DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, DC 20350-2000

IN REPLY REFER TO

G-7

6470
Ser N456S/10U158209
19 July 2010

U.S. Nuclear Regulatory Commission
Region I
Attn: Ms O. Masnyk-Bailey
475 Allendale Road
King of Prussia, PA 19406-1415

45-23645-01NA
03029462

Ms. Masnyk-Bailey:

SUBJECT: TERMINATION OF NAVAL RADIOACTIVE MATERIALS PERMIT NO. 13-00164-B1NP ISSUED TO NAVAL SURFACE WARFARE CENTER DIVISION, CRANE

Naval Surface Warfare Center Division, Crane has submitted an NRC Form 314 and supporting documentation to terminate Naval Radioactive Materials Permit (NRMP) No. 13-00164-B1NP. NRMP No. 13-00164-B1NP authorized use and storage of Kr-85 and storage of H-3 unsealed sources. Krypton-85 was used and stored in an ISOVAC Radiflo Mark IV and Intertest Leak Detection System. Kr-85 was also used to replenish and perform calibration checks on the leak detection systems. H-3 is a component of Laser Target Markers that were in storage only.

Naval Radiation Safety Committee (NRSC) review of the NRC Form 314 and supporting termination determined that Decommissioning Group 2 is the appropriate decommissioning category. NRSC requests that NRC perform an environmental assessment (EA) and inform the NRSC when to proceed with NRMP termination. Enclosure (1) provides a summary of the supporting documentation to assist in preparation of the EA.

If you have any further question regarding this action, please contact Mr. Jeffrey Black at NAVSEADET RASO: (757) 887-4692, or jeffrey.l.black@navy.mil.

Sincerely,

L. L FRAGOSO
By direction

RECEIVED
2010 JUL 26 PM 2:17

573216
NMSS/RGN1 MATERIALS-002

SUMMARY OF NAVAL SURFACE WARFARE CENTER DIVISION, CRANE REQUEST TO TERMINATE NRMP NO. 13-00164-B1NP

Naval Surface Warfare Center Division, Crane submitted an NRC Form 314 with supporting documentation to terminate NRMP No. 13-00164-B1NP.

LOCATIONS OF RADIOACTIVE MATERIAL USE AT CRANE NAVAL WARFARE CENTER, 300 HIGHWAY 361, CRANE IN 47522

Krypton-85

- Building 2931 - Kr-85 was used to support fine leak testing of hermetically sealed components used by Department of Defense entities. Fine leak testing was performed using an ISOVAC Radiflo Mark IV and an Intertest Leak Detection System. A separate Kr-85 gas cylinder was used to replenish the Kr-85 in the leak test systems. Kr-85 calibration check sources were also used to calibrate the leak test systems. Kr-85 was used in Building 2931 building from September 1998 to November 1999. Building 2931 has since been demolished.

- Magazine 915 - Intertest Leak Detection System and calibration check sources were stored at Magazine 915 from November 1999 to December 2008. Magazine 915 is a one story, one room structure, approximately 42 feet by 25 feet. The floor and walls are made of concrete and the exterior is earthen-covered. Magazine 915 is ventilated by a passive wind turbine leading to the outer environs. Magazine 915 is located at a remote area of the site.

Hydrogen-3

- Buildings 2521 and 2931 - H-3 was stored in these building as a component of a Laser Targeting Marker (LTM-91). LTM-91 is an electro-optical device that transmits and receives precise, controlled laser energy to measure target range and to mark targets for delivery of laser guided ordnance. LTM-91 is a radioactive commodity exempt from NRC licensing per 10 CFR 30.19, but was placed on the NRMP for inventory purposes.

HISTORY AND RECORDS PERTINENT TO NRMP
No. 13-00164 B1NP TERMINATION

Note: Other amendments to NRMP No. 13-00164 are not relative to NRMP termination e.g., RSO change.

- September 1988 - Amendment 0 authorized use of Kr-85 to support operation of ISOVAC Mark IV Radiflo Leak Detection System in Building 2931.

- March 1993 - Amendment 2 authorized use of Intertest Leak Detection System in Building 2931. This system was purchased as a replacement to the ISOVAC Mark IV Radiflo Leak Detection System.

- December 1997 - Amendment 4 authorized storage of Laser Target Markers containing H-3 in Building 2521.

- February 1998 - The ISOVAC Radiflo Mark IV Leak Detection System was last used in Building 2931.

- March 1998 - Amendment 5 authorized storage of Laser Target Markers containing H-3 in Building 3291. Laser Target Markers were moved from Building 2521 to Building 3291. No surveys for H-3 were performed in Building 2521 since the Laser Target Markers are a radioactive commodity item.

- October 1998 - Transferred ISOVAC Mark IV Radiflo Leak Detection System from Crane to U.S. Army Industrial Operations. No radiological surveys were performed in Building 2931. Transfer documents are included as Attachment 1.

- December 1998 - Transferred Kr-85 gas cylinder from Crane to DuPont Pharmaceuticals. Radiological surveys were performed to support transfer of custody and shipment. Transfer documents are included as Attachment 2.

- October 1999 - Amendment 8 authorized "storage only" of Intertest Leak Detection System and calibration check sources in Magazine 915.

- November 1999 - Relocated Intertest Leak Detection System and calibration check sources from Building 2931 to Magazine 915. Performed radiological surveys in Building 2931. Radiological surveys were performed by Crane using

an Eberline Model E-520 beta/gamma survey instrument. Additionally, wipes were taken and counted (by an outside organization) using a liquid scintillation beta counting system. All wipes had no measureable krypton-85 radioactivity (0 net counts). Radiological survey data of Building 2931 are included as Attachment 3.

- August 2002 - Transferred LTM-91 from Crane to Canadian Government. No radiological survey for H-3 was performed in Building 2931. Transfer Documents are included as Attachment 4.

- December 2008 - Transferred Intertest Leak Detection System and calibration check sources to ISOVAC Engineering Inc. for decommissioning and disposal. Transfer documents are included as Attachment 5.

- December 2008 - Performed radiological survey in Magazine 915 subsequent to removal of Intertest Leak Detection System and calibration sources. Radiological surveys were performed by Crane using a Ludlum Model M-2241 beta/gamma survey instrument. Radiological survey data of Magazine 915 are included as Attachment 6.

- January 2009 - Received certificate of decommissioning and disposal from ISOVAC Engineering. Certificate of Decommissioning and Disposal documents are included as Attachment 7.

- March 2009 - To provide additional assurance, Crane performed additional surveys subsequent to removing low level radioactive waste associated with NPMPs 13-00164 U1NP and U2NP. These surveys were performed using a Ludlum Model M-2241, an alpha scintillation detector-based system, and a liquid scintillation beta counting system. Survey measurements were made at the previous Intertest Leak Detection System storage location as well as all other areas inside Magazine 915. Results of these surveys confirmed that no radioactivity remained in Magazine 915. Radiological survey data are included as Attachment 8.

RADIONUCLIDE OF CONCERN

Kr-85 is the only radionuclide of concern. Kr-85 is a noble gas that only accumulates on inner surfaces of tubing and in grease in valves, tanks, and tubing maintained at high pressures in leak detection systems according to NRC Information Notice 96-51. Because Kr-85 is a noble gas, no contamination is expected to remain on any external surfaces of systems such as the Leak Detection Systems. Additionally, ISOVAC Engineer (George Neff) has stated that Kr-85 accumulation has never been observed on surfaces maintained at normal atmospheric pressure.

DECOMMISSIONING GROUP

This decommissioning falls in Group 2 based upon Kr-85 being an unsealed source and negative data from radiological surveys performed in Building 2931 and Magazine 915 subsequent to the removal of all radioactive material. H-3 in the LTM-91 is not considered as part of this decommissioning act since it is a commodity item exempt from NRC licensing per 10 CFR 30.19, but was placed on the NRMP for inventory purpose.

ENVIRONMENTAL ASSESSMENT

There is no impact on the environment for this decommissioning action. Radiological surveys found that no residual Kr-85 was left in either Building 2931 or Magazine 915.

Enclosure:
(1) Summary of Naval Surface Warfare Center Division, Crane Request To Terminate NRMP No. 13-00164-B1NP

Copy to:
COMNAVSEASYSCOM (04N) (w/o encl), NAVSEADET RASO

ATTACHMENT 1

ISOVAC RADIFLO MARK IV

TRANSFER DOCUMENTATION

DEPARTMENT OF THE NAVY
CRANE DIVISION
NAVAL SURFACE WARFARE CENTER
300 HIGHWAY 361
CRANE, INDIANA 47522-5000

IN REPLY REFER TO:
5104
067EM
4 Nov 98

MEMORANDUM

From: 067EM (E. McQueen)
To: 6024 (J. Barnett)
Via: 6024 (V. Brunamonti)

Subj: **RADIFLO MARK IV, DISPOSAL AS LOW-LEVEL-RADIOACTIVE-WASTE**

Ref: (a) OPNAVNOTE 5100 07 Apr 92, Naval Low-Level-Radioactive Waste Program

Encl: (1) NSWCC ltr 5104 Ser 067EM/8021 of 05 Mar 98
(2) HQ, US Army IOC ltr AMSIO-SF (385-11e) of 19 Oct 98
(3) Uniform Low-Level Radioactive Waste Manifest of 22 Oct 98

1. For your action, the following describes the transfer of custody for the subject device. The transfer was coordinated by Naval Sea Systems Detachment, Radiological Affairs Support Office. They are agents of the Navy Radiation Safety Committee who grants us our Radioactive Materials Permit No. 13-00164-B1NP.

a. Request that you remove the device from your property accountability list using documentation provided in the enclosures.

b. Request that you supply a charge number for eight hours to be used by Code 067 (4-hours) and Code 09 (4-hours) for the labor involved in transferring the device. Estimates for disposal of this device are normally in excess of $10,000. No dollar cost was incurred using the Navy's radioactive waste program.

2. The RADIFLO MK IV contained radioactive material (Krypton-85 gas) and radioactive contaminated components. Enclosure (1) was submitted as the request for disposal assistance per reference (a). Per enclosure (2), assistance was granted via Project Number USN 98-017. Enclosure (3) documents the manifesting (box 9) and transfer by R & R Trucking of the device to Qual-X, 3039 Home Road, Powell, Ohio.

3. Point of contact is Mr. E. G. McQueen, Code 067EM, Command Radiation Safety Officer, Building 12, Extension 3578.

E. G. McQueen

E. G. McQUEEN

ATTACHMENT 2

KR-85 GAS CYLINDER TRANSFER DOCUMENTATION

SHIPPING CONTAINER TALLY → 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

REQUISITION AND INVOICE / SHIPPING DOCUMENT

Form Approved OMB No. 0704-0248

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE ADDRESS IN ITEM 2

1. FROM (Include ZIP Code) COMMANDER NAVSURFWARCENDIV 300 Highway 361, Crane, IN 47522-5001	SHEET NO. 1	NO. OF SHEETS 1	5. REQUISITION DATE 15 Dec 1998
	6. REQUISITION NUMBER		
	7. DATE MATERIAL REQUIRED (YYMMDD) 19981215		8. PRIORITY 04
2. TO: (Include ZIP Code) DuPont Pharmaceuticals 331 Treble Cove Road N. Billerica, MA 01862	9. AUTHORITY OR PURPOSE Authorized transfer of RM per NRMP No. 13-00164-B1NP to supplier		
	10. SIGNATURE Marilyn S. Schisel		11a. VOUCHER NUMBER & DATE (YYMMDD) N001648349B621
3. SHIP TO - MARK FOR HAZMAT MATERIAL COORDINATOR	12. DATE SHIPPED (YYMMDD)		b.
	13. MODE OF SHIPMENT FEDEX		14. BILL OF LADING NUMBER
	15. AIR MOVEMENT DESIGNATOR OR PORT REFERENCE NO.		

