

SEP 04 1998

DNSC-MQ

MEMORANDUM FOR DNSC-MO

SUBJECT: Annual Radiological Report  
DLAH Form 30, S/N 6, dtd Aug 6, 1998  
New Haven, IN

The attached report indicates a somewhat incomplete inspection because the Radiological Safety Officer was apparently denied access to some depot records under the guise of Public Law No. 93-579, Privacy Act of 1974. Please direct depot personnel to provide all requested documents during future annual surveys. Failure to do so prevents us from fulfilling our responsibilities mandated by the DNSC Occupational Radiation Protection Program.

Notwithstanding the above, we concur with the following recommendations in the attached subject report:

Calibrate two check sources maintained at the depot.

Include documentation of radiation safety training in the depot's "Radiological Data Book".

Include documentation of coordination with emergency response personnel in the depot's "Radiological Data Book".

Place copies of the DNSC Occupational Radiation Protection Program, DLA and NRC Regulations, and the DNSC Source Materials License in the depot library so they are available to all personnel without requiring them to request access.

Review individual exposure records quarterly, document the reviews, advise employees and document the annual advisories. Include documentation in the depot's "Radiological Data Book."

**/S/ Peter O.I.M. Porton**

PETER O.I.M. PORTON  
Chief, Quality Assurance &  
Technical Services Division

Attachment

cc: Off. file - MQ DNSC-ME, DNSC-MQBI, DNSC-MQBR, DNSC-MQNH

DNSC-MQ/Mpecullan:mjp/767-7620/9/3/98

Author: Lois Huddlestun at ccp014  
Date: 6/1/98 2:05 PM  
Priority: Normal  
Receipt Requested  
TO: kevin reilly at ccp014  
CC: michael pecullan at ccp014, Frederic Brooks at ccp014  
Subject: Annual Radiological Survey

Kevin -

Attached you will find the radiological survey I performed at the depot. The format is that presented by Mr Pecullan at the DNSC Radiation Orientation in November of 1997. This will be entered into the radiation notebook as an inspection performed by the RPO. All discrepancies that are able to be corrected at the depot level are targeted to be corrected by the end of CY 1998. The discrepancies that are above depot level will be on hold until you or your representatives get back with us.

I do intend to attempt a survey such as this at least annually, with results being discussed with Fred and forwarded to you. I have attempted to be as thorough and as objective as possible. You will see that there are several Findings and several Recommendations.

If you have any comments or suggestions, please feel free to call.

annual~1.doc is the written portion of the survey

orepil~1.xls is the map of the ore piles showing the readings taken

whse\_r~1.xls is the map of the warehouse showing the readings taken

readings.xls is the written documentation of all the readings

The best way to view or print these files is to download them to the hard drive and print them off in the actual program that it pertains to, e.g. annual~1.doc is a MS Word file, the remainder of the files are Microsoft Excel files and will not print off properly from cc:mail. The Excel files must be downloaded and printed from Excel. If you have any questions, please feel free to call.

Thanks,

1. Radiological Officers: (Ref: DNSC ORPP Appendix E)

A. Radiological Protection Officer (RPO): Lois Mae Huddlestun, (219)-749-9544

B. Radiological Safety Officer (RSO): William Till, (219)-749-8291

2. Training:

A. (Ref: DNSC ORPP par. 3.3, 4.8; DLAR 4145.23, par. 4-2; DLAR 6055.4 par. XII.B.10; 10 CFR 19.12) Records indicating annual training are maintained in the Radiation Program Notebook. The only documentation to date is for 1994, 1995, and an unknown date (estimated to be in 1988).

**NOTE:** *The RPO is in the process of creating a training program and will implement the same upon completion at some point during the 1998 calendar year, at which time training will be documented and maintained in the Radiation Program Notebook. The RPO is also in the process of creating an initial training package to be included as part of the incoming package for new employees beginning work at New Haven Depot.*

B. (Ref: DNSC ORPP par 5.5) In March of 1998 employees received their annual respiratory protection training at the same time that they received their annual respirator fit testing by the Respiratory Protection Designee – William Till.

**NOTE:** One employee has been eliminated from respirator use until such time as a properly fitted respirator can be located and another employee cannot wear a respirator without allowing for a fresh air break every 30 minutes.

3. Instrumentation:

A. (Ref: DNSC ORPP par. 4.4 and 13.3)

<u>Radiological Instruments</u>	<u>Model/Type</u>	<u>Serial No.</u>	<u>Calibration Due</u>
Dosimeter/(Fagmeter)	5-0002/FH 40F6	77-390	Being Calibrated
Eberline Geiger Counter	E-120	10122	23 Apr 99
Eberline Geiger Counter	E-520	3135	23 Apr 99

**NOTE:** All other equipment listed in previous reports is in the process of being excessed by DRMS.

Source Chips

Gamma Source Chip	Cs137	Serial Number 951
Alpha Source Chip	unknown	Serial Number 377

Monitoring Devices

	<u>Model/Type</u>	<u>Number of Units</u>
Thermoluminescent Dosimeters	(TLD Badges)	26
Pocket Dosimeter	FEMA CDV-750	15
Pocket Dosimeter Charger	Model 6	1

