/09/04	07/11/04	4191263	

NOTE(S)

are incomplete without the case narrative.
MDC is determined using instrument performance only
Bold results are greater than the MDC
U Result is less than the sample detection limit.

DUPLICATE EVALUATION REPORT

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F4G070328
Matrix: SOLID

Date Sampled: 06/29/04
Date Received: 07/07/04

Parameter	SAMPLE Result	Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result	Total Uncert. (2 σ +/-)	% Yld	QC Sample ID	
							Precision	
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/g	901.1 MOD		F4G070328-001		
Potassium 40	16.5	2.3		18.4	2.6		11	%RPD
Uranium 238	0.003 U	0.38		0.14 U	0.49		192	%RPD
---Other Dedected Radionuclides---								
Bismuth 214	0.39	0.11		0.56	0.14		34	%RPD
Lead 210	2.23	0.997		2.4	2.1		8	%RPD
Lead 212	0.323	0.063		0.369	0.076		13	%RPD
Lead 214	0.50	0.12		0.42	0.13		18	%RPD
Radium (226)	0.49	0.16		0.32	0.21		42	%RPD
Radium 228	0.33	0.25		0.40	0.29		20	%RPD
Thallium 208	0.090	0.048		0.147	0.054		49	%RPD
Batch #:		4191263 (Sample)	4191263 (Duplicate)					

NOTE(S)

are incomplete without the case narrative.
Calculations are performed before rounding to avoid round-off error in calculated results
U Result is less than the sample detection limit.

Laboratory Control Sample Report

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F4G070328
Matrix: SOLID

Parameter	Spike Amount	Result	Total Uncert.	MDC	Lab Sample ID		QC Control Limits
			(2 σ +/-)		% Yld	% Rec	
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/g	901.1 MOD	F4G090000-263C		
Americium 241	70.0	72.7	8.7	0.7	104	(90 - 115)	
Cesium 137	29.5	30.8	3.8	0.3	104	(90 - 115)	
Cobalt 60	42.4	42.4	4.8	0.4	100	(90 - 111)	
Batch #:		4191263		Analysis Date: 07/11/04			

NOTE(S)

MDC is determined by instrument performance only
Calculations are performed before rounding to avoid round-off error in calculated results

Appendix F
DandD Soil Sample Dose Assessment

DandD Residential Scenario

DandD Version: 2.1.0

Site Name: Scotia

Description: alpha spec data exposure

Options:

Implicit progeny doses NOT included with explicit parent doses
Nuclide concentrations are distributed among all progeny

External Pathway is ON

Inhalation Pathway is ON

Secondary Ingestion Pathway is ON

Agricultural Pathway is ON

Drinking Water Pathway is ON

Irrigation Pathway is ON

Surface Water Pathway is ON

Initial Activities:

Nuclide	Area of Contamination (m ²)	Distribution
230Th+C	585	CONSTANT(pCi/g)
Justification for concentration: sample data		Value 2.24E+00
232Th+C	585	CONSTANT(pCi/g)
Justification for concentration: sample data		Value 2.04E+00
235U+C	585	CONSTANT(pCi/g)
Justification for concentration: sample data		Value 1.60E-01
238U+C	585	CONSTANT(pCi/g)
Justification for concentration: sample data		Value 1.64E+00

Site Specific Parameters:

General Parameters:

None

Element Dependant Parameters

None

Correlation Coefficients:

None

Summary Results:

90.00% of the 109 calculated TEDE values are $< 2.06\text{E}+01$ mrem/year.

The 95 % Confidence Interval for the 0.9 quantile value of TEDE is $1.97\text{E}+01$ to $2.18\text{E}+01$ mrem/year

Appendix G

Minimum Detectable Activity

Minimum Detectable Count Rate

Alpha Probability of Detection

Probability of Detection and Dwell Time for Alpha Scanning
DNSC Scotia
Detector Eberline SHP-380AB, 1160

Probability of Detecting DCGL for Alpha Scanning

180 G - DCGL_{as} (dpm/100 cm²)
7.5 B - Bkg Count Rate (cpm)
0.443 E - Detector Efficiency
18.4 d - Diameter of detector in direction of scan (cm) (as measured)
15 v - Scan speed (cm/sec)

