

DuPont Specialty Products USA, LLC
Washington Works
P.O. Box 2800
Washington, WV 26181-2800



August 24, 2022

Certified Mail – 7021 0950 0000 9461 7755
Return Receipt Requested

Michael Reichard
U.S Nuclear Regulatory Commission (NRC) Region I
2100 Renaissance Blvd., Suite 100
King of Prussia, PA 19406

Subject: NRC License No. 047-01876-01

Dear Mr. Reichard:

On February 18, 2022, our parent company, DuPont de Nemours, Inc., ("DuPont") announced that it entered into a definitive agreement with Celanese Corporation (the "Buyer") to divest a majority of DuPont's Mobility & Materials businesses ("M&M"), excluding certain businesses (the "Transaction"). The businesses excluded from the Transaction include the Adhesives, Brake Fluids, Multibase™, Tedlar® and Delrin® businesses. The portion of the business to be sold to Buyer is hereinafter referred to as the "M&M Business".

The Transaction is targeted to close around the end of 2022, subject to customary closing conditions and regulatory approvals. In anticipation, DuPont will update its legal entity structure aligning all legal entities to either DuPont or the M&M Business. To be clear, until the closing of the Transaction, the M&M Business is, and continues to be, a business of DuPont regardless of any changes as part of our internal reorganization.

The DuPont location of Washington, West Virginia, will be split into two entities. The Delrin® business will remain with DuPont de Nemours (DuPont Specialty Products USA, LLC), and will retain the NRC License No. 047-01876-01. The other portion of the M&M Business at Washington, West Virginia, will be divested, and the new Legal Entity for this facility will be "DuPont Polymer Products LLC" effective on November 1, 2022.

We have submitted a RSO change request to Bryan S. Monroe on August 2, 2022. Pending the NRC approval, Mr. Monroe will remain on the DuPont Specialty Products license as RSO after the transaction. Mr. Monroe has been an authorized user and Backup RSO for the past six years on the current DuPont license.

We are submitting this letter to provide you with information about the proposed corporate reorganization and the need to modify our legal entity. We are requesting a license separation associated with the DuPont Polymer Products LLC and we are submitting the necessary Form 313 and supporting information, as attached.

For nuclear source and radiation safety purposes there will be no change of control until November 1, 2022. Pending approval Bryan S. Monroe will continue to serve as the Site Radiation Safety Officer with Mr. Whitlatch mentoring. After November 1, 2022 Mr. Whitlatch will serve as the RSO for DuPont Polymer Products LLC at Washington, Works.

DuPont Specialty Products USA, LLC NRC License No. 047-01876-01 will remain in control of the nuclear sources after the transition until final approval from the NRC.

The total of the existing nuclear sources on site will be split by business, as appropriate, between the remaining DuPont Specialty Products USA LLC operations and the new DuPont Polymer Products LLC operations.

We thank you for your cooperation and attention in this matter. If you have any questions or need additional information, please do not hesitate to contact me at (304) 863-2906.



Best Regards,



Herb Whitlatch
Radiation Safety Officer

Attachments:

- 1) NRC Form 313
- 2) NRC Form 313 – additional information
- 3) Procedure 503 Nuclear, X-Ray and Laser
- 4) Site Nuclear Source Inventory
- 5) Training documents for Herbert Whitlatch and Casey Green

NRC FORM 313 (06-30-2022) 10 CFR 30, 32, 33, 34, 35, 36, 37, 39, and 40	U.S. NUCLEAR REGULATORY COMMISSION  APPLICATION FOR MATERIALS LICENSE	APPROVED BY OMB: NO. 3150-0120 Estimated burden per response to comply with this mandatory collection request: 4.3 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the FOIA, Library, and Information Collections Branch (T-6 A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollections.Resource@nrc.gov , and the OMB Reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0120), Attn: Desk Officer for the Nuclear Regulatory Commission, 725 17th Street NW, Washington, DC 20503; e-mail: omb_submission@omb.eop.gov . The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.				
INSTRUCTIONS: SEE THE CURRENT VOLUMES OF THE NUREG-1556 TECHNICAL REPORT SERIES ("CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES") FOR DETAILED INSTRUCTIONS FOR COMPLETING THIS FORM: http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/. SEND TWO COPIES OF THE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.						
APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH: MATERIALS SAFETY AND TRIBAL LIAISON BRANCH DIVISION OF MATERIALS SAFETY, SECURITY, STATE AND TRIBAL PROGRAMS OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20555-0001 ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS: IF YOU ARE LOCATED IN: ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO: LICENSING ASSISTANCE TEAM DIVISION OF RADIOLOGICAL SAFETY AND SECURITY U.S. NUCLEAR REGULATORY COMMISSION, REGION I 475 ALLENDALE ROAD, SUITE 102 KING OF PRUSSIA, PA 19406-1415 R1DRSSMail.Resource@nrc.gov <i>*Note: The preferred method to submit NRC Form 313 is e-mail. Any other document (e.g., financial assurance documents) should be sent via mail.</i>		IF YOU ARE LOCATED IN: ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO: MATERIALS LICENSING BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION III 2443 WARRENVILLE ROAD, SUITE 210 Lisle, IL 60532-4352 R3DNMSMail.Resource@nrc.gov <i>*Note: The preferred method to submit NRC Form 313 is e-mail. Any other documents (e.g., financial assurance documents) should be sent via mail.</i> IF YOU ARE LOCATED IN: ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO: MATERIALS LICENSING BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION IV 1600 E. LAMAR BOULEVARD ARLINGTON, TX 76011-4511 r4licensingactions@nrc.gov <i>*Note: The preferred method to submit NRC Form 313 is e-mail. Any other document (e.g., financial assurance documents) should be sent via mail.</i>				
PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.						
1. THIS IS AN APPLICATION FOR (Check appropriate item) <input checked="" type="checkbox"/> A. NEW LICENSE <input type="checkbox"/> B. AMENDMENT TO LICENSE NUMBER _____ <input type="checkbox"/> C. RENEWAL OF LICENSE NUMBER _____		2. NAME AND MAILING ADDRESS OF APPLICANT (Include zip code) Dupont Polymer Products, LLC 8480 Dupont Road, B24 Washington, WV 26181				
3. ADDRESS WHERE LICENSED MATERIALS WILL BE USED OR POSSESSED Dupont Polymer Products, LLC 8480 Dupont Road, B24 Washington, WV 26181		4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION Herbert A. Whitlatch II <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">BUSINESS TELEPHONE NUMBER (304) 863-2906</td> <td style="width:50%;">BUSINESS CELLULAR TELEPHONE NUMBER NA</td> </tr> <tr> <td colspan="2">BUSINESS E-MAIL ADDRESS Herb.Whitlatch@dupont.com</td> </tr> </table>	BUSINESS TELEPHONE NUMBER (304) 863-2906	BUSINESS CELLULAR TELEPHONE NUMBER NA	BUSINESS E-MAIL ADDRESS Herb.Whitlatch@dupont.com	
BUSINESS TELEPHONE NUMBER (304) 863-2906	BUSINESS CELLULAR TELEPHONE NUMBER NA					
BUSINESS E-MAIL ADDRESS Herb.Whitlatch@dupont.com						
SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE						
5. RADIOACTIVE MATERIAL a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.		6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.				
8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.		7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE.				
10. RADIATION SAFETY PROGRAM.		9. FACILITIES AND EQUIPMENT.				
12. LICENSE FEES (Fees required only for new applications, with few exceptions*) (See 10 CFR 170 and Section 170.31) *Amendments/Renewals that increase the scope of the existing license to a new or higher fee category will require a fee.		11. WASTE MANAGEMENT.				
PER THE DEBT COLLECTION IMPROVEMENT ACT OF 1996 (PUBLIC LAW 104-134), YOU ARE REQUIRED TO PROVIDE YOUR TAXPAYER IDENTIFICATION NUMBER. PROVIDE THIS INFORMATION BY COMPLETING NRC FORM 531: https://www.nrc.gov/reading-rm/doc-collections/forms/nrc531info.html.						
13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 37, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF. WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.						
CERTIFYING OFFICER – TYPED/PRINTED NAME AND TITLE JOHN KOVALESKI PLANT MANAGER		SIGNATURE  DATE 8/24/2022				
FOR NRC USE ONLY						
TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS	
			\$			
APPROVED BY				DATE		

