(h) The licensee must establish and maintain a list of all contaminated areas on the site, which will require decontamination in the future.

## (24) Funding for Decommissioning and Radioactive Waste

(a) The licensee must, on an annual basis –
  (i) provide a confirmation of the level of financial resourcing (actual ring-fenced funds) available for decommissioning, and management of radioactive waste as well as
  (ii) the measures being implemented in the event that the financial resourcing (actual ring-fenced funds) is determined as being insufficient.

(b) The financial resourcing shall be provided by way of –
  (i) A fund established and accepted by the Regulator; or
  (ii) A financial guarantee issued by duly registered bank, or any other bank or financial institution approved by the regulator; or
  (iii) Any other financial instrument acceptable by the regulator.

(c) The financial resourcing must be reviewed and updated annually or if there are material changes.

(d) The right to use the financial resourcing shall be approved by the regulator upon submission by the authorisation holder.

## (25) Organisational Capability and Management of Organisational Change

(a) The licensee has the prime responsibility for safety and security of the authorised facility, activities within the facility and radioactive material on the site.

(b) The licensee must provide and maintain adequate financial and human resources to ensure the safe operation and security of the authorised site.

(c) The licensee must implement NNR approved processes to control any change to its organisational structure or resources that may have a bearing on health, safety, and the environment as contemplated in the Act.

(d) The processes must provide for the classification of changes to the organisational structure or resources according to their safety significance.

(e) The processes must include a requirement for the provision of documentation to justify the safety of the proposed change and shall where appropriate provide for the submission of such documentation to the NNR.

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**(26) Financial Security**

(a) The licensee must annually provide proof to the NNR that any claim for compensation to an amount contemplated in Section 30(2) of the Act can be met.

**(27) Public Safety Information Forum**

(a) In order to inform the persons living in the municipal area in respect of which an emergency plan has been established, in terms of Section 38(1) of the Act, on nuclear and radiation safety matters, the licensee must establish a Public Safety Information Forum as prescribed.

**(28) Self-Inspection Programme**

(a) Pursuant to the provisions of Section 26(2) of the Act, the licensee must implement a self-inspection programme to ensure compliance with all conditions of the nuclear installation licence.

**(29) Display of the Nuclear Installation Licence**

(a) To ensure public access to the conditions specified in this licence, the licensee must at all times display copies of this Nuclear Installation Licence at the entrance to the installation in the following languages – English, SeTshwana and Afrikaans.

(b) The licensee must provide to the NNR documented proof that the translations into SeTshwana and Afrikaans are true and accurate translations of the original English text.

**(30) Implementation of Written Instruction for all Operations that may affect Nuclear Safety, Radiation Safety or Nuclear Security**

(a) The licensee must ensure that all operations that may affect nuclear safety, radiation safety or nuclear security are conducted in accordance with written instructions (operating instructions).

(b) The licensee must implement NNR approved processes for the preparation, review, and amendment to all operating instructions.

(c) Said instructions are to be submitted to the NNR for information and whenever any operating instruction is amended or revised said

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amendments or revisions must be submitted to the NNR within fourteen (14) days of approval of the amendment.

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## PART B-1: SPECIFIED NNR REQUIREMENTS FOR THE PELSTORE

B-1.1 The facility is to be operated according to the latest NNR approved revision of NLM-OTS-012 (Rev 02): "Operating Technical Specifications for the Pelstore Storage Facility".

B-1.2 The licensee must comply with the requirements, as per the NNR requirements documents, listed in the table below –

| Document number | Description |
|---|---|
| RD-0014 (Rev 0) | Emergency Preparedness and Response Requirements for Nuclear Installations |
| RD-0016 (Rev 0) | Requirements for authorisation Submissions Involving Computer Software and Evaluation Models for Safety Calculations |
| RD-0024 (Rev 0) | Requirements on Risk Assessment and Compliance with Safety Criteria for Nuclear Installations |
| RD-0026 (Rev 0) | Decommissioning of Nuclear Facilities |
| RD-0034 (Rev 0) | Quality and Safety Management Requirements for Nuclear Installations |
| RD-0038 (Rev 0) | Notification of Events at Facilities and Activities Authorised by NNR Nuclear Technology and Waste Projects Department |
| LD-1079 (Rev 1) | Requirements in Respect of Licence Change Requests to the National Nuclear Regulator |

B-1.3 The storage of radioactive waste containers in the Pelstore is limited to a maximum of one hundred and four thousand (104 000) waste containers.