**NOTE:** Four of the pocket dosimeters have been identified as drifters and have been separated from the others.

- B. (Ref: DNSC ORPP par. 13.4) TLD badges are processed by US Army Aviation Missile Command, ATTN: AMSAM-TMD-SR-D (USAIRDB), Bldg 5417, Redstone Arsenal, AL 35898-5000. Thermoluminescent Dosimeters are exchanged on a quarterly basis and all individuals assigned to the depot (except the secretary) are on the dosimetry program.
- C. Radiological Instruments and Monitoring Devices are stored in Building T-136 in a room known as "the radiation store room". This room is locked at all times. Keys to open this room by special permission may be obtained from the Depot Manager, the RSO, or the key custodian. The radiological instruments are to be utilized only by the RPO or RSO.
- D. The monitoring devices are to be signed out only by the RPO, RSO, or Depot Manager (in the absence of the RPO and RSO). A form is completed showing the date, employees name, SS#, DOB, badge #, location of potential exposure, reason for exposure, starting and ending time (Initial and final readings for the pocket dosimeters), and the monitor's name. Normally a TLD and a pocket dosimeter are issued at the same time. The pocket dosimeter is utilized as a quick reference only.
- E. Source chips are stored in the vault in a file drawer labeled "dosimetry Program".
4. Dosimetry:
- A. (Ref: DNSC ORPP par. 4.2; DLAR 1000.28 par 6-3a) DD Forms 1141 for each potentially exposed employee was began by the RPO.  
**NOTE:** During an inspection by SSG Collins of the US Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Ground, MD, a suggestion was made to discontinue creation of the remainder of the DD Forms 1141 until the DNSC ORPP Manager, Kevin Reilly has a chance to read the recommendations. SSG Collins' recommendation is that the DD Form 1141 be discontinued since the ADRs are provided by the US Army, Redstone Arsenal, AL. These forms have previously been approved by the NRC. Since New Haven Depot already receives ADRs from US Army, the DD Form 1141 creates a duplication of paperwork.
- B. (Ref: DNSC ORPP par. 4.6; DLAI 1000.30 par. 4-3) Quarterly reviews are documented on the ADR by the Depot RPO (Last date annotated – 06 May 98).  
**NOTE:** DD Forms 1141 are on hold until a final decision is rendered by DNSC ORPP Manager, Kevin Reilly
- C. (Ref: DNSC ORPP par 16.2; DLAR 1000.28 par. 6-6a.; DLAR 4145.23 par. 5-6a.; 10 CFR 19.13) There are no records to date documented to indicate the last time that exposure notifications were discussed with each employee.  
**NOTE:** The RPO is going to present copies of exposure documentation to each employee during the annual radiation training session before the end of the 1998 calendar year.

5. Posting:

A. (Ref: DNSC ORPP par. 4.3; 10 CFR 40.7(e)(2); 10 CFR 19.11; 10 CFR 21.6) The following required documents are posted in Building T-136, directly over the employee sign-in logbook.

1. Section 206 of Public Law 93-438 "Energy Reorganization Act of 1974
2. NRC Form 3, "Notice to Employees" (dated 8/1997)
3. The location of the NRC License

B. (Ref: DNSC ORPP par 8; 10 CFR 20.1902(a)) CONTROLLED AREA - NFPA 704 signs displaying the radiation symbol are posted on the north and south outside of Warehouse 214, Sections 3 and 4. The warehouses are locked and sealed at all times restricting entry to unauthorized personnel. The bays inside the warehouse containing the radioactive material referenced on the license (Tantalum) are posted with yellow and magenta labels and/or yellow and magenta signs containing a radiation symbol and the language "Caution, Radioactive Materials" or "Caution, Radiation Area". In addition, each of the bays in the warehouse containing the radioactive material on the license has been surrounded with yellow and magenta barricade tape with the radiation symbol and the language "Caution, Radiation Hazard".

C. (Ref: DNSC ORPP par 8; 10 CFR 20.1902(a)) RESTRICTED AREA - For the outside storage, the zirconium ore is completely surrounded by four strands of barbed wire fence with a gate and a combination padlock. Posted on the fence are also yellow and magenta signs containing a radiation symbol and the language "Caution, Radiation Area".

6. Rolling Radiation Library: The rolling radiation library is currently stored in the RPO's office during non-duty hours, but is available during duty hours to all employees. The records containing personal privacy act information are maintained in the locked top file portion of the library. Access to these files may be obtained through the RPO or Depot Manager IAW DLAR 1000.28 par.6-8.

A. Copies of the following are available in the "DNSC ORPP" notebook:

1. DNSC ORPP, dated 25 Jun 97
2. Recommendations of the International Commission on Radiological Protection, ICRP, Publication 26, adopted January 17, 1977.
3. US NRC License STC-133 with Amendments 1-20
4. Radioactive Materials Inventory for New Haven Depot
5. Decommissioning File
6. DLAR 1000.28, dated 30 Jun 95
7. DLAI 1000.30, dated 30 Jun 95
8. DLAR 4145.23, dated 20 Aug 93
9. DLAR 6055.4, dated 21 Jun 93
10. DLAR 5400.21, dated 26 Mar 85
11. DLAM 4145.8, dated 19 Apr 85

*Annual Radiological Survey for NRC License No. STC-133*  
DLA-DNSC-MONH New Haven Depot  
15411 Dawkins Road  
New Haven, IN 46774  
DATED: 01 Jun 98

B. Copies of the following are available in the "New Haven Depot Radiation Surveys" notebook

1. NRC Transaction Reports
2. Fagmeter Calibration Certifications
3. Geiger Counter (E-520) Calibration Certifications
4. Geiger Counter (E-120) Calibration Certifications
5. Annual Leakage Evaluations for Pocket Dosimeters
6. Annual Radiological Surveys

C. Copies of the following are available in the "Radiation Program" notebook

1. Local Emergency/Security Notifications
2. Training Documents
3. General Correspondence
4. NVLAP Certificates of Accreditation (Ref: 10 CFR 20.1502 par. (c)(1))
5. TLD Services Correspondence

D. Copies of the following are available in the library (Revised versions to be purchased after July of 1998):

1. 10 CFR Parts 0-199, revised as of January 1, 1997
2. 40 CFR Parts 190-259, revised as of July 1, 1996
3. 49 CFR Parts 100-185, revised as of October 1, 1997
4. 49 CFR Parts 186-199, revised as of October 1, 1996
5. 29 CFR Part 1926, revised as of July 1, 1996
6. 29 CFR Parts 500-899, revised as of July 1, 1996
7. 29 CFR Parts 1900-1910.999, revised as of July 1, 1996
8. 29 CFR Parts 1910 (1910.1000 to END), revised as of July 1, 1996
9. Respiratory Protection Program, revised as of 27 May 97

7. Personal Protection:

A. The decontamination facility is located in building T-214, section 1, west end. This facility is divided into three sections. The facility contains showers, toilets, wash basin, washer and dryer, and lockers. All air in this area is filtered with a self contained filtering system. The filtering system was originally set up for asbestos particulate.