4. APPROPRIATIONS SYMBOL AND SUBHEAD	OBJECT CLASS	EXPENDITURE ACCOUNT (From)	EXPENDITURE ACCOUNT (To)	CHARGEABLE ACTIVITY	BUREAU CONTROL ACTIVITY NO.	BUREAU CONTROL NO.	AMOUNT

ITEM NO. (a)	FEDERAL STOCK NUMBER, DESCRIPTION, AND CODING OF MATERIEL AND / OR SERVICES (b)	UNIT OF ISSUE (c)	QUANTITY REQUESTED (d)	SUPPLY ACTION (e)	TYPE CONTAINER (f)	CONTAINER NOS. (g)	UNIT PRICE (h)	TOTAL COST (i)
A	Radioactive Material,N.O.S., USA DoT 7A, Type A, UN 2982, Kr85, Uncompressed/Gas	PG	1	1			$3,375.00	$3,375.00
B	Package: Yellow III, T.I. 1.3, Activity 0.37 GBQ, Conforms to the Conditions and Limitations Specified for UN 2982							
C	Radiological Controls Required for Unpacking							
D	Entries Comply with IATA/ICAO							
E	For Emergencies Call (800) 526-6549							
F	Signature (&Date) of Receiver Required							
	Signed: _____ Date: _____							
	Fax or Mail Signed DD-1149 to (812) 854-4248 Upon Receipt of Material							
	NSWC Crane POC: Marilyn Schisel, Code 602, Bldg. 2940W, (812) 854-2369							

16. TRANSPORTATION VIA MATS OR MSTS CHARGEABLE TO 36E0099

17. SPECIAL HANDLING

18. RECAPITULATION OF SHIPMENT	ISSUED BY	TOTAL CONTAINERS	TYPE CONTAINER	DESCRIPTION	TOTAL WEIGHT	TOTAL CUBE
	CHECKED BY					
	PACKED BY 41SW			TOTAL		

19. RECEIPT				
	CONTAINERS RECEIVED EXCEPT AS NOTED	DATE (YYMMDD)	BY	SHEET TOTAL $3,375.00
	QUANTITIES RECEIVED EXCEPT AS NOTED	DATE (YYMMDD)	BY	GRAND TOTAL $3,375.00
	POSTED	DATE (YYMMDD)	BY	20. RECEIVER'S VOUCHER NO.

DD Form 1149, JAN 83 PREVIOUS S/N 0102-LF-015-8500

FedEx.

REMITTANCE ADVICE

Payment Due in 15 Days of Invoice Date

NONE	4-743-30739	01/05/99	BILLING INQUIRIES? FAX: 800-548-3020 PHONE: 800-622-1147	104.75	1
ACCOUNT NUMBER	INVOICE NUMBER	DATE		AMOUNT DUE IN U.S. $	AIRBILLS

0474000047433073915001047526

To ensure proper credit, please return this document with your remittance.

00010*************** MIXED AADC 460

NAVAL SURFACE WARFARE CENTER
ERIC MCQUEEN
300 HWY 361 BLDG 41 SE
CRANE, IN 47522-5001

Mail Payment to:

FEDEX
P.O. Box 1140
Memphis, TN 38101-1140

PLEASE DO NOT STAPLE OR PAPER CLIP
T.I.N.: 71-0427007

QUESTIONS? CALL OUR CUSTOMER ACCOUNT SERVICES, 800-622-1147, 7AM - 6PM (CST) MONDAY - FRIDAY.
TO ENSURE PROPER CREDIT PLEASE RETURN THE REMITTANCE ADVICE (1ST PAGE OF THIS INVOICE) WITH YOUR PAYMENT.
MAIL TO: FEDERAL EXPRESS CORP., P.O. BOX 1140, MEMPHIS, TN 38101 - 1140.

FedEx.

BILL TO: NAVAL SURFACE WARFARE CENTER
300 HWY 361 BLDG 41 SE
CRANE, IN 47522

SENDER ACTIVITY SUMMARY

PAGE 1 OF
DATE 01/05/
INVOICE NO. 4-743-30739 ACCOUNT NO. NO

TRACKING NOS REFERENCE	SENDER NAME AND ADDRESS	RECIPIENT ADDRESS AND PROOF OF DELIVERY	PACKAGES & WEIGHT	SERVICES	CHARGES	NET CHARGES
800479798688* REGION 5 21020041 781511026046	ERIC MCQUEEN NAVAL SURFACE WARFARE CENTER 300 HWY 361 BLDG 41 SE CRANE, IN 47522 SHIPPED 12/16/98	[illegible] NORTH BILLERICA MA 01862 AA DELIVERED [illegible] 08:50 SIGNED: G.[illegible]	1/ 72	2DAY PKG NO ACCT # INACCESS DGS PickUpCharge	76.75 10.00 15.00 3.00	104.7
		SENDER SUBTOTAL	104.75	PAY THIS AMOUNT		

QUESTIONS? CALL OUR CUSTOMER ACCOUNT SERVICES, 800-622-1147, 7AM - 6PM (CST) MONDAY - FRIDAY.
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MAIL TO: FEDERAL EXPRESS CORP., P.O. BOX 1140, MEMPHIS, TN 38101 - 1140.

FedEx.

BILL TO: NAVAL SURFACE WARFARE CENTER
300 HWY 361 BLDG 41 SE
CRANE, IN 47522

ACTIVITY SUMMARY

PAGE 2 O
DATE 01
INVOICE NO. 4-743-30739 ACCOUNT NO.

* FEDEX HAS AUDITED THIS AIRBILL FOR CORRECT PIECES, WEIGHT, AND SERVICE. ANY CHANGES MADE ARE REFLECTED IN THE INVOICE AMOUNT.

QUESTIONS? CALL OUR CUSTOMER ACCOUNT SERVICES, 800-622-1147, 7AM - 6PM (CST) MONDAY - FRIDAY.
TO ENSURE PROPER CREDIT PLEASE RETURN THE REMITTANCE ADVICE (1ST PAGE OF THIS INVOICE) WITH YOUR PAYMENT.
MAIL TO: FEDERAL EXPRESS CORP., P.O. BOX 1140, MEMPHIS, TN 38101 - 1140.

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The World On Time.

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See the FedEx Service Guide for further details

Questions? Call 1•800•Go•FedEx (800)463-3339

1 From (please print and press hard)

Date: 12/11/98 Sender's FedEx Account Number:

Sender's Name: Eric McQueen Phone: (812) 854-3578

Company: Naval Surface Warfare Center

Address: 300 Highway 361 Bldg. 41SE (Dept./Floor/Suite/Room)

City: Crane State: IN ZIP: 47522-5001

2 Your Internal Billing Reference Information (Optional) (First 24 characters will appear on invoice): 21020041

3 To (please print and press hard)

Recipient's Name: Phone: (800) 526-6549

Company: Dupont Pharmaceuticals RstK

Address: 331 Treble Cove Road RA# 11737/Dnye ☐ Check here if residence (Extra charge applies for FedEx Express Saver)

(To "HOLD" at FedEx location, print FedEx address here) (We Cannot Deliver to P.O. Boxes or P.O. ZIP Codes) Dept./Floor/Suite/Room

City: N. Billerica State: MA ZIP: 01862

For HOLD at FedEx Location check here: ☐ Hold Weekday ☐ Hold Saturday (Not available at all locations) (Available for FedEx Priority Overnight and FedEx 2Day only)

For Saturday Delivery check here: ☐ (Extra Charge. Not available to all locations) (Available for FedEx Priority Overnight and FedEx 2Day only)

4a Express Package Service *Packages under 150 lbs.* Delivery commitment may be later in some areas.

☐ FedEx Priority Overnight (Next business morning) ☐ FedEx Standard Overnight (Next business afternoon)
☒ FedEx 2Day (Second business day) ☐ FedEx Express Saver (Third business day)

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas.

☐ FedEx Overnight Freight (Next business day) ☐ FedEx 2Day Freight (Second business day) ☐ FedEx Express Saver Freight (Up to 3 business days)

(Call for delivery schedule. Some restrictions apply. See back for detailed descriptions of freight services.)

5 Packaging

☒ Other Packaging

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☒ Dangerous Goods as per attached Shipper's Declaration ☐ Cargo Aircraft Only

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FedEx Account No.

Credit Card No. Exp. Date

Total Packages	Total Weight	Total Declared Value*
1	72#	$ .00

[redacted]

*When declaring a value higher than $100 per shipment, you pay an additional charge. See SERVICE CONDITIONS, DECLARED VALUE, AND LIMIT OF LIABILITY section for further information.

Signature Release Unavailable

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Page 1 of 1 Pages

Two completed and signed copies of this Declaration must be handed to the operator

WARNING

Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties. This Declaration must not, in any circumstances, be completed and/or signed by a consolidator, a forwarder or an IATA cargo agent.

TRANSPORT DETAILS

This shipment is within the limitations prescribed for: (delete non-applicable) ~~PASSENGER AND CARGO AIRCRAFT~~ ~~CARGO AIRCRAFT ONLY~~

Airport of Departure:

Airport of Destination: BOSTON/LOGAN

Shipment type: (delete non-applicable) ~~NON-RADIOACTIVE~~ RADIOACTIVE

NATURE AND QUANTITY OF DANGEROUS GOODS

Dangerous Goods Identification							
Proper Shipping Name	Class or Division	UN or I.D. No.	Packing Group	Subsidiary Risk	Quantity and Type of Packaging	Packing Inst.	Authorization
Radioactive Material, N.O.S. **Entries comply with IATA/ICAO**	7	UN 2982			KR85 Uncompressed / Gas	III Yellow T.I. 1.3 Dim. 45x30 x26cm	

FOR SHIPMENTS WITHIN USA, AK, AND HI ONLY

Additional Handling Information

Entries comply with IATA/ICAO

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked, and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Emergency Telephone Number (Required for US Origin or Destination Shipments): (800) 526-6549

Name/Title of Signatory

Place and Date

Signature (see warning above)

IF ACCEPTABLE FOR PASSENGER AIRCRAFT, THIS SHIPMENT CONTAINS RADIOACTIVE MATERIAL INTENDED FOR USE IN, OR INCIDENT TO, RESEARCH, MEDICAL DIAGNOSIS, OR TREATMENT.

ATTACHMENT 3

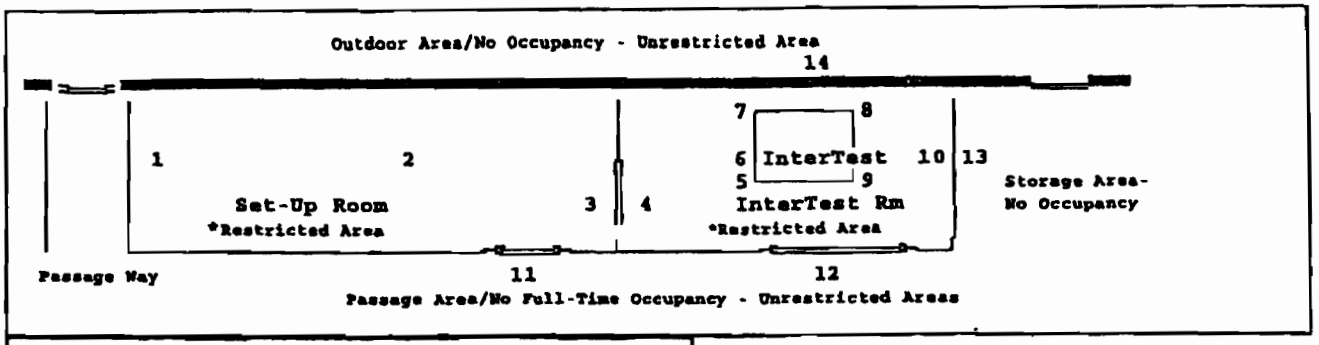
RADIOLOGOGICAL SURVEY DATA - BUILDING 2931

NAVSURFWARCENDIV CRANE

BUILDING 2931

Close Out
*** ~~Monthly~~ Survey ***

INTERTEST Model 1014-BII (Fine Leak Detection Device)
Radioactive Source: Krypton-85
Typical Targets: Electronic Components



READINGS IN mR/hr (@ 1 ft from surface)		
	*BACKGROUND RADIATION LEVEL	.02
1	Counting Station/Area	.02
2	Setup Station/Area	.02
3	Entrance From Setup	.03
4	Exit From InterTest	.03
5	Test Chamber Rt Front	.30
6	Chamber Front Center	.30
7	Chamber Lt Front	.20
8	Chamber Lt Rear	.20
9	Test Chamber Rt Rear	.20
10	South Interior Wall	.07
11	Main Entrance	.02
12	Service Entrance	.05
13	South Exterior Wall	.02
14	East Exterior Wall	.07

