Office of Environment, Health, Safety and Security
Operating Experience Level 3

OE-3: 2025-02 **July 2025**

Recommended Approaches for Rescinded Guidance: Moratorium on the Free Release of Volumetrically Contaminated Metals & Suspension on the Unrestricted Release of Scrap Metal from Radiation Areas within DOE Facilities

PURPOSE

This Operating Experience Level 3 (OE-3) document describes and provides recommended approaches for implementing Federal Register Notice (FRN), Volume 90, Number 93, issued May 15, 2025. This FRN rescinds several Department of Energy (DOE or the Department) policies, specifically the Secretary Memorandum, *Moratorium on the Free Release of Volumetrically Contaminated Metals,* issued on January 12, 2000, and the *Suspension on the Unrestricted Release of Scrap Metal from Radiation Areas within Department of Energy (DOE) Facilities,* issued on July 13, 2000. The FRN is provided in **Attachment 1**.

BACKGROUND

In January and July 2000, the Secretary of Energy issued two policies to address the management and release of metals from radiation areas at DOE sites and to ensure protection of public health and the environment, openness and public trust, and fiscal responsibility. Reviews of the environmental radiation protection program at that time did not identify any evidence that the public might be harmed by releases of excessed metals from the DOE sites, but DOE determined that there was a need to provide additional radiation monitoring, independent verification, and record keeping and reporting. The Department subsequently promulgated guidance to help sites improve monitoring and release practices through another Secretarial Memorandum, Managing the Release of Surplus and Scrap Materials, January 19, 2001. This memorandum established four key action areas for increasing confidence in the release of materials:

1. Clearly define areas and activities that can potentially contaminate property;
2. Clearly define release criteria, including measurement and survey protocols, for property released from areas or activities that have potential to contaminate;
3. Ensure that released property meets DOE requirements; and
4. Better inform and involve the public and improve DOE reporting on releases.

DOE has continued to successfully ensure the protection of the public and the environment over the last 25 years. During this time, the Department has implemented the following improvements to its requirements and guidance:

1. Publication of DOE Order (O) 458.1, *Radiation Protection of the Public and the Environment* in 2011, replacing DOE Order 5400.5, *Radiation Protection of the Public and the Environment* issued in 1990, which established clear and credible procedures for reviewing and releasing material from radiologically controlled areas;
2. Establishment by DOE and National Nuclear Security Administration (NNSA) Headquarters of a review process to

support the effectiveness of site-level programs. Assistance visits were conducted at many sites to review environmental radiation protection programs and ensure compliance with applicable requirements;

3. Publication of publicly available summaries of results of monitoring, surveys, and independent verification of property clearance activities in the site's Annual Site Environmental Report;
4. Publication of DOE-STD-6004-2016, *Clearance and Release of Personal Property from Accelerator Facilities*, supporting the control, clearance, and release of personal property from accelerators, accelerator facilities, and their operations; and
5. Publication of DOE-STD-1241-2023, *Implementing Release and Clearance of Property Requirements* which includes the adoption of volumetric pre-approved authorization limits from a national consensus standard.

PATH FORWARD

The Secretary of Energy's decision to rescind the moratorium and suspension on scrap metal means sites are now authorized to process all scrap metals for unrestricted release and clearance by adhering to the requirements for release of personal property as outlined in DOE O 458.1. This action does not establish any new requirements. DOE clearance of scrap metal for unrestricted release must continue to ensure the protection of both the public and the environment.

DOE sites have established programs for clearance and release of materials. These programs are tailored to assess the specific radiological hazards present at a site, program or project. These programs include effective radiological assessment procedures for evaluating the radiological status of property to determine when unrestricted release from DOE control is appropriate. With the rescission of the previous policies, DOE sites can now expand release and clearance programs to include the unrestricted release of scrap metals stored or managed in radiological areas as defined by 10 CFR 835, Occupational Radiation Protection.

DISCUSSION

DOE O 458.1, paragraph 4.k. and 2.k. (Contractor Requirements Document (CRD)) requires that 'property control and clearance processes must be developed and implemented before property is cleared.' Personal property has a dose constraint of 1 mrem/yr above background.