B. Personal Protective Equipment, in addition to the basic PPE issued, includes but is not limited to:

1. Tyvek coveralls
2. CPF II coveralls
3. Rubber gloves
4. Disposable respirators
5. Half-face respirators issued to each individual

8. (Ref: DNSC ORPP par.11) Annual radiological survey is attached.
9. (Ref: DNSC ORPP par 9.1.2; 10 CFR 20.1003) "Restricted Area means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials."
  - A. See paragraphs 5B and 5C of this report for detailed descriptions of where restricted areas have been established.
  - B. The depot is secured by a seven foot high chainlink fence with three strands of barbed wire canted inward. The perimeter fence is six miles enclosing 268 acres of depot property. In addition, there is 24-hour manned guard service contracted by GSA. All warehouse doors are locked and sealed restricting entry to unauthorized individuals. Security guards are prohibited from entering restricted/controlled areas by Memo to District Commander, Federal Protective Services, dated 3 Mar 98.
10. Storage:
  - A. The zirconium ore pile is in bulk form. The tantalum is containerized according to specifications at the time of acquisition. All containers appear to be in good condition.
  - B. Storage and handling procedures are IAW DNSCM 4145.1, Defense National Stockpile Center Operations Manual.
  - C. Inventory is maintained on the ACIS (Automated Commodity Inventory System) as well as on DLAH Form 45, Material Locator Cards as required by DNSCM 4145.1.
  - D. There is no radioactive waste generated at the facility.
  - E. The warehouse in which the tantalum is stored is 180' X 960' and is divided into four separate 180' X 240' sections with 79 bays for each section. Each section has four overhead doors on the north side and four overhead doors on the south side. Section four also contains an overhead door on the east side as well as a personnel door.
  - F. See attached listing of all licensed materials showing their locations and quantities.
11. Emergency Procedures:
  - A. (Ref: DNSC ORPP par.14.1) Emergency procedures are located in the Defense Logistic Agency, Defense National Stockpile Center Occupant Emergency Plan (OEP), New Haven Depot, New Haven, IN, dated May 98 in section II paragraph D. Hazardous Material; Leak/Spill/Personal Contamination. This OEP is forwarded annually to DNSC ORPP Manager, Kevin Reilly for approval. The OEP is disseminated annually to all employees on depot during a safety meeting to allow for any questions to be answered.
  - B. (Ref: DNSC ORPP par.14.2) Arrangements are made with the local emergency response organization (New Haven Adams Township Fire Department) annually. The fire department makes an annual survey of the depot and discusses any possible hazards, which may be present. A knock box is located at the guardshack for use by the fire department should they be summoned to the depot for an emergency (Keys are maintained in the depot lock box and one



key is encased in an emergency glass box that can be broken in case of an emergency). The knox box is updated semi-annually. The knox box contains folders for each warehouse and one for outside storage of commodities. On the outside of each folder are the NFPA 704 signs that are on each warehouse. There is also a listing showing all of the commodities stored in each section, then there are copies of the MSDS for each commodity in each section. Suggestion by SSG Collins is to document this arrangement by sending a letter to the fire department annually informing them of the knox box, etc. This suggestion will be completed by the end of CY 1998.

12. Medical Exams: (Ref: DNSC ORPP par. 15) Annual physicals for all personnel were conducted in 1998. For further information regarding annual physicals or results should be directed to Russell Bywaters, DLA-DNSC-MH, 703-767-6519. Mr Bywaters has sent to the Depot Manager via cc:mail, dated 1/5/98, a listing of personnel on depot and their restrictions or lack thereof based on the annual physicals.

**FINDINGS ARE AS FOLLOWS:**

1. (Ref: DNSC ORPP par. 3.1) Position Description of RPO has not been annotated to reflect the additional duty.
2. (Ref: DNSC ORPP par. 4.2) DD Forms 1141 are on hold as instructed by the DNSC ORPP Manager, Kevin Reilly.
3. (Ref: DNSC ORPP par. 4.5) US NRC license located at the depot is incomplete. It does not contain the attachments necessary to complete each amendment.
4. (Ref: DNSC ORPP Par. 4.5) The diagrams provided in past annual radiological surveys appear to be reprints from previous audits.
5. (Ref: DNSC ORPP Par. 4.6) DD Forms 1141 have not been reviewed as they are on hold per DNSC ORPP Manager, Kevin Reilly.
6. (Ref: DNSC ORPP Par. 4.8 and Par. 16.2; DLAR 6055.4 par. XII.B.10; DLAM 4145.8 par 4-3) Past radiation training (initial and annual) has not been documented so is unavailable for the program's records.
7. (Ref: DNSC ORPP Par. 14.2) Documentation showing the prior arrangements with the local fire department should be maintained in the Radiation Notebook.
8. (Ref: DNSC ORPP Par. 16.2; DLAR 1000.28 par. 6-6.a.; DLAR 4145.23 section 1, par. 5-6A; 10 CFR 19.13) Documentation showing annual radiation exposure notifications has not been documented in the past so is unavailable for the program's records.
9. (Ref: DNSC ORPP Par 16.2; DLAR 6055.4 par. IX.D.2.) Documentation showing quarterly exposure reviews has not been documented in the past so is unavailable for the program's records.
10. (Ref: DLAR 1000.28 Appendix B, par. B.(1)) Blocks 11-20 are not completed on the DD Forms 1952 as instructed during DNSC Radiation Orientation Program.
11. (Ref: DLAR 1000.28 par. 6-1; DLAI 1000.30, par. 4-1; DLAR 4145.3 par. V.2.m.) A document is not available at the depot designating in writing the individual(s) responsible to serve as a dose record custodian.
12. (Ref: DLAR 6055.4 par. IX.A.5.) A document is not available at the depot designating the storage location for the personnel dosimetric devices.