To:
Licensing Assistance Team
Division of Nuclear Materials Safety
U. S. Nuclear Regulatory Commission, Region I
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406-2713

Re: Additional information for Form 313 (License Split of 47-01876-01)

NRC FORM 313 Item 1:

- New License (this is a License split of 47-01876-01)

NRC FORM 313 Item 2:

DuPont Polymer Products, LLC
8480 DuPont Road, B24
Washington, WV 26181

NRC FORM 313 Item 3:

DuPont Polymer Products, LLC
8480 DuPont Road, B24
Washington, WV 26181

NRC FORM 313 Item 4:

- Herbert Whitlatch (304)863-2906
- Herbert Whitlatch is our proposed RSO

NRC FORM 313 Item 5:

Byproduct, source, and or special Material

- Cesium-137

Chemical or physical form

- Sealed Sources (3M, Model 4D6L, 4D6P, 4F6S, 4F6ST or 4FP6; 4D6L, 4D6P, 4F6S, or 4F6ST; Amersham Corporation, Model AMC. 16, AMC.17, AMC.18, AMC.19, CDC.700, CDC.711M, CDC.800, CDC.93, or CDC.PE2; CDC.808; Gamma Industries, Model VD; VDHP General Radio isotopes, Model 850223 or GRP-6082; 850233 or 6082; Isotope Products Laboratories, Model 225 or A-3402; Isotopes Laboratories, Model 225, HEG-060, or HEG-137; Kay-Ray/Sensall, Inc., Model 7700-Y; New England Nuclear, Model NER-570; NER-580; Ohmart Corporation, Model A-2100 or A-2101; A-2100, A-2102 and A-2104; A-2102 or A-5771; Ohmart/VEGA Corporation, Model A-2100, A-2102, A-2104, A-57878, A-58804, or A-58755; QSA Global, Model CDC.700M. CDC.800, CDC.93, CDC.PE2, CDC.PI, or CDC.P4; TN Technologies or Thermo Fisher Scientific, Model 57157C)

Maximum amount that Licensee may possess at any one time under this License.

- 25 Curies

Authorized use.

- For use in the following fixed gauging devices for controlling industrial processes: Kay-Ray/Sensall, Inc. Models 7050 through 7061, 7062B, 7063, 7063P, 7064, and 7067P; Ohmart Corporation Models HM-8, SH-FX Series, SHRH-A, and SHRM Series; Ohmart/VEGA Corporation Model SR-A; Ronan Engineering Company Models SA-1 and SA-8; TN Technologies Model 5034 Same as License # 47-01876-01 6 c

NRC FORM 313 Item 6:

- Fixed gauging devices for controlling industrial processes

NRC FORM 313 Item 7:

- Herbert Whitlatch II – RSO / Non-routine maintenance
- Herb was been the RSO under License 47-1876-01 for nine years.
- Casey Green – Authorized User / Non-routine maintenance
- See attached training documents.

NRC FORM 313 Item 8:

- See attachment Procedure 503 section 6.5 Radiation Monitor

NRC FORM 313 Item 9:

- See attachment Procedure 503 section 9.5 Inventory and Security

NRC FORM 313 Item 10:

- See attachment Procedure 503 Washington Works Radiation Safety Program Non-routine maintenance Procedure 503 section 9.7

NRC FORM 313 Item 11:

- See attachment Procedure 503 section 9.8 and 9.9

NRC FORM 313 Item 12:

- Cost to be determined by NRC

Sincerely,



Herbert Whitlatch – RSO
8480 Dupont Road, B24
Washington WV 26181
Phone: (304) 863-2906

Procedure 503

Nuclear, X-Ray, and Laser

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1. Purpose

This procedure provides the rules and practices for radiation safety at Washington Works and includes requirements for:

- Ionizing radiation (radioactive material sources)
- X-Ray radiation
- Non-ionizing radiation (lasers, microwaves, and ultraviolet)

The purpose of this procedure is to establish a program overseeing the licensing, purchasing, use, and disposal of radiation devices in compliance with government regulation and corporate standards.

This procedure describes specific rules and requirements necessary to control all use of radiation sources at WW and ensure that:

- Radiation devices are properly designed, kept in safe operating condition at all times, regularly inspected and tested.
- Necessary records are kept.
- Ionizing radiation exposures are kept ALARA "As Low as Reasonably Achievable".