B-1.4 The storage of Separating Element Assemblies (SEAs) is limited to a maximum of forty thousand (40 000) SEAs in the area allocated for the storage of Separating Element Assemblies (SEAs).

B-1.5 Waste containers must be properly sealed and no trace of damage that can lead to a spill may be visible.

B-1.6 Labels on the package must be firmly attached and must display a unique number traceable to the documentation accompanying the package.

B-1.7 Any metallic uranium shall be limited to bulk form which is defined by the following:

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(i) The items must be dry (no water or oil or grease).
(ii) The volume of the metal in an item shall not be less than $5cm^3$.
(iii) The surface of every item shall be smooth (e.g., there shall be no machining burrs on the item) and the minimum thickness of un-interrupted metal shall be 10mm.

B-1.8 Pressurised containers placed in waste containers, which may also have contained gases or other substances, particularly hazardous or toxic materials, must be emptied and their valves left open prior to containerisation.

B-1.9 Hazardous materials, liquids and gaseous substances may not be accepted in the facility.

B-1.10 The $^{235}U$ content in an ingot must be < 500g.

B-1.11 Unwashed SEAs must be covered in double plastic.

B-1.12 Waste with nuclides other than those in Table 1 below may not be accepted in Pelstore without the prior approval of the NNR which must be submitted to the NNR under cover of an Authorisation Change Request (ACR):

**Table 1: Table of nuclides that may be accepted in the PELSTORE**

| Key nuclides | Considered nuclides |
|---|---|
| $^{238}U$ | $^{231}Th$, $^{234Th}$, $^{234}U$, $^{234m}Pa$, $^{235}U$, $^{238}U$ |
| $^{14}C$<br>$^{60}Co$<br>$^{99}Tc$<br>$^{137}Cs$ | $^{3}H$, $^{10}Be$, $^{14}C$, $^{24}Na$, $^{27}Mg$, $^{28}Mg$, $^{28}Al$, $^{31}Si$, $^{32}Si$, $^{32}P$, $^{33}P$, $^{35}S$, $^{42}K$, $^{56}Mn$, $^{57}Co$, $^{58}Co$, $^{60}Co$, $^{76}As$, $^{79}Se$, $^{82}Br$, $^{86}Rb$, $^{90}Sr$, $^{93}Zr$, $^{95}Nb$, $^{99}Mo$, $^{99}Tc$, $^{103}Ru$, $^{115}Cd$, $^{125}I$, $^{125}Sb$, $^{125}Sn$, $^{131}I$, $^{137}Cs$, $^{138}Cs$, $^{192}Ir$. |
| $^{239}Pu$ | $^{232}Th$, $^{234}Th$, $^{234}U$, $^{239}Pu$, $^{241}Am$, $^{238}Au$, $^{226}Ra$. |

B-1.13 The maximum total inventory for isotopes in the Pelstore is 1.0 E+15 Bq.

B-1.14 Classified waste in drums must be packed on pallets and the stacking of pallets may not exceed 3 tiers high (4 drums per pallet).

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B-1.15 Unclassified waste in drums must be packed on pallets and the stacking of pallets may not exceed 2 tiers high (4 drums per pallet).

B-1.16 Concrete waste containers may only be stored in single rows, maximum 1 tier high.

B-1.17 Waste drums stored on the Pipe Bridge may only be stacked to a maximum of 2 tiers high.

B-1.18 SEA's must be packed on pallets and the stacking of pallets may not exceed 2 tiers high.

B-1.19 Not more than one waste drum is allowed in the Repacking Area at a time.

B-1.20 All water removed from drums in the Re-packing Room must be:

(i) Collected in 5-litre containers only.
(ii) Transported in a geometrically safe trolleys and
(iii) Evaporated either at A-Building, or in the evaporating pans in the Re-packing Room.

B-1.21 The number of evaporation pans in the Re-Packing Area is limited to one (1) evaporation pan.

B-1.22 The depth of the evaporation pan in the Re-packing Area is limited to a maximum of 38mm.

B-1.23 Water for washing purposes is limited to a maximum of 5 litres in the Pelstore.

B-1.24 Contaminated wash water must be:

(i) Collected in 5-litre containers only.
(ii) Transported in a geometrically safe trolleys.
(iii) Evaporated either at A-Building, or in the evaporating pan in the Re-Packing Area.

B-1.25 Geometrically safe trolleys with water from the Re-packing Room must be stored in the demarcated area outside the Repacking Area.