**RECOMMENDATIONS: (Awaiting decision from the DSNC ORPP Manager, Kevin Reilly)**

1. *It is good practice to send for calibration the source chip with the radiological instrument for constancy values.*
2. *It is good practice to stagger the calibration of radiological instruments throughout the year so that a calibrated instrument can be maintained on site at all times.*
3. *When the radiological instruments are sent in for calibration it is good practice to specify on the paperwork the calibration range (i.e. + or - 20%)*
4. *There is no longer an alpha meter in use at the depot, it would be a good idea to properly dispose of or transfer the alpha emitting check source.*
5. *(DLAR 6055.4, par. IX.3.) Pocket Dosimeters should only be used as a reference and not as an official reading for records.*
6. *Dispose of the four pocket dosimeters labeled as drifters.*
7. *A leakage evaluation report for the pocket dosimeters should be performed and documented on a periodic basis.*

1. Radiological Officers: (Ref: DNSC ORPP Appendix E)

A. Radiological Protection Officer (RPO): Lois Mae Huddlestun, (219)-749-9544

B. Radiological Safety Officer (RSO): William Till, (219)-749-8291

2. Training:

A. (Ref: DNSC ORPP par. 3.3, 4.8; DLAR 4145.23, par. 4-2; DLAR 6055.4 par. XII.B.10; 10 CFR 19.12) Records indicating annual training are maintained in the Radiation Program Notebook. The only documentation to date is for 1994, 1995, and an unknown date (estimated to be in 1988).

**NOTE:** The RPO is in the process of creating a training program and will implement the same upon completion at some point during the 1998 calendar year, at which time training will be documented and maintained in the Radiation Program Notebook. The RPO is also in the process of creating an initial training package to be included as part of the incoming package for new employees beginning work at New Haven Depot.

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**NOTE:** One employee has been eliminated from respirator use until such time as a properly fitted respirator can be located and another employee cannot wear a respirator without allowing for a fresh air break every 30 minutes.

3. Instrumentation:

A. (Ref: DNSC ORPP par. 4.4 and 13.3)

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**NOTE:** All other equipment listed in previous reports is in the process of being excessed by DRMS.

Source Chips

Gamma Source Chip	Cs137	Serial Number 951
Alpha Source Chip	unknown	Serial Number 377

Monitoring Devices

	<u>Model/Type</u>	<u>Number of Units</u>
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Pocket Dosimeter	FEMA CDV-750	15
Pocket Dosimeter Charger	Model 6	1

**NOTE:** Four of the pocket dosimeters have been identified as drifters and have been separated from the others.

- B. (Ref: DNSC ORPP par. 13.4) TLD badges are processed by US Army Aviation Missile Command, ATTN: AMSAM-TMD-SR-D (USAIRDB), Bldg 5417, Redstone Arsenal, AL 35898-5000. Thermoluminescent Dosimeters are exchanged on a quarterly basis and all individuals assigned to the depot (except the secretary) are on the dosimetry program.
- C. Radiological Instruments and Monitoring Devices are stored in Building T-136 in a room known as "the radiation store room". This room is locked at all times. Keys to open this room by special permission may be obtained from the Depot Manager, the RSO, or the key custodian. The radiological instruments are to be utilized only by the RPO or RSO.
- D. The monitoring devices are to be signed out only by the RPO, RSO, or Depot Manager (in the absence of the RPO and RSO). A form is completed showing the date, employees name, SS#, DOB, badge #, location of potential exposure, reason for exposure, starting and ending time (Initial and final readings for the pocket dosimeters), and the monitor's name. Normally a TLD and a pocket dosimeter are issued at the same time. The pocket dosimeter is utilized as a quick reference only.
- E. Source chips are stored in the vault in a file drawer labeled "dosimetry Program".
4. Dosimetry:
- A. (Ref: DNSC ORPP par. 4.2; DLAR 1000.28 par 6-3a) DD Forms 1141 for each potentially exposed employee was began by the RPO.  
**NOTE:** During an inspection by SSG Collins of the US Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Ground, MD, a suggestion was made to discontinue creation of the remainder of the DD Forms 1141 until the DNSC ORPP Manager, Kevin Reilly has a chance to read the recommendations. SSG Collins' recommendation is that the DD Form 1141 be discontinued since the ADRs are provided by the US Army, Redstone Arsenal, AL. These forms have previously been approved by the NRC. Since New Haven Depot already receives ADRs from US Army, the DD Form 1141 creates a duplication of paperwork.
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**NOTE:** *DD Forms 1141 are on hold until a final decision is rendered by DNSC ORPP Manager, Kevin Reilly*
- C. (Ref: DNSC ORPP par 16.2; DLAR 1000.28 par. 6-6a.; DLAR 4145.23 par. 5-6a.; 10 CFR 19.13) There are no records to date documented to indicate the last time that exposure notifications were discussed with each employee.  
**NOTE:** *The RPO is going to present copies of exposure documentation to each employee during the annual radiation training session before the end of the 1998 calendar year.*

