

The Nuclear Safety and Security Online User Interface NSS-OUI platform

Learn by Do It Yourself (DIY)

How to find it?

Go to the IAEA Main page: <https://www.iaea.org>

Select Resources and then Safety Standards



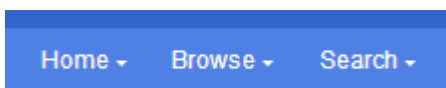
Then you find a direct link to NSS-OUI on the right hand side in “Related resources”. Click on it.

You can do the same by selecting Resources and then the Nuclear Security Series

You arrive to the NSS-OUI Welcome page with a link to the brochure on how to benefit from the system. Right-click on the link to open it in a new tab

There is also an “About page” that includes a link to a video demonstration of how to use the system (second paragraph)

Back on the Welcome page, you find two main functions on top: Browse and Search



These functions are all publicly available and there is no special need to be registered in Nucleus to access these. The browse functions makes you navigate from one publication or one part of a publication to the next relevant one, in a step by step approach. The search functions helps you finding all relevant publications or part of a publication for a specific topic and in a selecting context if you wish so.

Let’s start with Browse publications. It displays the list all publications in the hierarchical order, SF, GSR, SSR, GSG, SSG and the same for the NSS Series

There is a “radio” button to switch what you wish to appear on top of the list: the safety standards or the nuclear security series:

● **Display Safety Standards first** ● **Display Nuclear Security Series first**

In any list, clicking on a title provides a short description of the publication. For example scroll down and click on SSR-2/2 (Rev. 1). A box displays the objective of the publication.

Of course as we have many publications, you can search for specific terms like “waste” or “site” in the search window and click on search (This searches words in the titles of the publications):

Search Publications

In some cases, like “transport” you find publications in both series. If you search “vital area” then you find NSS-No. 16. Note that the number is also searchable. For example the famous guide on periodic safety review SSG-25. Just type SSG-25 in the search window:

Search Publications


SSG-25 : Periodic Safety Review for Nuclear Power Plants

Click back on browse publications to list again all.

Go to SSR-2/2 (Rev. 1) and there is an icon in the description box to open the whole publication:



Then you will see three parts in the window:

- The left part is the TOC. Hover over an item displays the complete title (note that there is a trick: if you go to the bottom of the TOC and select the last item then, you force downloading the whole file)
- The middle part is the text of the publication in black characters and Relationship notes in blue for relations with the safety standards or security guidance or in olive for relations with other categories of publications
- The right part is the space for the feedback interface. This is explained at the end of this note and is reserved for authorized users.

Read a part of SSR-2/2 (Rev. 1) and then find the relevant guides sometimes very detailed like below § 4.32:

i See also:

NS-G-2.4 The Operating Organization for Nuclear Power Plants, para. 5.12 to 5.16

NS-G-2.14 Conduct of Operations at Nuclear Power Plants, para.5.21 to 5.25 and 7.15 to 7.17

You may copy/paste the pub number back in the browse publications page to search for it and open it like NS-G-2.14:

Search Publications

Back to SSR-2/2 (Rev. 1). At the very bottom of the page you find some links:

 [Print page](#)  [Publication page](#)

- Print page will print the html version and the relationship blue and olive notes
- Publication page will lead you to the actual publication and translations if available

For documents that are superseded, like NS-G-1.1, the access will be kept, using the publication page button although the text of NS-G-1.1 is not any more accessible with NSS-OUI (because we don't want it to be again searchable as it is superseded). We also indicate that it is relevant now to read SSG-39 and provide a link to it.