These are minimum requirements for radiation safety. Additional measures may be implemented as necessary.

2. Policy

Radiation sources provide essential process and quality measurements. The applications are complex, and misuse can create personnel hazards and damage equipment or processes. Federal and State regulations and corporate standards set forth requirements which allow radiation to be used safely. It is Washington Works policy to strictly comply with those regulations and requirements at all times.

3. Medical Rights

All records maintained by the Company concerning an employee's exposure are accessible to them if they request. The employee has the right to examine and copy these records.

4. Compliance

This procedure is part of the Washington Works Nuclear Regulatory Commission License 47-01876-01.

Washington Works reserves the right to modify this procedure without amending the NRC License, so long as the modifications comply fully with NRC regulation and do not compromise radiation safety or radioactive material control.

The policies and practices contained in this document are designed to comply with Nuclear Regulatory Commission regulations 10CFR Parts 2, 19, 20, 21, 30, 31, and 71; OSHA 29CFR 1910.96, DOT 49CFR Parts 100 - 177, West Virginia State Board of Health Chapter 5 Article 3, and corporate Engineering Standards S24T / S26T.

5. Definitions

ALARA	A NRC term meaning "AS LOW AS REASONABLY ACHIEVABLE"
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Licensee	Holder of the NRC License; in this case, the Washington Works Site
mR/hr	A unit of radiation intensity, milli-Roentgen per hour. This is the normal unit measured by the survey meters used at Washington Works. 1 Roentgen of radiation produces 1 electrostatic unit of charge in 1 cubic centimeter of air.
mrem	A unit of radiation exposure, millirem, which equates the biological effect of several different types of radiation. For gamma radiation, 1 millirem = 1 milliRoentgen = 1 milliRad = 0.01 milliSieverts.
Non-ionizing Radiation	Radiation such as laser light or microwaves which does not produce ionized atoms, but can damage living tissue.
Radiation Safety Program (RSP)	The rules and practices defined by this procedure allow radiation to be safely used at Washington Works in compliance with government regulation.
West Virginia Department of Health	Regulates the use of X-ray machines.

6. Roles and Responsibilities

Responsibilities for the Washington Works Radiation Safety Program (RSP) are delegated to the following individuals and groups:

- Washington Works Management - Licensee
- Radiation Sources Subcommittee
- NRC Licensed Individuals
 - "Radiation Safety Officer" RSO
 - "Responsible Individuals" or Licensed Individuals
- Radiation Monitors
- LSO Laser Safety Officer

6.1 Washington Works Management

- Radiation safety, security, and control of radioactive materials, and compliance with regulations
- Completeness and accuracy of radiation safety records and all information provided to the NRC
- Knowledge about the contents of the license and application.
- Meticulous compliance with current NRC and DOT regulations and Washington Works operating and emergency procedures.
- Commitment to provide adequate resources to the radiation protection program.
- Selection and assignment of a qualified individual to serve as the Radiation Safety Officer.
- Selection and assignment of a qualified individual to serve as the Laser Safety Officer.

6.2 Radiation Sources Sub-Committee (RSS)

The Central Safety, Health, and Environmental Committee established the Radiation Sources Subcommittee (RSS) to assist the plant in the safe handling of all radioactive sources and lasers, and implement the Washington Works management responsibilities.

Refer to Safety Resource R-3, Central Safety, Health, and Environmental Committee & Subcommittees, for the RSS responsibilities and members.

6.3 RSO

- Stop unsafe licensed activities
- Proper use and routine maintenance
- Security and investigation
- Material disposal
- Interaction with NRC, and other authorities
- Records Maintenance
- Annual program audit and timely corrective action
- Fixed gauge lock - out procedures
- Ensure that individuals using licensed material are properly trained
- Maintain up-to-date emergency procedures and monitor emergency events

6.4 Licensed Individuals/Authorized Users

Individuals qualified by training and experience who are listed on the NRC license and who are responsible for the RSP. The Radiation Safety Officer (RSO) is the primary contact with the NRC. In Washington Works procedures, the NRC Responsible Individuals are called Licensed Individuals.

The Licensed Individual is an alternate to the RSO and has the same responsibilities. RSO/Licensed Individuals are the only site personnel authorized to supervise the handling or moving of radiation sources.

- H.A. Whitlatch – x2906 Radiation Safety Officer/Laser Safety Officer

6.5 Radiation Monitor

The Area Radiation Monitor training shall meet NRC requirements for information to workers receiving occupational doses. Areas which have lockable sources must have a trained monitor on each shift. The training is valid for 3 years. Training will be computer-based training. A list of trained and qualified Monitors can be found at \\Wwcs4\shared11\Common Global\Information\Radiation Training.doc

- Know how to operate a survey meter.
- Perform the area lockout of radiation sources per this procedure and WW S&OH Procedure 508. Only Radiation Monitors or Licensed Individuals are permitted to perform the area lockout of radiation sources.
- Establish and check limited access barricades, radiography barricades, and emergency barricades.
- Prevent unauthorized or unqualified personnel from entering radiation barricades.

7. Nuclear Radiation Sources

This section contains the RSP requirements for radioactive material sources.

7.1 Information to Employees

NRC Form 3 and any other notification required by the NRC shall be posted at each pedestrian entrance to the Plant. A copy of 42USC 5846 Sec. 206 will be posted with each Form 3.

7.2 Permit

A permit (Radiation Safety Permit-RSP503) must be completed by the area where work will be performed and approved by RSO or Licensee, before any person (plant, vendor, or Eng. Dept.) brings a source on plant, whatever the use. See Attachment #1 and Radiography, page 25.

7.3 Procurements

Before placing any order, apply to the Radiation Sources Subcommittee concerning all applications/uses/alterations. This includes contracts with vendors, lab use, or any tests on plant.

Any new use of existing or portable Nuclear, X-Ray, & laser sources must be reviewed/approved by the Radiation Sources Sub-Committee.

All Purchase Requisitions must be approved by the RSO and shall specify that upon delivery stores receiving must notify the RSO or Licensed Individual. Do not specify an area delivery point on the Requisition.

7.4 Receiving

- Stores Receiving must hold unopened package(s) on loading dock & immediately notify the RSO or a Licensed Individual listed on previous page.
- Licensed individual must check security seal as directed in Procedure 517.
- Licensed Individual will "survey" the package(s) & determine how it can be safely handled within established radiation limits.
- Upon Licensed Individual's clearance, Stores Receiving will proceed with normal functions of receiving the materials.
- Licensed Individual will give instructions for delivery/location.

