Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Astral Neutronics Limited

Astral Systems
Units H2, H4 and H5
Boscombe Business Park
Severn Road
Hallen
Bristol
BS10 7SB

Permit number

EPR/SB3850TF

Variation Notice Number

EPR/SB3850TF/V002

Reference: LIT 12640 Version: 4.0 Published: 01/10/2024

Permit number EPR/SB3850TF

Introductory note

This introductory note does not form a part of this permit

The permit is issued under the provisions of regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016. Those Regulations are concerned with the control of radioactive material and the receipt, transfer, accumulation and disposal of radioactive waste. The permit specifies the radioactive substances activities that are allowed on the named premises.

The operator must also comply with other legislation to which the keeping or use of radioactive material and the transfer, accumulation and disposal of radioactive waste is subject. This includes legislation enforced by the Health and Safety Executive and by the Office for Nuclear Regulation.

The status log of the permit sets out the permitting history, including any changes to the permit reference number.

Status Log of the permit		
Detail	**Date**	**Response Date**
application EPR/SB3850TF/A001	duly made 07/08/2024	-
additional information received in response to Schedule 5 Notice	16/09/2024	-
Additional information received	-	07/10/2024
permit determined	17/10/2024	-
Variation application EPR/SB3850TF/V002	Duly Made 03/09/2025	-
Permit Variation EPR/SB3850TF/V002 determined (varied and consolidated permit issued)	01/10/2025	-

End of Introductory Note

Permit

Permit number
EPR/SB3850TF

The Environment Agency hereby authorises under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

Astral Neutronics Limited *("the operator")*

whose registered office is

Unit H5
Severn Road
Hallen
Bristol
BS10 7SB

company registration number **13376789**

to carry on radioactive substances activities at

Astral Systems
Units H2, H4 and H5
Boscombe Business Park
Severn Road
Hallen
Bristol
BS10 7SB
("the premises")

to the extent authorised by and subject to the conditions of this permit.

Name	Date
Ben Morrish	***01/10/2025***

Authorised on behalf of the Environment Agency

Conditions

1 – Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

(a) in accordance with a written management system that is sufficient to ensure compliance with the conditions of this permit; and

(b) using sufficient competent persons and resources.

1.1.2 The operator shall maintain records demonstrating compliance with condition 1.1.1.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.1.4 The operator shall manage and operate the activities in consultation with such suitable radioactive waste advisers as are necessary for the purpose of advising the operator as to compliance with this permit.

2 – Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry on the activities specified in Schedule 1, Table S1.1 (the "activities").

2.1.2 Only radioactive material in the form of open sources comprising the radionuclides specified in Schedule 1, Table S1.2, together with any associated decay products present in amounts not exceeding those which could be present through radioactive decay of the specified radionuclides, shall be kept or used on the premises.

2.1.3 The activity of each radionuclide kept or used on the premises shall not exceed the relevant maximum activity specified in Schedule 1, Table S1.2.

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at Schedule 5 to this permit.

2.3 Operating techniques

2.3.1 The operator shall use the best available techniques:

(a) to minimise the activity of radioactive material kept or used on the premises;

(b) to minimise the period over which radioactive waste is accumulated;

(c) to minimise the activity of radioactive waste produced on the premises that will require to be disposed of on or from the premises;

(d) to ensure that all relevant parts of the premises are constructed, maintained and used in such a manner that:

(i) they do not readily become contaminated; and

(ii) any contamination which does occur can be easily removed;

(e) to prevent:

(i) the loss of any radioactive material or radioactive waste; and

(ii) access to any radioactive material or radioactive waste by any person not authorised by the operator.

2.3.2 The operator shall use the best available techniques in respect of the disposal of radioactive waste pursuant to this permit to:

(a) minimise the activity of gaseous and aqueous radioactive waste disposed of by discharge to the environment;

(b) minimise the volume of radioactive waste disposed of by transfer to other premises; and

(c) dispose of radioactive waste at times, in a form, and in a manner so as to minimise the radiological effects on the environment and members of the public.

2.3.3 The operator shall use the best available techniques to:

(a) exclude all entrained solids, gases and non-aqueous liquids from any radioactive aqueous waste prior to discharge to the environment;

(b) ensure that any discharge of radioactive gas to the atmosphere is made in a manner which prevents its entry into any building.