NS-G-1.1

Software for Computer Based Systems Important to Safety in Nuclear Power Plants

1. Introduction

i This safety guide is now revised and issued as SSG-39 on Design of Instrumentation and Control Systems for Nuclear Power Plants

You may access SSG-39 [here](#)

 [Go back](#)  [Toggle full-screen mode](#)  [Print page](#)  [Publication page](#)

There are two interesting other cases:

- 1) GSR Part 7. Not only it provides information on the relevant guide GS-G-2.1 and GSG-2. But also like for the requirement 2, links to the EPR manuals, like EPR-Public Communication: Just right-click on the link to open it in a new tab

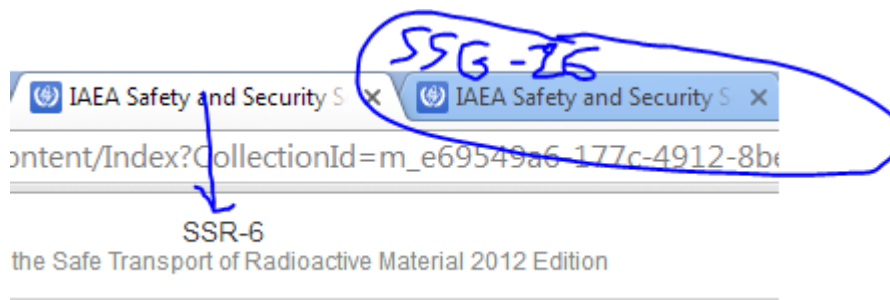
- 2) SSR-6 for the transport regulation: Download all first. The Advisory Material accompanying guide SSG-26 provides specific guidance for specific paragraphs of SSR-6. Also SSG-26 is a very long file with 450 pages. So we have decided to insert hyperlinks to facilitate the navigation from SSR-6 to SSG-26. For example § 307 on compliance assurance. This links directly to the content of SSG-26 at the right place.

Compliance Assurance

307. The *competent authority* shall assure compliance with these Regulations.

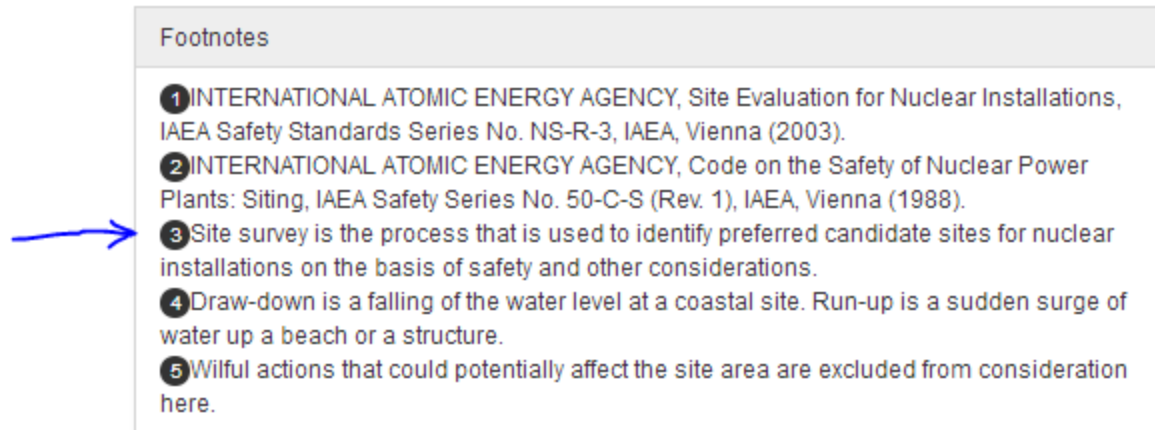
[SSG-26 recommendations available here](#)

When you click on this link you arrive directly in the section 3 of SSG-26 and straight at the relevant parts with para. 307.1 to 307.9. As this opens in a new tab, selecting back the tab for SSR-6 leads you back to the Requirements publication.