7.5 Shipping Radioactive Material

Radioactive material may be shipped from the plant in a routine manner only after RSO has completed all the following:

- Initiated Purchase Requisition for disposal/transfer to another location, or Vendor for disposal
- Checked packing for physical integrity and required leak testing
- Put on proper NRC/DOT/IATA labels for material type & radiation level

- Changed plant radiation records to show the transfer

7.6 Responsibilities of Radioactive Material Source Users

Radioactive material source users will:

- Provide safety rules. They must be submitted to the Sub-Committee for approval before ordering radioactive material or putting facilities in service.
- Provide such safety equipment/shielding/protection as may be prescribed by the Sub-Committee.
- Assign film badges to personnel as required by the RSO.
- Notify RSO or other Licensed Individual immediately of any unusual incidents/accidents/fires/spills/etc. where radioactive materials may be involved. Rope off area of incident until necessary survey is completed and area cleared by RSO.
- RSO or Licensed Individual must attend all Pre-Startup Safety Reviews involving radiation sources.

8. Radiation Exposure Film Badge Procedures

Washington Works will use film badges to establish that no employee can receive a radiation dose greater than 100 mR/year, which is the NRC public dose limit. Taking into account past film badge reports it is not realistically possible for any employee to receive a dose in excess of ten percent of NRC limits (500 mR/year would require monitoring). Therefore, yearly dose reports on NRC form 4 or 5 will not be used.

8.1 Film Badge Procurement

The Radiation Safety Officer will subscribe to a National Voluntary Laboratory Accreditation Program (NVLAP) approved film badge service.

Badges will be obtained to record radiation exposure in all cases recommended by the Radiation Sources Sub-Committee or the RSO.

8.2 Distribution

The Administrative Assistant will distribute film badges quarterly. Each group of badges will be accompanied by an assignment form.

Film Badges will be used by all persons who will work near radiation sources where film badges have been recommended by the Radiation Sources Sub-Committee or RSO.

Each plant area will complete the assignment form for each film badge. Badges should be returned as soon as replacement badges have been issued or as soon as possible before the end of each quarter.

8.3 Film Badge Processing

Film badges must be returned by the end of each quarter to the supplier.

8.4 Film Badge Exposure Record

The RSO will receive the film badge exposure report from the supplier and scan it for any unusual exposure. Those showing more than 150 mR for the quarter will be investigated. NRC occupational dose limits are 5 Rem per year.

All employees who receives in excess of 100 mrem shall be reported to the individual annually.

9. Handling of Nuclear Radiation Sources

This section describes standards and requirements for permanently installed sources at Washington Works

9.1 Isotopes and Sealed Sources

All sources shall be non-dusting and both chemically and biologically inert. They shall be welded into a capsule designed to withstand fire. Source holders shall be also constructed to withstand fire. With the source holder in the closed condition, shielding shall be such that radiation levels 12" - (30 cm) from the source holder shall not exceed 2 mR/hr. The source holder shall be provided with means for locking it in the closed position or an additional housing shall be provided for locking the source in the closed position. Contact the plant RSO or Radiation Sources Sub-Committee chairman for additional requirements.

9.2 Licensing

The RSO and Licensed Individuals are responsible for ensuring that no radiation sources are received on the plant without proper licensing.

9.3 Marking and Identification

Each source will be identified by a permanent label securely fastened and showing the following: Chemical symbol of radioisotope source, millicurie strength of the source, date of strength measurement or date of purchase, and serial number of the source. It may be fastened directly to the source holder where practical or to a flange or other closure which supports or permits access to the source holder.

Each source installation shall be further identified by posted NRC approved signs 7" X 10" or larger and bearing the radiation symbol and the words "Caution - Radioactive Material." The symbol and wording shall be purple on a yellow background or black on yellow background. Sufficient signs are to be posted so they can be seen by anyone approaching the installation.

Each BTO shall maintain an up to date inventory list of its nuclear devices. This list should include the location and plant "J-number for each source.

9.4 Permissible Radiation Intensity Levels

Where practical each installation shall be designed by location and/or shielding such that radiation intensity 12" (30cm) from the outside of the equipment or source location will be 2

mR/hr or less and with an occupancy factor designed to be ALARA. In emergency or in cases where this is not practical, the following must be met:

- The area will be surveyed by an NRC Licensed Individual to determine the extent and intensity of radiation. Suitable meters shall be maintained by the area for this purpose.
- The results of this survey will be reviewed with the Radiation Sources Sub-Committee which will decide upon a safe procedure to be followed. Normally this will include one of the following:
- If the work to be done is of short duration, the area shall be surveyed and those working in the area will be permitted to remain such time that their exposure will not exceed 50 mR. Constant supervision will be provided.
- If the work to be done is of long duration, and constant supervision is not practical, the area where intensity is 2 mR/hr or more will be clearly marked, will have rules posted regarding occupancy of the area, will be designated a restricted area, and access will be limited.

9.5 Inventory and Security

The RSO will maintain an accurate inventory of all ionizing radiation sources on the W.W. site listing the size, type, manufacturer, material, date of purchase, use, location and leak test reference. A series of locks will be used to secure radiation sources against unauthorized removal. The RSO may authorize area personnel to keep one of the keys.

9.6 Leak Testing and Inspection

The RSO will subscribe to an approved leak test service. Area Responsible Individuals/designated individuals will perform the necessary leak testing. "Standard" source holders (i.e., Ohmart SH-FI, SHRH, SHRM, HM8; Kay-Ray 7061, 7063, 7064, 7067, Ronan SA-1 and equivalent) are to be leak tested every three years. Other source holders, in analyzers, gauges, etc., are to be leak tested every six months. Radiation source found to be leaking will be returned to the manufacturer for repair. All source holders, signs, boxes, locks, etc., must be visually inspected at six-month intervals.

9.7 Non-Routine Maintenance

Installation and moving of sources will be done under the direct supervision of a NRC Licensed Individual (see section 6.4). All requirements under Permissible Radiation Intensity Levels - section will apply while sources are being handled. Sources may not be relocated to other units or buildings without approval from the Radiation Sources Sub-Committee.