B-1.26 Transfers of radioactive material or radioactively contaminated equipment from the facility to other facilities on the Pelindaba site must comply with the

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requirements for on-site transfer and may only be undertaken to facilities that are appropriately authorised to receive said equipment and material.

B-1.27 Transfers of Low-Level Waste originating from the Necsa Pelindaba site in approved waste packages to the Vaalputs Radioactive Waste Disposal Facility may be undertaken on condition that said waste packages complies with the requirements of the currently approved Waste Acceptance Criteria for Vaalputs.

B-1.28 With the exception of the transfers authorised under Section B-1.27, no off-site transfer of radioactive material or radioactively contaminated equipment may be undertaken by the facility without prior NNR approval.

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## PART B-2: SPECIFIED NNR REQUIREMENTS FOR THE AREA 14 DECOMMISSIONING FACILITIES

B-2.1 The licensee must comply with the requirements, as per the NNR requirements documents, listed in the table below –

| Document number | Description |
|---|---|
| RD-0014 (Rev 0) | Emergency Preparedness and Response Requirements for Nuclear Installations |
| RD-0016 (Rev 0) | Requirements for authorisation Submissions Involving Computer Software and Evaluation Models for Safety Calculations |
| RD-0024 (Rev 0) | Requirements on Risk Assessment and Compliance with Safety Criteria for Nuclear Installations |
| RD-0026 (Rev 0) | Decommissioning of Nuclear Facilities |
| RD-0034 (Rev 0) | Quality and Safety Management Requirements for Nuclear Installations |
| RD-0038 (Rev 0) | Notification of Events at Facilities and Activities Authorised by NNR Nuclear Technology and Waste Projects Department |
| LD-1079 (Rev 1) | Requirements in Respect of Licence Change Requests to the National Nuclear Regulator |

B-2.2 **Cable Tunnels**

B-2.2.1 In the **Evaporation Facility** situated in the Cable Tunnels:

(i) Only aqueous solutions originating from uranium facilities under decommissioning may be received for evaporation.
(ii) The solutions considered for evaporation must be water based;
(iii) The maximum $^{235}U$ enrichment may not exceed 5%;
(iv) The liquid will be in 5-litre containers in a subcritical configuration;
(v) A maximum of fifteen (15) evaporation pans 2 metre long x 1.5 metre wide and 90 mm deep may be used in the Evaporation Facility in the Area 14 Cable Tunnels.

B-2.2.2 The storage of pre-treated waste in drums in the Cable Tunnels of Area 14 is limited to a maximum of sixteen (16) drums only.

B-2.2.3 Transfers of radioactive material and contaminated equipment from the facility to other facilities on the Pelindaba site must comply with the

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requirements for on-site transfer and may only be undertaken to facilities that are appropriately authorised to receive said equipment and material.

B-2.2.4 No off-site transfer of radioactive material or radioactively contaminated equipment may be undertaken by the facility without prior NNR approval.

B-2.2.5 The facility must maintain a NNR approved care and maintenance programme.

B-2.2.6 Decommissioning of the facility requires prior NNR approval which must be applied for under an Authorisation Change Request (ACR).

B-2.3 **Oil Basement**

B-2.3.1 Phase 2 decommissioning is authorised to take place in the Oil Basement in accordance with an NNR approved decommissioning strategy and plan.

B-2.3.2 The storage of pre-treated waste in drums in the Oil Basement is limited to a maximum of one thousand and eighty three (1083) drums only.

B-2.3.3 Transfers of radioactive material and contaminated equipment from the facility to other facilities on the Pelindaba site must comply with the requirements for on-site transfer and may only be undertaken to facilities that are appropriately authorised to receive said equipment and material.

B-2.3.4 No off-site transfer of radioactive material or radioactively contaminated equipment may be undertaken by the facility without prior NNR approval.

B-2.4 **Control Corridor**

B-2.4.1 The facility must maintain a NNR approved care and maintenance programme.

B-2.4.2 Decommissioning of the facility requires prior NNR approval which must be applied for under an Authorisation Change Request (ACR).

B-2.4.3 Transfers of radioactive material and contaminated equipment from the facility to other facilities on the Pelindaba site must comply with the requirements for on-site transfer and may only be undertaken to facilities that are appropriately authorised to receive said equipment and material.

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B-2.4.4 No off-site transfer of radioactive material or radioactively contaminated equipment may be undertaken by the facility without prior NNR approval.

B-2.5 **Filter Rooms**

B-2.5.1 The facility must maintain a NNR approved care and maintenance programme.