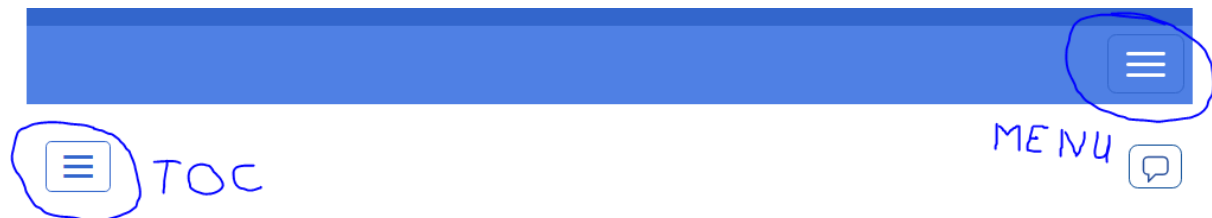


How to use the footnotes ? They are indeed hyperlinks that work both way. Open NS-R-3 (Rev.1) and see the scope. The footnote 3 lead to the end of the page with the corresponding text. Clicking again on the number three leads you back to the text.

1.8. The siting process for a nuclear installation generally consists of an investigation of a large region to select one or more candidate sites (site survey)³, followed by a detailed evaluation of those candidate sites. This publication is primarily concerned with the latter stage.



What means responsive design: Different display for tablets and smartphones, with “hamburger”.
Hamburger for the Menu and TOC. Try it by requesting a zoom +125%:



NS-R-3 (Rev. 1)
Site Evaluation for Nuclear Installations

THAT'S FOR THE FIRST NAVIGATION MODE. LET'S NOW SEE THE SECOND MODE:

Browse Overarching Requirements.

You access the suite of Overarching Requirements available in GSRs followed by SSRs.

Clicking on one title opens a box providing the bold shall statement of the selected overarching requirements, like req 4 of GSR Part 1 (Rev. 1) on independence of the regulatory body. Then clicking on the icon  leads you directly inside GSR Part 1 (Rev. 1) straight at the place of that requirement.

As there are many OR, the titles and the bold shall statements are searchable, using the search window at the top of the list:

For example, search “ageing”:

Search Overarching Requirements (ORs)

SSR 2/1 (Rev. 1) Requirement 31: Ageing management	▼
SSR-2/2 (Rev.1) Requirement 14: Ageing management	▼
SSR-3 Requirement 37: Design for ageing management	▼
SSR-3 Requirement 86: Ageing management	▼

You may then choose the req. 14 of SSR-2/2 (Rev. 1). Click on it and open it with the  icon. This leads you straight to the requirement 14 and associated requirements and then it tells you that the relevant guide is NS-G-2.12. You may then copy this number and paste it in the search window in the Browse publications page to access it.

Search Publications

 NS-G-2.12 : Ageing Management for Nuclear Power Plants

Go back to the Browse Overarching Requirements tab and search monitoring. You find several results and you see that this time it searches not only the titles but also the text of the bold shall statements.

Search Overarching Requirements (ORs)

monitoring

Search

GSR Part 1 (Rev. 1) Requirement 13: Provision of technical services	▲
The government shall make provision, where necessary, for technical services in relation to safety, such as services for personal dosimetry, environmental monitoring and the calibration of equipment. ↗	
GSR Part 2 Requirement 11: Management of the supply chain	▼
GSR Part 3 Requirement 14: Monitoring for verification of compliance	▼
GSR Part 3 Requirement 20: Requirements for monitoring and recording of occupational exposures	▼
GSR Part 3 Requirement 24: Arrangements under the radiation protection programme	▼
GSR Part 3 Requirement 32: Monitoring and reporting	▼
SSR 2/1 (Rev. 1) Requirement 29: Calibration, testing, maintenance, repair, replacement, inspection and monitoring of items important to safety	▼
SSR 2/1 (Rev. 1) Requirement 82: Means of radiation monitoring	▼
SSR-2/2 (Rev.1) Requirement 09: Monitoring and review of safety performance	▼
SSR-3 Requirement 31: Calibration, testing, maintenance, repair, replacement, inspection and monitoring of items important to safety	▼
SSR-3 Requirement 49: Provision of instrumentation and control systems	▼
SSR-3 Requirement 57: Radiation protection systems	▼
SSR-5 Requirement 21: Monitoring programmes at a disposal facility	▼

If you then select the last one, SSR-5 Requirements 21, again you arrive straight inside SSR-5 and you find the text of the requirements as well as information on which paragraphs of the guides for Near Surface Disposal SSG-29 (7.1 to 7.5) apply as well as which paragraphs of SSG-14 for Geological Disposal apply (6.60 to 6.64).

