

Guide to Standard Conditions for Radioactive Substances



Summary of main changes between versions of this document

Note on version numbers: the first two numbers of the version number of this guidance document reflect the version number of the standard conditions that it refers to, i.e., this document is version 3 and therefore refers to version 3 of the standard conditions. If this guidance is updated but the standard conditions have not been changed the third number in the version number will be increased, e.g., version 3.1.1

Version 1.1.0

Affected section	Changes made
General	Updated to reflect version 1.1 of standard conditions.
Glossary and abbreviations	Glossary and abbreviation of terms commonly used in this guidance added.
A.6.3	Reason and guidance updated to clarify that it does not only apply to monitoring equipment.
G.2.1	Reason and guidance updated.

Version 1.1.1

Affected section	Changes made
All conditions	A 4th box has been added to each condition to specify the CAS attribute(s) for that condition.
Data Returns	Updated to include a link to the data returns forms on the SEPA.

Version 2.0

Affected section	Changes made
General	Updated to incorporate the changes listed in the <i>Notice of revision to the standard conditions for radioactive substances activities</i> (published 11 March 2019).
C.4.1.a	The wording “ <i>the transfer is carried out in accordance with an authorisation granted under the Transfrontier Shipment of Radioactive Waste and Spent Fuel Regulations 2008</i> ” has been removed as it is no longer applicable.

Version 2.1

Affected section	Changes made
Section K	The section title has been amended to: <i>Conditions applicable to offshore installation permits and registrations.</i>
Appendix 1	Address to send the HASS forms to has changed from the SEPA Aberdeen office to the SEPA Angus Smith Building.

Version 3.0

Affected section	Changes made
Section D	Standard condition D.2.1 has been amended to reference the 2024 edition of the “ <i>Security Requirements for Radioactive Sources</i> ”
Section D	Standard condition D.2.3 has been deleted.

All conditions	SEPA's compliance assessment scheme has changed and therefore the CAS attribute(s) for each condition have been removed as they no longer apply.
General	Table of Contents has been added. The document has been reformatted to allow for accessibility.
Appendix 1	Telephone number for those contacting SEPA outwith Scotland has been changed.

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Glossary and abbreviations

This section is only for the guidance, it is not part of the standard conditions.

BPM	Best practicable means
CCTV	Closed-circuit television
EASR	Environmental Authorisations (Scotland) Regulations 2018
HASS	High activity sealed radioactive source
IAEA	International Atomic Energy Agency
IAEA GSR	IAEA General Safety Requirements
NORM	Naturally occurring radioactive material
NPSA	National Protective Security Authority
OSPAR	The OSPAR Convention is a treaty that aims to prevent and eliminate pollution and conserve the marine ecosystems of the North-East Atlantic
RWA	Radioactive waste adviser

A. All authorised activities

A.1 Resources

Standard Condition

A.1.1 You must have adequate financial and human resources to ensure compliance with your authorisation.

Reason

This condition contributes toward compliance with Regulation 8 and 23 of EASR.

This rule reflects IAEA GSR part 3 requirements 5, 17 and 30.

Providing and maintaining sufficient resource to carry out your regulated activity is fundamental to ensuring control of the radioactive substances as well as remaining a Fit and Proper Person to hold the authorisation.

Guidance

SEPA sets out its guidance on Fit and Proper Persons in our document *Guidance on who can hold an authorisation: in control and fit and proper person tests*, available on our website.

SEPA does not specify minimum resource levels, such as numbers of staff or size of budget. This is left to you to decide what is necessary and to manage the inevitable fluctuations due to medium to long term staff absences or changes to your funding.

It is recommended that the minimal resource needed to carry out your regulated activity, including but not limited to staffing, equipment, facilities, and budgets is identified in writing, at least in an indicative manner. It is also recommended that any longer-term deviations from this minimal level are justified in writing. Consideration should be given to succession planning of relevant staff to avoid shortfalls in suitably qualified and experienced persons and periodic replacement of relevant equipment and facilities throughout the lifecycle of the radioactive substances activity.

A.2 Management arrangements

Standard Condition

A.2.1 You must have and maintain a management system to ensure compliance with your authorisation.

Reason

This condition contributes towards compliance with paragraphs 20(c) and 23(c), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 5, 9 and 30.

You need a formal, robust management system to always ensure control of the radioactive substances in order to avoid an unplanned exposure to a member of the public, harm to the environment or the generation of unnecessary radioactive waste.

Guidance

Good management is fundamental to ensuring the safety of the radioactive substances. SEPA expects a defined management structure with evident organisational commitment to compliance with the authorisation. Staff at various levels should be able to explain their roles and responsibilities in relation to radioactive substance management. We recommend that the management arrangements for your radioactive substances activities are incorporated into your wider arrangements to ensure it has the same visibility and oversight.

The types of things that should form the management arrangements are, for the most part, the topics of the rest of the standard conditions in Sections A and B.

For more information on management systems, see the IAEA Safety Standards document *Application of the Management System for Facilities and Activities (GS-G-3.1)* and the International Organization for Standardization (ISO) documents for quality and environmental management systems.

Standard Condition

A.2.2 You must regularly carry out a review of your management system and its effectiveness in terms of achieving compliance with your authorisation.

Reason

This condition contributes towards compliance with paragraphs 20(c) and 23(c), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 5, 9 and 31.

Internal review of the management system provides demonstration that it remains fit for purpose for ensuring the safety of the radioactive substances.

Guidance

SEPA expects you to review or audit the management system in your organisation in relation to radioactive substances on a regular basis. The frequency of the review or audit has not been defined; however, it should reflect the complexity of the radioactive substances activities undertaken as well as the rate and amount of change that has occurred to your management system since it was last reviewed. For authorisations relating to sealed sources, this should include a review of security. When deviations are identified, appropriate corrective actions should be proposed and taken.

SEPA expects that the review or audit will be recorded, and the outcome will be written down and available for inspection.

It is possible to make use of external audits, for example relating to ISO 9001 or 14001 accreditation, to comply with this rule. However, the audit must specifically cover your management system in relation to radioactive substances and compliance with this authorisation.

A.3 Written procedures

Standard Condition

A.3.1 You must have, implement, and maintain written procedures to ensure compliance with your authorisation.

Reason

This condition contributes towards compliance with paragraphs 20©(ii), 23(d)(iii), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 5, 9, 13, 15, 30, 31 and 32.

Written procedures are the fundamental underpinning of your management arrangements for activities involving radioactive substances and compliance with the conditions and limitations of the authorisation. These procedures must be regularly and formally reviewed to ensure they remain valid and reflect the current arrangements.

Guidance

The purpose of requiring the written procedures is to ensure you detail how you will comply with your authorisation. It is essential that you carefully scrutinise the standard conditions and any bespoke rules in your permit and ensures that there are appropriate procedures in place to cover all of them. SEPA expects that the detail and complexity of the procedures will be proportionate to the risk posed by the radioactive substances and the complexity of their activities involving radioactive substances.

Procedures can be in electronic or paper form. However, SEPA does expect that you will have considered the maintenance, security and redundancy issues of both formats and made suitable arrangements.

It is not necessary to duplicate existing procedures or documents solely for the purposes of satisfying this requirement. It is perfectly acceptable to refer out to existing procedures. Although not required, you may prefer to create a compliance matrix document that specifically addresses

how each requirement will be complied with or signposts where the appropriate procedure can be found.

It is recommended that the relevant procedures are incorporated into your controlled document management system (if available) to ensure that they have formal standing within your organisation, a recognised person responsible for their maintenance and they are subject to periodic review in accordance with your quality management system.

A.4 Record keeping

Standard Condition

A.4.1 You must make, as soon as reasonably practicable, true, accurate and legible records that ensure and demonstrate compliance with the requirements of your authorisation.

Reason

This condition contributes towards compliance with paragraphs 20(f), 20(g) and 25(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 13, 14, 17, 30, 31 and 32.

Records are the principle means of demonstrating compliance with the requirements attached to the authorisation. For that reason, it is imperative that the records are true, accurate and legible.

Guidance

It is essential that you make all records that you need to be able to comply with your authorisation. You should also keep records to demonstrate that you have complied with your authorisation.

“Records” refers to a wide range of documents, from the specified data required to be kept by other standard conditions to things such as BPM cases, contamination or environmental monitoring and staff training records. Any document that you use to demonstrate compliance with the authorisation will fall into this category. This will probably include previous

authorisations issued to you (or transferred to you) and records made under those authorisations or authorisations issued to another person that has been transferred to you.

SEPA does not require the records to be kept in a particular format (e.g., electronic or paper). However, SEPA does expect that you will have considered the maintenance, security and redundancy issues of both formats and made suitable arrangements to ensure the records are available as required.

It is recognised that you may keep and use the records for other purposes (e.g., billing) and that some records may also be kept by different parts of your organisation (e.g., finance, facilities and human resources) or by contract partners. It is your responsibility to ensure the relevant records are accessible, legible and are set out in a manner to demonstrate compliance with the authorisation.

Standard Condition

A.4.2 You must keep sufficient records as long as necessary to ensure and demonstrate compliance with your authorisation.

Reason

This condition contributes towards compliance with paragraphs 20(f), 20(g) and 25(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 13, 17 and 30.

Records are the principle means of demonstrating compliance with the requirements attached to the authorisation. For that reason, it is imperative that the records are retained for as long as necessary.

Guidance

SEPA does not set any restrictions on the length of time you must keep your records. However, you must consider what each record does in terms of demonstrating compliance. You may

prefer to establish a record retention schedule for all your records, setting out the time you intend to keep them. Please note that SEPA will not approve the schedule, but we may ask to see it as part of an inspection.

SEPA also does not specify the location where your records must be kept (e.g., at the Authorised Place). However, wherever they are kept, bear in mind that SEPA expects all records to be reasonably available for inspection.

Standard Condition

A.4.3 Your records must include the required records specified in Schedule 1 of these standard conditions.

Reason

This condition contributes towards compliance with paragraphs 20(f) and 20 (g), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 13, 17 and 30.

SEPA has prescribed a minimum set of records for each Regulated Activity or sub-activity to ensure that there is a minimum amount of information available.

Guidance

The prescribed set of records is the minimum you must keep. SEPA anticipates that you may need to keep many other records to fully demonstrate compliance with your authorisation.

A.5 Provision of training and information to staff

Standard Condition

A.5.1 You must ensure that anyone carrying out duties that may affect compliance with your authorisation is suitably trained and experienced.

Reason

This condition supports IAEA GSR part 3 requirements 15 and 30.

To ensure compliance with your arrangements, it is necessary that all staff that have access to the radioactive substances or responsibility for compliance with the authorisation are appropriately trained and experienced.

Guidance

This requirement applies to both staff that interact with the radioactive substances as part of their normal duties as well as their supervisors and managers who will have responsibility for compliance with the authorisation. It is expected that the level of training will be proportional to the level of interaction and responsibility of the individual staff member.

Training may involve formal classroom sessions/courses as well as hands-on practical instruction as part of the staff member's duties and will involve refresher training as required. All relevant training should be recorded and be available for inspection. For more complex sites or activities, you may prefer to create and maintain a matrix of training compared against the general duties of each staff member, task, or post.

If the necessary training requires significant time and/or finance to achieve, efforts should be made to ensure there is redundancy in suitably qualified and experienced staff available as well as sufficient staff in the pipeline to become trained to avoid any shortfalls.