BUILDING 2931 - MID NE SECTION
NRMP 13-00164-B1NP
(Device Serial #90211)

RADIAC
Make: Eberline
Model: E-520
Serial # 721
Calibration Date: 8/30/99
Cal Due Date: 2/28/00

Beta Window - Closed

	OK	Not OK
Battery CK	☒	☐
Source CK	☐	☐

SIGNATURES

- Surveyer: J. Fisher
  Date/Time: 11/8/99 / 0745
- Reviewer: Eric G McQueen
  Eric G. McQueen, Command RSO ERIC G. McQUEEN Radiation Safety Officer
  Date: 9 Nov 99

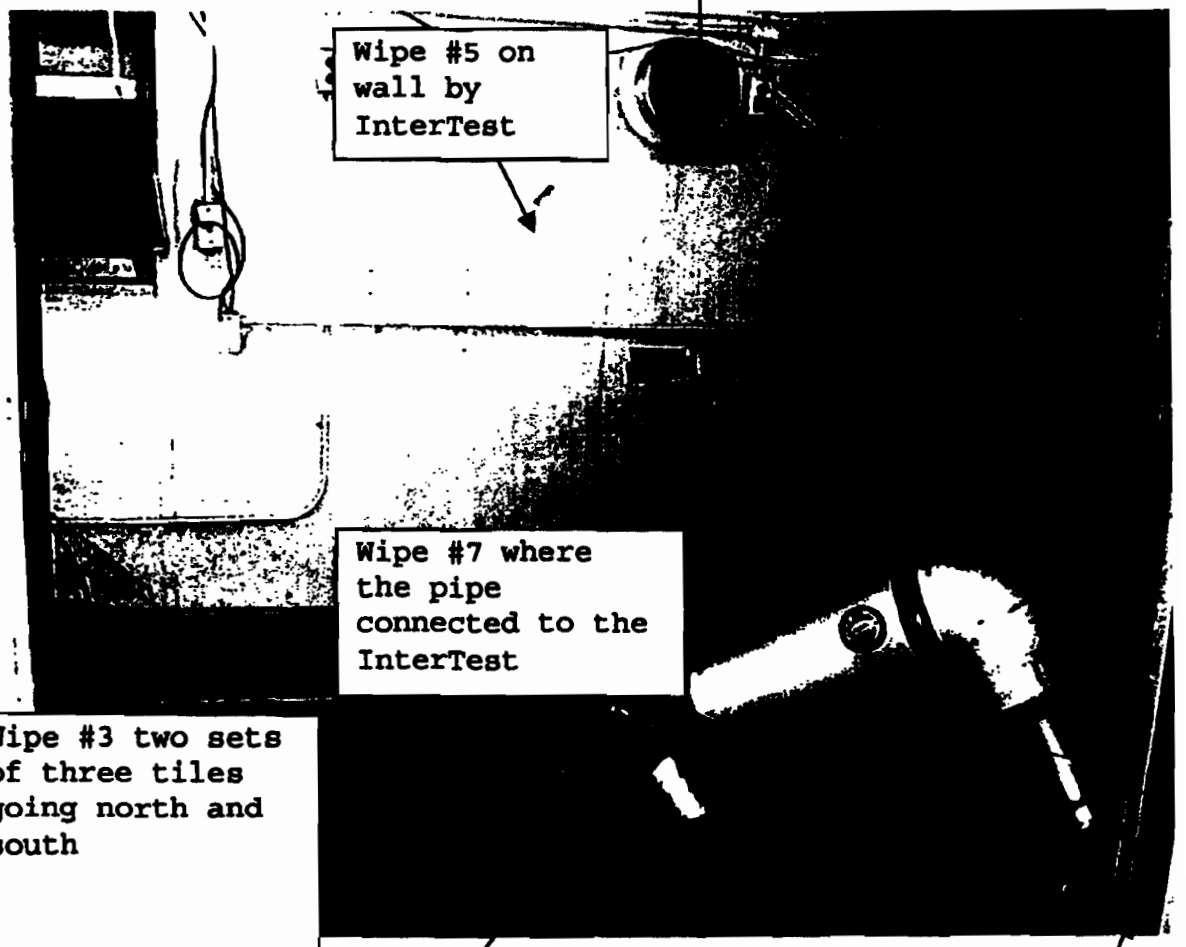
Interlocks, Audible/Visual Warnings, Signs/Checked: OK

Results and Recommendations: 0.4 mR/hr at the exhaust opening with the vent removed.
* Close Out Survey – All Findings SAT s/w

ATTACHMENT 3

Wipe #1 on Truck Bed

Wipe #4



Wipe tests done in the room and on the truck bed before the truck was released.

STAN A. HUBER CONSULTANTS, INC.

200 NORTH CEDAR ROAD -- NEW LENOX IL 60451-1751 -- PHONE 815-485-6161

SEALED GAMMA/BETA SOURCES - LEAK TEST CERTIFICATE

REPORT DATE: 11/19/99

FACILITY: Crane Division - Naval Surface Warfare Center
Crane IN

NRC LICENSE NUMBER:
STATE LICENSE NUMBER: N/A

SOURCE IDENTIFICATION:

RADIONUCLIDE:	Kr-85
ACTIVITY:	N/A
CALIBR. DATE:	N/A
MANUFACTURER:	N/A
MODEL NUMBER:	N/A
SERIAL NUMBER:	N/A
OTHER DESCRIPTION:	Truck Bed where Inter Test Stood

#1

ASSAY RESULTS:

COUNTING EFFICIENCY:	0.572
BACKGROUND AT TIME OF ASSAY:	172

	MAX CPM	NET CPM	DPM	ACTIVITY uCi
WET WIPE	160	0	0	< 0.000001
DRY WIPE	Not Performed			

ANALYSIS PERFORMED USING:
Packard Auto-Gamma Scintillation Spectrometer Model #D5003 Serial #406282 AND/OR
Packard 1900CA Tri-Carb Liquid Scintillation Analyzer Model #A1900 Serial #101464

ANALYSIS OF RESULTS:
Sources are not leaking at this time
Removable contamination is less than 5E-3 uCi. (.005)

NEXT LEAK TEST DUE: May 2000

LEAK TEST PERFORMED BY: Marge Dunn DATE: 11/08/99

ANALYSIS PERFORMED BY: S A HUBER CONSULTANTS INC. JMP/BAD DATE: 11/18/99

RADIATION SAFETY OFFICER SIGNATURE: Eric McQueen

E[illegible] McQUEEN
Radiation Safety Officer

STAN A. HUBER CONSULTANTS, INC.

200 NORTH CEDAR ROAD -- NEW LENOX IL 60451-1751 -- PHONE 815-485-6161

SEALED GAMMA/BETA SOURCES - LEAK TEST CERTIFICATE

REPORT DATE: 11/19/99

FACILITY: Crane Division - Naval Surface Warfare Center
Crane IN

NRC LICENSE NUMBER:
STATE LICENSE NUMBER: N/A

SOURCE IDENTIFICATION:

RADIONUCLIDE:	Kr-85
ACTIVITY:	N/A
CALIBR. DATE:	N/A
MANUFACTURER:	N/A
MODEL NUMBER:	N/A
SERIAL NUMBER:	N/A
OTHER DESCRIPTION:	Bldg 2931 Third tile in from doors (#2) 3 tiles going North & South

ASSAY RESULTS:

COUNTING EFFICIENCY:	0.572
BACKGROUND AT TIME OF ASSAY:	172

	MAX CPM	NET CPM	DPM	ACTIVITY uCi
WET WIPE	177	5	9	0.000004
DRY WIPE	150	0	0	< 0.000001

ANALYSIS PERFORMED USING:
Packard Auto-Gamma Scintillation Spectrometer Model #D5003 Serial #406282 AND/OR
Packard 1900CA Tri-Carb Liquid Scintillation Analyzer Model #A1900 Serial #101464

ANALYSIS OF RESULTS:
Sources are not leaking at this time
Removable contamination is less than 5E-3 uCi. (.005)

NEXT LEAK TEST DUE: May 2000

LEAK TEST PERFORMED BY: Sharon Cesinger DATE: 11/08/99

ANALYSIS PERFORMED BY: S A HUBER CONSULTANTS INC DATE: 11/18/99

RADIATION SAFETY OFFICER SIGNATURE:

ERIC G. McQUEEN
Radiation Safety Officer

STAN A. HUBER CONSULTANTS, INC.

200 NORTH CEDAR ROAD -- NEW LENOX IL 60451-1751 -- PHONE 815-485-6161

SEALED GAMMA/BETA SOURCES - LEAK TEST CERTIFICATE

REPORT DATE: 11/19/99

FACILITY: Crane Division - Naval Surface Warfare Center
Crane IN

NRC LICENSE NUMBER:
STATE LICENSE NUMBER: N/A

SOURCE IDENTIFICATION:

RADIONUCLIDE:	Kr-85
ACTIVITY:	N/A
CALIBR. DATE:	N/A
MANUFACTURER:	N/A
MODEL NUMBER:	N/A
SERIAL NUMBER:	N/A
OTHER DESCRIPTION:	Bldg 2931 Forth tile in from doors (#3) 3 tiles going North & South

ASSAY RESULTS:

COUNTING EFFICIENCY:	0.572
BACKGROUND AT TIME OF ASSAY:	172

	MAX CPM	NET CPM	DPM	ACTIVITY uCi
WET WIPE	151	0	0	< 0.000001
DRY WIPE	149	0	0	< 0.000001

ANALYSIS PERFORMED USING:
Packard Auto-Gamma Scintillation Spectrometer Model #D5003 Serial #406282 AND/OR
Packard 1900CA Tri-Carb Liquid Scintillation Analyzer Model #A1900 Serial #101464

ANALYSIS OF RESULTS:
Sources are not leaking at this time
Removable contamination is less than 5E-3 uCi. (.005)

NEXT LEAK TEST DUE: May 2000

LEAK TEST PERFORMED BY: Marge Dunn DATE: 11/08/99

ANALYSIS PERFORMED BY: S A HUBER CONSULTANTS INC DATE: 11/18/99

RADIATION SAFETY OFFICER SIGNATURE:

ERIC G. McQUEEN
Radiation Safety Officer

STAN A. HUBER CONSULTANTS, INC.

200 NORTH CEDAR ROAD -- NEW LENOX IL 60451-1751 -- PHONE 815-485-6161

SEALED GAMMA/BETA SOURCES - LEAK TEST CERTIFICATE

REPORT DATE: 11/19/99

FACILITY: Crane Division - Naval Surface Warfare Center
Crane IN

NRC LICENSE NUMBER:
STATE LICENSE NUMBER: N/A

SOURCE IDENTIFICATION:

RADIONUCLIDE:	Kr-85
ACTIVITY:	N/A
CALIBR. DATE:	N/A
MANUFACTURER:	N/A
MODEL NUMBER:	N/A
SERIAL NUMBER:	N/A
OTHER DESCRIPTION:	Bldg 2931 Vent Opening (#4) on Wall

ASSAY RESULTS:

COUNTING EFFICIENCY:	0.572
BACKGROUND AT TIME OF ASSAY:	172

	MAX CPM	NET CPM	DPM	ACTIVITY uCi
WET WIPE	151	0	0	< 0.000001
DRY WIPE	151	0	0	< 0.000001

ANALYSIS PERFORMED USING:
Packard Auto-Gamma Scintillation Spectrometer Model #D5003 Serial #406282 AND/OR
Packard 1900CA Tri-Carb Liquid Scintillation Analyzer Model #A1900 Serial #101464

ANALYSIS OF RESULTS:
Sources are not leaking at this time
Removable contamination is less than 5E-3 uCi. (.005)

NEXT LEAK TEST DUE: May 2000

LEAK TEST PERFORMED BY: Sharon Cesinger DATE: 11/08/99

ANALYSIS PERFORMED BY: S A HUBER CONSULTANTS INC. DATE: 11/18/99

RADIATION SAFETY OFFICER SIGNATURE: Eric G McQueen

ERIC G. McQUEEN
Radiation Safety Officer

STAN A. HUBER CONSULTANTS, INC.