If then you go to SSG-29 by Browse publications, use the TOC to find monitoring (you may actually use CTRL F and type monitoring to quickly find it):

The screenshot shows the IAEA Nuclear Safety and Security website. At the top, there is a blue header with the IAEA logo and the text 'IAEA Nuclear Safety and Security'. A search bar in the top right corner contains the word 'monitoring'. Below the header, there is a navigation menu with links for 'Home', 'Browse', and 'Search'. On the left side, there is a sidebar with a list of 'Elements in a SSG' including 'Step by Step...', 'Site Character...', 'Design', 'Waste Accepta...', 'Construction', 'Operation', 'Closure', 'Assurance of Sa...', 'Monitoring Pro...', and 'Post-Closure ...'. The 'Monitoring Pro...' item is highlighted with a blue circle. The main content area displays 'SSG-29 Near Surface Disposal Facilities for Radioactive Waste' and '1. Introduction'. A blue box titled 'See also:' contains links to 'SSR 5 Disposal of Radioactive Waste', 'WS-G-6.1 Storage of Radioactive Waste', 'SSG-23 The Safety Case and Safety Assessment for the Disposal of Radioactive Waste', 'SSG-31 Monitoring and Surveillance of Radioactive Waste Disposal Facilities', and 'Safety Report Series No.35 Surveillance and Monitoring of Near Surface Disposal Facilities for Radioactive Waste'. Below this box, the word 'Background' is visible.

Then you find the relevant guidance and indeed receive the information that in addition to the 5 paragraphs 7.1 to 7.5, there is a complete safety guide SSG-31 on Monitoring and Surveillance of Radioactive Waste Disposal Facilities. You also find a link to a relevant Safety Report, the No. 35:

7. Assurance of Safety

Monitoring Programmes

Requirement 21 of SSR-5 [4]: Monitoring programmes at a disposal facility

“A programme of monitoring shall be carried out prior to, and during, the construction and operation of a disposal facility and after its closure, if this is part of the safety case. This programme shall be designed to collect and update information necessary for the purposes of protection and safety. Information shall be obtained to confirm the conditions necessary for the safety of workers and members of the public and protection of the environment during the period of operation of the facility. Monitoring shall also be carried out to confirm the absence of any conditions that could affect the safety of the facility after closure.”

i See also SSG-31, Safety Guide on Monitoring and Surveillance of Radioactive Waste Disposal Facilities
and the [Safety Report Series No. 35 Surveillance and Monitoring of Near Surface Disposal Facilities for Radioactive Waste](#)

This cannot be found in the publications. It is only through the relationship notes in blue or olive that you can navigate this way and find the relevant publications or parts of publications.

For the Nuclear Security Recommendations and for the Transport Regulations, we have created an equivalent system with overall recommendations. Select the menu "Browse Overall recommendations), search for example "information security". NSS-15 para 4.5 to 4.9 is one of the answer and when you open it, you find a link to the implementing guide NSS 23-G.

LET'S NOW SEE THE SEARCH MODES:

We have three modes

The first is a full text search. Just type a word or sequence of word. When you insert this within quotes, its looks for exact matches. For example “computer security perimeter”. This search mode works for very specific words or sequences of words otherwise it would result in too many answers.

Then **the second** and probably the most efficient search mode is the Advanced Search. You can search by topical areas (by subject) and filter optionally by type of publication or by contextual elements (target audience, lifetime, types of facilities and activities).

For example, select the branch “Commissioning and operation of NPPs, ...”, then the branch “operation” and then the topic “ageing management”. Then go to the bottom of the page and click on search.

You find the relevant requirements and guides or parts of these requirements and guides.