(c) ensure that any residual ash is disposed of as very low level waste in accordance with this permit.

2.3.4 The operator shall maintain in good repair the systems and equipment provided:

(a) to meet the requirements of conditions 2.3.1, 2.3.2 and 2.3.3; and

(b) to carry out any monitoring and measurements necessary to determine compliance with the conditions of this permit.

2.3.5 The operator shall check, at an appropriate frequency, the effectiveness of systems, equipment and procedures provided to meet the requirements of conditions 2.3.1, 2.3.2 and 2.3.3.

2.3.6 Any container in which radioactive material or radioactive waste are stored shall be clearly and legibly marked with the word 'Radioactive', with the ionising radiation symbol conforming with BS 3510: 1968 or ISO 361 and any other information necessary for the identification of the radioactive material or radioactive waste present.

2.3.7 The operator shall have and comply with appropriate criteria for the acceptance into service of systems, equipment and procedures for carrying out any monitoring and measurements necessary to determine compliance with the conditions of this permit.

2.3.8 The operator shall maintain records of open radioactive sources showing:

(a) the radionuclide present, the date on which it was received and the activity on that date;

(b) so far as is reasonably practicable its location on the premises;

(c) if it has been removed from the premises, the date of removal, the activity on that date and the name and address of the person to whom it was transferred; and

(d) the activity present on the premises at the end of each calendar month.

2.4 Pre-operational conditions

2.4.1 The activities shall not be brought into operation until the measures specified in Schedule 1, Table S1.3 have been completed.

2.4.2 Written notification of the date of completion of each measure shall be sent to the Environment Agency within 14 days of the completion of each such requirement.

2.5 Improvement programme

2.5.1 The operator shall complete the improvements specified in Schedule 1, Table S1.4 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.5.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

2.6 Receipt of radioactive waste

2.6.1 No radioactive waste shall be received onto the premises.

2.7 Accumulation of radioactive waste

2.7.1 There shall be no accumulation of radioactive waste except of the types of radioactive waste specified in Schedule 2.

2.7.2 The limits on accumulation given in Schedule 2 shall not be exceeded.

2.7.3 The operator shall maintain records of radioactive waste showing:

(a) the radionuclide present, the date on which accumulation began and the activity on that date;

(b) so far as is reasonably practicable its location on the premises;

(c) if it has been removed from the premises, the date of removal, the activity on that date and the name and address of the person to whom it was transferred; and

(d) the total activity and volume of radioactive waste present on the premises.

3 – Disposals of radioactive waste and monitoring

3.1 Disposals of radioactive waste

3.1.1 There shall be no disposals of radioactive waste except of the types of radioactive waste and by the disposal routes specified in Schedule 3.

3.1.2 The limits on disposals given in Schedule 3 shall not be exceeded.

3.1.3 The operator shall ensure that the transfer of radioactive waste, including, where practicable, for radioactive waste collected as a result of the operator's participation in the National Arrangements for Incidents involving Radioactivity or in the Radsafe scheme:

(a) is in accordance with the directions of the person to whom the radioactive waste is transferred that are necessary to enable that person to comply with all relevant regulatory requirements;

(b) is done using a suitable container constructed and maintained so as to prevent the loss of waste; and

(c) so far as is reasonably practicable, is not subject to delays in transit and is accepted at the premises of the person to whom the operator transfers waste.

3.1.4 The operator shall:

(a) ensure that the person to whom radioactive waste is transferred receives at the time of transfer of each consignment a clear and legible note signed on the operator's behalf:

(i) stating the total activity in the consignment of each relevant radionuclide or group of radionuclides listed in the relevant table in Schedule 3; or

(ii) stating, when no relevant radionuclide or group of radionuclides is specified in Schedule 3, the total activity in the consignment of each radionuclide or group of radionuclides as listed in the written specification of the person to whom the radioactive waste is transferred.

(b) obtain a note signed on behalf of the person to whom radioactive waste is transferred, at the time of transfer, stating:

(i) that the transfer has taken place; and

(ii) the date of receipt of the radioactive waste.