5. Posting:
- A. (Ref: DNSC ORPP par. 4.3; 10 CFR 40.7(e)(2); 10 CFR 19.11; 10 CFR 21.6) The following required documents are posted in Building T-136, directly over the employee sign-in logbook.
    - 1. Section 206 of Public Law 93-438 "Energy Reorganization Act of 1974
    - 2. NRC Form 3, "Notice to Employees" (dated 8/1997)
    - 3. The location of the NRC License
  - B. (Ref: DNSC ORPP par 8; 10 CFR 20.1902(a)) CONTROLLED AREA - NFPA 704 signs displaying the radiation symbol are posted on the north and south outside of Warehouse 214, Sections 3 and 4. The warehouses are locked and sealed at all times restricting entry to unauthorized personnel. The bays inside the warehouse containing the radioactive material referenced on the license (Tantalum) are posted with yellow and magenta labels and/or yellow and magenta signs containing a radiation symbol and the language "Caution, Radioactive Materials" or "Caution, Radiation Area". In addition, each of the bays in the warehouse containing the radioactive material on the license has been surrounded with yellow and magenta barricade tape with the radiation symbol and the language "Caution, Radiation Hazard".
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3. Geiger Counter (E-520) Calibration Certifications
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2. Training Documents
3. General Correspondence
4. NVLAP Certificates of Accreditation (Ref: 10 CFR 20.1502 par. (c)(1))
5. TLD Services Correspondence

D. Copies of the following are available in the library (Revised versions to be purchased after July of 1998):

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2. 40 CFR Parts 190-259, revised as of July 1, 1996
3. 49 CFR Parts 100-185, revised as of October 1, 1997
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5. 29 CFR Part 1926, revised as of July 1, 1996
6. 29 CFR Parts 500-899, revised as of July 1, 1996
7. 29 CFR Parts 1900-1910.999, revised as of July 1, 1996
8. 29 CFR Parts 1910 (1910.1000 to END), revised as of July 1, 1996
9. Respiratory Protection Program, revised as of 27 May 97

7. Personal Protection:

A. The decontamination facility is located in building T-214, section 1, west end. This facility is divided into three sections. The facility contains showers, toilets, wash basin, washer and dryer, and lockers. All air in this area is filtered with a self contained filtering system. The filtering system was originally set up for asbestos particulate.

B. Personal Protective Equipment, in addition to the basic PPE issued, includes but is not limited to:

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2. CPF II coveralls
3. Rubber gloves
4. Disposable respirators
5. Half-face respirators issued to each individual

8. (Ref: DNSC ORPP par.11) Annual radiological survey is attached.
9. (Ref: DNSC ORPP par 9.1.2; 10 CFR 20.1003) "Restricted Area means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials."
  - A. See paragraphs 5B and 5C of this report for detailed descriptions of where restricted areas have been established.
  - B. The depot is secured by a seven foot high chainlink fence with three strands of barbed wire canted inward. The perimeter fence is six miles enclosing 268 acres of depot property. In addition, there is 24-hour manned guard service contracted by GSA. All warehouse doors are locked and sealed restricting entry to unauthorized individuals. Security guards are prohibited from entering restricted/controlled areas by Memo to District Commander, Federal Protective Services, dated 3 Mar 98.
10. Storage:
  - A. The zirconium ore pile is in bulk form. The tantalum is containerized according to specifications at the time of acquisition. All containers appear to be in good condition.
  - B. Storage and handling procedures are IAW DNSCM 4145.1, Defense National Stockpile Center Operations Manual.
  - C. Inventory is maintained on the ACIS (Automated Commodity Inventory System) as well as on DLAH Form 45, Material Locator Cards as required by DNSCM 4145.1.
  - D. There is no radioactive waste generated at the facility.
  - E. The warehouse in which the tantalum is stored is 180' X 960' and is divided into four separate 180' X 240' sections with 79 bays for each section. Each section has four overhead doors on the north side and four overhead doors on the south side. Section four also contains an overhead door on the east side as well as a personnel door.
  - F. See attached listing of all licensed materials showing their locations and quantities.
11. Emergency Procedures:
  - A. (Ref: DNSC ORPP par.14.1) Emergency procedures are located in the Defense Logistic Agency, Defense National Stockpile Center Occupant Emergency Plan (OEP), New Haven Depot, New Haven, IN, dated May 98 in section II paragraph D. Hazardous Material; Leak/Spill/Personal Contamination. This OEP is forwarded annually to DNSC ORPP Manager, Kevin Reilly for approval. The OEP is disseminated annually to all employees on depot during a safety meeting to allow for any questions to be answered.
  - B. (Ref: DNSC ORPP par.14.2) Arrangements are made with the local emergency response organization (New Haven Adams Township Fire Department) annually. The fire department makes an annual survey of the depot and discusses any possible hazards, which may be present. A knox box is located at the guardshack for use by the fire department should they be summoned to the depot for an emergency (Keys are maintained in the depot lock box and one

key is encased in an emergency glass box that can be broken in case of an emergency). The knox box is updated semi-annually. The knox box contains folders for each warehouse and one for outside storage of commodities. On the outside of each folder are the NFPA 704 signs that are on each warehouse. There is also a listing showing all of the commodities stored in each section, then there are copies of the MSDS for each commodity in each section. Suggestion by SSG Collins is to document this arrangement by sending a letter to the fire department annually informing them of the knox box, etc. This suggestion will be completed by the end of CY 1998.

12. Medical Exams: (Ref: DNSC ORPP par. 15) Annual physicals for all personnel were conducted in 1998. For further information regarding annual physicals or results should be directed to Russell Bywaters, DLA-DNSC-MH, 703-767-6519. Mr Bywaters has sent to the Depot Manager via cc:mail, dated 1/5/98, a listing of personnel on depot and their restrictions or lack thereof based on the annual physicals.