Again, by selecting an item in this list of results, you go straight into the publication at the relevant place, like “NS-G-2.4 on The Operating Organization for Nuclear Power Plants - Plant operation management programmes - Management of ageing”

If you choose to go back in your browser using the left arrow on the top left, you can refine your search, for example selecting “research reactors” in the list of facilities and activities and search again. Now you only find the requirements and guides for research reactors.

There are two different icons:



indicates that there are sub-elements that you can access to by clicking on the icon.



Then the icon means there are no sub-element.

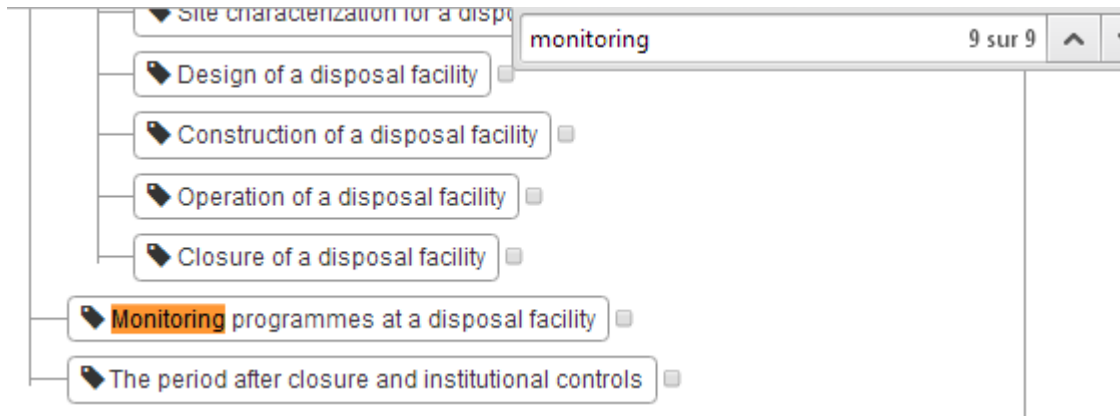
If you search the branch “Safe disposal of radioactive waste” and select the topic “monitoring programme at a disposal facility” then you find again SSR-5 Req 21, SSG-31, SSG-14 and SSG-29, but also RS-G-1.8 that is an old guide that did include recommendations for the monitoring of disposal in its section five starting with § 5.41. But then we have also added the information that SSG-31 is now relevant. So we have made explicit relationship in SSR-5 to the guides 14 and 29 to SSG-31, but not to RS-G-1.8. However the relationship remains as an implicit one for us in the future to consider its revision for maintaining consistency. This is one of the main differences between the browse functions and the search functions. The browse functions only provides you the relationship that we have decided to make explicit because they do provide valuable additional information.

Note that you can now search the search criteria in the list of topical areas. For this click on the button “Expand All”:

Topical Area(s)

Expand All

This opens all branches and you may then use CTRL F to insert a word for searching it in the ontology, like for example “monitoring” and scroll down until you find the topical area you wish to search for.



The third mode is more for the Secretariat. It is called “Relationship search” and it searches all relationships for one specific publication. For example SSG-14:

IMPORTANT NOTE: This relationship search capability is operational for the Safety Standards Series as well as for most of the Nuclear Security Series.

The Relationship Search visualizes relationships between publications. It can query all implicit relationships based on common tags (Topical Areas).

To	Relationship Type	Details
SSG-40	Tag	Passive means for the safety
SSG-25	Tag	Periodic safety review
SSG-1	Tag	Safe Disposal of radioactive waste
WS-G-6.1	Tag	Monitoring programmes at a disposal facility
SSG-36	Tag	Safe Disposal of radioactive waste
GS-G-3.4	Tag	Radiation protection in the operational period
GS-G-4.1	Tag	Periodic safety review
NS-G-3.1	Tag	Applying the safety principles and concepts
SSG-22	Tag	Applying the safety principles and concepts
SSG-5	Tag	Site Characteristics and potential effects of the nuclear installation

Graph Parameters

What relationships does

SSG-14

have

from

other publications?