Standard Condition

A.5.2 You must ensure that anyone carrying out duties that may affect compliance with your authorisation has access to a copy of your authorisation and all relevant procedures and records that are necessary to ensure compliance with your authorisation.

Reason

This condition supports IAEA GSR part 3 requirements 15 and 30.

To ensure compliance with your authorisation, it is necessary that all relevant staff have access to the authorisation and all relevant procedures and records that are necessary to ensure compliance.

Guidance

The required information can be held in paper or electronic format; however, consideration should be given to situations where access to electronic documents may not be possible and to avoiding large amounts of unnecessary paper documents.

Particularly for registrations and permits involving sealed sources, careful consideration should be given to the accessibility of this information from a security standpoint.

A.6 Facilities and equipment**Standard Condition**

A.6.1 You must provide suitable facilities and equipment that are necessary to ensure compliance with your authorisation.

Reason

This condition contributes towards compliance with paragraphs 20(c)(ii) and 23 (c)(vi), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 13, 30 and 32.

Suitable facilities, systems and equipment must be provided for the management of radioactive substances to avoid an unplanned exposure to a member of the public, harm to the environment or the generation of unnecessary radioactive waste.

Guidance

SEPA does not specify what facilities and equipment are needed for managing your radioactive substances as you are the best person to make this decision. You should consider what “hardware” is needed, including but not limited to floors, ceilings, walls, furniture, waste bins, tanks, pipework, ducting, sinks, and fume hoods used in conjunction with the radioactive substances as well as any items that contribute to BPM (e.g., filters, radiation monitors and detectors). You must ensure that any back-up systems are maintained to the same level as those in use at any time.

Standard Condition

A.6.2 You must have and comply with appropriate arrangements for the acceptance into service of all facilities and equipment that are necessary to ensure compliance with your authorisation.

Reason

This condition contributes towards compliance with paragraph 20(c)(ii), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 13, 15, 30 and 32

It is essential that all facilities and equipment involved in radioactive substances have been designed, constructed, modified, or chosen to fulfil appropriate criteria and will function correctly once used or installed. Failure to meet these criteria may result in loss of control of the radioactive substances and the potential for an unplanned exposure to a member of the public, harm to the environment or the generation of unnecessary radioactive waste.

Guidance

SEPA expects that you will have in place procedures for establishing acceptance criteria and checking the suitability of all facilities and equipment prior to their first use and subsequent to any maintenance activity to ensure that they perform effectively and as intended. The acceptance criteria and required checks should be commensurate with the risk posed by the radioactive substances. The checks could include the manufacturer's critical examination, calibration certificates, and a 'dry run' of a process or a formal commissioning programme.

SEPA expects that the acceptance criteria and any checks made will be recorded and available for inspection, even if they are conducted by another part of your organisation (e.g., Facilities Department) or an external party (e.g., RWA, contractor).

Standard Condition

- A.6.3 You must ensure that all facilities and equipment provided to ensure compliance with your authorisation are:
- a. maintained in good repair.
 - b. regularly calibrated (where calibration is required)
 - c. checked to ensure they are serviceable and effective; and
 - d. being correctly used.

Reason

This condition contributes towards compliance with paragraphs 20(b) and 20(c), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15, 30 and 32.

All facilities and equipment must be working correctly and effectively so that you can comply with your authorisation and thereby minimise the risk of an unplanned exposure of a member of the public, harm to the environment or the generation of unnecessary waste.

Guidance

This standard condition applies to all facilities and equipment. For example, if you have an intruder alarm as part of your site security it might be maintained in good repair but if it is not switched on it is not effective. Similarly, a filter used for abatement may be maintained in good repair and regularly tested for efficiency but if it is not properly connected to the stack it will not be effective or correctly used.

The complexity and frequency of the inspection, maintenance and repair regime should be commensurate with the risk posed by the radioactive substances and the environment they operate within. This may include service contracts for relevant equipment such as liquid scintillation counters or fume hood systems, regular audits by the RWA, a formal maintenance schedule or a combination of these. You will need to be prepared to justify the approach to maintenance for the facilities and equipment, and it may be necessary to record this justification.

SEPA expects that these inspections, and any discrepancies found, will be recorded and available for inspection, even if they are conducted by another part of your organisation (e.g., Facilities Department) or an external party (e.g., RWA, contractor). It is recommended that any corrective actions taken, and the date they were taken on, are also recorded.

Whilst minor repairs are expected to be carried out relatively quickly, it is recognised that substantial repairs may take longer to finance and arrange. In these cases, SEPA expects that you will provide an implementation plan for the carrying out of the required repairs, along with dates for any milestones as well as the projected completion date.

You should have a programme of calibration and routine checking for all measuring instruments set out in relevant procedures. It is essential that the measuring instruments are calibrated against traceable standard sources. Calibration records and records of routine checks (e.g., use of standards) on monitoring equipment should be kept and made available during inspection.

In addition, your procedures should specify the correct manner in which relevant equipment, including measuring instruments are to be used. Staff using the measuring instruments must be trained in the procedures and the correct manner for use of the measuring instruments. It is recommended that you keep a record of the staff trained to use the measuring instruments and provides refresher training as required.

A.7 Sampling, measurements, tests, surveys, and calculations

Standard Condition

A.7.1 You must take samples and conduct measurements, tests, surveys, analyses, and calculations as necessary in order to determine compliance with your authorisation.

Reason

This condition contributes towards compliance with paragraphs 22(1)(a) and 23(d)(j), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 14, 30, 31 and 32.

It is your responsibility to actively take samples and carry out measurements et al as necessary to characterise your radioactive substances and to demonstrate compliance with all the requirements of your authorisation. This is particularly important regarding radioactive substances since it is impossible to directly detect radioactivity using human senses alone. Undetected radioactive substances or contamination may cause an unplanned exposure of a member of the public or harm to the environment and could generate unnecessary radioactive waste requiring disposal.

Guidance

You must determine what sampling, measurement, tests, surveys, and calculations are needed to fully characterise your radioactive substances and determine compliance with your authorisation requirements. For authorisations involving radioactive waste, SEPA expects your RWA to have advised on the assessment.

The number, frequency and type of sample, measurement, etc. is dependent on a variety of factors including the nature of the radioactive substances (i.e., sealed, or unsealed), the method of its storage and the way it is used. It may also be necessary to consider the non-radioactive properties of the radioactive substances, particularly if they are hazardous.

This information should be written down and included in the procedures relating to sampling, measurement etc. The results of all sampling, measurements etc. must be recorded and be available for inspection by SEPA.

Further information about ensuring data quality can be found in the UK Government's Data Quality Framework, available from the UK Government website.

Standard Condition

A.7.2 You must use the best practicable means when taking samples or conducting measurements, tests, surveys, and calculations.

Reason

This condition contributes towards compliance with paragraphs 20(c)(ii) and 22(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 14, 30 and 31.

Because radioactive substances cannot be directly detected by human senses, it is critical that you are using best practicable means in sampling and conducting measurements et al to ensure that the risks of an unplanned exposure to a member of the public, harm to the environment or generation of unnecessary waste are minimised.

Guidance

You are responsible for determining the best methods for carrying out this requirement and ensuring that it remains up to date regarding advances in scientific and technical understanding.

SEPA expects that the justification of BPM regarding taking samples and carrying out measurements et al will be documented and that it will be periodically reviewed by you/your RWA to ensure it remains valid. This expectation does not require separate BPM documentation, and it may be incorporated into other procedures or written arrangements.

BPM is defined in the Interpretation of Terms section of the Standard Conditions for radioactive substances activities and further generic guidance on BPM, refer to the SEPA document *“Satisfying the optimisation requirement and the role of Best Practicable Means”*, available from our website.

A.8 Provision of information and data returns

Standard Condition

A.8.1 You must provide SEPA with the required information specified in Schedule 2 of these standard conditions within the specified timescales.

Reason

This condition contributes toward compliance with paragraphs 20(i), 22(1)(b), 23(b), 25(c) and 25(d), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirement 32.

SEPA requires the ability to formally request information from you at any time. If a formal request for information is not complied with, it can be considered a contravention of the authorisation and appropriate enforcement action can be taken.

Guidance

SEPA has set out all the minimum required data returns for radioactive substances activities in Schedule 2 of these standard conditions for ease of reference. The schedule specifies the type of licence (e.g., permit involving HASS), the data to be supplied to SEPA and the periodicity of the return.

SEPA has produced several standardised forms for non-nuclear data returns. The forms are available on our [website](#).

There may also be bespoke conditions attached to your authorisation that require additional information to be provided to SEPA.

SEPA is required to place this information on our register, which is available to the public. In the interests of complying with the General Data Protection Regulations, you are only required to provide a summary of the information so that any personal information can be omitted.

A.9 Contraventions of your authorisation

Standard Condition

A.9.1 If you believe that a requirement of your authorisation is being, has been, or might be contravened, you must inform SEPA by telephone without delay.

Reason

This condition contributes towards compliance with paragraphs 20(h), 20(j) and 23(d)(iv), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 16, 17, 30 and 32.

Non-compliance, or potential non-compliance events must be reported to SEPA without delay to allow us to take our own measures to ensure that there is not an unplanned exposure of a member of the public, harm to the environment or the generation of unnecessary radioactive waste. The notification also allows SEPA to begin its own investigation into the matter, and it also allows us to comply with any international reporting obligations.

Guidance

It is important to note that this condition also requires notification of SEPA of non-compliance events that might occur. This enables SEPA to consider if any actions are required to protect the public or the environment. Delaying the notification until the non-compliance is confirmed to have occurred is unacceptable. SEPA recognises that potential contraventions of a minor nature are unlikely to require SEPA to act. Therefore, in these circumstances, a delay in informing SEPA may be acceptable.

All staff involved in the management of radioactive substances should be aware of this requirement and be empowered to make the notification or escalate the matter to the appropriate person in your organisation for the notification to be made to SEPA.

It is difficult to demonstrate compliance with this condition unless an event of this nature has occurred. SEPA expects you to have measures in place to respond to this type of event, many of which will be written down for other purposes (e.g., local rules), and this can be used as demonstration of compliance. Contact details for SEPA can be found in Appendix 1.

Standard Condition

A.9.2 Where you have informed SEPA that you have contravened your authorisation, you must:

- a. Confirm the information given in the telephone notification in writing by the next working day after the verbal notification.
- b. Carry out an investigation into the circumstances to identify any necessary corrective measures to avoid such events in the future.
- c. Record the results of your investigation.
- d. Ensure that any corrective measures are carried out as soon as reasonably practicable; and
- e. Send a summary of your investigation to SEPA as soon as reasonably practicable.

Reason

This condition contributes towards compliance with paragraphs 20(k), 20(l) and 23(d)(iv), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15, 16, 30 and 32.

This condition requires you undertake a formal investigation of the event, keep SEPA informed and ensure that any corrective measures identified are carried out.

Guidance

Written confirmation of the contravention can be provided by email. Contact details for SEPA can be found in Appendix 1.

SEPA expects the investigation to begin as soon as reasonably practicably after the event or identification of the potential contravention.

No timescale for completion of the investigation has been specified to allow you to conduct a thorough investigation and identify the root cause and any necessary corrective measures needed to prevent a recurrence of the contravention. It is recommended that you provide SEPA an indication of the length of time you expect the investigation to take within the written confirmation.