Determine Time Over Source

$t = d/v$ Equation J-3, MARSSIM Appendix J
 $t = 1.227667$

Determine Probability

$$P = 1 - \left[1 + \left(\frac{(GE + B)t}{60} \right) \right] \times \left(e^{\frac{-(GE+B)t}{60}} \right) \text{ Equation 6-14 of MARSSIM}$$

Where: G = Contamination Activity (dpm) – DCGL
E = Detector Efficiency (4 π)
B = Background Count rate (cpm)
 $t = d/v$
d = Width of detector in direction of scan (cm)
v = scan speed (cm/sec)

P= 53.29%

Dwell Time Over Source

$$t = \frac{13,800}{CAE} \text{ Equation 6-13 of MARSSIM}$$

Where C = Contamination Guideline (dpm/100 cm²)
A = Physical Probe Area (cm²)
E = Detector Efficiency (4 π)

t= 173 seconds

Probability of Detection and Dwell Time for Alpha Scanning
DNSC Scotia
Detector Ludlum 2221, 239-1F, PR114130

Probability of Detecting DCGL for Alpha Scanning

1048 G - DCGL_{as} (dpm/582 cm²)
 373 B - Bkg Count Rate (cpm)
 0.35 E - Detector Efficiency
 16 d - Diameter of detector in direction of scan (cm) (manufacturers data)
 25 v - Scan speed (cm/sec)

Determine Time Over Source

$t = d/v$ Equation J-3, MARSSIM Appendix J
 t = 0.64

Determine Probability

$$P = 1 - \left[1 + \left(\frac{(GE + B)t}{60} \right) \right] \times \left(e^{-\frac{-(GE+B)t}{60}} \right) \text{ Equation 6-14 of MARSSIM}$$

Where: G = Contamination Activity (dpm) – DCGL
 E = Detector Efficiency (4 π)
 B = Background Count rate (cpm)
 t = d/v
 d = Width of detector in direction of scan (cm)
 v = scan speed (cm/sec)

P= 99.7%

Dwell Time Over Source

$$t = \frac{13,800}{CAE} \text{ Equation 6-13 of MARSSIM}$$

Where C = Contamination Guideline (dpm/100 cm²)
 A = Physical Probe Area (cm²)
 E = Detector Efficiency (4 π)

t= 0.38 seconds

Minimum Detectable Activity for Alpha Static Measurements
SUs 0c, 2, 2a, 2b, 3, 3a, 3b, 4a, 4b, 5a, 5b, and 6b
Detector SHP-380AB, 1090
DNSC Scotia Depot

Variables

Alpha Survey Type
1090 Detector Number
8.5 Background count rate (cpm)
2 Count Time (min)
43.6% Efficiency
100 Area of Detector (cm²)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are equivalent

Calculate Static MDA

Static MDA = $2.71 + 4.65(B_r * t)^{0.5} / t * E * A / 100$ (NUREG 1507)

Where:	B _r	Background Countrate
	t	Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Static MDA	25 dpm/100 cm ²
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Minimum Detectable Activity for Beta Static Measurements
SUs 0c, 2, 2a, 2b, 3, 3a, 3b, 4a, 4b, 5a, 5b, and 6b
Detector SHP-380AB, 1090
DNSC Scotia Depot

Variables

Beta Survey Type
1090 Detector Number
251 Background count rate (cpm)
2 Count Time (min)
14% Efficiency
100 Area of Detector (cm²)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are equivalent

Calculate Static MDA

Static MDA = $2.71 + 4.65(B_r * t)^{0.5} / t * E * A_{100}$ (NUREG 1507)

Where:	B _r	Background Countrate
	t	Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Static MDA	382 dpm/100 cm ²
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Minimum Detectable Activity for Alpha Static Measurements
SUs 0a, 0b, 1, 4, 5, 6, and 6a
Detector SHP-380AB, 1160
DNSC Scotia Depot

Variables

Alpha Survey Type
1160 Detector Number
9.6 Background count rate (cpm)
2 Count Time (min)
44.3% Efficiency
100 Area of Detector (cm²)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are equivalent

Calculate Static MDA

Static MDA = $2.71 + 4.65(B_r * t)^{0.5} / t * E * A / 100$ (NUREG 1507)

Where:	B _r	Background Countrate
	t	Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Static MDA	26 dpm/100 cm ²
------------	----------------------------