- Barricade the area to a safe distance with the perimeter to be below 2 mR/hr at all times.
- Doses to personnel must remain within regulatory limits and ALARA (e.g., use of shielded containers or shielding);

- The source is secured against unauthorized removal or access or under constant surveillance;
- Manufacturer's or distributor's instructions and recommendations will be followed;
 - Non-manufacturer/non-distributor supplied replacement components or parts, or the use of materials (e.g., lubricants) other than those specified or recommended by the manufacturer will not be used. Any cleaning, maintenance, or repair of the gauges that requires detaching the source or source rod from the gauge, or any internal gauge repair will be performed only by the manufacturer or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
- Individuals performing non-routine operations on gauges shall wear a film badge.
- Obtain a survey instrument that meets the criteria in the section entitled "Radiation Safety Program - Instruments in NUREG-1556, Vol. 4, 'Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Fixed Gauges Licenses, dated October 1998.'" Each survey meter will be calibrated by a person authorized by the NRC or an Agreement State to perform survey meter calibrations.
- Surveys will be conducted during non-routine operations; and will be maintained, for 3 years from the date of the survey, records of the survey (e.g., who performed the survey, date of the survey, instrument used, measured radiation levels correlated to location of those measurements), as required by 10 CFR 20.2103.
- Before being returned to routine use, the gauge is tested to verify that it functions as designed and source integrity is not compromised.
- During storage, installation, or moving; source shutters will be secured in the shielded position with a padlock, nylon strap, bolt and nut, or other substantial means.

9.8 Alterations

No source capsule or source holder shall be altered by cutting, filing, or changing size or shape by any method. If alterations are required, the source will be returned to the supplier.

9.9 Disposal

Disposal of radioactive material will be arranged by the RSO, Purchasing and plant shipping.

9.10 Radiation Device Calibration and Checkout

Specific area procedures must be written to cover circumstances where the radiation source must be opened for calibration or check-out.

9.11 Unsealed Isotopes and Source Materials

Currently, there are no plans to use any radiation source in this category and none are anticipated.

A suitable procedure will be developed as the need arises.

9.12 Emergencies

Hazards are personnel exposure and/or contamination. Sealed sources are unlikely to release radioactive material unless subjected to extreme fire or explosion. In case of fire, lead shielding could melt out of a source holder thus reducing its shielding ability. In a case of mechanical damage a source could get shifted so that the radiation beam is no longer shielded by the vessel or equipment.

The strategy for dealing with an emergency would be:

- Evacuate the immediate area.
- Identify and isolate all persons who may have received exposure to radiation and contact medical personnel.
- Barricade the area to a safe distance.
- Contact the RSO or Licensed Individual.

10. Nuclear Radiation Source Lockout

The radiation source must be locked out for any work which might expose an individual to the direct radiation beam.

A dedicated radiation lock must be used. These are locks having no more than 2 keys, and the keys must be under the control of supervision so that access is limited to area Radiation Monitors.

These locks are in addition to WW S&OH Procedure 508.

Radiation locks must be used only by a licensed individual or a trained and qualified Radiation Monitor.

Radiation Monitor training is valid for three years. A current list is maintained by the plant R.S.O.as indicated on page 6.

A film badge is not required to lock a source.

The lockout must be tested with a radiation survey meter to satisfy the try step.

10.1 Specific Steps to Lockout a Source

The following steps are listed for reference and as a basis for writing specific area lockout procedures. Only Licensed Individuals or trained and qualified Radiation Monitors can perform a radiation source lockout.

- Obtain a radiation survey meter and check the calibration sticker on its side to ensure that the meter has been calibrated within the last 12 months. Switch the meter to the battery check position to verify that the batteries are good. Obtain a radiation source lock.
- Visually inspect the source for any damage, or loose mountings, and that the shutter mechanism is operable. If damage or malfunction is noted, rope off the area and contact the RSO.
- Verify that the meter is responding: Set the meter to the most sensitive range (X0.1) and with the source open, check the radiation level in front of the DETECTORS. The survey meter should detect some level of radiation. If the meter does not respond, contact the plant RSO (WW Ext 863-2906) to determine if the meter is malfunctioning.

- Lock and tag the source: Close shutter on source and lock securely with the radiation lock (Radiation Monitor Only). Place an operator danger tag on the lock - signed and dated.
- Try the source lockout: The actual radiation beam is typically very narrow at the front of the source, and with the shutter open is very intense. Do not attempt to measure the radiation level in front of the source. Verify that no radiation is present in front of the DETECTORS with the survey meter set at the most sensitive range.
- Complete the lock-out: The source may now be locked with an area lock or system lock. Each person working on systems requiring radiation source lockout will place their personal lock and properly filled out danger tag on the source or lock box.
- Specific area procedures must be written to cover circumstances where the radiation source must be opened for calibration or check-out before the vessel or equipment is completely reassembled.
- Before signing a vessel entry permit: Radiation Monitor must perform the same checks as outlined above, and check the radiation level inside the vessel.
- Return the radiation source to service: At the completion of work, any personal locks should be removed then the area Radiation Monitor will remove the radiation lock and open the shutter.

11. X-Ray Machines

11.1 Requirements

Refer to S-24-T and plant RSO for X-Ray equipment requirements.

Each area using X-Ray producing equipment must ensure surveys are performed bi-annually by a radiation monitor.

Any new use/relocation, of existing or portable X-Ray must be reviewed and approved by the Radiation Sources Sub-Committee.

Normal operating procedures shall be written and available to all X-ray equipment workers.

RSO or his delegate must attend all Pre-Startup Safety Reviews.

Yellow signs or labels with the radiation symbol shall be placed on or near X-Ray machines as follows:

- X-Ray source housing shall be labeled "Caution - High Intensity X-Ray Beam".
- X-Ray rooms or locations shall have a sign stating, "Caution X-Ray equipment".
- Install a sign inside each X-Ray machine 4" X 8" >> "BYPASS PERMIT REQUIRED TO BYPASS SAFETY SWITCHES - Permit must be signed by the Radiation Safety Officer or NRC Licensed Individual - Refer to S&OH P-503"

11.2 Warning and Safety Devices

The X-Ray machine shall have an easily visible warning light labeled "X-Ray On" near any switch which energizes the X-Ray tube.

11.3 Maintenance and Adjustment

Personnel who service X-Ray machines must be a trained Radiation Monitor (training within past 3 years) and have factory training and/or plant experience servicing X-Ray equipment.