200 NORTH CEDAR ROAD -- NEW LENOX IL 60451-1751 -- PHONE 815-485-6161

SEALED GAMMA/BETA SOURCES - LEAK TEST CERTIFICATE

REPORT DATE: 11/19/99

FACILITY: Crane Division - Naval Surface Warfare Center
Crane IN

NRC LICENSE NUMBER:
STATE LICENSE NUMBER: N/A

SOURCE IDENTIFICATION:

RADIONUCLIDE:	Kr-85
ACTIVITY:	N/A
CALIBR. DATE:	N/A
MANUFACTURER:	N/A
MODEL NUMBER:	N/A
SERIAL NUMBER:	N/A
OTHER DESCRIPTION:	Bldg 2931 Outer wall of room (#5) Where the Inter Test stood

ASSAY RESULTS:

COUNTING EFFICIENCY:	0.572
BACKGROUND AT TIME OF ASSAY:	172

	MAX CPM	NET CPM	DPM	ACTIVITY uCi
WET WIPE	142	0	0	< 0.000001
DRY WIPE	163	0	0	< 0.000001

ANALYSIS PERFORMED USING:
Packard Auto-Gamma Scintillation Spectrometer Model #D5003 Serial #406282 AND/OR
Packard 1900CA Tri-Carb Liquid Scintillation Analyzer Model #A1900 Serial #101464

ANALYSIS OF RESULTS:
Sources are not leaking at this time
Removable contamination is less than 5E-3 uCi. (.005)

NEXT LEAK TEST DUE: May 2000

LEAK TEST PERFORMED BY: Marge Dunn DATE: 11/08/99

ANALYSIS PERFORMED BY: S A HUBER CONSULTANTS INC DATE: 11/18/99

RADIATION SAFETY OFFICER SIGNATURE:

E[illegible] C. McQUEEN
Radiation Safety Officer

STAN A. HUBER CONSULTANTS, INC.

200 NORTH CEDAR ROAD -- NEW LENOX IL 60451-1751 -- PHONE 815-485-6161

SEALED GAMMA/BETA SOURCES - LEAK TEST CERTIFICATE

REPORT DATE: 11/19/99

FACILITY: Crane Division - Naval Surface Warfare Center
Crane IN

NRC LICENSE NUMBER:
STATE LICENSE NUMBER: N/A

SOURCE IDENTIFICATION:

RADIONUCLIDE:	Kr-85
ACTIVITY:	N/A
CALIBR. DATE:	N/A
MANUFACTURER:	N/A
MODEL NUMBER:	N/A
SERIAL NUMBER:	N/A
OTHER DESCRIPTION:	Bldg 2931 double doors by the (#6) Inter test

ASSAY RESULTS:

COUNTING EFFICIENCY:	0.572
BACKGROUND AT TIME OF ASSAY:	172

	MAX CPM	NET CPM	DPM	ACTIVITY uCi
WET WIPE	168	0	0	< 0.000001
DRY WIPE	166	0	0	< 0.000001

ANALYSIS PERFORMED USING:
Packard Auto-Gamma Scintillation Spectrometer Model #D5003 Serial #406282 AND/OR
Packard 1900CA Tri-Carb Liquid Scintillation Analyzer Model #A1900 Serial #101464

ANALYSIS OF RESULTS:
Sources are not leaking at this time
Removable contamination is less than 5E-3 uCi. (.005)

NEXT LEAK TEST DUE: May 2000

LEAK TEST PERFORMED BY: Sharon Cesinger DATE: 11/08/99

ANALYSIS PERFORMED BY: S A HUBER CONSULTANTS INC. JMC/SAH DATE: 11/18/99

RADIATION SAFETY OFFICER SIGNATURE: Eric G. McQueen

ERIC G. McQUEEN
Radiation Safety Officer

STAN A. HUBER CONSULTANTS, INC.

200 NORTH CEDAR ROAD -- NEW LENOX IL 60451-1751 -- PHONE 815-485-6161

SEALED GAMMA/BETA SOURCES - LEAK TEST CERTIFICATE

REPORT DATE: 11/19/99

FACILITY: Crane Division - Naval Surface Warfare Center
Crane IN

NRC LICENSE NUMBER:
STATE LICENSE NUMBER: N/A

SOURCE IDENTIFICATION:

RADIONUCLIDE:	Kr-85
ACTIVITY:	N/A
CALIBR. DATE:	N/A
MANUFACTURER:	N/A
MODEL NUMBER:	N/A
SERIAL NUMBER:	N/A
OTHER DESCRIPTION:	Bldg 2931 Vent attached to back of Inter test (#1)

ASSAY RESULTS:

COUNTING EFFICIENCY:	0.572
BACKGROUND AT TIME OF ASSAY:	172

	MAX CPM	NET CPM	DPM	ACTIVITY uCi
WET WIPE	174	2	3	0.000002
DRY WIPE	144	0	0	< 0.000001

ANALYSIS PERFORMED USING:
Packard Auto-Gamma Scintillation Spectrometer Model #D5003 Serial #406282 AND/OR
Packard 1900CA Tri-Carb Liquid Scintillation Analyzer Model #A1900 Serial #101464

ANALYSIS OF RESULTS:
Sources are not leaking at this time
Removable contamination is less than 5E-3 uCi. (.005)

NEXT LEAK TEST DUE: May 2000

LEAK TEST PERFORMED BY: Marge Dunn DATE: 11/08/99

ANALYSIS PERFORMED BY: S A HUBER CONSULTANTS INC. DATE: 11/18/99

RADIATION SAFETY OFFICER SIGNATURE:

ERIC G. McQUEEN
Radiation Safety Officer

ATTACHMENT 4

LASER TARGET MARKER TRANSER DOCUMENTATION

SHIPPING CONTAINER TALLY → 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

REQUISITION AND INVOICE/SHIPPING DOCUMENT

Form Approved
OMB No. 0704-0246
Expires Dec 31, 1999

PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. RETURN COMPLETED FORM TO THE ADDRESS IN ITEM 2.

1. FROM: (Include ZIP Code)
NAVSURFWARCENDIV
CODE 1121 BLDG 41SE
300 HIGHWAY 361
CRANE, IN 47522-5001

SHEET NO.	NO. OF SHEETS	5. REQUISITION DATE	6. REQUISITION NUMBER
1	2	2002-08-06	

7. DATE MATERIAL REQUIRED (YYYYMMDD): 2002-08-08
8. PRIORITY: 03

2. TO: (Include ZIP Code)
COMMANDING OFFICER, 25 CANADIAN FORCES SUPPLY DEPOT (1B)
RECEIPTS SECTION (PO BOX 4000 STN K), 6363 NOTRE DAME ST E
MONTREAL, QUEBEC, CANADA H1N

9. AUTHORITY OR PURPOSE: LTM/SOFLAM PROGRAM

10. SIGNATURE: POLLY WALKER

11a. VOUCHER NUMBER & DATE (YYYYMMDD): N00164-2218-5150

3. SHIP TO - MARK FOR
"UNFORECASTED RETURNS FROM REPAIR LINE ON FMS CASE DE-P-GAV
IAW TECH OPI AUTHORITY, DASPM 3-7, (819)997-2094"

12. DATE SHIPPED (YYYYMMDD):

b. *2910028*

13. MODE OF SHIPMENT: FEDERAL EXPRESS

14. BILL OF LADING NUMBER:

15. AIR MOVEMENT DESIGNATOR OR PORT REFERENCE NO.:

4. APPROPRIATIONS DATA

			AMOUNT
TRANSPORTATION:	A1 97X4930.	NH1J 000 77777 0 000164 2F 000000 85E00285E147	
LABOR:	A1 97X4930.	NH1J 000 77777 0 000164 2F 000000 85E00285E147	
MATERIAL:	A1 97X4930.	NH1J 000 77777 0 000164 2F 000000 85E00285E147	

ITEM NO. (a)	FEDERAL STOCK NUMBER, DESCRIPTION, AND CODING OF MATERIAL AND/OR SERVICES	UNIT OF ISSUE (c)	QUANTITY REQUESTED (d)	SUPPLY ACTION (e)	TYPE CONTAINER (f)	CONTAINER NOS. (g)	UNIT PRICE (h)	TOTAL COST (i)
	*** CONTAINS HAZARDOUS MATERIAL ***							
	POC: SANDRA PAULIN PHONE NO: 812-854-5924 RETURN COPY TO: S. PAULIN, 812-854-3665 SHOP CD: 85E00 *N0016422185150*							
01	TRIPOD ANGULATION HEADS (SEE ATTACHED RADIATION STATEMENT) NSN: 5855999758623 S/N 69590488; 69520488; 69490488	EA	3					

16. TRANSPORTATION VIA MATS OR MSTS CHARGEABLE TO

17. SPECIAL HANDLING

18. RECAPITULATION OF SHIPMENT	ISSUED BY	TOTAL CONTAINERS	TYPE CONTAINER	DESCRIPTION	TOTAL WEIGHT	TOTAL CUBE
	SP8789					
	CHECKED BY					
	PACKED BY					
				← TOTAL →		

19. RECEIPT				
	CONTAINERS RECEIVED EXCEPT AS NOTED	DATE (YYYYMMDD)	BY	SHEET TOTAL
	QUANTITIES RECEIVED EXCEPT AS NOTED	DATE (YYYYMMDD)	BY	GRAND TOTAL
	POSTED	DATE (YYYYMMDD)	BY	20. RECEIVER'S VOUCHER NO.

DD FORM 1149, JAN 1997

51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

PREVIOUS EDITION MAY BE USED.

SHIPPING CONTAINER TALLY 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

REQUISITION AND INVOICE/SHIPPING DOCUMENT (Continuation sheet)

Form Approved
OMB No. 0704-0246
Expires Dec 31, 1999

PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. RETURN COMPLETED FORM TO THE ADDRESS IN ITEM 2 OF DD FORM 1149.

SHEET NO.	NO. OF SHEETS	6.REQUISITION NUMBER	11a.VOUCHER NUMBER AND DATE	b.VOUCHER NUMBER AND DATE
2	2		N00164-2218-5150	*2910028*

TOTAL CONTAINERS	TYPE CONTAINER	DESCRIPTION	TOTAL WEIGHT	TOTAL CUBE
		SHIP TRACKABLE MEANS WITH FOLLOWING STATEMENT "THIS PACKAGE CONFORMS TO THE CONDITIONS AND LIMITATIONS SPECIFIED IN 49 CFR 173.424 FOR RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-INSTRUMENTS OR ARTICLES, UN2911. RADIOLOGICAL CONTROLS REQUIRED FOR UNPACKING. SIGNATURE OF RECEIVING ACTIVITY REQUIRED. SIGNATURE _____ DATE_____. FAX COPY OF THIS PAGE W/SIGNATURE TO DON MILLER, 812-854-3831, NSWC CRANE, IN (USA).		

RADIOACTIVE MATERIALS SHIPMENT CERTIFICATION

SHIP TO: Commanding Officer
25 Canadian Forces Supply Depot (1B)
Receipts Section (PO Box 4000 STN K)
6363 Notre Dame St E
Montreal, Quebec, Canada H1N

FROM: CRANE DIVISION,
NAVAL SURFACE WARFARE CENTER
300 HIGHWAY 361
CRANE, IN 47522-5001

TCN:

COMMODITY DESCRIPTION

NSN: 5855999758623 NOMENCLATURE: Tripod Angulation Head

ISOTOPE		ACTIVITY	FORM
[ ]Am 241	[ ]Co 60	Per Item: 1.72 Ci or 63.66Bq	[ ] Special (A1)
[ ]Cs 137	[ ]DU		[ ] Normal (A2)
[X]H 3	[ ]Kr 85	# of Items: (3)	
[ ]Ni 63	[ ]Pm 147		[ ] Liquid
[ ]Ra 226	[ ]Th 232	Total: 5.16 Ci or 190.98Bq	[ ] Solid
Other:		[X]Ci [ ]mCi [ ]uCi	[X] Gas

RADIATION LEVELS

Surface: < 0.01 mR/hr One Meter: < 0.01 mR/hr Transport Index: NA

TRANSPORTATION INFORMATION

This package conforms to the conditions and limitations specified in:

49 CFR 173.421, 173.421-1 Radioactive material excepted package - limited quantity of material. UN 2910

49 CFR 173.421-1, 173.422 Radioactive material excepted package instruments or articles. UN 2911

49 CFR 173.421-1, 173.424 Radioactive material excepted package - articles manufactured from natural or depleted uranium or natural thorium. UN 2910

[X] Label Exempt DOT White I DOT Yellow II DOT Yellow III

Mode Of Shipment: [ ] Truck [ ] Rail [ ] Air [ ] Sea IMCO CLASS 7

SPECIAL INSTRUCTIONS: Do not ship via U.S. Postal Service. Do not put this package in the same compartment or vehicle with bagged grains, fruits or other unsealed foods. Do not place this package next to film.