SEPA is required to place this information on our register, which is available to the public. The summary of the investigation should not contain any personal details that might contravene your requirements under the General Data Protection Regulations. If this detail is required, SEPA can arrange to view it at your site.

A.10 Ceasing your authorised activity and leaving the authorised place

Standard Condition

A.10.1 You must inform SEPA of the following circumstances by providing the information set out in the relevant section of Schedule 3 of these standard conditions within the specified timescales:

- a. If you vacate the authorised place, or in the case of mobile radioactive sources, vacate the place where they are normally kept; or
- b. You cease to carry on the authorised activities.

Reason

This condition supports IAEA GSR part 3 requirements 15, 17 and 29.

This notification minimises the risk of radioactive substances being abandoned, or radioactive contamination not being remediated on the Authorised Place. Abandoned radioactive substances and/or radioactive contamination can result in an unplanned exposure to a member of the public, harm to the environment or the generation of unnecessary radioactive waste.

Guidance

It is difficult to demonstrate compliance with this condition unless you intend to leave the authorised premises or cease to carry out your activity. SEPA recommends that these eventualities are captured in your management arrangements along with the requirement to contact SEPA as demonstration of compliance.

If you leave the authorised place or cease to carry out your activity because you have sold the business to another person, you will be required to transfer the authorisation to that person. Further information on transfer applications can be found on our website.

Please note that in relation to authorisations for vessels operating in the offshore area, there is no requirement to inform SEPA every time the vessel moves, unless otherwise specified in your permit.

Contact details for SEPA can be found in Appendix 1.

B. All radioactive substances authorised activities

B.1 Overarching requirement

Standard Condition

B.1.1 You must carry out the authorised radioactive substances activities in a manner that achieves and maintains an optimal level of protection of the environment and the public.

Reason

This condition contributes towards compliance with paragraph 20(c)(i), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 1, 4, 11, 15, 17, 29, 30 and 31.

This condition reflects the fundamental objective for all radioactive substances activities permits and registrations.

Guidance

SEPA views optimisation as being the same as BPM, which is defined in the Standard Conditions for radioactive substances activities. For further guidance on optimisation, please see the SEPA document “*Satisfying the optimisations requirement and the role of Best Practicable Means*”, available from our website.

B.2 Radioactive waste optimisation

Standard Condition

B.2.1 You must use the best practicable means to ensure that no unnecessary radioactive waste is generated.

Reason

This condition contributes towards compliance with paragraph 20(c)(i), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 1, 11, 15 and 31.

Where radioactive waste production cannot be avoided, BPM must be used to minimise the activity and volume of the radioactive waste generated. Waste reduction is an important step in radioactive waste management and controlling potential risk of an unplanned exposure to a member of the public or harm to the environment.

Guidance

The key point is that no unnecessary radioactive waste should be generated. In the case of decommissioning sites where the radioactive substances activities have stopped or radioactively contaminated land, this condition relates to the generation of secondary radioactive wastes arising from the decommissioning or remediation.

SEPA views optimisation as being the same as BPM, which is defined in the Standard Conditions for radioactive substances activities. For further guidance on optimisation, please see the SEPA document “*Satisfying the optimisation requirement and the role of Best Practicable Means*”, available from our website.

Standard Condition

B.2.2 You must optimise your approach to the management of radioactive waste taking account of all waste streams and disposals expected from current and future operations.

Reason

This condition contributes towards compliance with paragraph 20(c)(j), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 1, 11, 15, 30 and 31.

This rule ensures that you adopt a balanced approach to managing the radioactive wastes that will be generated throughout the lifetime of the radioactive substances activity that you are carrying out.

Guidance

SEPA expects you to have considered the generation of radioactive wastes throughout the lifecycle of the activity, including when you cease undertaking the activity. In addition, during decommissioning of the Authorised Place, both radioactive and non-radioactive waste will be generated. All these wastes should be managed using Best Practicable Means.

For further guidance on optimisation, please see the SEPA document “*Satisfying the optimisation requirement and the role of Best Practicable Means*” and available from our website.

B.3 Receipt of radioactive waste

Standard Condition

B.3.1 You may only receive radioactive waste that is described in your authorisation.

Reason

This condition supports GSR part 3 requirements 29 and 31.

This condition prevents you from receiving radioactive waste from another person or another place unless it has been specifically authorised in your permit.

Guidance

Any radioactive waste that you can received will be described in your authorisation in either a standard or a bespoke condition.

As standard, all authorisations include standard condition C6 (return of radioactive waste) and C7 (transfer of samples), which allow the receipt of some types of radioactive waste in limited circumstances.

If you are allowed to introduce radioactivity into organisms, you will also be allowed to receive waste associated with your activities (see condition I1.4).

Otherwise, if there is no bespoke condition in your authorisation describing radioactive waste that is authorised to be received, you are not allowed to receive any other types of radioactive waste from any other person or from any other place. Usually, there will be several bespoke conditions associated with receipt of waste (e.g., Waste Acceptance Criteria).

B.4 Safe management of radioactive substances

Standard Condition

B.4.1 You must manage radioactive substances in a manner that prevents the unauthorised or reckless dispersal of radionuclides, and, in the case of a sealed source, which prevents any dispersal of radionuclides.

Reason

This condition contributes towards compliance with paragraphs 20(b) and 20(e), Schedule 8 of EASR

This condition supports IAEA GSR part 3 requirements 15, 17, 30 and 31.

You must manage radioactive substances appropriately to avoid cross-contamination of other items and thereby minimise the risk of generating unnecessary radioactive waste, causing an unplanned exposure to a member of the public or harm to the environment.

The difference between unsealed and sealed sources has been introduced since there can be intentional dispersal of unsealed sources as part of the work undertaken (e.g., injection into a patient, use of an environmental tracer); however, sealed sources have been designed and constructed to prevent any release.

Guidance

This conditions covers everything that could prevent an unauthorised dispersal of the radioactive substances or an unintentional public exposure, including but not limited to its radioactive characteristics (e.g. activity, type of radioactivity), its physical state (e.g. liquid, gas, solid), possible non-radioactive hazardous properties (e.g. flammable), the immediate container

or device holding it, the area or environment where it is kept, signage and labelling to indicate its presence and what other substances are stored next to or in the vicinity of it.

For sealed sources where there is no obvious damage to the source or its immediate container, the usual means of demonstrating compliance with this condition is by way of a periodic wipe test. The wipe test frequency should be commensurate with the dispersal risk (i.e. age or where there has been possible impact/fire damage) and specified in the procedures.

Due to the wide range of circumstances that this condition relates to, it is difficult to provide brief guidance. Further generic guidance can be obtained from the IAEA website.

Standard Condition

B.4.2 Unless your authorisation allows otherwise, you must not release radioactive materials into the environment or introduce radioactive materials into organisms that will leave the authorised place whilst containing that substance.

Reason

This condition contributes towards compliance with paragraphs 20(b), 20(e) and 21(1)(b), Schedule 8 of EASR.

This condition supports GSR part 3 Requirement 29 and 31.

This condition prevents you from releasing radioactive material into the environment or introducing radioactive materials into organisms that leave the authorised place unless you have been specifically authorised in your permit.

Guidance

The introduction of radioactive material directly into the environment or into organisms that leave the authorised place (e.g., patients) presents the same risk of an unplanned exposure of a member of the public or harm to the environment as discharging radioactive waste into the environment. The intention is to ensure that these activities are not allowed unless it has been specifically authorised and, if necessary, appropriate bespoke conditions applied.

Please note that this condition relates to organisms, which includes humans and pets, that leave the authorised place. If you introduce radioactive material into organisms that don't leave your site, it will not apply.

Standard Condition

B.4.3 You must manage radioactive substances safely and securely to prevent unauthorised use, loss, and theft.

Reason

This condition supports the IAEA Code of Conduct of the Safety and Security of Radioactive Sources.

This condition supports IAEA GSR part 3 requirements 15, 17, 30 and 31.

You must effectively restrict access to the radioactive substances to prevent loss, theft or unauthorised use of the radioactive substances. The unauthorised use, loss or theft of the radioactive substances may ultimately result in an unplanned exposure of a member of the public, harm to the environment or the generation of unnecessary radioactive waste.

Guidance

The objective of access control is to ensure that only authorised users have access to the radioactive substances. Access controls may include a combination of physical (e.g., doors, fences, walls, cages, locks/interlocks, and shielded containers), electronic and administrative measures (e.g., procedures). Preference should be given, where practicable, to engineering controls over administrative controls. The principles of defence in depth should also be considered and all controls should be commensurate with the hazard posed by the radioactive substance.

In addition, it is recommended that a system of detection, assessment and response is established to determine if the access control measures have been breached and to ensure that any such event is appropriately investigated.

Further advice on physical security measures can be obtained from the National Protective Security Authority (NPSA) website.

Standard Condition

B.4.4 You must regularly verify that radioactive substances and, where relevant, the equipment or containers holding radioactive substances are still present and in good repair.

Reason

This condition contributes towards compliance with paragraph 23(d)(ii), Schedule 8 of EASR.

This condition supports the IAEA Code of Conduct of the Safety and Security of Radioactive Sources.

This condition supports IAEA GSR part 3 requirements 14, 15 and 17.

This ensures that the radioactive substances are routinely accounted for and that any missing source is identified as soon as possible. This minimises the risk of the radioactive substances (or their containers or immediate housing) becoming damaged or being disposed of in an inappropriate manner. It also requires routine verification that the radioactive substances/containers/equipment are in good condition and that any damage is identified at the earliest opportunity so that measures can be taken to mitigate any potential release of radioactivity which could cause an unplanned exposure to a member of the public, harm to the environment or generate unnecessary waste.

Guidance

The requirement to verify the continued presence of the radioactive substances may overlap with those of other legislation (e.g., IRR17). A balance must be struck between the need to verify the continued presence of the radioactive substance and the requirement to keep doses ALARP and minimise handling of the containers and equipment. In these situations, alternative methods of verification should be undertaken.

Verification checks should be conducted at a frequency commensurate with the risk and likelihood of loss, theft, or damage to ensure that the radioactive substances are present and have not been tampered with. In general, SEPA expects that the minimum frequency for fixed sealed sources to be weekly.

Such checks could include physical checks that the source is in place, remote observation through CCTV, verification of seals or other tamper evident devices and measurements of radiation or other physical phenomena that would provide assurance that the radioactive substances are present.

For sealed sources, periodic wipe tests should provide demonstration that the source remains in good repair. For sealed sources in use, verifying that the device or equipment containing the sealed source is functional may be sufficient. Changes to the manner of keeping or use (e.g., shutdown of the plant to which the sealed source is attached for periodic maintenance) or following any incident in which damage could occur to the sealed source, source container or associated equipment, should also trigger a check. It is recognised that the source container may have shorter lifespan than the source itself. In such cases, it may be necessary to undertake wipe tests at a greater frequency.

Records of these verifications, wipe tests and any maintenance activities, as well as any correction actions taken in response to any issues found, must be kept and be available for inspection as demonstration of compliance with this condition.

Standard Condition

B.4.5 Where reasonably practicable, you must ensure that radioactive substances or their immediate containers are adequately and legibly marked or labelled to indicate their radioactive content.