12.Static Eliminators

All applications using radioactive material must be approved by the Radiation Sources Sub-Committee.

13.Laser Radiation

Reference corporate Standard S-26-T (Does not include consumer laser printers or CD drives)

13.1 Permit for Temporary Use

A permit (Laser Safety Permit) - (S-189) must be completed/approved before any person (plant, vendor, or Eng. Dept.) brings a source on plant, whatever the use.

13.2 Approval

Each use, modification, or installation of Laser equipment must be approved by the LSO before it can be ordered, modified, or brought on plant.

13.3 Purchase Requisition

The purchase requisition for any laser equipment must be approved by the Laser Safety Officer or the Committee Chairman before the laser can be ordered.

13.4 Shipping

Lasers can be shipped as standard pieces of equipment. The one exception is if the laser equipment was "manufactured" on this site, then the proper forms must be filed with the Department of Health, Education, and Welfare of the United States before it can be shipped.

13.5 Installation

The Laser Safety Officer or designate must be present for the Pre-Startup Safety Review, Safety & Health procedure 511, and when the equipment is initially energized.

13.6 Training

All personnel qualified to operate or maintain a laser where the exposure level is in excess of **CLASS II** must have participated in a training program. Contact the Laser Safety Officer to arrange for training. The BTO shall maintain a current list of trained operators and service personnel.

Training on the use of laser pointers and bar code scanners will be done site wide by use of the TLM program, and will be documented electronically by each BTO.

13.7 Inventory

Each BTO shall maintain an up to date inventory list of its LASERS of class 2 and higher. Information in the list shall include serial number, LASER location, Type, Power, Manufacturer's Name, Class-operating, Class-maintenance, and comments.

13.8 Summary of Laser Requirements and Advisory Guidelines

	Class 1 and 1M	Class 2 and 2M	Class 3 R	Class 3B	Class 4
Training	No	Recommended	Required	Required	Required
Warning label on laser	No	Required	Required	Required	Required
Area posting	No	Recommended	Required	Required	Required
Words on sign/label	NA	Caution	Danger	Danger	Danger
Medical surveillance	No	No	No	Required	Required
Inventory	No	Required	Required	Required	Required
Written SOPs	No	No	Required	Required	Required

13.9 Laser Pointers

Laser Pointers typically contain a Class 2 laser and have the potential to cause damage if the beam is directed into a person's eye.

Laser pointers may be exempted from these requirements provided the following are met:

- Laser pointers used on site must be Class 2.
- Training on the safe use of laser pointers is required.
- Laser pointers must be labeled with appropriate yellow Caution warning labels.
- Dual-function writing and laser pointer pens are not permitted, due to the potential to accidentally activate the laser beam when writing.

13.10 Bar Code Scanners

Bar Code Scanners are increasingly used on site, primarily for inventory tracking. Bar code scanners may be exempted from these requirements provided the following are met:

- Bar code scanners used on site must be Class 2.
- Training on the safe use of bar code scanners is required.
- Bar code scanners must be labeled with appropriate yellow Caution warning labels and the manufacturers' Class 2 label.

13.11 Safety Rules

Laser source users will provide Safety Rules. The Safety Rules must be approved by the Radiation Sub-Committee. The Sub -Committee must review any subsequent changes to the safety rules.

13.12 Records

Source users must maintain a record of any personnel exposed to Class IIIB or IV laser equipment and schedule required checkups with Medical for surveillance. All personnel operating Class IIIB or IV laser equipment and those working around these lasers must have an eye exam prior to their initial assignment. An eye exam is required upon any termination of any Class IIIB or IV laser exposure assignment. It is the user's responsibility to:

- Arrange required appointments with Medical.
- Inform Laser Safety Officer of those qualified to work with Class IIIB or IV lasers and that they have had the required exams.

13.13 Laser Personnel

Herb Whitlatch, Laser Safety Officer – B-280 – x2906.

14. Non-Ionizing Radiation

This section on non-ionizing radiation contains general guidance and minimum program requirements.

For further assistance or questions contact the Radiation Sources Sub-Committee.

14.1 Ultraviolet Radiation (UV)

(.100 - .400 MICROMETERS: 3.0×10^{15} - 7.5×10^{14} CYCLES PER SECOND)

UV radiation is an invisible energy produced naturally by the sun and artificially by electrical arcs operating at high temperatures. Artificial sources include germicidal and black light lamps, welding arcs, and some laboratory equipment. Since the eyes and the skin readily absorb UV radiation, there is a potential for injury. The severity depends upon the length of exposure, the intensity, distance, wavelength of the sources and the sensitivity of the individual.

The adverse effects that can occur are "sunburn", corneal lesions, and cataracts. Personal protective measures are important and include wearing special UV goggles or face shield to protect the eyes and face and gloves and long sleeves to cover the hands and arms. Shiny surfaces in the work area will reflect UV radiation so they should be covered or removed. Care should also be taken to shield operations, with potential for exposing nearby employees, with UV impenetrable material, such as black cloth.

Since the Threshold Limit Value (TLV) for occupational exposure to UV radiation is dependent upon the wavelength and the total irradiance, please contact the Radiation Sources Sub Committee for guidance.

14.1.1 Minimum Source Management Requirements

- Area must maintain a list of UV sources
- Updated safety rules and operating directions
- Use adequate eye protection
- Attach labels and warning signs

14.2 Visible Radiation (VR)

(.40 - .750 MICROMETERS: 3.0×10^{15} - 2.75×10^{14} CYCLES PER SECOND)

Visible radiation, or light, from the sun or artificial sources plays a major role in our daily life. Because few direct effects of light have been documented, it is not considered a major health hazard as long as the intensity of the light source is "comfortable". However, one of the areas associated with visible radiation is the effect of illumination on job performance. It has been suggested that poor lighting can cause eye strain, but does not lead to permanent damage. The consensus on illumination is that, if there is enough light to perform your work reasonably well, there is no reason to believe that there is any hazard to your eyes. If high intensity lighting is to be used, it should be evaluated for retinal effects.

14.3 Infrared Radiation (IR)

(.75 - 1000 MICROMETERS: 2.75×10^{14} - 3×10^{11} CYCLES PER SECOND)

The infrared region extends from the visible red-light region to the microwave region. Exposures to IR radiation can occur from any surface which is at a higher temperature than the receiver. Infrared radiation may be used for any heating application where product surfaces can be arranged for exposure to the heat sources. Typical industrial applications for IR radiation include drying and baking of paints and other protective coatings, dehydration, surface conditioning and heating, and spot heating for any object.