Graph Filters

Publications

Relationships

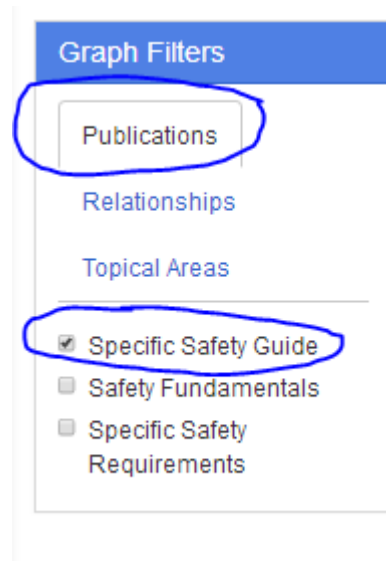
Topical Areas

☒ Specific Safety Guide

☒ Safety Fundamentals

☒ Specific Safety Requirements

You may then apply filters, like de-selecting some topical areas or some types of publications. You may for example keep the Safety Guides:



You may also list the suite of topical areas and then select those for which you wish to list existing relationships like Radiation protection in the post closure, scope of the safety assessment and monitoring programmes. This restrict the search results and you find among the results SSG-31 and RS-G-1.8 for monitoring and SSG-23 for safety assessment.

To	Relationship Type	Details
WS-G-6.1	Tag	Monitoring programmes at a disposal facility
WS-G-5.1	Tag	Radiation protection in the post-closure period
SSG-23	Tag	Scope of the safety case and safety assessment
SSG-31	Tag	Monitoring programmes at a disposal facility
RS-G-1.8	Tag	Monitoring programmes at a disposal facility

Graph Filters

Publications

Relationships

Topical Areas

- ☐ Safe Disposal of radioactive waste
- ☐ Governmental responsibility for the disposal of radioactive waste
- ☐ Waste management
- ☐ Radiation protection in the operational period
- ☐ Passive means for the safety
- ☒ Radiation protection in the post-closure period
- ☒ Scope of the safety case and safety assessment
- ☒ Monitoring programmes at a disposal facility
- ☐ Periodic safety review
- ☐ General requirements
- ☐ Applying the safety principles and concepts
- ☐ Site Characteristics and potential effects of the nuclear installation

Let's now move to the Glossary integration.

We now have a new html interactive version of the safety glossary: This is part of a new IAEA Knowledge Organization System server available here: <https://kos.iaea.org/iaea-safety-glossary.html>

If you select a letter, like the letter A, you find a suite of terms. From each of these terms you may further navigate to other sub-terms or related terms, like authorization then licence, then licensee and then "person or organization".

You may use the search window on the top right, type control to quickly find a defined term, for example search "control" and select "regulatory control".



This can now be used as metadata to search terms that are defined and make a link to their definition.

As an example, in our development site (<https://nucleus-apps-ga.iaea.org/nss-oui/>), we have started tagging GSG-2 with defined terms.

For example, Browse publications, select GSG-2 and then you see that terms that are underlined are defined. Clicking on these terms creates a pop-up window with the definition.

In the near future, after integration with the new server, we will progressively tag existing publications (the most recent ones) with the glossary. This will also include security related terms.

Finally, the feedback module. This is only for staff members and members of the Committees and the CSS that need to be registered in nucleus and be granted with a special access right for this.

After being logged in with the “Sign In” link on the top right of the NSS-OUI pages, the user can



select the comment icon and then “Enter feedback mode”.

This generates “+” icons for:

- general comments on the whole publication
- comments on a section or sub-section
- comments or proposals for individual paragraphs

It is possible to insert several comments or proposals for each element with a “+” icon, by clicking on the icon to close the open comment or proposal and click again to insert a new one.

Then, at the bottom of the html page there is a possibility offered to print the draft set of comments:

 [Draft feedback report](#)

This can be used in case of internal clearance as appropriate.

Then there is a possibility to submit each comment one by one or all at once by clicking on the icon

[Submit all feedback](#)



FEEDBACK ON THE SYSTEM: use the “contact us” that is on the bottom right in every page.