Minimum Detectable Activity for Beta Static Measurements
SUs 0a, 0b, 1, 4, 5, 6, and 6a
Detector SHP-380AB, 1160
DNSC Scotia Depot

Variables

Beta Survey Type
1160 Detector Number
286.8 Background count rate (cpm)
2 Count Time (min)
15.0% Efficiency
100 Area of Detector (cm²)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are equivalent

Calculate Static MDA

Static MDA = $2.71 + 4.65(B_r * t)^{0.5} / t * E * A / 100$ (NUREG 1507)

Where:	B _r	Background Countrate
	t	Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Static MDA	380 dpm/100 cm ²
------------	-----------------------------

**Alpha Swipe MDA Calculation
DNSC Scotia
HandECount Scaler 132
July 10, 2004**

Variables

Alpha Survey Type
132 Detector Number
0.5 Background count rate (cpm)
5 Count Time (min)
20.5 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100 \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.08 dpm/100 cm ²
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**Beta Swipe MDA Calculation
DNSC Scotia
HandECount Scaler 132
July 10, 2004**

Variables

Beta Survey Type
132 Detector Number
35.6 Background count rate (cpm)
5 Count Time (min)
30.5 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

Swipe MDA = $3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100$ (NUREG 1507 Equation 3-10)

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.33 dpm/100 cm ²
-----------	------------------------------

**Alpha Swipe MDA Calculation
DNSC Scotia
HandECount Scaler 132
July 15, 2004**

Variables

Alpha Survey Type
132 Detector Number
0.9 Background count rate (cpm)
10 Count Time (min)
30.5 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

Swipe MDA = $3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100$ (NUREG 1507 Equation 3-10)

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.05 dpm/100 cm ²
-----------	------------------------------

Beta Swipe MDA Calculation
DNSC Scotia
HandECount Scaler 132
July 15, 2004

Variables

Beta Survey Type
132 Detector Number
37.4 Background count rate (cpm)
10 Count Time (min)
20.6 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

Swipe MDA = $3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100$ (NUREG 1507 Equation 3-10)

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.37 dpm/100 cm ²
-----------	------------------------------

Alpha Swipe MDA Calculation
DNSC Scotia
HandECount Scaler 132
July 16, 2004

Variables

Alpha Survey Type
132 Detector Number
0.7 Background count rate (cpm)
6 Count Time (min)
30.1 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100 \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.06 dpm/100 cm ²
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**Beta Swipe MDA Calculation
DNSC Scotia
HandECount Scaler 132
July 16, 2004**

Variables

Beta Survey Type
132 Detector Number
35.7 Background count rate (cpm)
6 Count Time (min)
20.6 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100 \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.45 dpm/100 cm ²
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**Alpha Swipe MDA Calculation
DNSC Scotia
HandECount Scaler 131
July 15, 2004**

Variables

Alpha Survey Type
131 Detector Number
0.84 Background count rate (cpm)
10 Count Time (min)
29.3 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100 \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.05 dpm/100 cm ²
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Beta Swipe MDA Calculation
DNSC Scotia
HandECount Scaler 131
July 15, 2004

Variables

Beta Survey Type
131 Detector Number
31.08 Background count rate (cpm)
10 Count Time (min)
18.4 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100 \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.38 dpm/100 cm ²
-----------	------------------------------

**Alpha Swipe MDA Calculation
DNSC Scotia
HandECount Scaler 131
July 16, 2004**

Variables

Alpha Survey Type
131 Detector Number
0.9 Background count rate (cpm)
6 Count Time (min)
30.4 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A /_{100} \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.06 dpm/100 cm ²
-----------	------------------------------

**Beta Swipe MDA Calculation
DNSC Scotia
HandECount Scaler 131
July 16, 2004**

Variables

Beta Survey Type
131 Detector Number
32.28 Background count rate (cpm)
6 Count Time (min)
19.6 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100 \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.45 dpm/100 cm ²
-----------	------------------------------

**Alpha Swipe MDA Calculation
DNSC Scotia
Protean IPC-9025
February 3, 2004**

Variables

Alpha Survey Type
9025 Detector Number
0.033 Background count rate (cpm)
1 Count Time (min)
29.1 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100 \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B_r	Background Countrate
	t_s	Count Time (min)
	t_b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.12 dpm/100 cm ²
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**Alpha Swipe MDA Calculation
DNSC Scotia
Protean IPC-9025
February 4, 2004**