IR is felt as a sensation of warmth on the skin and provides its own warning. The increase in tissue temperature is dependent upon wavelength, length of exposure and total energy delivered to the tissue.

IR radiation in the far wavelength region, 5 to 3000 micrometers, is completely absorbed in the surface layers of the skin. In the near region, .75 to 1.5 micrometers, exposure can cause acute skin burns. This short wavelength region can also cause injuries to the cornea, retina and lens of the eye. Long term exposure of the eyes to IR radiation from furnaces and other hot bodies has been observed to produce "glassblower's cataract", opacity of the rear surface of the lens of the eye.

Protection for the eyes through special eye wear or face shields is recommended if this exposure is possible.

14.4 Microwave and Radio Frequency Radiation

(3000 MICROMETERS AND LONGER, 3×10^{11} AND LOWER CYCLES PER SECONDS)

The hazards associated with microwave and radio frequency are controversial, and studies

continue both in the US and abroad. OSHA and ACGIH recognize only a thermal effect of microwaves and have set standards accordingly. NIOSH and ANSI have proposed intermediate exposure limits for non-thermal effects. The site's Acceptable Exposure Limit is frequency dependent and follows closely the NIOSH recommendations. These limits and other precautions are found in the corporate Engineering Standard S-27-T.

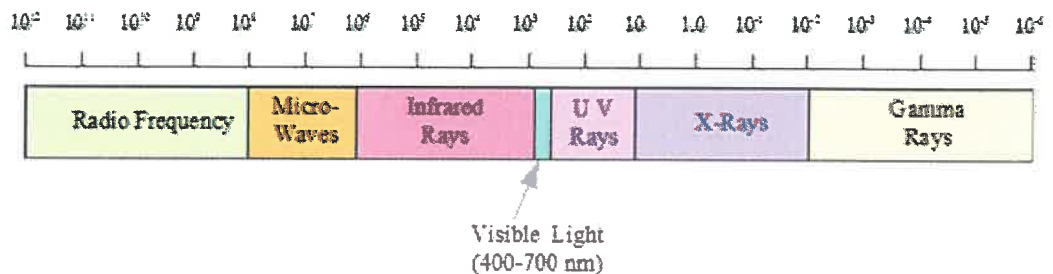
14.4.1 Minimum Source Management Requirements

- For microwave sources, complete requirements in policy 20 and procedure 558.
- Maintain separate inventory list of food microwave ovens, process microwave sources, and RF sources between 0.03 and 300 MHZ of which are > 1000 watts.
- Provide adequate safety rules and operating directions for process microwave and process RF sources.
- Train operators on the use of Process sources.

14.5 Electromagnetic Radiation (ELF & VLF)

(30-300K HERTZ)

Extremely low frequency (ELF) and very low frequency (VLF) electromagnetic radiation from the distribution, transmission, and use of electrical power has been the source of controversy over the past few years. As of now, there are no studies which show a correlation between ELF or VLF and any health problems. However, if questions arise, consult the Radiation Sub-Committee, as it has meters to measure ELF and VLF.



15. Radiography

This procedure covers the use of ionizing radiation for weld, pipe, and vessel inspection, or other temporary uses (e.g. distillation column scans or soil compaction). Radiography sources typically emit intense, penetrating radiation, and proper control of these sources is an essential part of the (RSP) radiation safety program. Misuse can result in very high radiation exposures and serious health effects. WW are required by the Nuclear Regulatory Commission (NRC) to keep radiation exposures "As low as Reasonably Achievable" (ALARA).

15.1 Radiation Safety Permits

A Radiation Safety Permit (S-191) must be approved for each job before a Radiation Source is brought on site.

Radiation Work permits can only be approved individuals listed on Page 6.

15.2 Vendor Requirements

Any radiography vendor must be licensed by the Nuclear Regulatory Commission. The license must cover the source type, size, and proposed use.

The WW Radiation Safety Officer must have a copy of the vendor's NRC License, and the name and phone number of the vendor's Radiation Safety Officer.

The radiography vendor is responsible to barricade and conduct the radiography in compliance with the NRC regulations.

Radiography source temporary storage shall be the radiographer's vehicle. This vehicle shall be placarded with a standard DOT radiation placard on 3 sides of the vehicle. The placard is for WW emergency response/safety purposes and is required while on the WW site regardless of DOT regulation. Radiography sources shall be under the direct surveillance of the radiographer at all times, or locked in the radiographer's vehicle.

15.3 Radiation Monitors

A Trained and Qualified WW Radiation Monitor must be present at all times during any radiography conducted in process units.

WW Radiation Monitors are qualified and trained according to P-503. A list of Radiation Monitors is kept by the WW Radiation Safety Officer, Bldg. 280.

Radiation Monitor responsibilities:

- Ensure that the radiography operation complies with WW procedures.
- Verify that the radiography area is properly barricaded.
- Check that the Radiation Work Permit is properly filled out.
- Obtain BTO or area management approval for radiography in process units.
- Ensure that area personnel and radiation sensitive devices are protected.
- Conduct a safety check for radiography operations (X-Ray yard or process unit).

- Check that emergency barricades can be readily put in place.

The Radiation Monitor has the authority and responsibility to restrict entry to a radiation barricade.

15.4 Radiography Barricades and Access

Radiation exposure limits are listed in section 9.1.

15.4.1 Restricted Access Barricade

The radiographer vendor is responsible to define and set up a restricted access barricade surrounding the radiography area such that radiation exposure at the perimeter will be less than 2.0 mR in any one hour. Only essential personnel are allowed in the barricaded area. Anyone entering the barricaded area must have permission from the Radiographer and the Radiation Monitor, and they must wear a radiation dosimeter device (film badge).

15.4.2 Emergency Barricade

An emergency barricade must be erected if the radiography equipment malfunctions. The barricade must be set at a distance limiting the radiation intensity to 2.0 mR/hr or less. The barricade position must be determined and barricade rope and signs available before starting the radiography operation.