IN THE EVENT OF AN EMERGENCY OR ACCIDENT, CONTACT THE NEAREST MILITARY INSTALLATION OR CALL THE NSWC RADIATION SAFETY OFFICER AT 812-854-1568.

Signature Radiation Safety Officer: Don Hall Date: 8-6-02

(2)

Canadian Government Catalogue of Materiel
October 1996

5-99-975-8623 TI:M

GULATION HEAD.
ERATION RANGE VERTICAL AXIS +400 MIL TO -400 MIL, AZIMUTH AXIS 0 TO 6400 IL,FULL CIRCLE;WEIGHT 4.52 LB;BASE FITTING 5/8-11UNC FEMALE THREAD;FINISH .R.R. NATO GREEN;P/O LASER TARGET MARKET SET, CONTAINS 48 GBQ TRITIUM.

RNCC	RNVC	Reference Number	NCAGE
3	2	00-1064-9052	U2879
5	2	39099916	27777

nit of Issue: EA Price: 3814.50
ccountability Code: B Quality Assurance: Z
upply Status Code: 40
AE/AIC: 32R
EAC: 73329

User:DF,ZC,ZN,ZS

NAVSURFWARCENDIV Crane

Description of Angulation Head

Miller Donald B CNIN

From: Marr.SA@forces.ca
Sent: Tuesday, August 27, 2002 8:05 AM
To: Miller Donald B CNIN
Subject: RE: DND CANADIAN - LTM/SOFLAM QUESTION

Good Day, Don.

I have received word from our customs officer that the items were receipted by DND Customs last week and have been forwarded to the Depot to be brought on charge.

Since the Depot has a large backlog in Receipts and it may take some time for them to action the receipt at the Depot. Since the Customs agent is an integral part of DND and he has ACK receipt of these items to me, please take this as acknowledgement of receipt for the shipment by DND.

Thanks for the support.

Further questions, please contact the undersigned.

Stephen Marr
DASPM 3-7/C1
v:(819) 997-2094
f:(819) 997-1383
email: marr.sa@forces.ca

-----Original Message-----
From: Miller Donald B CNIN [mailto:miller_don@crane.navy.mil]
Sent: Monday, 26 Aug 02 15:52
To: 'Marr.SA@forces.ca'
Subject: RE: DND CANADIAN - LTM/SOFLAM QUESTION

Mr. Marr,

I am so sorry to have to bother you once again and hope this to be my last request to you. I just want to be certain that the Tripod Angulation Heads (containing tritium) were physically received by you or a representative of yours at the designated shipping location that you provided Mr. Helms. If you have (or know who has) the shipping documentation for these items at the Supply Depot, could you please fax me an acknowledgement of receipt for the shipment. I do not know the country code information to use to call here, but my fax number is 812-854-3831. If that will not work for you, an e-mail from someone stating the items were received would be acceptable. I am required to keep on file, documentation that you received these items.

Thank you once again for your time and assistance in closing the the loop on this shipment.

Respectfully,
Don Miller

> -----Original Message-----
> From: Marr.SA@forces.ca [SMTP:Marr.SA@forces.ca]
> Sent: Monday, August 19, 2002 7:40 AM
> To: Miller Donald B CNIN
> Subject: RE: DND CANADIAN - LTM/SOFLAM QUESTION

ATTACHMENT 5

INTERTEST TRANSFER DOCUMENTATION

IsoVac Engineering, Inc.
614 Justin Ave.
Glendale, CA 91201
(818) 552 – 6200

Shipper/Transfer

DATE	INVOICE #
December 2, 2008	9293-4

SHIP FROM:	SHIP TO:
CRANE DIVISION. NWSC 300 Hwy 361 Crane, IN 47522-5001	IsoVac Engineering, Inc. 614 Justin Ave. Glendale, Ca 91201

P.O. NUMBER	TERMS	SHIP	VIA	F.O.B	PROJECT NO.
9293-S			R&R Trucking	Crane, IN	9293-4

QUANTITY	ITEM CODE	DESCRIPTION	PRICE EACH	AMOUNT

ITEM: **NRMP 13-00164-BINP (Kr-85 Leak Detection System)**
INTERTEST Model 1014-B II, S/N 90211
Electronics Console, gas handling system
Dimensions: 43" W x 33" D x 55" H
Approx Wt: 1,500 lbs

TRANSFER OF ITEM FROM: **Crane Division NSWC**
TO: IsoVac Engineering Inc.
614 Justin Ave.
Glendale CA 91201

For Decommisioning, Decontamination, Disposal to RadWaste

Item is internally contaminated with Kr85 residues, and is hereby transferred from NSWC Radioactive Materials License to IsoVac California Byproduct Materials License No. 1673-19.

Release from NSWC by: 12/2/08
Kevin Tschaenn R.S.O.
Code 0591, Bldg 2
812-854-6839

Received by:
George Neff R.S.O.
IsoVac Engineering, Inc.

ATTACHMENT 6

RADIOLOGOGICAL SURVEY DATA - MAGAZINE 915

NSWC CRANE RADIOLOGICAL SURVEY REPORT

PERSON (S) PERFORMING SURVEY & PHONE NUMBER:	START DATE AND TIME:	END DATE AND TIME:	SURVEY TYPE (circle all that apply) : CONTAMINATION / RADIATION
KEVIN TSCHAENN (812) 854-6839	12/03/2008	12/03/2008	
	UIC / COMMAND: 13-00164 / NSWCC	LOCATION: MAGAZINE 915	

NRMP OR NRC LICENSE NUMBER:	RADIOACTIVE MATERIALS INVOLVED:
NRMP 13-00164-B1NP	Kr-85 (Intertest Leak Detection System)

ADDITIONAL INFORMATION / COMMENTS/ SPECIAL INSTRUCTIONS:
FOR PERMIT TERMINATION. Equipment transferred: Date of Transfer: 2 Dec 2008. Licensee Recipient: IsoVac Engineering, Inc. 614 Justin Ave., Glendale, CA 91201. Individual Contact: Mr. George Neff, PH: (818) 552-6200. License Number: California Byproduct Materials License Number 1673-19, Exp. February 17, 2008, (in renewal). Leak Test Requirements: N/A.

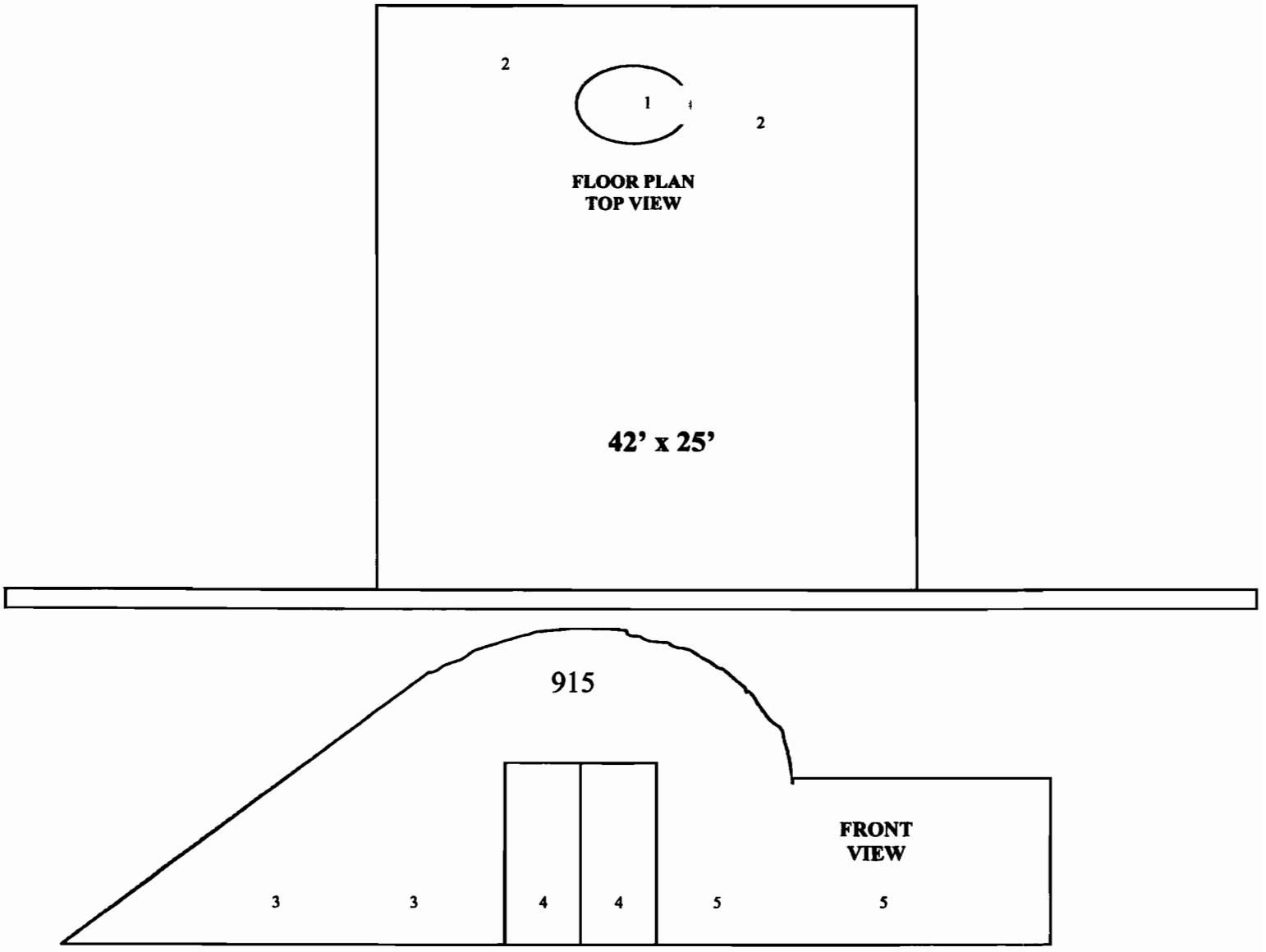
RADIAC USED (MODEL NUMBER)	SERIAL NUMBER	CAL DATE	BACKGROUND	RADIAC EFFICIENCY
LUDLUM M-2241	118467	12/2/08	< 15 uR/hour <0.015 mR/hour	Not Applicable

ITEM	DESCRIPTION	GROSS (CPM)	NET (CPM)	SWIPE (DPM/100 cm^2)	DIRECT (DPM)	DIRECT (DPM/100 cm^2)	RADIATION LEVELS (mrem/hr)
1	SEE ATTACHED DIAGRAM OF MAGAZINE 915	N/A	N/A	N/A	N/A	N/A	<0.015

PRINTED NAME - RADIATION SAFET OFFICER REVIEW:	SIGNATURE:	DATE:
KEVIN R. TSCHAENN		

ATTACHED SURVEY TO NRC FORM 314
Page 1 of 2 (Diagram of Mag-915 is attached)

DIAGRAM OF MAGAZINE 915 (RADIATION SURVEY: PAGE 2 0F 2)



Survey readings at locations indicated (mR/hr):

Background: < 0.015
1: < 0.015 (Vent)
2: < 0.015 (Top of Mag)
3: < 0.015
4: < 0.015
5: < 0.015
6: < 0.015 (General Area)

ATTACHMENT 7

INTERTEST DECOMMISSIONING

AND DISPOSAL DOCUMENTATION

IsoVac Engineering Inc.