DOE-STD-6004-2016 facilitates implementation of requirements in DOE O 458.1 by providing criteria and guidance for DOE accelerators to develop and implement programs for the radiological clearance and release of personal property with surface and volumetric activity.

DOE-STD-1241-2023 established pre-approved authorized limits for volumetric and surface activity. These are included as **Attachments 2 and 3**. Sites are allowed to use pre-approved authorized limits for volumetric and surface activity with the review and approval of the relevant DOE Field Element Manager.

These pre-approved authorized limits apply to the clearance of personal property only. Although pre-approved authorized limits may be conservative and too restrictive or inappropriate for certain radionuclides in certain situations, DOE allows sites to seek approval for more realistic and appropriate authorized limits should the need arise. Procedures for requesting site specific authorized limits are provided in DOE O 458.1, paragraph 4.k.(6) and 2.k.(6) (CRD). Consistent with the requirements of DOE O 458.1, appropriate records of released materials must be maintained, and public notification must be conducted. Site public

notification and communication programs must incorporate information on the use of pre-approved authorized limits, and property control and clearance programs.

The Office of Public Radiation Protection in the Office of Environmental, Health, Safety and Security and the NNSA Office of Environment, Safety and Health are available and will cooperate to review DOE and NNSA site Environmental Radiation Protection Programs upon request. These reviews are coordinated with the associated DOE Program Offices.

IMPLEMENTATION

Property offered for release and clearance may not be cleared from DOE radiological control unless the property is demonstrated to comply with the requirements of DOE O 458.1 based on process and historical knowledge, radiological monitoring or surveys, or a combination of these.

The use of process and historical knowledge as a basis for clearance decisions must follow a documented evaluation process, using a graded approach, to determine if property could contain residual radioactive material. If available process and historical knowledge does not demonstrate that property does not contain residual radioactive materials, radiological monitoring or surveys should be considered and conducted to supplement the evaluation process.

The requirements for performing radiological monitoring and surveys in support of the clearance of property are defined in DOE O 458.1, section 4.k.(8) and 2.k.(8) (CRD). Surveys must:

- Use methodologies sufficient to meet measurement objectives, such as those in Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), the Multi-Agency Radiation Survey and Assessment of Materials and Equipment Manual (MARSAME) or other methodologies approved by DOE;
- Meet measurement quality objectives;
- Use DOE-approved sampling and analysis techniques, if applicable; and
- Include an evaluation of non-uniformly distributed residual radioactive material, if applicable.

Instruments used for radiological monitoring or surveys must be capable of detecting and quantifying residual radioactive material consistent with the applicable authorized limits. In addition, instruments must be:

- Periodically maintained and calibrated at an established frequency;
- Appropriate for the types(s), levels, and energies of the radiation encountered; and
- Appropriate for existing environmental conditions and routinely tested for operability.

When mixtures of radionuclides are present, clearance using the pre-approved authorized limits must follow the sum of fraction procedure. When a mixture contains radionuclides from the same group or more than one group, the ratio of the total activity concentration of each group and the associated screening level for that group is summed over all of the groups in the mixture. The sum of the ratios must be less than or equal to one in order to use the authorized limits.

Measurements for proxy radionuclides may be necessary to characterize levels of all radionuclides of interest, including hard-to-detect radionuclides. The use of proxy measurements should be justified and described in supporting technical basis documents.

DOE O 458.1 requires the implementation of a documented As Low As Reasonably Achievable (ALARA) process, where ALARA is not a level or limit to be achieved in controlling radiation exposures or doses, but

rather an optimization process that ensures appropriate factors are taken into consideration to arrive at decisions that affect the degree of protection against radiation for the public. DOE-HDBK-1215-2014, *Optimizing Radiation Protection of the Public and the Environment for use with DOE O 458.1, ALARA Requirements,* provides guidance on implementing an ALARA process which uses a graded approach commensurate with the acceptable risk to the public. A qualitative ALARA analysis may be appropriate in some cases.

Field Element Managers should ensure that survey and evaluation processes are in place and properly implemented.

All references to the Moratorium and Suspension should be removed from programmatic documents, plans and procedures in accordance with approved document review and revision schedules.