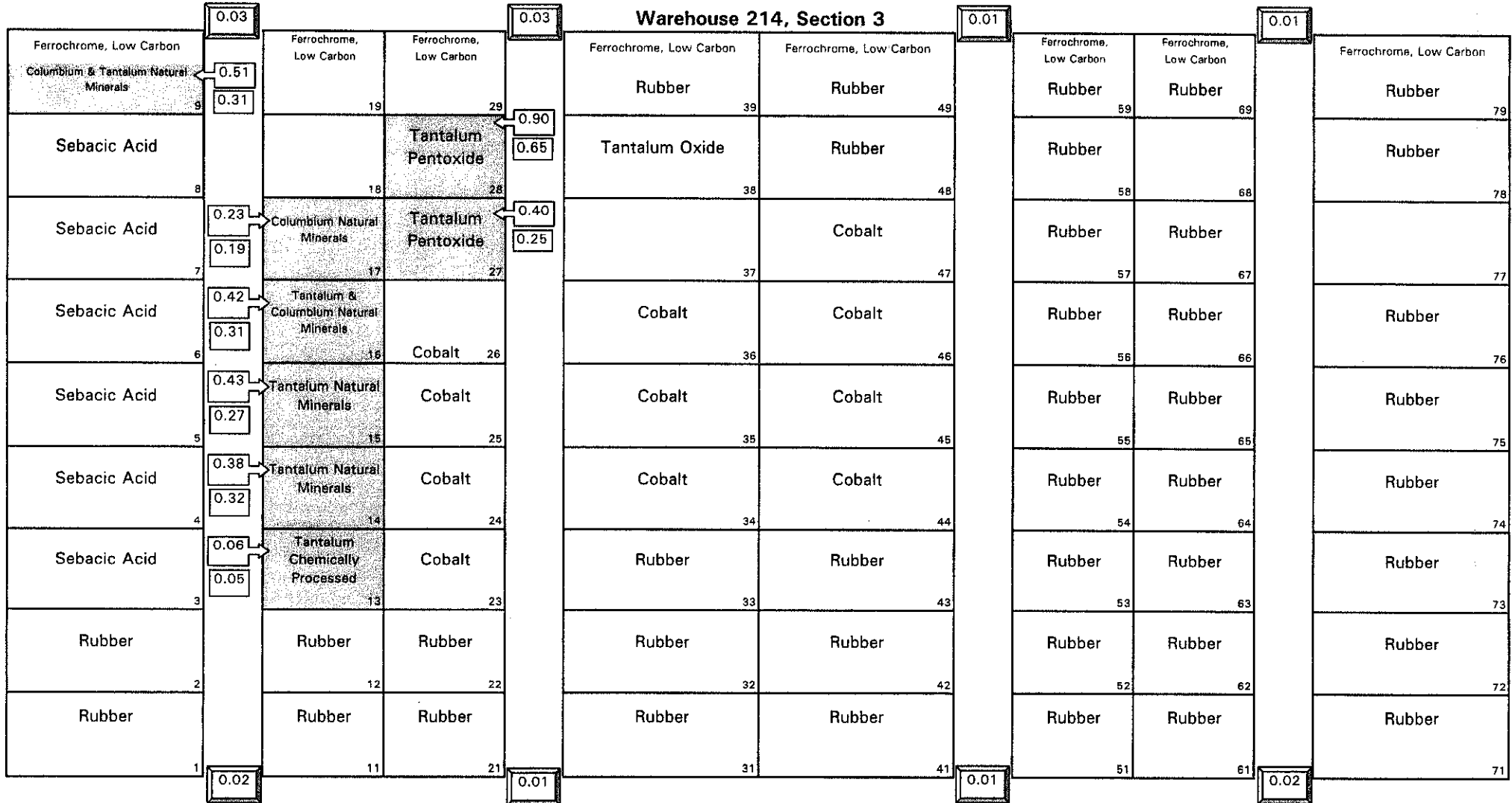
**FINDINGS ARE AS FOLLOWS:**

1. (Ref: DNSC ORPP par. 3.1) Position Description of RPO has not been annotated to reflect the additional duty.
2. (Ref: DNSC ORPP par. 4.2) DD Forms 1141 are on hold as instructed by the DNSC ORPP Manager, Kevin Reilly.
3. (Ref: DNSC ORPP par. 4.5) US NRC license located at the depot is incomplete. It does not contain the attachments necessary to complete each amendment.
4. (Ref: DNSC ORPP Par. 4.5) The diagrams provided in past annual radiological surveys appear to be reprints from previous audits.
5. (Ref: DNSC ORPP Par. 4.6) DD Forms 1141 have not been reviewed as they are on hold per DNSC ORPP Manager, Kevin Reilly.
6. (Ref: DNSC ORPP Par. 4.8 and Par. 16.2; DLAR 6055.4 par. XII.B.10; DLAM 4145.8 par 4-3) Past radiation training (initial and annual) has not been documented so is unavailable for the program's records.
7. (Ref: DNSC ORPP Par. 14.2) Documentation showing the prior arrangements with the local fire department should be maintained in the Radiation Notebook.
8. (Ref: DNSC ORPP Par. 16.2; DLAR 1000.28 par. 6-6.a.; DLAR 4145.23 section 1, par. 5-6A; 10 CFR 19.13) Documentation showing annual radiation exposure notifications has not been documented in the past so is unavailable for the program's records.
9. (Ref: DNSC ORPP Par 16.2; DLAR 6055.4 par. IX.D.2.) Documentation showing quarterly exposure reviews has not been documented in the past so is unavailable for the program's records.
10. (Ref: DLAR 1000.28 Appendix B, par. B.(1)) Blocks 11-20 are not completed on the DD Forms 1952 as instructed during DNSC Radiation Orientation Program.
11. (Ref: DLAR 1000.28 par. 6-1; DLAI 1000.30, par. 4-1; DLAR 4145.3 par. V.2.m.) A document is not available at the depot designating in writing the individual(s) responsible to serve as a dose record custodian.
12. (Ref: DLAR 6055.4 par. IX.A.5.) A document is not available at the depot designating the storage location for the personnel dosimetric devices.