CERTIFICATION of DECOMMISSIONING

Of

RADIOISOTOPE LEAK TESTING EQUIPMENT

The following equipment has been removed from the use and handling of Krypton85 gas, And has been transferred to IsoVac Engineering's California Byproduct Materials License Number 1673-19, Exp. February 17, 2008, (in renewal), for total deactivation and disposal.

Equipment location at time of shut down:

COMPANY NAME:	US Navy Weapons Center
Address:	300 Hwy 361
	Crane, IN 47522

Navy Item Number: NRMP 13-00164-BINP

Equipment Manufacturer:

COMPANY:	Intertest
Model Number:	1014-B II
Serial Number:	90211

Field Deactivation Verified BY:

Technician: Jorge' Bonilla
Company: IsoVac Engineering, Inc.
Byproduct Materials License No.: 1673-19 Exp: February 27, 2008, (in renewal)

Radiation readings on receipt at IsoVac:

Exterior of shipping container: < 0.04 mr/hr.
Estimated Krypton85 gas content: 300-500 m Curies

CERTIFIED BY: George R. Neff Date: December 30, 2008

George R. Neff, R.S.O.
IsoVac Engineering, Inc.

IsoVac Engineering Inc.

October 25, 2008

NSWC Crane
Code 0591, Bldg 2
300 Highway 361
Crane, IN 47522-5001

Attn: Kevin Tschaenn
RSO, LSSO

Subject: Decommissioning and Disposal of Kr85 machine

Reference: IsoVac Report R-4232

Kevin:
Thank you for your assistance in helping Mr. Bonilla and I to have access and inspection of the Intertest Kr85 leak detection system. To restate the purpose of our visit; we have been contracted by B&B Environmental Company to handle the decommissioning and disposal of the Kr85 system stored at your site. We were first to visit the site and assess the condition of the machine and attempt to establish the amount of Kr85 gas that was contained in the equipment, and then establish the equipment that would be needed to transfer and ship the Kr85 gas to IsoVac.

Not knowing if the machine was going to operate at all, a vacuum pump and a compressor were assembled with valves and switches at IsoVac. They were set up to be able to be powered with an external power system so we could measure the pressures within the machine, as well as to be able to transfer a sample of any Kr85 gas within the machine for analysis on-site and determination of the possible content of Kr85. The two units were individually crated for "next-day" shipment to Crane, in the event they would be needed if the machine could not be made operational on our first day.

Our visit and findings are summarized as follows:

A – The equipment

- The machine was found to be located in Bunker 915 at NSWC, Crane.
- The machine is a Intertest Model 1014-B Kr85 Leak Detection System.
- The Serial Number of the machine is 90211
- The machine contains two Alcatel Vacuum Pumps
- The machine contains one Tecumseh 'Oil-Bath' Compressor.
- The machine dimensions are: 43" wide x 33" deep x 55" high.
- The machine is on four wheels.
- The estimated weight is ~1,500 lbs.
- The radiation monitor system is a Cetex-501A

B – The equipment conditions:

- The equipment was complete with external panels
- The equipment was non-operable on arrival

- IsoVac bypassed the external power input system and directly wired in power from an external power generator provided by Crane. Both AC and DC power were activated.
- Due to corrosion and deterioration, the control electronics was non-functional, but IsoVac was able to bypass that system and operate the equipment manually.
- IsoVac was able to make the radiation alarm system actuate with an IsoVac GM tube.
- The Granville vacuum meter was able to be activated, showing a reading of <600 mmHg.
- The vacuum pumps were found to be under vacuum, (~ 5 inches of Hg).

C – Operational findings:

- The machine was operated after work on the valves and switches.
- The machine was operated in the "Manual-Mode". The valves and motors were made operational, (with some limitations in quality performance).
- Valves SV, V1, V3 were partially operational, but sufficiently to allow the measurement of the pressure in the pressurization tank. That was determined as ~50 mm Hg. (That tank had apparently been left under vacuum at some time in the past).
- We accessed the vacuum pumps which were found to be contaminated indicating they were used to pump Kr85 during the transferring of the Kr85 out of the machine.
- The storage tank was found to be under vacuum of ~30 mm Hg, indicating a maximum of a few millicuries of Kr85 gas in that tank.
- The vacuum pumps contained no more than possibly a few millicuries of Kr85.
- The compressor showed a reading of Kr85 within the compressor at the upper portion of the container where only gas was standing. That gas was the result of the 'outgasing' following the pumping of Kr85 at the time the machine was pumped-out. The readings at that surface were easily detected due to the thin wall of the compressor tank, (0.040" to 0.060"). That gas was then expanded into the storage tank. The compressor readings dropped to < 1 mr/hr. The storage tank reading was < 0.2 mr/hr after the transfer, (due to the 2" lead jacket).
- The machine was completely closed up with all of the panels replaced onto the machine.
- The machine was then surveyed in preparation for shipping:
- The external radiation readings:
  Front: < 0.1 mr/hr
  Right side: 0.2 mr/hr
  Rear: 0.1 mr/hr
  Left side: < 0.1 mr/hr

D – Status of the project at this time:

- The machine is ready to ship to IsoVac, in the "as-is" condition.
- The machine needs to be lifted with a fork lift and the wheels removed.
- The machine must be placed on a reinforced pallet and strapped down to the pallet.
- The machine is a "Contaminated Instrument" and can ship by normal truck, without placards or special labeling. It only requires some internal label to note that it contains radioactive residue, (in the event it is opened).
- The machine should be wrapped with plastic-wrap to contain the panels during shipment.
- This machines satisfied 49 CFR 173.421. It "contains less than 1 curie of Kr85 gas, under reduced pressure, with external radiation levels less than twice ambient background on all sides"

E – The next steps:

- IsoVac will prepare the paperwork for the transfer of the machine from the NSWC radiation license to IsoVac Byproduct Materials License No. 1673-9, for disposal.
- The trucking company, (R & R Trucking), has been contacted to arrange for the shipping of the equipment to IsoVac.

- As soon as the shipping date is set, IsoVac will make arrangements with NSWC to have a fork lift available at the bunker.
- IsoVac Personnel will come to NSWC and remove the wheels from the machine, provide banding to anchor the machine to the pallet, and provide the necessary paperwork for the trucking company and release paperwork for NSWC.
- The system will then proceed to IsoVac where it will be completely disassembled, deactivated, and scrapped.

F – Conclusions on the findings of the equipment.

- The Kr85 gas was apparently removed from this equipment at some time in the past.
- It appears that the Kr85 gas was pumped into another shipping container and shipped from the NSWC site.
- The condition of the machine, (all under vacuum, and the radiation readings in specific components of the machine), confirms the transfer operations that would have removed the Kr85 gas.
- At this time, the machine contains < 500 millicuries of Kr85.

By *George Neff*, R.S.O.
IsoVac Engineering Inc.

ATTACHMENT 8

RADIOLOGOGICAL SURVEY DATA - MAGAZINE 915

NSWC CRANE RADIOLOGICAL SURVEY REPORT

PERSON (S) PERFORMING SURVEY & PHONE NUMBER:	START DATE:	END DATE:	SURVEY TYPE (circle all that apply): CONTAMINATION / RADIATION
KEVIN TSCHAENN (812) 854-6839	03/31/2009	03/31/2009	
	UIC / COMMAND: 13-00164 / NSWCC	LOCATION: MAGAZINE 915	

NRMP OR NRC LICENSE NUMBER:	RADIOACTIVE MATERIALS INVOLVED:
NRMP 13-00164-B1NP/LLRW Pickup & Removal (3/16/09-3/24/09) NRMP 13-00164-U1NP (Liquid Scintillation Count Waste, Contaminated Liquid Scintillation Vials) NRMP 13-00164-U2NP (Depot Level Repair Contact Waste; gloves, wipe media, cleaning materials)	Kr-85 (Intertest Leak Detection System), Non-Permitted (Exempt) Military-Use Commodities (Th-230/232, Ra-226, H-3, Sr-90), Liquid Scintillation Counter and Depot Level Repair Waste (Ni-63, Am-241) All items containerized and sealed while in storage. FOLLOWUP TO 12/03/08 MAG-915 SURVEY

ADDITIONAL INFORMATION / COMMENTS/ SPECIAL INSTRUCTIONS:

FOR PERMIT TERMINATION/LLRW CLOSE-OUT: The Kr-85 Intertest Leak Detection System was transferred on 2 Dec 2008. Licensee Recipient: ISOVAC Engineering, Inc. 614 Justin Ave., Glendale, CA 91201. Individual Contact: Mr. George Neff, PH: (818) 552-6200. License Number: California Byproduct Materials License Number 1673-19, Exp. February 17, 2008, (in renewal). A description of materials remaining in the magazine is described in this survey report (see below).

RADIAC USED (MODEL NUMBER)	SERIAL NUMBER	BATTERY CHECK	SOURCE CHECK	CAL DATE	BACKGROUND	RADIAC EFFICIENCY
LUDLUM M-2241	118467	OK	OK	12/2/08	< 10uR/hour (<0.010mR/hour)	Not Applicable
1M-265/PDQ RADIACMETER DT-681/PDQ ALPHA PROBE (S/N A00955)	A022441	OK	OK	9/22/08	0.0	Not Provided

LIQUID SCINTILLATION RESULTS & FACILITY DIAGRAM ATTACHED

ITEM	DESCRIPTION	GROSS (CPM)	NET (CPM)	SWIPE (DPM/100 cm²)	DIRECT (DPM)	DIRECT (DPM/100 cm²)	RADIATION LEVELS (mrem/hr)
1	MAGAZINE 915 (GENERAL AREA)	N/A	N/A	N/A	BKGD	BKGD	<0.010
2	Concrete Flooring	*	*	*	BKGD	BKGD	<0.010
3	Concrete Flooring	*	*	*	BKGD	BKGD	<0.010
4	Concrete Flooring	*	*	*	BKGD	BKGD	<0.010
5	Concrete Flooring	*	*	*	BKGD	BKGD	<0.010
6	Concrete Flooring	*	*	*	BKGD	BKGD	<0.010
7	Concrete Flooring	*	*	*	BKGD	BKGD	<0.010
8	Concrete Flooring	*	*	*	BKGD	BKGD	<0.010
9	Concrete Flooring	*	*	*	BKGD	BKGD	<0.010
10	Concrete Flooring	*	*	*	BKGD	BKGD	<0.010
11	Concrete Flooring	*	*	*	BKGD	BKGD	<0.010

PRINTED NAME - RADIATION SAFETY OFFICER REVIEW:	SIGNATURE:	DATE:
KEVIN R. TSCHAENN		5-11-09

ATTACHED SURVEY TO NRC FORM 314

NSWC CRANE RADIOLOGICAL SURVEY REPORT – CONTINUATION PAGE

ITEM	DESCRIPTION	GROSS (CPM)	NET (CPM)	SWIPE (DPM/100 cm²)	DIRECT (DPM)	DIRECT (DPM/100 cm²)	RADIATION LEVELS (mR/hr)
12	54 X Empty 55-Gallon Drums (Black, Metal) & Drum Rings	•	•	•	BKGD	BKGD	<0.010
13	4 X Empty 30-Gallon Drums & Drum Rings	•	•	•	BKGD	BKGD	<0.010
14	1 X Empty 50-60 Gallon Drum (OD Green, Metal) & Drum Ring	•	•	•	BKGD	BKGD	<0.010
15	5 X Empty 10-Gallon Drum (OD Green, Metal) & Drum Rings	•	•	•	BKGD	BKGD	<0.010
16	1 X Empty 4' by 4' by 8' Metal Box (Yellow-Brown), w/ Lid	•	•	•	BKGD	BKGD	<0.010
17	3 X Empty Small Metal Boxes (OD Green) & Drum Rings	•	•	•	BKGD	BKGD	<0.010
18	~35 X Wooden Pallets	•	•	•	BKGD	BKGD	<0.010
19	Hand Truck & Misc Hand Tools	•	•	•	BKGD	BKGD	<0.010
20	Stainless Metal Shelving (on wheels)	•	•	•	BKGD	BKGD	<0.010
21	Wall, corner, former storage area of K-85 Leak Detection System	•	•	•	BKGD	BKGD	<0.010