Reason

This condition contributes towards compliance with paragraphs 24(a), (b) and (c), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15 and 17.

Radioactive substances need to be suitably marked with enough information to allow the hazards to be readily identified and to minimise the risk of losing control of the radioactive substances and causing an unplanned exposure to a member of the public, harm to the environment or the generation of unnecessary radioactive waste.

Guidance

The marking should include, as a minimum, a trefoil, and a unique reference. Labels and signs may also need to comply with other legislation (e.g. IRR17 or transport regulations) and should comply with ISO 3864.

Where it is not practical to mark the authorised radioactive substances (e.g., it is a powder or liquid) or the authorised radioactive substance is contained within an item or piece of equipment (e.g., NORM contamination of a valve) or a system (e.g., pipework), the container, item, piece of equipment or system should display the marking or labelling.

Where a discreet area or space has radioactive contamination or contains several items that are radioactive/contaminated, it is acceptable to label the entrance or access to that area. A sign at the entrance to your site stating that there is radioactive substances present will usually not fully satisfy this condition.

In the case of sealed sources, the manufacturer may have already assigned a unique identifier. If this is not the case, then you must assign an identifier upon receipt of the sealed source.

It is strongly recommended that the identification on the authorised radioactive substance, container, item, piece of equipment or system is robust enough to survive normal handling and the storage environment whilst remaining legible.

It is also possible that the item or piece of equipment containing the authorised radioactive substances has been assigned its own unique identifier as part of your asset management programme. It is imperative that these two identifiers are kept separate to prevent confusion.

If a marked container or system is no longer used for storing radioactive substances, or that the authorised radioactive substances have been removed from an item or piece of equipment, and

there is no contamination present, all markings and labels should be removed as soon as possible to avoid confusion as to the contents.

B.5 Contamination control and remediation

Standard Condition

B.5.1 If you believe that a leak, spill, or unauthorised dispersal of radioactive substances has occurred, you must immediately take all reasonably practicable measures to prevent or restrict any further dispersal.

Reason

This condition contributes towards compliance with paragraph 20(b), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15, 17 and 30.

Once suspected, you must take all practicable measures to prevent or minimise the further dispersal of any radioactive substance. The longer the period that the radioactive substances remain dispersed in an uncontrolled manner, the greater the risk of an unplanned exposure of a member of the public, harm to the environment or the generation of additional radioactive waste requiring disposal.

Guidance

This condition does not apply to historic spills or contaminated land.

You should be ready and able to instigate the measures without delay. Staff involved in work with the radioactive substances should be trained and empowered to take the necessary measures without direction.

The measures to be taken should be commensurate with the risk posed by the radioactive substances that have been dispersed. For example, it may be acceptable to barrier off an area where a spill of a short-lived radionuclide has occurred to allow it to decay away. The non-

radioactive properties of the dispersed radioactive waste should also be considered when planning measures.

SEPA expects that any equipment or substances needed to prevent or minimise further dispersion and to clean up the dispersed radioactive substances, such as spill kits, special vacuum cleaners and decontamination fluids, are readily available, are in sufficient quantity for any foreseeable event and are in good working order.

Standard Condition

- B.5.2 If there is a leak, spill, or unauthorised dispersal of radioactive substances, you must:
- a. use the best practicable means to remediate any radioactive contamination arising either on or off the authorised place; and
 - b. carry out the remediation as soon as reasonably practicable.

Reason

This condition contributes towards compliance with paragraph 20(b), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 11, 15, 17 and 30.

SEPA's expectation is that remediation efforts must be optimised in all such circumstances. Radioactive contamination that is not remediated may result in an unplanned exposure to a member of the public, harm to the environment or the generation of unnecessary radioactive waste.

Guidance

It is difficult to demonstrate compliance with this rule unless an event of this nature (e.g., spill, leak, or accident) has occurred. SEPA expects you to have measures in place to respond to this type of event, many of which will be written down for other purposes (e.g., local rules) and these documents can be used as demonstration of compliance.

Prompt decontamination of any such contaminated areas will minimise the risk of creating 'legacy' contaminated sites, (e.g., in the event you go out of business). However, SEPA recognises that "as soon as reasonably practicable" could mean years, provided that you can justify that the delay was BPM.

For nuclear sites, please refer to the joint agencies' document Management of radioactive waste from decommissioning of nuclear sites: Guidance on Requirements for Release from Radioactive Substances Regulation (GRR), available on our website.

For further guidance on optimisation, please see the SEPA document "*Satisfying the optimisation requirement and the role of Best Practicable Means*", available from our website.

B.6 Treatment of radioactive waste

Standard Condition

B.6.1 You must only treat radioactive waste where this represents the best practicable means for the management of the waste.

Reason

This condition supports the UK policy framework for managing radioactive substances and nuclear decommissioning and Scotland's Higher Activity Waste Policy.

This condition supports IAEA GSR part 3 requirements 1, 29 and 31.

You are authorised to undertake treatment of radioactive waste, but only where this treatment is optimised.

Guidance

Treatment can involve physical, chemical, or biological processes.

SEPA expects you to undertake simple forms of treatment, such as segregation, both at the point of generation and subsequently, as well as simple forms of decontamination as a matter of

course. More complex forms of treatment (e.g., filtration, ion exchange) will need to be considered more fully in terms of BPM.

Except for the simpler forms of treatment, SEPA expects you to write down the justification for any treatment undertaken and have this available for inspection.

If you are authorised to receive radioactive waste from outwith the United Kingdom, SEPA expects you to have written assessment of all practicable options for that waste. It should detail how your intended management of the waste represents best practicable means over treatment in (or closer to) the country of origin.

For further guidance on optimisation, please see the SEPA document “*Satisfying the optimisation requirement and the role of Best Practicable Means*”, available from our website.

Standard Condition

B.6.2 You must not deliberately dilute radioactive substances in order to release them from regulatory control unless:

- a. the dilution takes place in normal operations where radioactivity is not a consideration; or
- b. the dilution is a result of mixing radioactive waste with non-radioactive material for the purposes of re-use or recycling that is authorised by your authorisation.

Reason

This condition contributes towards compliance with paragraph 20(a), Schedule 8 of EASR.

The dilution of radioactive waste will generate additional volume of radioactive waste that will require disposal, even if it can be done such that the waste is no longer considered to be radioactive. This does not accord with the principles of optimisation.

Guidance

This condition does not prohibit deliberate dilution altogether. It prohibits deliberate dilution to remove the radioactive substance from regulatory control, except in specific situations, where this has been authorised in your permit. Conditioning for manageability of the waste remains acceptable, provided it is BPM.

SEPA expects any dilution to be optimised, and we would strongly recommend that you discuss your plans with us before you undertake any dilution.

For nuclear sites, there are a number of joint guidance documents regarding conditioning available on our website or on request.

B.7 Holdings of radioactive substances

Standard Condition

B.7.1 You must only hold the minimum quantity of radioactive material that is necessary to carry out your activity.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR

This condition supports IAEA GSR part 3 requirements 1, 11, 15, 17 and 31.

It limits the generation of unnecessary radioactive waste by requiring you to only hold the minimum necessary to carry out your activity. It also supports the optimisation principle.

Guidance

Please note this only applies to radioactive material.

You may have radioactive material limits set out in your permit. SEPA views this as the maximum amount that can be lawfully held and would expect you to only hold the amount of

radioactive material that is necessary to carry out your activity at any time, which may be less than these limits.

Standard Condition

B.7.2 You must ensure that the quantity of radioactive substances you hold does not exceed any limits set out in your authorisation.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15, 17, 30, 31 and 32.

This condition gives force to any bespoke limits for holdings of radioactive material or waste set out in your authorisation.

Guidance

If no limits have been set for this in your permit, then there is no limit on the amount you can hold of either radioactive material or waste.

Standard Condition

B.7.3 You must transfer or dispose of radioactive waste as soon as reasonably practicable after it becomes waste.

Reason

This rule contributes towards compliance with paragraphs 20(e) and 23(d)(v), Schedule 8 of EASR and the UK policy framework for managing radioactive substances and nuclear decommissioning.

This condition supports IAEA GSR part 3 requirements 15, 17, 30 and 31.

The storage period for radioactive waste at the Authorised Place must be kept as short as reasonably practicable to minimise the risk of you losing control of the radioactive waste and potentially causing an unplanned exposure to a member of the public, harm to the environment or the generation of unnecessary radioactive waste.

Guidance

Wastes may be accumulated for decay storage, to meet certain conditions for disposal (e.g., tidal windows), pending arrangements for uplift by a contractor or if justified as BPM as part of the waste management plan for that waste (e.g., decommissioning waste).

SEPA recognises that there are economies of scale in accumulating sufficient radioactive waste to financially justify the cost of uplift and disposal. However, the long-term storage of radioactive waste without disposal or transfer, for example based on cost of disposal, is generally not acceptable.

There should be a presumption towards early solutions for all waste streams, although it is noted that early solutions do not necessarily mean early disposal. Longer term storage of waste (e.g., on the order of years) should be justified in writing as representing BPM and should be available for inspection by SEPA.

B.8 Waste management plan

Standard Condition

B.8.1 You must prepare, maintain, and implement a management plan for waste arising from your activities involving radioactive substances and the decommissioning of associated facilities and equipment.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR and the UK policy framework for managing radioactive substances and nuclear decommissioning.

This condition supports IAEA GSR part 3 requirements 15, 17 and 31.

This rule ensures that you have a plan for the management of all radioactive substances that may be present or be generated throughout the lifetime of carrying out your activities. It must also include radioactive waste generated as part of decommissioning when you are no longer carrying out the activities to reduce the potential for radioactive substances or contaminated items being abandoned.

Guidance

The waste management plan can be in either paper or electronic form and should be available for inspection by SEPA. It should be periodically reviewed and updated to reflect the status of all facilities and equipment associated with the radioactive substances.

For sealed source authorisations, the plan should cover, as a minimum, the disposal of all the sources and associated equipment (e.g., gauges, transport containers, etc.) when they come to the end of their useful life, or you cease carrying on your activities.

For non-nuclear authorisations, the plan should consist of, as a minimum, the disposal routes for all operational radioactive waste streams and the list of contaminated items currently being held on site.

For nuclear permits, the requirements for the waste management plan (WMP), supported by a site wide environmental safety case (SWESC), is set out in the joint agencies' document *"Management of radioactive waste from decommissioning nuclear sites: Guidance on Requirements for Release from Radioactive Substances Regulation, Version 1.0, July 2018"* available on our website.

For further information on decommissioning, see the IAEA Safety Standards document *"Decommissioning of Facilities (GSR Part 6)"*.

B.9 Lost and stolen radioactive substances

Standard Condition

B.9.1 If you believe that any radioactive substances have been lost or stolen, you must:

- a. immediately verify if this is the case.
- b. take all reasonably practicable measures to recover them; and
- c. inform the relevant police force and SEPA by telephone without delay.

Reason

This condition contributes towards compliance with paragraphs 20(h) and (j), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15, 17 and 32.

The longer the period that radioactive substances are in an uncontrolled state, the greater the risk of it potentially causing an unplanned exposure to a member of the public, harm to the environment or generating unnecessary radioactive waste. This condition ensure you verify that the radioactive substances are indeed missing, take all reasonably practicable measures to recover them and inform SEPA and the police so that we can take precautionary measures.