**RECOMMENDATIONS: (Awaiting decision from the DSNC ORPP Manager, Kevin Reilly)**

1. *It is good practice to send for calibration the source chip with the radiological instrument for constancy values.*
2. *It is good practice to stagger the calibration of radiological instruments throughout the year so that a calibrated instrument can be maintained on site at all times.*
3. *When the radiological instruments are sent in for calibration it is good practice to specify on the paperwork the calibration range (i.e. + or - 20%)*
4. *There is no longer an alpha meter in use at the depot, it would be a good idea to properly dispose of or transfer the alpha emitting check source.*
5. *(DLAR 6055.4, par. IX.3.) Pocket Dosimeters should only be used as a reference and not as an official reading for records.*
6. *Dispose of the four pocket dosimeters labeled as drifters.*
7. *A leakage evaluation report for the pocket dosimeters should be performed and documented on a periodic basis.*



**LEGEND:**

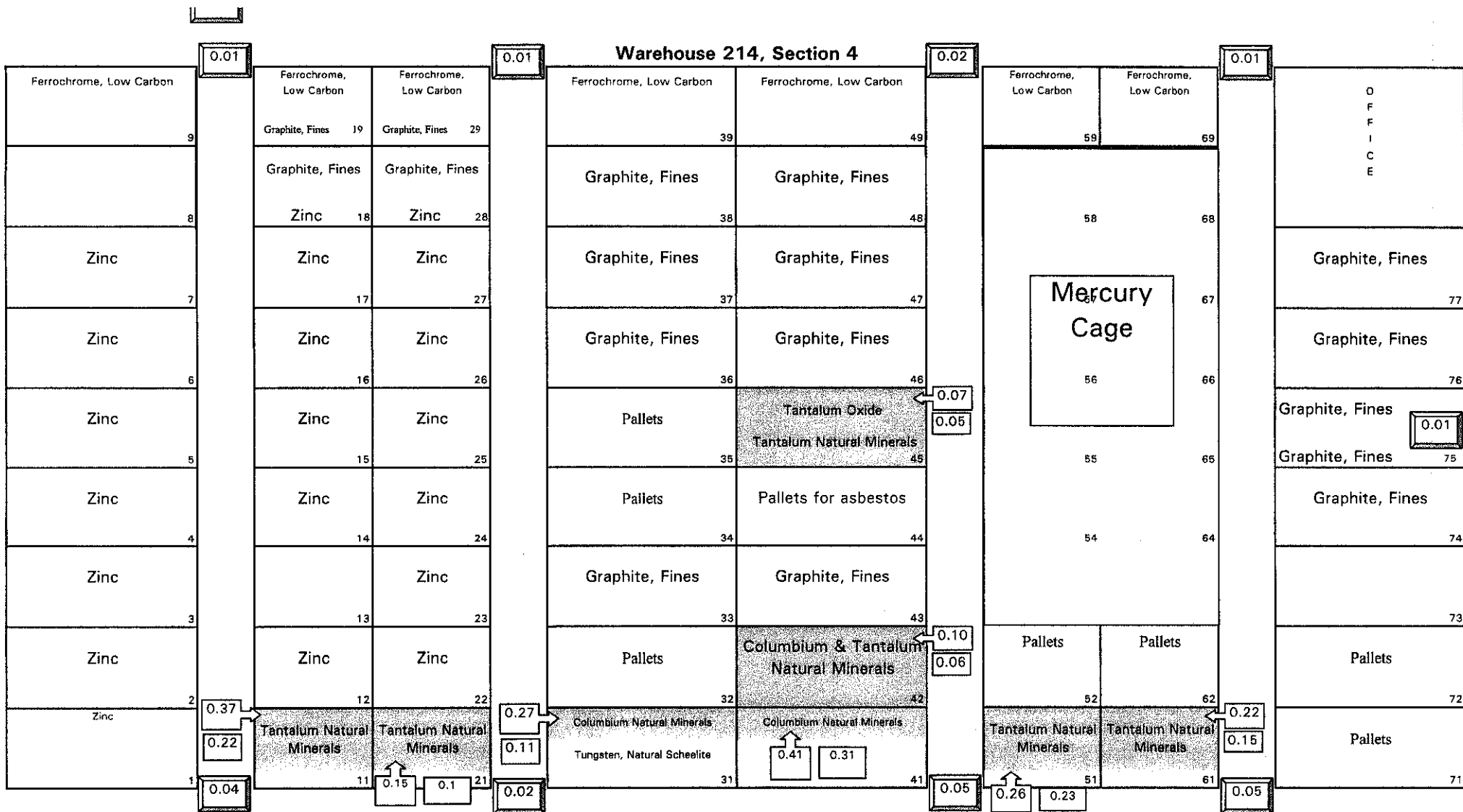


(Material on US NRC License STC-133)

Readings on contact (mR/hr)

Readings at 1 foot (mR/hr)

Readings at Door (mR/hr)



**LEGEND:**



(Material on US NRC License STC-133)

Readings on contact (mR/hr)

Readings at 1 foot (mR/hr)

Readings at door (mR/hr)