PRINT NAME	SIGNATURE	DATE
KELLEN R. TSCHAEN		5/11/09

ATTACHED SURVEY TO NRC FORM 314

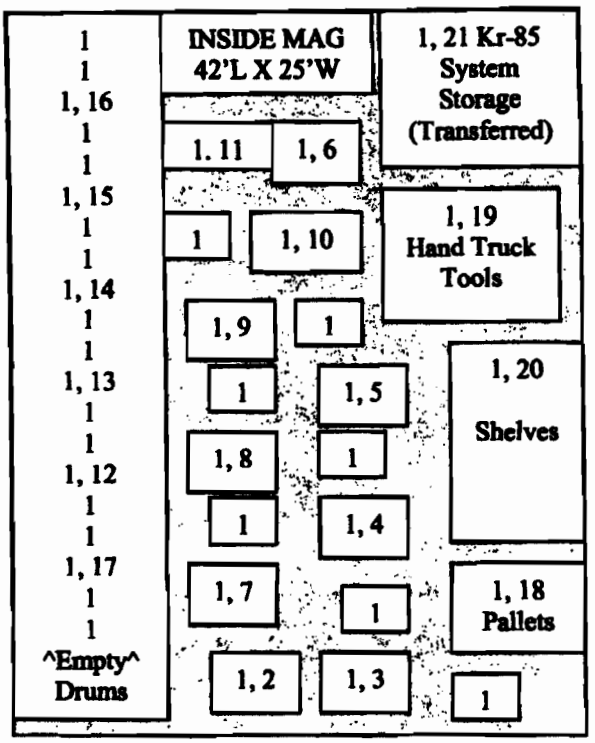
Wipe Test Results

Sample Position No.	Sample Date	Description	Isotope	CPM (gross)	Background	CPM (net)	Efficiency	MDA	DPM	Activity (microcuries)
2	4/1/2009	Test Wipe 1	Ni-63	17	16	1	0.6984	13	< 13	< 0.000006
3	4/1/2009	Test Wipe 2	Ni-63	15	16	0	0.6986	13	< 13	< 0.000006
4	4/1/2009	Test Wipe 3	Ni-63	14	16	0	0.6973	13	< 13	< 0.000006
5	4/1/2009	Test Wipe 4	Ni-63	20	16	4	0.7000	13	< 13	< 0.000006
6	4/1/2009	Test Wipe 5	Ni-63	20	16	4	0.6930	13	< 13	< 0.000006
7	4/1/2009	Test Wipe 6	Ni-63	10	16	0	0.6904	13	< 13	< 0.000006
8	4/1/2009	Test Wipe 7	Ni-63	17	16	1	0.6960	13	< 13	< 0.000006
9	4/1/2009	Test Wipe 8	Ni-63	47	16	31	0.6980	13	45	0.00002
10	4/1/2009	Test Wipe 9	Ni-63	15	16	0	0.6944	13	< 13	< 0.000006
11	4/1/2009	Test Wipe 10	Ni-63	13	16	0	0.6996	13	< 13	< 0.000006
12	4/1/2009	Test Wipe 11	Ni-63	16	16	0	0.7001	13	< 13	< 0.000006
13	4/1/2009	Test Wipe 12	Ni-63	16	16	0	0.7073	13	< 13	< 0.000006
14	4/1/2009	Test Wipe 13	Ni-63	15	16	0	0.7089	13	< 13	< 0.000006
15	4/1/2009	Test Wipe 14	Ni-63	14	16	0	0.7050	13	< 13	< 0.000006
16	4/1/2009	Test Wipe 15	Ni-63	19	16	3	0.7083	13	< 13	< 0.000006
17	4/1/2009	Test Wipe 16	Ni-63	15	16	0	0.7099	13	< 13	< 0.000006
18	4/1/2009	Test Wipe 17	Ni-63	54	16	38	0.6953	13	55	0.00002
19	4/1/2009	Test Wipe 18	Ni-63	26	16	10	0.6984	13	14	0.000006
20	4/1/2009	Test Wipe 19	Ni-63	19	16	3	0.6991	13	< 13	< 0.000006
21	4/1/2009	Test Wipe 20	Ni-63	16	16	0	0.7108	13	< 13	< 0.000006
2	4/1/2009	Test Wipe 1	Am-241	35	31	4	0.958	13	< 13	< 0.000006
3	4/1/2009	Test Wipe 2	Am-241	33	31	2	0.958	13	< 13	< 0.000006
4	4/1/2009	Test Wipe 3	Am-241	28	31	0	0.958	13	< 13	< 0.000006
5	4/1/2009	Test Wipe 4	Am-241	37	31	6	0.958	13	< 13	< 0.000006
6	4/1/2009	Test Wipe 5	Am-241	36	31	5	0.958	13	< 13	< 0.000006
7	4/1/2009	Test Wipe 6	Am-241	24	31	0	0.958	13	< 13	< 0.000006
8	4/1/2009	Test Wipe 7	Am-241	36	31	5	0.958	13	< 13	< 0.000006
9	4/1/2009	Test Wipe 8	Am-241	65	31	34	0.958	13	35	0.00002
10	4/1/2009	Test Wipe 9	Am-241	35	31	4	0.958	13	< 13	< 0.000006
11	4/1/2009	Test Wipe 10	Am-241	29	31	0	0.958	13	< 13	< 0.000006
12	4/1/2009	Test Wipe 11	Am-241	34	31	3	0.958	13	< 13	< 0.000006
13	4/1/2009	Test Wipe 12	Am-241	29	31	0	0.958	13	< 13	< 0.000006
14	4/1/2009	Test Wipe 13	Am-241	31	31	0	0.958	13	< 13	< 0.000006
15	4/1/2009	Test Wipe 14	Am-241	31	31	0	0.958	13	< 13	< 0.000006
16	4/1/2009	Test Wipe 15	Am-241	35	31	4	0.958	13	< 13	< 0.000006
17	4/1/2009	Test Wipe 16	Am-241	30	31	0	0.958	13	< 13	< 0.000006
18	4/1/2009	Test Wipe 17	Am-241	74	31	43	0.958	13	45	0.00002
19	4/1/2009	Test Wipe 18	Am-241	43	31	12	0.958	13	< 13	< 0.000006
20	4/1/2009	Test Wipe 19	Am-241	36	31	5	0.958	13	< 13	< 0.000006
21	4/1/2009	Test Wipe 20	Am-241	33	31	2	0.958	13	< 13	< 0.000006

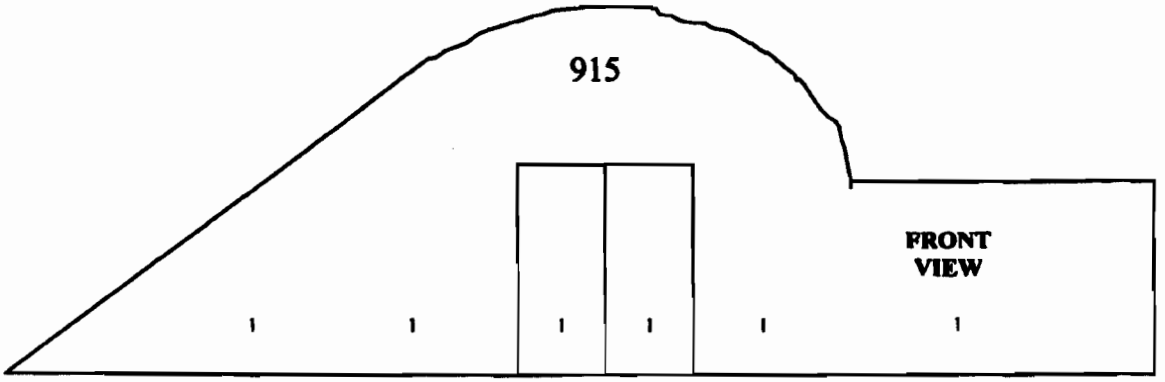
Analysis Completed
4/3/2009

Perkin Elmer Tri-Carb 2900TR Liquid Scintillation Analyzer Ser # 431132

DIAGRAM OF MAGAZINE 915



SURVEY LOCATIONS 1 – 21 (Swipes and Direct Survey)



Background: <u>≤ 0.01 mR/hr Beta-Gamma, 0.0 CPM Alpha</u>

<u>Direct Survey Results</u>:

1: <u>≤ 0.01 mR/hr, 0.0 CPM</u> - General Area

2-21: <u>≤ 0.01 mR/hr, 0.0 CPM</u> – Contact Readings (floor, empty containers, shelves, hand-tools, wooden pallets, hand-truck, wall)*

***See Survey Report Pages 1 and 2 for Swipe Sample Results**

NRMP 13-00164 B1NP
AMD 12

NAVAL RADIOACTIVE MATERIALS PERMIT

Pursuant to the authority stated in OPNAVINST 6470.3A, Naval Radiation Safety Committee, and in reliance on statements made by the applicant, permission is hereby granted for the acquisition, receipt, possession, use, storage and disposal of radioactive materials listed below subject to the conditions listed in this permit.

1 - COMMAND	2 - PERMIT NO.
	13-00164-B1NP
	3 - AMENDMENT NO.
	12
COMMANDER CRANE DIVISION NAVAL SURFACE WARFARE CENTER 300 HIGHWAY 361 CRANE, IN 47522-5000	4 - DOCKET NO.
	5 - EXPIRATION DATE 29 FEBRUARY 2013

6 - RADIOACTIVE MATERIAL	7 - CHEMICAL/ PHYSICAL FORM	8 - MAXIMUM QUANTITY AUTHORIZED
A. Krypton-85	A. Gas	A. 60 curies (2.22 terabecquerels) total.
B. Krypton-85	B. Sealed Source	B. Not to exceed 1 millicurie (37 megabecquerels) per source and 10 millicuries (370 megabecquerels) total.

9. Authorized Use

   a. For storage only in Isovac Mark IV Radioflo Unit.

   b. For storage pending disposal with the Intertest Model 1014-B11 Leak Detection System (calibration source).

CONDITIONS

10. The Command's Radioactive Materials Permit is amended and reprinted in its entirety. Changes to the permit are printed in **bold** typeface.

NAVAL RADIATION SAFETY COMMITTEE

SUPPLEMENTARY SHEET

Naval Radiation Safety Committee

Naval Radioactive Materials Permit

PERMIT NO.
13-00164-B1NP

AMENDMENT NO.
12

11. Radioactive material, Items 7A and 7B shall be stored only at Magazine 0915, Crane Division, Naval Surface Warfare Center, Crane, IN.

12. Radioactive material shall be used by, or under the supervision of, individuals trained in accordance with the command's Radioactive Materials Permit applications along with submitted procedures and information contained in the application packages.

    a. The Radiation Safety Officer for the activities authorized by this permit is Mr. Kevin R. Tschaenn.

    b. The Assistant Radiation Safety Officer for the activities authorized by this permit is **Mr. Aaron Upchurch.**

13. The command's Radioactive Materials Permit applications along with submitted procedures and information contained in the application package are considered an integral part of this Permit. The command shall maintain a copy of its application package on file with this Naval Radioactive Materials Permit.

14. The command is authorized to transport radioactive material only in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material" and "Defense Transportation Regulations, DD 4500-9R."

15. The command shall conduct a physical inventory every six months to account for all sources and/or devices received and possessed under this permit. Records of inventories shall be maintained for five years from the date of each inventory and shall include the date of the inventory, manufacturer's name and model numbers, source identification numbers, radioisotopes, chemical/physical forms, activity, date of activity determination, location and custodian.