The Department has a long history of safely and successfully clearing materials and equipment for recycle or reuse. Field Element Managers, Federal Project Officers and Contracting Officers are encouraged to promote the benefits of personal property release and clearance efforts throughout the Department, including incentivizing contractors to minimize disposal pathways as much as practical.

SUMMARY

The Secretary of Energy rescinded the moratorium and suspension policies through the Federal Register. DOE sites are now allowed to recycle scrap metal for unrestricted release following the current, established requirements in DOE O 458.1 and their site's release and clearance processes.

SHARE YOUR GOOD NEWS STORIES

Many DOE sites have stored scrap metal onsite over the last 25 years to avoid the cost of disposal. The scrap metal has been stored either in buildings or outside, in many cases creating an unsightly storage yard and incurring ongoing maintenance expense.

The DOE Corporate Operating Experience Program is available as a tool to collect and share best practices and capture good news stories on the cleanup of scrap metal storage areas following the rescission of these policies. Information such as photo documentation showing storage areas pre- and post-removal of scrap metal, cost avoidance for maintaining and disposing of releasable scrap metal, and application of recycling funds for no-cost decommissioning efforts enhance and help complete the story of DOE's robust release and clearance of property program as well as illustrating the great work performed daily across the Department.

REFERENCES

Federal Register, Volume 90, Number 93, May 15, 2025

10 CFR 835, *Occupational Radiation Protection*

DOE O 458.1, Chg. 5, *Radiation Protection of the Public and the Environment*

DOE-STD-1241-2023, *Implementing Release and Clearance of Property Requirements*

DOE-STD-6004-2016, *Clearance and Release of Personal Property from Accelerator Facilities*

DOE-HDBK-1215-2014, *Optimizing Radiation Protection of the Public and the Environment for use with DOE O 458.1, ALARA Requirements*

Secretary Memorandum, *Moratorium on the Free Release of Volumetrically Contaminated Metals*, January 12, 2000

Secretary Memorandum, *Suspension on the Unrestricted Release of Scrap Metal from Radiation Areas within DOE Facilities*, July 13, 2000

Secretary Memorandum, *Managing the Release of Surplus and Scrap Materials*, January 19, 2001

This OE-3 document requires no follow-up report or written response.

Michael J. Silverman
Director
Office of Environmental Protection and ES&H Reporting
Office of Environment, Health, Safety and Security

ADDITIONAL SOURCES OF INFORMATION

Questions regarding the rescinded moratorium and suspension may be directed to the Recycle, Reuse, Disposition Community of Practice or to Mike Stewart, Office of Public Radiation Protection (EHSS-22), 202-586-6444 or email Mike.Stewart@hq.doe.gov.

Attachment 1: Federal Register/ Vol. 90, No. 93, May 15, 2025

DEPARTMENT OF ENERGY

Rescinded Guidance Materials

AGENCY: Department of Energy.

ACTION: Notification of rescinded materials.

SUMMARY: This document announces the recent rescission of several U.S. Department of Energy guidance materials.

FOR FURTHER INFORMATION CONTACT: Mr. David Taggart, U.S. Department of Energy, Office of the General Counsel, GC–1, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 586–5281. Email: *DOEGeneralCounsel@hq.doe.gov.*

SUPPLEMENTARY INFORMATION: This document announces the rescission of several U.S. Department of Energy (DOE) guidance materials. DOE identified these materials as part of the regulatory review required by Executive Order (E.O.) 14219, ''Ensuring Lawful Governance and Implementing the President's 'Department of Government Efficiency' Deregulatory Initiative,'' 90 FR 10583 (Feb. 25, 2025). The materials rescinded are as follows:

- July 13, 2000, Suspension on the Unrestricted Release of Scrap Metal from Radiation Areas within DOE Facilities
- January 12, 2000, Moratorium on the Free Release of Volumetrically Contaminated Metals
- Guidance for Implementing the Department of Energy Carbon Pollution-Free Electricity Roadmap
- Department of Energy Carbon Pollution-Free Electricity Roadmap
- Department of Energy Sustainability Plan
- Climate Adaptation and Resilience Plan
- Secretarial Direction Promoting Sustainable Transportation at the Department of Energy Through Federal Travel
- Implementation Guidance for Energy Efficient Transformer Rebates
- Implementation Guidance for Extended Product System Rebates

Signing Authority

This document of the Department of Energy was signed on May 9, 2025, by Chris Wright, Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE **Federal Register** Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

Signed in Washington, DC, on May 12, 2025.
Jennifer Hartzell,
Alternate Federal Register Liaison Officer, U.S. Department of Energy.