Guidance

It is difficult to demonstrate compliance with this condition unless an event of this nature has occurred. SEPA expects you to have measures in place to respond to this type of event, many of which will be written down for other purposes (e.g., local rules).

The measures to recover the lost/stolen radioactive substances should be put into effect immediately when you have grounds for believing this may be the case. Your staff should have adequate training to initiate emergency procedures in these circumstances and be empowered to raise the alarm. You may need to also contact your RPA/RWA for further advice.

ONR is the lead regulator for any lost or stolen radioactive substances that remain on the nuclear site.

Contact details for SEPA can be found in Appendix 1.

B.10 Radioactive Waste Advisers

Standard Condition

- B.10.1 Except where your authorisation only relates to sealed sources, you must appoint, retain, and consult with suitable Radioactive Waste Advisers to advise on compliance with your authorisation, including but not limited to:
- a. Achieving and maintaining an optimal level of protection of the environment and the population.
 - b. Accepting into service adequate equipment and procedures for measuring or assessing exposure of members of the public and radioactive contamination of the environment.
 - c. Checking the effectiveness and maintenance of equipment for measuring or assessing exposure of members of the public and radioactive contamination of the environment; and
 - d. Ensuring the regular calibration of measuring instruments.

Reason

This condition contributes towards compliance with paragraph 20(d), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirement 15.

It establishes the requirement for you to have and consult with a certified Radioactive Waste Adviser in respect of the listed duties.

Standard Condition

- B.10.2 You must appoint the Radioactive Waste Adviser in writing and include the scope of advice they are required to give.

Reason

This condition contributes towards compliance with paragraph 20(d), Schedule 8 of EASR.

The appointment of an RWA must be formalised and include the scope of advice the RWA is required to give.

Guidance

The letter of appointment and any documentation detailing the scope of advice the RWA is required to give, if separate from the letter of appointment, should be available for inspection as demonstration of compliance with this condition.

C. Transfers of radioactive substances

C.1 Duty of care

Standard Condition

C.1.1 You must only transfer radioactive substances to a person who is legally entitled to manage them.

Reason

This condition contributes towards compliance with paragraphs 20(e) and 23(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15 and 17.

This condition establishes a Duty of Care system for the transfer of both radioactive material and radioactive waste to ensure that it remains under regulatory control and only goes to an authorised person.

Guidance

Within the UK, this will usually be the holding of an authorisation under EASR18 (Scotland), a permit under EPR16 (England or Wales) or a registration / authorisation under RSA93 (Northern Ireland).

For receiving sites outside of the UK, there may not be a comparable licensing system. In these circumstances, you must take all reasonably practicable measures to satisfy yourself that the receiving site has all the permissions required by that country for the receipt and management of the radioactive substance.

Sealed sources can also be returned to the manufacturer or to the supplier.

The regulation of the transportation of radioactive waste falls outside of SEPA's remit. ONR is the regulator in relation to both road and rail transport, whilst the Civil Aviation Authority regulates transport by air and the Marine and Coast Guard Agency regulates the transport by sea. Carriage of dangerous goods, including radioactive substances, is regulated internationally

by agreements and European Directives, with biennial updates of the Directives to take account of technological advances.

C.2 Transfer procedure

Standard Condition

C.2.1 Before transferring any radioactive substances to another person, you must:

- a. Give to that person a true and accurate description of that substance, and
- b. confirm that that person agrees to receive them.

Reason

This condition supports IAEA GSR part 3 requirements 3, 29 and 32.

It helps to establish a Duty of Care system for both radioactive material and radioactive waste. It ensures that you can satisfy yourself that the receiving site has agreed to receive your material or waste, and you have received confirmation that the radioactive substances are acceptable for transfer before they have left the authorised place. The description you provide should form part of the transfer record set out in Schedule 1 of the standard conditions.

Guidance

Please note that disposing of radioactive waste in normal refuse (commonly referred to as Dustbin Disposal) is not a transfer and does not require prior agreement from the receiving site.

The transfer record is important in the event there is an incident in transporting the radioactive substances and in confirming the nature of it to the person transporting it as well as the person receiving it.

In addition to the radionuclide content and radioactivity of the material or waste, it may also be necessary to establish its non-radioactive properties, especially if these properties are hazardous.

The format of the transfer record can be either paper or electronic. The use of multi-page, carbonised consignment notes can facilitate this requirement, although their use is not mandatory. Blank copies of the records may also be provided by the person receiving the waste (or his carrier) to facilitate the transfer.

SEPA expects that confirmation that the person agrees to receive the radioactive substance(s) is in writing.

Standard Condition

C.2.2 You must ensure that you receive a receipt from the person removing the radioactive substances from the authorised place.

Reason

This condition supports IAEA GSR part 3 requirements 3 and 29.

It helps to establish a Duty of Care system for both radioactive material and radioactive waste. It ensures that you receive a receipt on transfer of the radioactive substances.

Guidance

The receipt from the person removing the radioactive substances does not have to include the transfer record. SEPA expects the receipt to contain, as a minimum, the date and time of transfer, name of the organisation removing the radioactive substances and sufficient information to identify the consignment.

Standard Condition

C.2.3 As soon as reasonably practicable following transfer, you must obtain written confirmation from the person that the radioactive substances have been received.

Reason

This condition supports IAEA GSR part 3 requirements 3 and 29.

It helps to establish a Duty of Care system for both radioactive material and radioactive waste. It ensures that you receive written confirmation that the radioactive substances have arrived at their destination.

Guidance

For clarity, the date that the radioactive substance is delivered to the receiving facility may not be the same as the date upon which it accepts it. The receiving person may delay officially accepting the radioactive substance on to his premises until such time as he confirms that his requirements (e.g., Waste Acceptance Criteria) have been met.

The confirmatory documentation for waste may consist of the completed consignment note or some other form of documentation (e.g., Certificate of Destruction). It can be in either paper or electronic form.

The confirmatory documentation should be received by you within a reasonable time of the radioactive substances being received. If not, it is your responsibility to follow this up with the receiving person. If there is a significant delay between the delivery and acceptance, you should obtain confirmation that the radioactive substance has been delivered (e.g., completed consignment note, email) in addition to any confirmation that it has been accepted.

Standard Condition

- C.2.4 Following transfer, you must ensure that the radioactive substances will be returned without delay to the authorised place if:
- a. they are not in accordance with the description that you have provided; or
 - b. cannot be delivered for any reason.

Reason

This condition supports IAEA GSR part 3 requirements 3 and 29.

It helps to establish a Duty of Care system for both radioactive material and radioactive waste. In effect, it authorises you to receive your transferred waste back at the authorised place.

Guidance

This requirement relates to situations where the radioactive substances cannot be delivered to the receiving person or where they have been delivered but subsequently a problem arises with it. You will continue to retain responsibility for the radioactive substances consignment until a receipt has been obtained from the receiving person acknowledging that he has formally accepted it.

There may be situations where the return of the radioactive substances to your site may not be the optimised solution (e.g., if a consignment becomes damaged). If so, contact SEPA immediately.

It is difficult to demonstrate compliance with this condition unless an event of this nature has occurred. SEPA expects you to have measures in place to respond to this type of event, many of which will be written down for other purposes (e.g., local rules), and this can be used as demonstration of compliance.

C.3 Transfer of radioactive waste**Standard Condition**

C.3.1 You must not transfer radioactive waste to any person unless the transfer represents the best practicable means for the management of that type of waste.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR, as well as the UK policy framework for managing radioactive substances and nuclear decommissioning.

This condition supports IAEA GSR part 3 requirements 1, 11, 15, 29 and 31.

It ensures that the optimisation principle is expressly included in transfers of radioactive waste.

Guidance

Further guidance on BPM can be obtained in the document *Satisfying the optimisation requirement and the Role of Best Practicable Means*", available from our website:

Standard Condition

C.3.2 You must inform SEPA in advance if you intend to transfer radioactive waste to a person to whom you have not previously sent radioactive waste by providing the information within the specified timescales set out in the relevant section of Schedule 3 of these standard conditions.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR

This condition supports IAEA GSR part 3 requirements 17 and 32.

This condition provides transparency to SEPA and the public when you decide to use a new disposal route. It allows SEPA an opportunity to intervene at an early stage if there is an issue with the proposed receiving site.

Guidance

There is no requirement for SEPA to approve the use of a new transfer route nor to respond to this provision of information. If SEPA does not respond, we have not approved the transfer or accepted that the transfer is optimised.

C.4 Transfer of radioactive waste outside of the United Kingdom

Standard Condition

C.4.1 Except for sealed sources, you must not transfer radioactive waste to a person outside of the United Kingdom unless:

- a. the purpose of the transfer is treatment of the radioactive waste; and
- b. any waste following treatment is returned in accordance with Government Policy.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR and supports the UK Policy on the export of radioactive waste and Scotland's Higher Activity Waste Policy.

This condition supports IAEA GSR part 3 requirements 29 and 31.

This condition authorises the transfer of all classifications of radioactive waste to facilities outside the UK, but only for the purposes of treatment, as well as authorising the return of any waste in accordance with applicable Government policy.

Guidance

SEPA recognises that some forms of treatment may not be available in the UK. This condition enables you to make use of these treatment facilities. Please note that you are still obligated to comply with all applicable Transfrontier shipment regulations (e.g., the Transfrontier Shipment of

Radioactive Waste and Spent Fuel (EU Exit) Regulations 2019, International Waste Shipments (Amendment)(EU Exit) Regulations 2019).

There are forms available from SEPA on request which can be completed to detail how you intend to comply with Government Policy.

It may not be necessary to return any treated radioactive waste/residues to you. It may be allowed to be disposed of in that country. This is a matter for the competent authorities in the receiving country to determine.

If the waste to be transferred is ILW, it will be necessary for you to also comply with the requirements of Scotland's Higher Activity Waste Policy (HAW Policy). Further guidance on the HAW Policy can be found on the Scottish Government's website. It is recommended that you contact SEPA in relation to ILW transfers.

C.5 Transfer of intermediate level radioactive waste to other parts of the United Kingdom

Standard Condition

C.5.1 You must not transfer intermediate level radioactive waste to a person in the UK outside Scotland unless:

- a. the purpose of the transfer is treatment of the radioactive waste; and
- b. any intermediate level waste remaining following treatment is returned in accordance with Government Policy.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR and supports Scotland's Higher Activity Waste Policy.

This condition supports IAEA GSR part 3 requirements 29 and 31.

It authorises the transfer of ILW to other parts of the UK provided the transfer meets the requirements that the purpose is for treatment and that any remaining ILW is returned in accordance with Government Policy.

Guidance

Further guidance on the HAW Policy can be found on the Scottish Government's website. For example, the Higher Activity Waste Policy does not extend to sealed sources and therefore they do not need to be returned.

C.6 Return of radioactive waste

Standard Condition

C.6.1 You must ensure that any waste that is required to be returned by your authorisation is:

- a. returned to the authorised place; or
- b. in the case of low-level radioactive waste, taken to another person in the United Kingdom who is legally entitled to receive and manage that waste, or
- c. in the case of intermediate level radioactive waste, taken to another person in Scotland who is legally entitled to receive and manage that waste.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR.

This condition supports Scotland's Higher Activity Waste Policy and the UK policy framework for managing radioactive substances and nuclear decommissioning.