(c) keep a copy of any note issued under condition 3.1.4(a) and any note received under condition 3.1.4(b).

3.1.5 If required by the Environment Agency, the operator shall ensure that any consignment or part of any consignment of radioactive waste found, following transfer, not to be in accordance with the conditions of this permit:

(a) is packaged in accordance with the relevant legislation; and

(b) is returned as soon as is reasonably practicable to the operator's site.

3.1.6 The operator shall, not later than 14 days after the end of each month or within such longer period as the Environment Agency may approve in writing, record all disposals of radioactive waste made during that month.

3.2 Monitoring

3.2.1 If required by the Environment Agency, the operator shall

(a) take such samples and conduct such measurements, tests, surveys, analyses and calculations, including environmental measurements and assessments, at such times and using such methods and equipment as the Environment Agency specifies; and

(b) keep samples, provide samples, or dispatch samples for tests at a laboratory, as the Environment Agency specifies, and ensure that the samples or residues thereof are collected from the laboratory within three months of receiving written notification that testing and repackaging in accordance with the relevant legislation are complete.

3.2.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.2.3 The operator shall carry out:

(a) regular calibration, at an appropriate frequency, of systems and equipment provided for carrying out any monitoring and measurements necessary to determine compliance with the conditions of this permit; and

(b) regular checking, at an appropriate frequency, that such systems and equipment are serviceable and correctly used.

4 – Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

(a) be legible;

(b) be made as soon as reasonably practicable;

(c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

(d) be retained until notified in writing by the Environment Agency that records no longer need to be retained.

4.1.2 The operator shall:

(a) retain records made in accordance with any previous relevant permit issued to the operator and related to the premises covered by this permit; and

(b) retain records transferred to the operator, which were made in accordance with any previous relevant permit related to the premises covered by this permit.

4.1.3 The operator shall keep on site all records, plans and the management system required by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by this permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 The operator shall supply such information in relation to:

(a) the disposals of radioactive waste; and

(b) the samples, tests, surveys, analysis and calculations, environmental monitoring and assessments undertaken under condition 3.2.1;

in such format and within such timescales as the Environment Agency may specify in writing.

4.3 Notifications

4.3.1 The Environment Agency shall be notified without delay following the detection of:

(a) any malfunction, breakdown or failure of equipment or techniques or accident, which has caused, is causing or may cause significant pollution or may generate significant amounts of radioactive waste;

(b) the breach of a limit specified in this permit; or

(c) any significant adverse environmental effects; or

(d) any escape of accumulated radioactive waste.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in Schedule 4 within the time period specified in that Schedule.

4.3.3 The Environment Agency shall be notified in writing, at least 21 days in advance or, where this is not possible, without delay, of the operator's intention to cease to keep or use radioactive material, or to cease to accumulate or dispose of radioactive waste.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

(a) Where the operator is a registered company:

i. any change in the operator's trading name, registered name or registered office address; and

ii. any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

(b) Where the operator is a corporate body other than a registered company:

i. any change in the operator's name or address; and

ii. any steps taken with a view to the dissolution of the operator.

(c) In any other case:

i. the death of any of the named operators (where the operator consists of more than one named individual); and

ii. any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case them being in a partnership, dissolving the partnership.

4.3.5 If the operator believes or has reasonable grounds for believing that radioactive material or radioactive waste have been lost or stolen he shall:

(a) without delay inform the Police and the Environment Agency;

(b) make all reasonable efforts to recover that radioactive material or radioactive waste; and

(c) as soon as is practicable report the circumstances in writing to the Environment Agency.

4.4 Interpretation

4.4.1 In this permit the expressions listed below shall have the meaning given.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", in which case it may be provided by telephone.

"activity", expressed in becquerels, means the number of spontaneous nuclear transformations occurring in a period of one second.

"annual limit" means the limit over a calendar year.

"aqueous waste" means radioactive waste in the form of a continuous aqueous phase together with any entrained solids, gases and non-aqueous liquids.