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Attachment 2: Screening levels for volumetric clearance[a] *[Source: DOE-STD-1241-2023]*

Radionuclide groups[b]	SI units Volume (Bq/g)	Conventional units Volume (pCi/g)
Group 0 Special Case: ^{129}I[c]	0.01	0.3
Group 1 High-energy gamma, radium, thorium, transuranics, and mobile beta-gamma emitters: ^{22}Na, ^{46}Sc, ^{54}Mn, ^{56}Co, ^{60}Co, ^{65}Zn, ^{94}Nb, ^{106}Ru, ^{110m}Ag, ^{125}Sb, ^{134}Cs, ^{137}Cs, ^{152}Eu, ^{154}Eu, ^{182}Ta, ^{207}Bi, ^{210}Po, ^{210}Pb, ^{226}Ra, ^{228}Ra, ^{228}Th, ^{229}Th, ^{230}Th, ^{232}Th, ^{232}U, ^{238}Pu, ^{239}Pu, ^{240}Pu, ^{242}Pu, ^{244}Pu, ^{241}Am, ^{243}Am, ^{245}Cm, ^{246}Cm, ^{247}Cm, ^{248}Cm, ^{249}Cf, ^{251}Cf, ^{254}Es, and associated decay chains[d], and others[b]	0.1	3
Group 2 Uranium and selected beta-gamma emitters: ^{14}C, ^{36}Cl, ^{59}Fe, ^{57}Co, ^{58}Co, ^{75}Se, ^{85}Sr, ^{90}Sr, ^{95}Zr, ^{99}Tc, ^{105}Ag, ^{109}Cd, ^{113}Sn, ^{124}Sb, ^{123m}Te, ^{139}Ce, ^{140}Ba, ^{155}Eu, ^{160}Tb, ^{181}Hf, ^{185}Os, ^{190}Ir, ^{192}Ir, ^{204}Tl, ^{206}Bi, ^{233}U, ^{234}U, ^{235}U, ^{238}U, natural uranium[e], ^{237}Np, ^{236}Pu, ^{243}Cm, ^{244}Cm, ^{248}Cf, ^{250}Cf, ^{252}Cf, ^{254}Cf, and associated decay chains[d], and others[b]	1	30
Group 3 General beta-gamma emitters: ^{7}Be, ^{74}As, ^{93m}Nb, ^{93}Mo, ^{93}Zr, ^{97}Tc, ^{103}Ru, ^{114m}In, ^{125}Sn, ^{127m}Te, ^{129m}Te, ^{131}I, ^{131}Ba, ^{144}Ce, ^{153}Gd, ^{181}W, ^{203}Hg, ^{202}Tl, ^{225}Ra, ^{230}Pa, ^{233}Pa, ^{236}U, ^{241}Pu, ^{242}Cm, and others[b]	10	300
Group 4 Low-energy beta-gamma emitters: ^{3}H, ^{35}S, ^{45}Ca, ^{51}Cr, ^{53}Mn, ^{59}Ni, ^{63}Ni, ^{86}Rb, ^{91}Y, ^{97m}Tc, ^{115m}Cd, ^{115m}In, ^{125}I, ^{135}Cs, ^{141}Ce, ^{147}Nd, ^{170}Tm, ^{191}Os, ^{237}Pu, ^{249}Bk, ^{253}Cf, and others[b]	100	3,000
Group 5 Low-energy beta emitters: ^{55}Fe, ^{73}As, ^{89}Sr, ^{125m}Te, ^{147}Pm, ^{151}Sm, ^{171}Tm, ^{185}W, and others[b]	1,000	30,000

[a]The screening levels for clearance have been rounded to one significant figure and are assigned for volume radioactivity.

[b]To determine the specific group for radionuclides not shown, a comparison of the screening factors, by exposure scenario, listed in Tables B. 1, C.1, and D.1 of NCRP Report No. 123I (NCRP 1996) for the radionuclides in question and the radionuclides in the general groups above will be performed and a determination of the proper group made, as described in ANSI/HPS N13.12-2013, Annex A.