Iridium 192 source In Curies	Emergency Barricade Distance in Feet for 2.0 mR/hr	Distance to TFE or Distillate in Feet for 10.0 mR/hr
1.0	51	23
2.0	73	33
3.5	96	43
5.0	114	51
7.0	135	61
10.0	162	73
15.0	198	89
30.0	280	125
60.0	395	176
70.0	427	191
80.0	456	204

Site nuclear source inventory 08242022

Isotope	Size mCi	Source Model #	Source Serial #	Holder Model #	Holder Serial # J	Plant#	Date	Service	Location	
Cs137	150	Ohmart A-2102	6461	Ohmart HM-8	SO/16123-3	J	32	3/1/67	Level	B-252 MPW-1 East Separator 4th floor
Cs137	200	Gamma Ind. VD	K316	Kay Ray 7051	2207	J	52	9/1/74	Level	B-252 Evap, MPW1 4th floor
Cs137	1000	Gamma Ind. VD	K-337	Kay Ray model 7061	1638	J	53	11/1/74	Level	B-256 Pre-Poly, MPW-2 4th Floor
Cs137	50	Amersham CDC-808	26983	KayRay 7063	26983	J	92	7/1/89	Level	B-252 MPW-1 5th Floor Reactor
CS137	50	Amersham CDC-808	21991V	Kay Ray 7062B	28475	J	97	1/4/90	Level	B-256 4th Floor MPW-2 Pre-evaporator
Cs137	200	Amersham CDC-810	22201V	Kay Ray 7063	28476	J	98	6/18/90	Level	B-256 3rd Floor South Separator MPW
Cs137	200	Amersham CDC-810	22202V	Kay Ray 7063	28477	J	99	6/18/90	Level	B-256 3rd floor, North Separator
Cs137	200	Amersham CDC-810	23308-V	KayRay 7064	30516-A	J	103	6/5/91	Level	B-251, 4th Floor MPW-1 West Finisher
Cs137	200	Amersham CDC-810	23309-V	KayRay 7064	30516-B	J	104	6/5/91	Level	B-251 4th Floor MPW-1 West Separator
Cs137	200	Amersham CDC-810	23310-V	KayRay 7064	30516-C	J	105	6/5/91	Level	B-251 4th Floor MPW1 East Finisher
Cs137	1000	Amersham CDC-91	KayRay 24259-H	7063/7700-1000	S92M0201	J	109	6/20/92	Level	B-256 3rd floor MPW-2 South Finisher
Cs137	1000	Ronan SRC-PT-CS-1M	CDC.711M	Ronan SA1-F37	7459GG	J	110	12/18/92	Level	B-256 3rd floor MPW2 North Finisher



Applied HEALTH PHYSICS, LLC

CERTIFICATE OF RADIOLOGICAL TRAINING

This is to certify that

Casey Green

has successfully completed the following

***24-HOUR RADIATION SAFETY OFFICER TRAINING
AND INSTRUCTION AS REQUIRED BY TITLE 25 OF
THE PENNSYLVANIA CODE, CHAPTER 227,
NUREG-1556, VOLUME 4, APPENDIX D & J AND 49 CFR 172***

*presented by Applied Health Physics, LLC
June 14-16, 2022*

Todd Mobley

*Todd Mobley - President
Training Materials Located at:
Applied Health Physics, LLC
2986 Industrial Blvd.
Bethel Park, PA 15102*

Date: **June 16, 2022**

Expiration Date: **June 16, 2025**
DOT Subpart H

Certificate of Completion

Herbert Whitlatch

DuPont Washington, WV

has successfully completed

Radiation Safety Officer Training

conducted by VEGA Americas, Inc. in League City, TX

May 16-20, 2022


Subject matter covered based on NUREG 155, Volume 4, Appendix D:

A 40-hour course covering:

Radiation Safety
Radiation Requirements
Practical Explanation of Theory and Operation of Fixed Gauges
Supervised, Hands-on Exercises
Non-routine Maintenance
Unmounting & Remounting a Source Holder

VEGA


Kerry Kelly
Radiation Safety Officer


Jasilyn Fuller
Marketing Manager

Level

Switching

Pressure

Density

Weight

Interface

Non-Routine Maintenance Training Checklist

Procedures for Unmounting and Remounting a Source Holder

Trainee Name: Herbert Whittlatch



Company: DuPont

City/State: Washington, WV

Date(s) of Training: May 16-20, 2022

Instructor: Brett Kempfues/Heather Bigler

All training based on NUREG 1556. Work can only be performed by those whose license gives the authority to perform non-routine maintenance

Preplanning	
H/W	Have a plan for the work
H/W	Review scope of work and the plan with all appropriate personnel (Pre-job Brief, JSA, JHA, etc.)
H/W	Know the weight of the source holder and any requirements for manpower or equipment to lift/carry the holder
H/W	Gather necessary tools and/or equipment
H/W	Survey meters
H/W	Leak test kits
H/W	Determine storage location
H/W	Review lock out/tag out procedures
H/W	Review controls for the storage location, including security, access, etc.
Unmounting the Holder	
H/W	Follow company procedures to lock out the holder
H/W	Use survey meter to ensure that it is safe to continue
H/W	Unbolt and remove from the pipe/vessel
H/W	Store the locked holder in the designated storage area
Remounting the Holder	
H/W	Review scope of work and the plan with all appropriate personnel (Pre-job Brief, JSA, JHA, etc.)
H/W	Survey the holder in the storage area before moving it to the vessel location
H/W	Mount the holder onto the pipe/vessel
H/W	Follow company procedures to unlock the holder
H/W	Perform a leak test
H/W	Perform an occupancy survey if licensed; if not, verify initial occupancy survey
H/W	Document as required by company procedures
<p>Trainee's Signature: <u></u> Date: <u>5/19/22</u></p> <p>I hereby confirm that the above named person has performed the above checked tasks and demonstrated both an understanding of the requirements and an ability to perform the tasks.</p> <p>Trainer's Signature: <u></u> Date: <u>5/19/2022</u></p>	



Applied HEALTH PHYSICS, LLC

CERTIFICATE OF RADIOLOGICAL TRAINING

This is to certify that

Herbert Whitlatch

has successfully completed the following

***24-HOUR RADIATION SAFETY OFFICER TRAINING
AND INSTRUCTION AS REQUIRED BY TITLE 25 OF
THE PENNSYLVANIA CODE, CHAPTER 227,
NUREG-1556, VOLUME 4, APPENDIX D & J AND 49 CFR 172***

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