## ANNUAL RADIOLOGICAL SURVEY FOR US NRC LICENSE NO. ST-133

NEW HAVEN DEPOT

NEW HAVEN, IN

Operation check with Cs137  
source chip gave reading of  
3.5 mR/hr - correct

Printed: 6/2/98

LOCATION	SOURCE	INSTRUMENT USED	SHIELD POSITION	DISTANCE FROM SOURCE	SCALE FACTOR (RANGE)	METER READING	DOSE RATE
214-4 Door E-01	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.30	0.01
214-4 Door N-13	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.40	0.01
214-4 Door N-14	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.20	0.01
214-4 Door N-15	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.50	0.02
214-4 Door N-16	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.30	0.01
214-4 Door S-13	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	3.50	0.04
214-4 Door S-14	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	2.20	0.02
214-4 Door S-15	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	4.50	0.05
214-4 Door S-16	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	4.60	0.05
214-4-11	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	2.20	0.22
214-4-11	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	3.70	0.37
214-4-21	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	1.00	0.10
214-4-21	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	1.50	0.15
214-4-31	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	1.10	0.11
214-4-31	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	2.70	0.27
214-4-41	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	3.10	0.31
214-4-41	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	4.10	0.41
214-4-42	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.01	5.70	0.06
214-4-42	Tantalum	Eberline E-520	CLOSED	CONTACT	0.01	10.00	0.10
214-4-45	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.01	5.20	0.05
214-4-45	Tantalum	Eberline E-520	CLOSED	CONTACT	0.01	7.00	0.07
214-4-51	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	2.30	0.23
214-4-51	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	2.60	0.26
214-4-61	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	1.50	0.15
214-4-61	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	2.20	0.22

## ANNUAL RADIOLOGICAL SURVEY FOR US NRC LICENSE NO. ST-133

NEW HAVEN DEPOT

NEW HAVEN, IN

Operation check with Cs137  
source chip gave reading of  
3.5 mR/hr - correct

Printed: 6/2/98

LOCATION	SOURCE	INSTRUMENT USED	SHIELD POSITION	DISTANCE FROM SOURCE	SCALE FACTOR (RANGE)	METER READING	DOSE RATE
214-3 Door N-09	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	2.80	0.03
214-3 Door N-10	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	2.50	0.03
214-3 Door N-11	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.30	0.01
214-3 Door N-12	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.30	0.01
214-3 Door S-09	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.80	0.02
214-3 Door S-10	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.40	0.01
214-3 Door S-11	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	1.40	0.01
214-3 Door S-12	Tantalum	Eberline E-520	CLOSED	1 Foot inside door	0.01	2.20	0.02
214-3-13	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.01	5.20	0.05
214-3-13	Tantalum	Eberline E-520	CLOSED	CONTACT	0.01	6.00	0.06
214-3-14	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	3.20	0.32
214-3-14	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	3.80	0.38
214-3-15	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	2.70	0.27
214-3-15	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	4.30	0.43
214-3-16	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	3.10	0.31
214-3-16	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	4.20	0.42
214-3-17	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	1.90	0.19
214-3-17	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	2.30	0.23
214-3-27	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	2.50	0.25
214-3-27	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	4.00	0.40
214-3-28	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	6.50	0.65
214-3-28	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	9.00	0.90
214-3-9	Tantalum	Eberline E-520	CLOSED	1 FOOT	0.10	3.10	0.31
214-3-9	Tantalum	Eberline E-520	CLOSED	CONTACT	0.10	5.10	0.51

## ANNUAL RADIOLOGICAL SURVEY FOR US NRC LICENSE NO. ST-133

NEW HAVEN DEPOT

NEW HAVEN, IN

Operation check with Cs137  
source chip gave reading of  
3.5 mR/hr - correct

Printed: 6/2/98

LOCATION	SOURCE	INSTRUMENT USED	SHIELD POSITION	DISTANCE FROM SOURCE	SCALE FACTOR (RANGE)	METER READING	DOSE RATE
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.80	1.80
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.50	1.50
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	2.00	2.00
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.90	1.90
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.90	1.90
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.90	1.90
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.80	1.80
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	2.00	2.00
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	2.00	2.00
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	1.00	1.80	1.80
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.20	2.20
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.10	2.10
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.70	2.70
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.80	2.80
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.10	2.10
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	1.90	1.90
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.10	2.10
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.50	2.50
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.20	2.20
Area 7	Pile111, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	1.00	2.00	2.00

ANNUAL RADIOLOGICAL SURVEY FOR US NRC LICENSE NO. ST-133  
 NEW HAVEN DEPOT  
 NEW HAVEN, IN

Printed: 6/2/98

Operation check with Cs137  
 source chip gave reading of  
 3.5 mR/hr - correct

LOCATION	SOURCE	INSTRUMENT USED	SHIELD POSITION	DISTANCE FROM SOURCE	SCALE FACTOR (RANGE)	METER READING	DOSE RATE
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.01	4.00	0.04
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.10	1.20	0.12
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.01	13.00	0.13
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.10	2.20	0.22
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.01	12.00	0.12
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.10	2.00	0.20
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	1 FOOT	0.01	10.00	0.10
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.01	6.00	0.06
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.10	1.80	0.18
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.01	17.00	0.17
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.10	3.40	0.34
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.01	14.00	0.14
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.10	3.00	0.30
Area 7	Pile111A, Zirconium Ore	Eberline E-520	CLOSED	CONTACT	0.01	13.00	0.13

## ANNUAL RADIOLOGICAL SURVEY FOR US NRC LICENSE NO. ST-133

NEW HAVEN DEPOT

NEW HAVEN, IN

Operation check with Cs137  
source chip gave reading of  
3.5 mR/hr - correct

Printed: 6/2/98

LOCATION	SOURCE	INSTRUMENT USED	SHIELD POSITION	DISTANCE FROM SOURCE	SCALE FACTOR (RANGE)	METER READING	DOSE RATE
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.10	1.00	0.10
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.10	1.00	0.10
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.10	2.10	0.21
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.10	1.00	0.10
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.01	3.50	0.04
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.01	5.00	0.05
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.01	2.80	0.03
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.01	2.00	0.02
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.10	2.20	0.22
Area 7	FENCELINE	Eberline E-520	CLOSED	CONTACT	0.01	11.00	0.11