B-2.5.2 Decommissioning of the facility requires prior NNR approval which must be applied for under an Authorisation Change Request (ACR).

B-2.5.3 Transfers of radioactive material and contaminated equipment from the facility to other facilities on the Pelindaba site must comply with the requirements for on-site transfer and may only be undertaken to facilities that are appropriately authorised to receive said equipment and material.

B-2.5.4 No off-site transfer of radioactive material or radioactively contaminated equipment may be undertaken by the facility without prior NNR approval.

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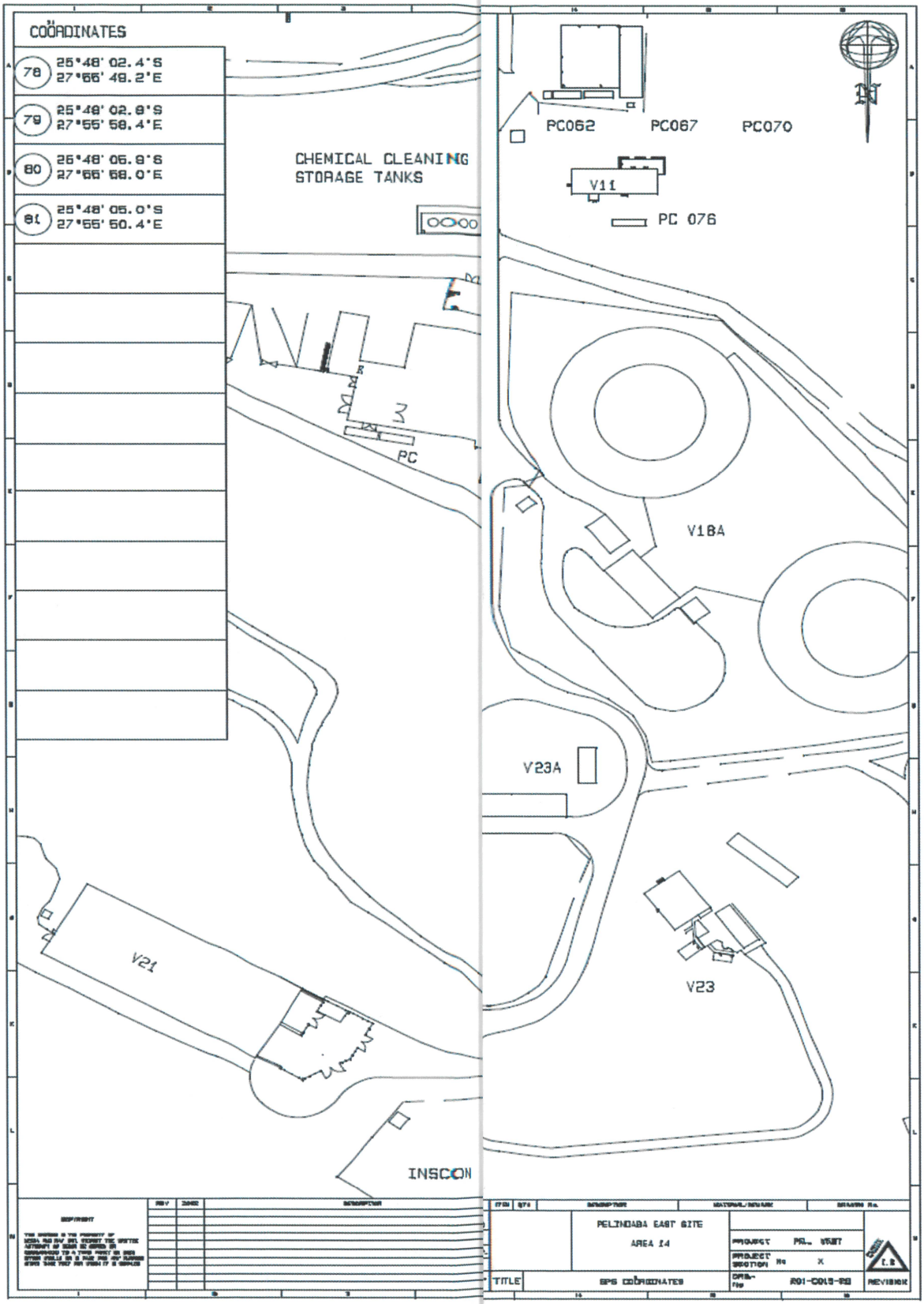



**Figure 1: Location of Area 14 W**

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