This condition supports IAEA GSR part 3 requirements 15 and 17.

It provides clarity and operational flexibility regarding the places where different classifications of radioactive waste may be returned.

Guidance

“Return” relates to both non-delivery of the consignment (e.g., closure of the receiving site) as well as return of waste following treatment elsewhere. An element of flexibility has been introduced to allow for the differences in the TFS Regulations, the HAW Policy in those circumstances where it could be more environmentally beneficial to transfer the waste to a third party closer to the place where the returned waste is starting its journey than the authorised place.

Returning radioactive waste to an offshore installation where it will be disposed of to sea is prohibited by the London Dumping Convention.

Standard Condition

C.6.2 You must ensure that before any radioactive waste is returned, the radionuclide content and activities have been determined.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR.

This condition supports Scotland’s Higher Activity Waste Policy and the UK policy framework for managing radioactive substances and nuclear decommissioning.

This condition supports IAEA GSR part 3 requirements 14, 15 and 32.

It ensures that radioactive waste is characterised before returning it to demonstrate that no unexpected radionuclides or extra radioactivity has appeared. This is particularly important in cases where a substitute waste is being returned following treatment.

Guidance

In cases where radioactive waste is being returned because of non-delivery to the intended receiving site, there is no need to re-characterise the waste. The information on the transfer record will be sufficient.

Regarding the return of treated radioactive waste, you should be able to demonstrate that the treatment has not resulted in unexpected radionuclides (except those due to radioactive decay) or increased radioactivity appearing in the waste.

This characterisation provides the baseline information to be used in all transfer documentation, and SEPA expects that you (and by extension, the treatment facility) will have appropriate methods to provide sufficient transparency, including, where practicable to do so, certification or accreditation to appropriate national or international standards.

Standard Condition

C.6.3 You must ensure that any radioactive waste returned:

- a. only contains the radionuclides that were present at the time of transfer from the authorised place (except for those present as a result of radioactive decay); and
- b. has an activity no greater than that at the time of transfer from the authorised place.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR.

This condition supports Scotland's Higher Activity Waste Policy and the UK policy framework for managing radioactive substances and nuclear decommissioning.

This condition supports IAEA GSR part 3 requirements 14, 15 and 32.

It ensures that no other radionuclides or greater activity has been introduced into any treated radioactive waste being returned.

Guidance

The radioactive waste will have been characterised by you before it was transferred. Allowance has been made for the introduction of "new" radionuclides due to radioactive decay.

C.7 Transfer of samples

Standard Condition

C.7.1 You must not transfer samples of radioactive substances unless the quantity sent is the minimum practicable necessary to carry out the planned tests.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR

This condition supports IAEA GSR part 3 requirements 15 and 17.

It specifically authorises the despatch of samples containing or contaminated by radioactive substances, provided it is the minimum practicable quantity.

Guidance

SEPA does not define “sample” or specify any kind of limit on the volume, activity, type of radionuclide, etc. that can be transferred as a sample. Instead, it is left to you to make the case that the quantity being dispatched is the minimum practicable necessary.

It should also be pointed out that the “testing” referred to in the rule does not necessarily mean radioactive testing or analysis. For example, radioactively contaminated components may be sent away for mechanical testing.

However, SEPA will not tolerate the abuse of this rule to facilitate sham disposal of a radioactive waste that would be otherwise prevented from being transferred by the authorisation.

Standard Condition

C.7.2 On completion of testing, any remaining samples and waste arisings may be returned to the authorised place.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirement 15.

It specifically authorises the return of samples containing or contaminated by radioactive substances and any residues resulting from the testing to the authorised place. The receipt of waste in the form of samples is allowed without the need for it to be specifically authorised in your permit or registration.

Guidance

Returning radioactive samples to an offshore installation where it will be disposed of to sea is prohibited by the London Dumping Convention.

D. Sealed Sources

D.1 Holdings of sealed sources

Standard Condition

D.1.1 Unless your authorisation allows otherwise, you must ensure that the aggregate activity of all sealed sources that you hold, excluding any HASS, does not exceed IAEA category 3.

Reason

This condition supports IAEA GSR part 3 requirements 17 and 29.

It establishes a generic rather than bespoke limit for non-HASS. Unless the source is HASS, the only difference in the authorisation is the level of security required.

Guidance

SEPA does not set limits on the activities, radionuclides, or numbers of non-HASS that you may hold. You must be able to calculate the A/D values for these sources and ensure that they remain below the top of IAEA Category 3.

Further information on the IAEA categories can be found on IAEA website.

Further information on the determination of source types can be found in the SEPA document *Guidance on calculating source category for sealed radioactive sources*.

If you believe that the aggregate activity of your sources may exceed IAEA category 3 for brief periods during a source changeover you are advised to contact SEPA to discuss a potential variation to your authorisation.

D.2 Security requirements for sealed sources

Standard Condition

D.2.1 You must have and implement security measures in accordance with the document “Security Requirements for Radioactive Sources”, dated 2024.

Reason

This condition contributes towards compliance with paragraph 20(m), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15, 17, 30 and 32.

This rule supports the IAEA Code of Conduct of the Safety and Security of Radioactive Sources.

Sealed sources in categories 1-4 will generally require higher security measures. This condition references the requirements set out in the police CTSA document. This allows security measures to adapt to changing circumstances without the need to vary authorisations. It also ensures that only people with legitimate reasons have knowledge of those requirements.

Guidance

The security measures will be regulated via the Authorisation. However, because SEPA is not competent to assess security, we will consult with the police CTSA on the adequacy of security measures at the Authorised Place. CTSA will base security requirements on their own documentation; this documentation cannot be made freely available to the public or published electronically. The documentation will be provided by CTSA to those who have a legitimate requirement for it in connection with their work; this includes you, SEPA inspection officers and other professionals such as architects and builders who need to know what standards need to be applied to construction of new premises or refurbishment of existing premises where it is planned to keep or use radioactive sources.

Further guidance on security issues is available in a suite of documents published by the NPSA which can be obtained from their website.

Standard Condition

D.2.2 You must implement, maintain, and review a security plan.

Reason

This condition contributes towards compliance with paragraph 20(m), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 17, 30 and 32.

This condition supports the IAEA Code of Conduct of the Safety and Security of Radioactive Sources.

You must write down your security measures in a security plan. This document will help to demonstrate that the sealed sources are being held securely.

Guidance

SEPA expects that you will draft and maintain a written security plan that describes how security measures will be implemented. A template for a generic Security Plan and further advice can be obtained from the CTSAs.

SEPA also expects that the security plan will be regularly reviewed you and the reviews will be recorded as demonstration of compliance. If a review indicates that the security measures should be upgraded or enhanced, we also expect that the identified improvements will be carried out as soon as reasonably practicable.

CTSAs will be able to advise on the level of threat and the suitability of specific security. In addition, further guidance on security issues is available from NPSA which can be obtained from their website.

E. High Activity Sealed Sources (HASS)

E.1 Financial provision

Standard Condition

E.1.1 You must ensure that you have made and maintain adequate, valid, and useable financial provision for the management of each HASS including when they become waste.

Reason

This condition contributes towards compliance with paragraph 23(d)vii), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15 and 17.

You are required to have in place adequate financial provision for HASS to cover the costs of disposal when they are no longer in use to ensure that HASS are not abandoned, disposed of illegally or otherwise become orphan sources.

Guidance

Financial provision will usually be approved by SEPA when an application for a HASS permit is made. However, appropriate financial provision needs to be in place at all times that you are responsible for the HASS, not just once the HASS becomes a disused source. It is strongly recommended that you regularly review your financial provision to ensure that the amounts of money provided remains adequate for the safe management of HASS Authorised Sources when they become a disused source.

You should inform SEPA of any proposed changes to the type of financial provision or its value as soon as reasonably practicable before the changes occurs.

E.2 HASS information and marking requirements

Standard Condition

E.2.1 You must ensure that each HASS is accompanied at all times by:

- a. written information which confirms that each HASS is identified and marked with a unique number; and
- b. photographs of the HASS, source container, transport packaging, device, and equipment as appropriate.

Reason

This condition contributes towards compliance with paragraphs 23(d)(vii) and 24(d), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15 and 17.

It ensures that you keep sufficient written information, including photographs, to identify the HASS as well as any associated equipment. This information will be particularly useful if the HASS is lost or stolen.

Guidance

Photographs do not need to be of the specific source, and you must not endanger your safety by exposing yourself to unnecessary radiation doses to obtain photographs of unshielded sources.

It is recommended that information about the HASS is gathered into a single file and kept securely as both a hard copy and an electronic file. This file should include information enabling the positive identification of the HASS, such as any wording on the device, size, weight, serial number, and photographs.

F. Mobile radioactive sources

Standard Condition

F.1.1 When not in storage or in transit, you must ensure the mobile radioactive sources are under continuous supervision by a suitably trained and experienced person.

Reason

This condition contributes towards compliance with paragraphs 20(e) and 20(m), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15, 17 and 32.

Due to their nature, mobile radioactive sources may go to places where you do not have full control over the access arrangements. In these circumstances, it is critical that these sources are kept under continuous supervision to prevent unauthorised access to and potential removal, loss, or theft of the sources.

Guidance

Supervision does not necessarily mean having the source in direct sight. It is possible to use CCTV equipment to maintain appropriate supervision. In addition, if there are only a limited number of access points to the source which is out of direct sight, and these access points are manned by suitably trained individuals or locked with limited access to keys/access codes/swipe cards/etc., this requirement will be satisfied.

“Suitably trained” is someone who understands the consequences of the unauthorised removal, loss, or theft of the source. This person also understands the local arrangements to keep the source safe, the extent of those arrangements and what to do if those arrangements have not been followed, there has been unauthorised access or removal of the source or if it has been lost or stolen.

Standard Condition

- F.1.2 You must inform SEPA of the following circumstances by providing the information within the specified timescales set out in the relevant section of Schedule 3 of these standard conditions:
- a. If you change the location where mobile radioactive sources are normally kept.
 - b. If you intend to keep mobile radioactive sources at a place other than where they are normally kept for a period exceeding four months.
 - c. If you intend to bring a mobile radioactive source normally kept outside Scotland into Scotland.

Reason

This condition contributes towards compliance with paragraphs 20(e) and 20(m), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15, 17 and 32.

An “authorised place” has not been defined for authorisations for Mobile Radioactive Sources as it is recognised that authorised Mobile Radioactive Sources have been designed or adapted for being transported from place to place. Whilst it does not need to appear in the authorisation, SEPA still needs to know where the authorised Mobile Radioactive Sources are normally kept, and if that location changes, to maintain regulatory control.

Guidance

The initial place where the authorised Mobile Radioactive Sources will be normally kept will be established during the application determination period. Thereafter, SEPA must be informed of any changes as soon as reasonably practicably before the movement takes place.

Normally, SEPA would seek to inspect the place where the authorised Mobile Radioactive Sources are normally kept if that location is in Scotland. However, in cases where it is to remain at another location for four months or more, there may be a higher risk to the security of the

authorised Mobile Radioactive Sources, and the security arrangements may need to be verified as being appropriate.

In the case of Mobile Radioactive Sources which are also sealed sources, we will also contact the CTSAs to alert them to the proposed change. We may carry out a joint inspection of the premises where the authorised Mobile Radioactive Sources will be kept.