SUPPLEMENTARY SHEET

Naval Radiation Safety Committee

Naval Radioactive Materials Permit

PERMIT NO.
13-00164-B1NP

AMENDMENT NO.
12

16. Except as specifically provided otherwise by this permit, the command shall conduct its program following the statements, representations, and procedures contained in the documents including any enclosures listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the command's application and correspondence are more restrictive than the regulations.

a. NAVSURFWARCENDIV Crane ltr 5104 Ser OES/3027 of 12 February 2003 (Renewal)
b. NAVSURFWARCENDIV Crane ltr 5104 Ser OES-KT/3071 of 3 June 2003 (Change the RSO)
c. NAVSURFWARCENDIV Crane ltr 5104 Ser 0591-KT/7026 of 9 March 2007 (Remove Extremity Dosimetry requirement)
d. NAVSURFWARCENDIV Crane ltr 5104 Ser 0591-KT/7047 of 10 May 2007 (Additional information for removing extremity dosimetry requirement)
e. NAVSURFWARCENDIV Crane letter 5104 Ser 0591-KT/8153 of 09 December 2008 (Change in ARSO)

DATE: _____

_____
L. L. FRAGOSO
Captain, MSC, USN
Executive Secretary
Naval Radiation Safety
Committee

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND DETACHMENT
RADIOLOGICAL AFFAIRS SUPPORT OFFICE (RASO)
NWS P.O. DRAWER 260
YORKTOWN, VA 23691-0260

IN REPLY REFER TO:

5104/00164
Ser EJA/08-0870/275
22 Dec 2008

From: Officer in Charge, Naval Sea Systems Command Detachment, Radiological Affairs Support Office (RASO)
To: Chairman, Naval Radiation Safety Committee

Subj: NAVAL RADIOACTIVE MATERIALS PERMIT NO. 13-00164-B1NP

Ref: (a) OPNAVINST 6470.3A
(b) NAVSURFWARCENDIV Crane ltr 5104 Ser 0591-KT/8153 of 09 Dec 08

Att: (1) Draft cover letter and Naval Radioactive Materials Permit No. 13-00164-B1NP, Amendment No. 12

1. Per reference (a), NAVSEADET RASO has reviewed reference (b) to amend the subject permit. Reference (b) assigns a new Assistant Radiation Safety Officer.

2. RASO has prepared attachment (1) for your review, approval, signature, and distribution.

"//S//"
J. R. CASSATA

From: Chairman, Naval Radiation Safety Committee
To: Commander, Crane Division, Naval Surface Warfare Center

Subj: NAVAL RADIOACTIVE MATERIALS PERMIT NO. 13-00164-B1NP AMENDMENT NO. 12

Ref: (a) OPNAVINST 6470.3A
(b) NAVSURFWARCENDIV Crane ltr 5104 Ser 0591-KT/8153 of 09 Dec 08

Encl: (1) Naval Radioactive Materials Permit No. 13-00164-B1NP, Amendment No. 12

1. Per reference (a), your request, reference (b), to amend the subject permit has been reviewed and approved by the Naval Radiation Safety Committee. Reference (b) assigns a new Assistant Radiation Safety Officer. Enclosure (1) provides a record of the approval.

2. Review enclosure (1) carefully to be sure that all conditions are understood. Changes as a result of this amendment are printed in **bold** typeface.

3. For further information contact NAVSEADET RASO at DSN 953-4692 or commercial (757) 887-4692.

L. L. FRAGOSO
By direction

Copy to:
COMNAVSURFWARCEN (Code 011)
NSWC Crane RSO (kevin.tschaenn@navy.mil)
NAVSEADET RASO

NRMP PROCESS MILESTONE FORM

NRMP PROCESS MILESTONE FORM

Command: Naval Surface Warfare Center, Crane

NRMP No.: 13-00164 B1NP

Amendment No.: 12 RCN: 09-0440

NRMP Action Type (Circle One): R A (T) N

Milestone	DATE
Application received from command:	09 Feb 09
Timely Filed Letter sent to command:	N/A
Deficiency letter sent:	03 Apr 09
Deficiency telephone call made:	N/A
Deficiency email sent:	N/A
Deficiency response received:	27 Jul 09
NRMP review complete sent for signature:	29 Jan 10

RPM Signature: JLBlack Date: Feb 3 2010

02 Initials: _____ Date:

00 Initials Date: _____ Date:

The following checklist was used to review the application, (mark the appropriate checklist):

_____ NRMP REVIEW CHECKLIST

X NRMP TERMINATION REVIEW CHECKLIST

HAS A SIGNIGICANT ACTION TAKEN PLACE REQUIRING A RASO VISIT?

YES (NO) (circle one)

I RECOMMEND AN ON-SITE EVALUATION BY RASO PRIOR TO ISSUANCE OF AN NRMP:

_____

(RPM SIGNATURE)

IF YES, COMPLETE AND ATTACH THE "IDENTIFICATION OF SIGNIFICANT NRMP ACTION"

NRC 314 Item No.	Suggested Response		Is the Item addressed Yes/No/NA	Paragraph Where Item is Addressed
	COMMAND NAME AND ADDRESS			
	The application includes the commands mailing address. (Command UIC: 00164)		Yes	
	NRMP Number		13-00164 B1NP	
	NRMP Expiration Date		29 Feb 13	
	Is a decommissioning plan required per 10 CFR 30.36(g)(1)		No	
	MATERIAL DATA			
	1. Does the application indicate that radioactive materials were procured or possessed by the permittee under this NRMP? (If yes complete 2. Below)		Yes	
	2. Does the application indicate that all activities authorized by the NRMP have ceased?		Yes System was in "storage only"	NRC 314 Section B.2
	Have radioactive materials been transferred to an authorized recipient? (If yes, complete table below.)		Yes	NRC 314 Section B.2
A.	SOURCE/DEVICE	DOCUMENT/DATE	STATE WHO THE MATERIAL WAS TRANSFERRED TO	
	Intertest Leak Detection System containing residual Kr-85	Certificate of Decommissioning 20 Dec 08	IsoVac Engineering Inc. Byproduct Material License 1673-19	
	(4) Kr-85 calibration check sources (placed inside Intertest System prior to transfer of custody)	Certificate of Decommissioning 20 Dec 08	IsoVac Engineering Inc. Byproduct Material License 1673-19	

NRC 314 Item No.	Suggested Response	Is the Item addressed Yes/No/NA	Paragraph Where Item is Addressed
	OTHER DATA		
	1. Has the NRMP expired?	No	NRC 314 Section A
	2. Has a radiation survey been conducted to confirm the absence of licensed radioactive materials?	Yes	NRC 314 Section C
B.	For sealed sources: Is there a statement that the leak test history has been reviewed?	N/A	
	Is there a statement that no leaking sources were possessed or handled during the course of the NRMP?	N/A	
	For unsealed sources or if a review of the leak test history reveals that leaking sources were possessed under the NRMP: For unsealed sources, is a contamination survey of the effected area(s) where the sources were stored and used included with the application?	Yes	Attachment 3 to application package
	If leaking sources were possessed, is documentation of the incident(s) and survey(s) of the effected area(s) included in the application?	N/A	
	3. The application includes the name of the point of contact and telephone number.	Yes	NRC 314
	4. The application includes the mailing address to mail future correspondence regarding the NRMP	Yes	NRC 314
	CERTIFING OFFICIAL		
	The application is signed by the commanding officer.	Yes	NRC 314

DECOMMISSIONING GUIDE CHECKLIST

DECOMMISSIONING GUIDE CHECKLIST

Facility Name:	Naval Surface Warfare Center Division, Crane
	Magazine 915 NSWC, Crane
Address:	300 HWY 361, Crane IN
NRMP No.:	13-00164-B1NP
Reviewer:	Jeff Black

Acronym	Definition
DP	Decommissioning Plan
EA	Environmental Assessment
EIS	Environmental Impact Statement
IAW	in accordance with
MML	US Navy Master Materials License(e)
NRC	U.S. Nuclear Regulatory Commission
NRMP	Naval Radiation Materials Permit
NRSC	Naval Radiation Safety Committee
RASO	Radiological Affairs Support Office
SER	Safety Evaluation Report

The following provides general guidance for completing the steps in the decommissioning process. Attachment 1 provides additional guidance for completing each step.

Step	Action (Organization performing the action is bolded)	Date
1	**Permittee** notifies the MML (RASO) in writing within 60 days of changes in operating status per 30.36 (d).	Intertest Leak Detection System in storage from Nov 99 to Dec 08
2	**RASO** requests additional information from the permittee that may be required to assess changes in operating status and to determine the proper decommissioning group.	03 Apr 09
3	**RASO** determines the decommissioning group: Group 2	15 Dec 09
4	**RASO** notifies the NRSC of the decommissioning status of the permittee, a recommended decommissioning group, and the requirements for decommissioning (e.g., SER, DP, EA, EIS).	Draft
5	**NRSC** notifies the NRC of the decommissioning status of the permittee, recommended decommissioning group, and the requirements for decommissioning (e.g., decommissioning group, timeline for decommissioning, funding, DP, alternate scheduling, and NRMP actions). **NRSC** requests NRC's concurrence of the permittee's requirements for decommissioning and NRC's future level of involvement in the decommissioning process.	Draft

6	**NRSC** notifies the permittee of their decommissioning status and the requirements for decommissioning (e.g., decommissioning group, timeline for decommissioning, funding, DP, alternate scheduling, and NRMP actions).	N/A
7	**Permittee** requests to extend the period for DP submission.	N/A
8	**RASO** reviews the permittee's request to extend the period for DP submission. RASO forwards the extension request, and recommendation, to the NRSC for review and approval or disapproval.	N/A
9	**NRSC** approves or rejects the permittee's request to extend the period for DP submission. • **NRSC** notifies the permittee that the request to extend the period for DP submission is denied and the permittee is directed to submit the DP as scheduled. • **NRSC** approves the permittee's request to extend the period for DP submission and forwards the request to the NRC for review and approval.	N/A
10	**NRC** approves or rejects the permittee's request to extend the period for DP submission.	N/A
11	**Permittee** submits DP.	N/A
12	**RASO** reviews the DP and provides the permittee with comments.	N/A
13	**Permittee** resolves all comments on the DP and submits final version.	N/A
14	**RASO** forwards DP to NRSC for review and approval.	N/A
15	**NRSC** provides RASO and permittee with comments on the DP.	N/A
16	**RASO** and **permittee** resolve all NRSC comments and RASO forwards revised final version to NRSC.	N/A
17	**NRSC**, if required, submits DP to NRC for review and approval.	N/A
18	**NRC** provides NRSC with comments on the DP.	N/A
19	**NRSC/RASO/Permittee** resolve NRC comments on DP.	N/A
20	**NRC** approves the DP and details the review (Safety Evaluation Report (SER), environmental).	N/A
21	**NRC** issues a federal register notice	TBD
22	**NRC** issues, if required, an environmental assessment (EA) or Environmental Impact Statement (EIS).	TBD
23	**NRSC** instructs the permittee to begin decommission IAW the final DP and to complete decommissioning within 24 months of initiating decommissioning operations. The permittee is notified to request an alternate decommission schedule if the period listed above cannot be met.	N/A
24	**Permittee** requests an alternate decommission schedule.	N/A
25	**RASO** reviews the permittee's request to extend the period for decommissioning. RASO's forwards the extension request, and recommendation, to the NRSC for review and approval.	N/A
26	**NRSC** approves or rejects the permittee's request to extend the period for decommissioning. • **NRSC** notifies the permittee that the request to extend the period for decommissioning is denied and the permittee is directed to complete decommissioning as scheduled. • **NRSC** approves the permittee's request to extend the period for decommissioning and forwards the request to the NRC for review and approval.	N/A

27	**NRC** approves or rejects the permittee's request to extend the period for decommissioning.	N/A
28	**Permittee** begins decommission IAW DP.	N/A
29	**Permittee** submits final status survey (FSS) report to RASO.	27 Jul 09
30	**RASO** reviews FSS.	15 Dec 09
31	**RASO** provides the permittee with comments on the FSS.	N/A
32	**Permittee** resolves all comments on the FSS and submits final version.	N/A
33	**RASO** forwards FSS to NRSC for review and approval.	
34	**NRSC** provides RASO and permittee with comments on the FSS.	
35	**RASO** and **permittee** resolve all NRSC comments and RASO forwards revised final version to NRSC.	
36	**NRSC**, if required, submits FSS to NRC for review and approval.	
37	**NRC** provides NRSC with comments on the FSS.	
38	**NRSC/RASO/Permittee** resolve NRC comments on FSS.	
39	**NRC** approves FSS.	
40	**Permittee** submits an NRC Form 314 to terminate NRMP or NRMP amendment to remove separate building or area from NRMP.	
41	**NRSC** terminates NRMP or approves NRMP amendment for the decommissioning of a separate building or area	

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

7/9/2010, and to inform you that the initial processing which includes an administrative review has been performed.

Notification (45-23645-01NA)

☒ 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

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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** 573216.
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