Australian Government
Australian Safeguards and Non-Proliferation Office

Form ASO323

INITIAL **INVENTORY LISTING**

Ref. No.

Material list

Material description	Mat'l category	Chemical formula	WEIGHTS				Material acquisition details	Storage location
			Gross	Compound	Element	Isotope		

Signature and permit details

Name :

Position:

Signature: _____

Permit Holder:

Permit No.

Date: ____/____/_____

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Explanatory Notes

Using this form..... Use as many ASO323 forms as is necessary to provide a complete list all materials held.

Ref. No...... A sequential reference number is required for each form of this type submitted by the Permit Holder (eg, 001, 002, 003, etc). Where amendments are made to a previously submitted form, please use the same reference with a sequential revision number (eg, 003-Rev.1).

Material Description..... Include, where applicable, unique identifiers such as serial numbers.

Material category, and Units of measure..... For each line entry, use one of the following letters in brackets corresponding to the material listed, and to the precision indicated.

Material Category	Unit	Minimum Requirements
(N)atural and (D)epleted uranium, (T)horium, Heavy (W)ater, and (G)raphite	Kilograms (kg)	≥0.01 kg - two decimal places. If <0.01 kg - as precise as known
(E)nriched uranium and (P)lutonium	Grams (g)	≥0.01 g - two decimal places. If <0.01 g - as precise as known

Chemical formula..... Complete if known. Many jars of uranium and thorium compounds have the chemical formula written on the label.

Gross weight ..... Total weight of the jar and contents.

Compound and element weights.....

- For small jars of chemicals, the *compound weights* can be estimated from the apparent volume in the jar. In the "**worked example**" below, a 100 gram jar of uranyl acetate (as listed on the label) is estimated to be three quarters full – hence 75 g, which translates to 0.075 kg.
- For the *element weight*, and again using the "**worked example**" below, uranyl acetate is 56.1% uranium (compare with chemical formula) – 75 g × 0.561 = 42.08g, which translates to 0.04 kg.
- For heavy water and graphite, record the material weight in the 'Compound' weight column.

Mat'l acquisition details Where available. It is important for ASNO to know the origin of the listed items to ensure they are **not** being double-counted in ASNO's records.

Signature/permit details This form must be signed by a representative of the Permit Holder (ie, the organisation) who will take responsibility for, and sign documents on behalf of, the organisation.

This form replaces the following forms →	ASO323 issued as version 1 on 22 December 2005.

WORKED EXAMPLE

Material description	Mat'l category	Chemical formula	WEIGHTS				Material acquisition details	Storage location
			Gross	Compound	Element	Isotope		
1 x jar of uranyl acetate. Item no. 412-002	N	$UO_2(CH_3CO_2)_2.2H_2O$	0.112 kg	0.075 kg	0.042 kg		Rec'd from Uni. Of Birdsville, April1988	Chem. Store, Room 217
Sentinel 660 source projector. Serial no. 6172518	D	metal	24 kg	16.80 kg	16.80 kg		Imported from UK, March 2005	Radiation Store, XYZ Company P/L
2% enriched uranium oxide powder	E	UO_2	154.52 g	150.00 g	130.29 g	2.61 g	Imported from Belgium, December 2010	Radiation Store