This requirement to inform SEPA if you bring the source into Scotland does not apply to authorised Mobile Radioactive Sources that are normally kept in Scotland, including offshore parts of Scotland.

The written confirmation should be sent to SEPA as detailed in Appendix 1 of this guidance.

G. Disposal of radioactive waste

G.1 Generic disposal requirements

Standard Condition

G.1.1 You must not dispose of any radioactive waste that is not described in your authorisation.

Reason

This condition contributes towards compliance with paragraphs 20(e) and 21(1)(a), Schedule 8 of EASR

This condition supports IAEA GSR part 3 requirements 15, 29 and 31.

This condition gives force to any specified wastes and destinations set out in the authorisation. The disposal of unauthorised waste may result in an unplanned exposure of a member of the public or harm to the environment.

Guidance

If no waste has been specified in your authorisation, and it is not covered by another standard condition (e.g., disposal with normal refuse), you are not authorised to dispose of any waste, except by transfer to another authorised person.

Standard Condition

G.1.2 You must ensure that any radioactive waste you dispose of is only disposed of in the manner described in your authorisation.

Reason

This condition contributes towards compliance with paragraphs 20(e) and 21(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15, 29, 31 and 32.

This condition gives force to the authorisation. The disposal of waste via an unauthorised route may result in an unplanned exposure of a member of the public or harm to the environment.

Guidance

No further specific guidance is provided.

Standard Condition

G.1.3 You must ensure that the quantity of radioactive waste you dispose of does not exceed any limits set out in your authorisation.

Reason

This condition contributes towards compliance with paragraphs 20(e) and 21(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 12, 15, 29, 31 and 32.

This condition gives force to any limits set out in the authorisation. Exceeding any specified limit may result in an unplanned exposure of a member of the public or harm to the environment.

Guidance

No further specific guidance is provided.

Standard Condition

G.1.4 You must use the best practicable means to minimise the quantity of radionuclides that are discharged.

Reason

This condition contributes towards compliance with paragraph 20(c)(i), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 1, 11, 15, 29 and 30.

Where radioactive waste production cannot be avoided, BPM must be used to minimise the activity and volume of the radioactive waste generated. Waste reduction is an important step in radioactive waste management and controlling potential risk of an unplanned exposure to a member of the public or harm to the environment.

Guidance

This is the second underpinning rule of optimisation.

For further guidance on optimisation, please see the SEPA document “*Satisfying the optimisation requirement and the role of Best Practicable Means*”, available from our website.

Standard Condition

G.1.5 You must use the best practicable means to dispose of radioactive waste in a manner that minimises public exposure and impact on the environment.

Reason

This condition contributes towards compliance with paragraph 20(c)(i), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 1, 11, 15, 29, 30 and 31.

It places the general BPM requirements directly on the disposal routes and radioactive waste types set out in the authorisation. It also specifically states that the radiological effects of concern to the authorisation are those to members of the public and to the environment.

Guidance

For further guidance on optimisation, please see the SEPA document “*Satisfying the optimisation requirement and the role of Best Practicable Means*”, available from our website.

G.2 Evaluation of releases

Standard Condition

G.2.1 You must evaluate the quantity of radionuclides discharged into the environment.

Reason

This condition contributes towards compliance with paragraph 22(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 9, 13, 30, 31 and 32.

This has several purposes including allowing you to satisfy your discharge reporting requirements and also allowing you to maintain your assessment of public and environmental exposures, if you are required to do this.

Guidance

This condition requires you to understand the radioactive characteristics of the waste that you are discharging, specifically the radionuclides being discharged and the quantities of those radionuclides. This has several purposes including allowing you to satisfy your discharge reporting requirements and also allowing you to maintain your assessment of public and environmental exposures, if you are required to do this. It is accepted that in some circumstances it may not be practicable determine the quantity of every single radionuclide being discharged. In such cases, we would expect that as a minimum you evaluate the quantity (i.e., activity) of any radionuclide or group of radionuclides that are limited. For nuclear sites additional guidance is available in Radiological Monitoring Technical Guidance Note 1 (TGN1)

By “evaluate”, SEPA includes monitoring and calculation. The most appropriate method for evaluating will be optimised. It is up to you to decide and justify the chosen method. SEPA expects this decision to be written down and available for inspection.

G.3 Disposal in normal refuse

Standard Condition

G.3.1 You are authorised to dispose of solid radioactive waste in normal refuse provided that:

- a. No single item has an activity exceeding 400 kBq for tritium and C-14 or 40 kBq for all other radionuclides.
- b. The total activity in 0.1 m³ of normal refuse does not exceed 4 MBq for tritium and C-14 or 400 kBq for all other radionuclides.
- c. The total activity disposed of in a year does not exceed 2 GBq for tritium and C-14 and 200 MBq for all other radionuclides; and
- d. Where practicable, any marking or labelling that indicates the waste is radioactive is removed prior to disposal.

Reason

This condition supports IAEA GSR part 3 Requirement 8.

This is a replacement for the “disposal of low volumes of solid radioactive waste” exemption contained in the Radioactive Substances Exemption (Scotland) Order 2011. It is reproduced as a standard condition to allow it to be used in conjunction with a permit or registration.

Guidance

The values presented are supported by radiological impact assessments which demonstrate that the relevant dose criteria are unlikely to be breached under all foreseeable circumstances.

The radiological impact assessments that underpin this disposal route assume that these wastes follow the “normal” route for disposal of conventional waste to a landfill or an incinerator, via (in many cases) a sorting, recovery or pre-treatment step and are co-disposed with substantial quantities of non-radioactive waste. The assessment is based on known common practice:

- A waste producer, at the point of origin, places waste in a container such that the radioactive content is no more than the concentration limits set out in the standard condition.
- A batch of such wastes is dispatched to a waste management company.
- The receiver of the waste- the waste management company- disposes of the batch to a landfill or incinerator, possibly following a sorting step.
- The waste management company disposes of several batches of non-radioactive waste immediately prior to, and again after, the disposal of the radioactive batch.

If this is not the case, and the waste is disposed of to a facility where dilution by co-disposal as described above is not expected to take place, then this condition does not apply.

The 0.1 m³ volume limit is the approximate volume of a normal refuse bin.

There are persons who receive radioactive waste (premises used for management of wastes which are not radioactive) for burial on land or incineration but who may be unaware of the presence of very low concentrations of radioactivity or trivial strength sources in the normal refuse. The principle here is that, to meet the relevant criterion for safety, conditions are applied to the waste producer and not to the waste disposer. Further controls are not necessary when the waste has left the premises where it arose.

G.4 Radioactive aqueous liquid disposals - small quantities

Standard Condition

G.4.1 You are authorised to dispose of radioactive aqueous liquid waste to a relevant sewer, relevant river or the sea provided that:

- a. The radionuclide concentration does not exceed 100 Bq/ml; and
- b. The total activity disposed of in 1 year does not exceed:
 - i. 100 MBq for the sum of the following radionuclides: H-3, C-11, C-14, F-18, P-32, P-33, S-35, Ca-45, Cr-51, Fe-55, Ga-67, Sr-89, Y-90, Tc-99m, In-111, I-123, I-125, I-131, Sm-153, Tl-201; or
 - ii. 1 MBq for the sum of all other radionuclides.

Reason

This condition supports IAEA GSR part 3 Requirement 8.

This is a replacement for the “disposal of low concentration aqueous radioactive waste to sewer, river or sea” exemption contained in the Radioactive Substances Exemption (Scotland) Order 2011. It is reproduced as a standard condition to allow it to be used in conjunction with a permit or registration and provides a generic limit for these types of discharges.

Guidance

A “relevant sewer” is defined as a sewage works with a capacity $> 100\text{m}^3$ of effluent/day. A “relevant river” is defined as a watercourse with a flowrate $> 1\text{m}^3/\text{second}$.

Disposals may also be made to a person who is permitted to receive such waste (e.g., by tanker).

The radiological impact assessments are based on small scale disposals. Other pathways to human dose (for instance, disposal to a soakaway or into static water such as lochs) are not covered by the impact assessment.

Aqueous liquid waste can include entrained solids or suspensions, provided that all practical measures have been used to attempt to remove such solid suspensions from the waste stream prior to disposal.

G.5 Radioactive gaseous releases - small quantities

Standard Condition

G.5.1 You are authorised to dispose of radioactive gaseous waste provided that:

- a. it consists only of fugitive releases from a container; and
- b. it is dispersed from a building in such a way that it does not enter or re-enter a building.

Reason

This condition supports IAEA GSR part 3 Requirement 8.

This is a replacement for the “disposal of gaseous radioactive waste” exemption contained in the Radioactive Substances Exemption (Scotland) Order 2011. It is reproduced as a standard condition to allow it to be used in conjunction with a permit or registration.

Guidance

This condition covers the situation where containers of liquids or solids are opened, and the release of a small quantity of gas or vapour cannot be avoided. The condition does not apply if the gas or vapour arises because of a process (for example, deliberate heating) has been applied to the contained radioactive substance. It does not cover any loss of gas or vapour after the liquid or solid has been dispensed.

Gaseous waste streams may contain solid particulates or liquids in aerosol form. Provided that all practical measures have been used to attempt to fully remove such solid and liquid components from the gaseous waste stream, such particulates or aerosols may be treated as an integral part of the gaseous waste stream.

H. Further conditions for permits with bespoke disposal conditions

H.1 Assessment of public exposure and the environment

Standard Condition

H.1.1 You must carry out and maintain an assessment of public exposure and the impact on the environment resulting from your disposals.

Reason

This condition contributes towards compliance with paragraph 22(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 9, 13, 30, 31 and 32.

You must carry out and maintain this assessment to demonstrate there is not an unauthorised exposure of a member of the public or harm to the environment resulting from your disposals.

Guidance

Usually, you will have carried out an assessment when you applied for authorisation. SEPA expects this assessment to be maintained throughout the life of the authorisation.

Some assessments may be generic and used to underpin other standard conditions. In these circumstances, SEPA expects you to know when this is the case, although you will not usually need to keep a copy of the generic assessment.

For disposals on nuclear sites, SEPA expects this requirement to be satisfied by maintaining the SWESC as set out in the document *Management of radioactive waste from decommissioning of nuclear sites: Guidance on Requirements for Release from Radioactive Substances Regulation (GRR)*,", available on our website.

H.2 Radioactive gaseous discharges outwith authorised outlets

Standard Condition

H.2.1 You must discharge radioactive gaseous waste from an authorised gaseous outlet unless you can:

- a. Demonstrate that directing the discharge to an authorised gaseous outlet is not the best practicable means; and
- b. Ensure that you will not exceed any relevant gaseous discharge limit.

Reason

This condition contributes towards compliance with paragraph 21(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 1, 11 and 31.

Even if you have specified gaseous discharge limits and authorised gaseous outlets in your authorisation, circumstances may arise where it may not be practical to use these outlets. This condition allows those circumstances to be accommodated, subject to the discharge being BPM and within your authorised gaseous limits, without the need to vary your authorisation.

Guidance

SEPA expects that radioactive gaseous discharges subject to limits will be discharged via authorised gaseous outlet(s). However, we recognise that in some situations it may not always be BPM to discharge via these outlets. SEPA expects you to write down the justification for not using an authorised gaseous outlet and be able to demonstrate that any gaseous emissions will not challenge any gaseous limit specified in your authorisation.