Variables

Alpha Survey Type
9025 Detector Number
0.167 Background count rate (cpm)
1 Count Time (min)
30.2 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100 \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.14 dpm/100 cm ²
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Alpha Swipe MDA Calculation
DNSC Scotia
Protean IPC-9025
July 23, 2004

Variables

Alpha Survey Type
9025 Detector Number
0.067 Background count rate (cpm)
5 Count Time (min)
30.4 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100 \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.03 dpm/100 cm ²
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Alpha Swipe MDA Calculation
DNSC Scotia
Protean IPC-9025
July 26, 2004

Variables

Alpha Survey Type
9025 Detector Number
0.067 Background count rate (cpm)
5 Count Time (min)
30.4 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r \cdot t_s (1 + t_s/t_b))^{0.5} / t_s \cdot E \cdot A / 100 \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.03 dpm/100 cm ²
-----------	------------------------------

Beta Swipe MDA Calculation
DNSC Scotia
Protean IPC-9025
February 3, 2004

Variables

Beta Survey Type
9025 Detector Number
1.267 Background count rate (cpm)
1 Count Time (min)
42.5 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r \cdot t_s (1 + t_s/t_b))^{0.5} / t_s \cdot E \cdot A / 100 \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B_r	Background Countrate
	t_s	Count Time (min)
	t_b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.16 dpm/100 cm ²
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Beta Swipe MDA Calculation
DNSC Scotia
Protean IPC-9025
February 4, 2004

Variables

Beta Survey Type
9025 Detector Number
0.5 Background count rate (cpm)
1 Count Time (min)
34.5 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

$$\text{Swipe MDA} = 3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A /_{100} \quad (\text{NUREG 1507 Equation 3-10})$$

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.16 dpm/100 cm ²
-----------	------------------------------

Beta Swipe MDA Calculation
DNSC Scotia
Protean IPC-9025
July 23, 2004

Variables

Beta Survey Type
9025 Detector Number
1 Background count rate (cpm)
5 Count Time (min)
43.2 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

Swipe MDA = $3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100$ (NUREG 1507 Equation 3-10)

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.05 dpm/100 cm ²
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Beta Swipe MDA Calculation
DNSC Scotia
Protean IPC-9025
July 26, 2004

Variables

Beta Survey Type
9025 Detector Number
1 Background count rate (cpm)
5 Count Time (min)
43.2 Efficiency
100 Area of Detector (cm²)
30 Background Count Time (min)

Constants

60 sec/min
2.54 cm/in

Assumptions

Background count time and sample count time are different

Calculate Swipe MDA

Swipe MDA = $3 + 3.29 (B_r * t_s (1 + t_s/t_b))^{0.5} / t_s * E * A / 100$ (NUREG 1507 Equation 3-10)

Where:	B _r	Background Countrate
	t _s	Count Time (min)
	t _b	Background Count Time (min)
	E	Efficiency
	A	Area of detector (cm ²)

Swipe MDA	0.05 dpm/100 cm ²
-----------	------------------------------

This is to acknowledge the receipt of your letter/application dated

11/10/2005, and to inform you that the initial processing which includes an administrative review has been performed.

☒ Amend. STC-133 There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned Mail Control Number 136268.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (RI)
(6-96)

Sincerely,
Licensing Assistance Team Leader

BETWEEN:

License Fee Management Branch, ARM
and
Regional Licensing Sections

: (FOR LFMS USE)
: INFORMATION FROM LTS
: -----
:
: Program Code: 11300
: Status Code: 0
: Fee Category: EX 2C
: Exp. Date: 20100228
: Fee Comments: NOT SHIELDING
: Decom Fin Assur Req'd: Y
: ::::::::::::::::::::::::::::::::::::::

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

Applicant/Licensee: DEFENSE LOGISTICS AGENCY
Received Date: 20050110
Docket No: 4000341
Control No.: 136268
License No.: STC-133
Action Type: Amendment

2. FEE ATTACHED

Amount: /
Check No.: /

3. COMMENTS

Signed Robert L. Juarez
Date 11/11/2005

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered /__/)

1. Fee Category and Amount: _____

2. Correct Fee Paid. Application may be processed for:

Amendment _____
Renewal _____
License _____

3. OTHER _____

Signed _____
Date _____