[c]Because of potential ground-water concerns, the volume radioactivity values for ^{129}I when disposal to landfills or direct disposal to soil is anticipated is assigned to Group 0.

[d]For decay chains, the screening levels represent the total activity (i.e., the activity of the parent plus the activity of all progeny) present.

[e]The natural uranium screening levels for clearance *shall* be lowered from Group 2 to Group 1 if decay-chain progeny are present (i.e., uranium ore versus process or separated uranium, for example, in the form of yellowcake). The natural uranium activity equals the activity from uranium isotopes (48.9% from ^{238}U, plus 48.9% from ^{234}U, plus 2.2% from ^{235}U). This approach is consistent with summing radionuclide fractions discussed in ANSI/HPS N13.12-2013, Section 4.4.

Attachment 3: DOE Total Residual Surface Activity Guidelines *[Source: DOE-STD-1241-2023]*

Allowable Total Residual Surface Activity (dpm/100 cm^2)[a, b]

Radionuclides[c]	Avg[d,e]	Max[d,e]	Removable[f]
Group 1—Transuranics, ^{125}I, ^{129}I, ^{227}Ac, ^{226}Ra, ^{228}Ra, ^{228}Th, ^{230}Th, ^{231}Pa	100	300	20
Group 2—Th-natural, ^{90}Sr, ^{126}I, ^{131}I, ^{133}I, ^{223}Ra, ^{224}Ra, ^{232}U, ^{232}Th	1,000	3,000	200
Group 3—U-natural, ^{235}U, ^{238}U, associated decay products, alpha emitters	5,000	15,000	1,000
Group 4—Beta-gamma emitters (radionuclides with decay modes other than alpha emission or spontaneous fission) except ^{90}Sr and others noted above[g]	5,000	15,000	1,000
Tritium (applicable to surface and subsurface)[h]	N/A	N/A	10,000

a The values in this table (except for tritium) apply to radioactive material deposited on but not incorporated into the interior or matrix of the property. Authorized limits for residual radioactive material in volume must be approved separately or meet DOE Total Residual Volumetric Activity Guidelines: Allowable Total Residual Volumetric Activity.

b As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by counts per minute measured by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

c Where surface contamination by both alpha-emitting and beta-gamma-emitting radionuclides exists, the limits established for alpha-emitting and beta-gamma-emitting radionuclides should apply independently.

d Measurements of average contamination should not be averaged over an area of more than 1 m^2. Where scanning surveys are not sufficient to detect levels in the table, static counting must be used to measure surface activity. Representative sampling (static counts on the areas) may be used to demonstrate by analyses of the static counting data. The maximum contamination level applies to an area of not more than 100 cm^2.

e The average and maximum dose rates associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 millirad per hour (mrad/h)(0.002 mGy/hr) and 1.0 mrad/h (0.01 mGy/hr), respectively, at 1 cm.

f The amount of removable material per 100 cm^2 of surface area should be determined by wiping an area of that size with dry filter or soft absorbent paper, applying moderate pressure, and measuring the amount of radioactive material on the wiping with an appropriate instrument of known efficiency. When removable contamination of objects on surfaces of less than 100 cm^2 is determined, the activity per unit area should be based on the actual area, and the entire surface should be wiped. It is not necessary to use wiping techniques to measure removable contamination levels if direct scan surveys indicate the total residual surface contamination levels are within the limits for removable contamination.

g This category of radionuclides includes mixed fission products, including the ^{90}Sr that is present in them. It does not apply to ^{90}Sr that has been separated from the other fission products or mixtures where the ^{90}Sr has been enriched.

h Measurement should be conducted by a standard smear measurement but using a damp swipe or material that will readily absorb tritium, such as polystyrene foam. Property recently exposed or decontaminated should have measurements (smears) at regular time intervals to prevent a buildup of contamination over time. Because tritium typically penetrates material it contacts, the surface guidelines in group 4 do not apply to tritium. Measurements demonstrating compliance of the removable fraction of tritium on surfaces with this guideline are acceptable to ensure nonremovable fractions and residual tritium in mass will not cause exposures that exceed DOE dose limits and constraints