For further guidance on optimisation, please see the SEPA document “*Satisfying the optimisation requirement and the role of Best Practicable Means*” available from our website.

I. Introduction of radioactive material into organisms

Standard Condition

- I.1.1 You are authorised to introduce radioactive material into organisms that will leave the authorised place whilst containing that substance.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirement 29.

This condition specifically authorises you to introduce radioactive material into organisms that leave the authorised place if Section I is specified in your authorisation. This activity is essentially no different to the disposal of radioactive waste into the environment in that it can have the same risk of an unplanned exposure to a member of the public or harm to the environment.

Guidance

Organisms includes human patients as well as pets.

Standard Condition

- I.1.2 You must carry out and maintain an assessment of public exposure that will result as a consequence of allowing organisms to which radioactive substances have been administered, leave the authorised place.

Reason

This condition contributes towards compliance with paragraph 22(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 9, 13, 30, 31 and 32.

It replicates the requirement to carry out and maintain an assessment, as found under the disposal of radioactive waste, regarding the introduction of radioactive material into organisms.

You must carry out and maintain this assessment to demonstrate that there has not been an unplanned exposure of a member of the public, harm to the environment or the generation of unnecessary radioactive waste.

Guidance

You will have carried out an assessment when you applied for authorisation. SEPA expects this assessment to be maintained throughout the life of the authorisation.

Some assessments may be generic and used to underpin other standard conditions. In these circumstances, SEPA expects you to know when this is the case, although you will not usually need to keep a copy of the generic assessment.

Standard Condition

I.1.3 You must ensure that public exposure and any impact on the environment resulting from the introduction of radioactive material into organisms is minimised.

Reason

This condition contributes towards compliance with paragraph 20(c)(i), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 1, 11, 13, 15, 30, 31 and 32.

It ensures that the optimisation requirements associated with the disposal of radioactive waste are applied to the introduction of radioactive material into organisms.

You must minimise the radiological impact of the introduction of radioactive material into organisms that leave the authorised place so there is not an unplanned exposure of a member of the public or harm to the environment.

Guidance

SEPA considers this very similar to the optimisation principle for radioactive waste. For further guidance on optimisation, please refer to the SEPA document “*Satisfying the optimisation requirement and the role of Best Practicable Means*”, available from our website.

Standard Condition

I.1.4 You are authorised to receive radioactive wastes that have been generated beyond the authorised place which are the result of your introduction of radioactive material into organisms.

Reason

This condition contributes towards compliance with paragraph 20(e), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirement 15.

This condition specifically allows you to receive back any radioactive waste that has been generated as a consequence of your introduction of radioactive material into organisms once the organism has left the authorised place.

Guidance

This only applies to radioactive wastes that are generated as a consequence of your introduction of radioactive material into the organisms. Should you wish to receive other types of radioactive waste, it will need to be listed in your authorisation.

J. Environmental monitoring programme

Standard Condition

J.1.1 You must develop, implement, maintain, and review an environmental monitoring programme to monitor the levels of radioactivity in the environment and food caused by your radioactive waste disposals.

Reason

This condition contributes towards compliance with paragraph 22(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15, 30, 31 and 32.

It requires you to establish and operate a suitable environmental monitoring programme to demonstrate that your radioactive discharges have been optimised, and the radiological effects minimised.

Guidance

This requirement is goal setting and allows you to develop a suitable programme considering the types of radionuclides discharged, their activities, the scale of the discharge and its location in relation to sensitive receptors. It is not necessary for you to obtain prior approval of the programme from SEPA, but the programme will form part of the routine inspection associated with the authorisation.

It should be noted that you may take many more environmental samples and measurements in the vicinity of the authorised place than form part of this environmental monitoring programme. It is not required that all of this monitoring is included in the programme established under this condition, and SEPA accepts that the other monitoring may be undertaken for other purposes (e.g., public reassurance). Neither does SEPA expect that the programme must be completely new. In all cases where it is sensible to do so, SEPA would expect a single set of monitoring data to satisfy multiple purposes.

Further guidance on the planning and implementation of a routine environmental monitoring programme can be obtained in the joint guidance document “*Environmental radiological*

monitoring in Scotland – Radiological Monitoring Technical Guidance Note 2” available on our website.

Standard Condition

J.1.2 You must take appropriate samples and conduct appropriate measurements, tests, surveys, analyses, and calculation to periodically assess the effectiveness of the measures you have taken to minimise the radiological effects of your radioactive waste disposals.

Reason

This condition contributes towards compliance with paragraph 22(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 14 and 30.

It is your responsibility to actively take samples and carry out measurements et al as necessary to demonstrate compliance with the requirements of the environmental monitoring programme. Appropriate sampling et al demonstrates that your radioactive discharges have not resulted in an unplanned exposure of a member of the public or harm to the environment.

Guidance

You should have carried out an assessment to determine what sampling, measurement, tests, surveys, and calculations are needed to implement your environmental monitoring programme.

The number, frequency and type of sample, measurement, etc. is dependent on a variety of factors including the nature of the radioactive substances being disposed of and the manner in which it is disposed. It may also be necessary to consider the non-radioactive properties of the radioactive substances being disposed of, particularly if they are hazardous. SEPA expects that you will have received input from your RWA.

This information should be written down and included in the procedures relating to sampling, measurement etc. The results of all sampling, measurements etc. must be recorded and be available for inspection by SEPA.

Standard Condition

J.1.3 You must inform SEPA within the specified timescales of any intended change in the environmental monitoring programme in accordance with Schedule 3 of these standard conditions.

Reason

This condition contributes towards compliance with paragraph 21(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 31 and 32.

SEPA recognises that the environmental monitoring programme may need to change over time. This condition ensures that any changes to the programme are notified to SEPA with sufficient time for SEPA to consider the implications of the proposed changes.

Guidance

It is difficult to demonstrate compliance with this condition unless there has been a need to amend the environmental monitoring programme. SEPA expects you to have measures in place to that SEPA is informed, many of which will be written down for other purposes, and this can be used as demonstration of compliance.

The inability to obtain a data set due to unforeseen circumstances (e.g., no mussels available to sample) does **NOT** require SEPA to be informed. This requirement applies to planned changes to the environmental monitoring programme. However, if there is a planned temporary change to the programme (e.g., to cease beach monitoring at a specified beach until arrangements with the beach owner have been concluded), it still requires SEPA to be informed.

It is also acceptable to inform SEPA via email. The information should be sent to the SEPA address specified in Appendix 1 of this guidance.

K. Conditions applicable to offshore installation permits and registrations

Standard Condition

K.1.1 You are authorised to dispose of radioactive waste arising from the production of oil and gas, excluding any waste that has been sent to an offshore installation from land.

Reason

This condition contributes towards compliance with paragraphs 20(e) and 21(1)(a), Schedule 8 of EASR.

This condition supports the UK's obligations regarding the London Dumping Convention and OSPAR.

This condition supports IAEA GSR part 3 requirements 29 and 31.

The generic disposal limits have been assessed based on an assumed concentration of NORM in the produced water. If this threshold is exceeded, SEPA will need to carry out further, more detailed assessments to ensure that the disposals at these higher concentrations do not result in an unplanned exposure of a member of the public or harm to the environment.

Guidance

The exclusion of waste that has been sent to an offshore installation from land prevents waste which had been sent to land for disposal from being sent back offshore for disposal.

Standard Condition

K.1.2 The specified disposal route for radioactive waste is the system that you have provided for this purpose.

Reason

This condition contributes towards compliance with paragraphs 20(e) and 21(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15, 30 and 31.

This condition gives force to the authorisation by specifying the disposal system to be used in accordance with standard condition G.1.2. It allows you to designate the system(s) for offshore disposals to provide operational flexibility.

Guidance

SEPA expects that you will formally identify in writing which system(s) are to be used for offshore disposals of radioactive waste.

Standard Condition

K.1.3 You must not discharge radioactive waste at any place other than the authorised place.

Reason

This condition contributes towards compliance with paragraphs 20(e) and 21(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 15, 30 and 31.

This condition prevents radioactive waste stored in a support vessel from being discharged at any other location than the authorised place. The generic disposal limits are based on all disposals occurring at the authorised place.

Guidance

No further guidance is provided.

Standard Condition

K.1.4 If you have any reason to believe that the concentration of Ra-226 in produced water has exceeded 0.1 Bq/g of produced water, you must inform SEPA without delay in accordance with Schedule 3 of these standard conditions.

Reason

This condition contributes towards compliance with paragraph 21(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 16, 31 and 32.

The generic disposal limits have been assessed based on an assumed concentration of radium-226 in the produced water. If this threshold is exceeded, SEPA will need to carry out further, more detailed assessments to ensure that the disposals at these higher concentrations do not result in an unplanned exposure of a member of the public or harm to the environment.

Guidance

The contact details for SEPA are specified in Appendix 1 of this guidance.

Standard Condition

K.1.5 You must not in any year discharge radioactive waste arising from decontamination or cleaning operations in which the activity of any radionuclide exceeds the relevant limit set out in Table K-1.

Reason

This condition contributes towards compliance with paragraph 21(1)(a), Schedule 8 of EASR.

This condition supports IAEA GSR part 3 requirements 12, 14 and 32.

This condition gives force to Table K-1.

Guidance

The table does not contain all the radionuclides associated with NORM (e.g., U-238). However, SEPA believes the listed radionuclides are those of most concern and that other radionuclides will be in lesser concentrations and appear in general relation to the listed radionuclides. By limiting the listed radionuclides, SEPA is also controlling these other radionuclides.

If you have evidence to suggest that this assumption is not accurate, you must contact SEPA immediately.

Table K-1

Radionuclide	Annual Limit (GBq)
Radium-226	2
Radium-228	2
Lead-210	2
Polonium-210	2

Appendix 1: SEPA Contact Details

Telephone

If required to inform SEPA by telephone, you must use SEPA's Pollution Hotline on **0800 80 70 60**.

If you are informing SEPA by telephone and are physically located outside of Scotland, you must use the telephone number **01698 507 779**.

The use of either telephone number will connect the person making the call to SEPA's Customer Hub. All calls are formally logged and will be forwarded within SEPA to ensure that an appropriate response can be made. It is recommended that you inform SEPA using these numbers, even during the working day, since there is no guarantee that the SEPA officer who normally deals with the authorisation in question will be available.

Written Notifications & Confirmations

For informing SEPA or providing confirmation in writing required by your authorisation, unless specifically instructed by the SEPA officer dealing with the site or event, it is recommended that you emailed them to RSNotifications@sepa.org.uk. This will ensure that the information is received and acted upon in a reasonable timescale.

HASS Form Returns

For all submissions relating to HASS, you must use the HASS Record form, available from our website. You must send the form to:

Radioactive Substances Unit
SEPA
Angus Smith Building
6 Parklands Avenue
Eurocentral
Holytown

North Lanarkshire

ML1 4WQ

Data Returns

For all required data returns to SEPA (e.g., annual waste returns), you must send the required information to RSNotifications@sepa.org.uk. This will ensure that the return is logged and passed to the appropriate SEPA officer(s) for dealing with that return. Data return forms for radioactive waste, sealed sources and first-time transfers can be found on our [website](#).

If you would like this document in an accessible format, such as large print, audio recording or braille, please contact SEPA by emailing equalities@sepa.org.uk