"best available techniques" means the latest stage of development (state of the art) of processes, of facilities or of methods of operation which indicate the practical suitability of a particular measure for limiting discharges, emissions and waste. In determining whether a set of processes, facilities and methods of operation constitute the best available techniques in general or individual cases, special consideration shall be given to:

(a) comparable processes, facilities or methods of operation which have recently been successfully tried out;

(b) technological advances and changes in scientific knowledge and understanding;

(c) the economic feasibility of such techniques;

(d) time limits for installation in both new and existing plants; and

(e) the nature and volume of the discharges and emissions concerned.

"Bq, kBq, MBq, GBq, TBq and PBq" are used as abbreviations meaning becquerels, kilobecquerels, megabecquerels, gigabecquerels, terabecquerels and petabecquerels respectively.

"calendar year" means a period of 12 consecutive months beginning on 1 January.

"environment" means all, or any, of the media of air, water (to include sewers and drains) and land.

"environmental permit" means a permit under the Environmental Permitting Regulations for the accumulation or disposal of radioactive waste and also includes an authorisation issued under the Radioactive Substances Act 1993 by the environmental regulator for Scotland or Northern Ireland.

"Environmental Permitting Regulations" means The Environmental Permitting (England and Wales) Regulations 2016.

"final disposal" includes: a. incineration of the radioactive waste on the premises; b. burial of the radioactive waste on the premises; or c. discharge to the environment of the bulk of the radioactivity in the waste (directly or following treatment of the waste).

"gaseous waste" means radioactive waste in the form of gases and associated mists and particulate matter.

"LLW" means solid radioactive waste, including any immediate packaging, with a maximum concentration of 4 gigabecquerels per tonne of alpha emitting radionuclides and 12 gigabecquerels per tonne of all other radionuclides.

"LLWR" means Low Level Waste Repository near Drigg, Cumbria.

"LLWR Site Operator" means the holder of the licence issued under the Nuclear Installations Act 1965 for the LLWR.

"Month" means calendar month.

"National Arrangements for Incidents Involving Radioactivity" means the arrangements co-ordinated by UK Health Security Agency to protect the public from hazards arising from the use and transport of radioactive materials and in situations where no formal contingency plans exist.

"nuclear site" means a site licensed under the Nuclear Installations Act 1965.

"quarter" means any period of three consecutive months.

"open source" means radioactive material not in the form of a sealed source.

"organic liquid waste" means radioactive waste in the form of liquid, not being aqueous waste, containing one or more organic chemical compounds.

"*other alpha emitters*" means alpha-emitting radionuclides with half-lives greater than three months excluding uranium, radium-226 and thorium-232.

"*other radionuclides*" means:

(a) iron-55 and beta-emitting radionuclides with half-lives greater than three months unless individually specified in this Table; and

(b) any other radionuclides specified in writing by the Agency

"packaging" includes any sack, drum, container or wrapping.

"Radsafe" means the consortium of organisations which offer mutual assistance in the event of a transport accident involving radioactive materials belonging to a RADSAFE member.

"radioactive waste adviser" means, subject to the transitional arrangements in the Agencies' Scheme for Radioactive Waste Advisers ("the Scheme"), either an individual certified under the Scheme and appointed in writing by the operator, or those individuals advising the operator under the operators arrangements for "corporate radioactive waste adviser" as approved under the Scheme. The Scheme is published at:

http://www.sepa.org.uk/radioactive_substances/radioactive_waste_advisers.aspx

"samples" includes samples that have been prepared or treated to enable measurements of activity to be made.

"techniques" include both the technology used and the way in which the installation is designed, built, maintained, operated and dismantled.

"Total", where used in relation to a group of radionuclides:

(a) in Schedule 1, Table S1.2, excludes any radionuclide that would fall within the group in question, but which is specifically identified and limited elsewhere in that table;

(b) for a waste type identified in Schedule 2, Table S2.1, excludes any radionuclide that would fall within the group in question, but which is specifically identified and limited against that waste type;

(c) for a waste type and disposal outlet or route identified in a table in Schedule 3, excludes any radionuclide that would fall within the group in question, but which is specifically identified and limited against that waste type and disposal outlet or route.

"VLLW" means very low level solid radioactive waste, which is disposed of with non-radioactive refuse, and in which:

(a) except in the case of carbon-14 and tritium, each $0.1m^3$ of waste contains less than 400 kBq of total activity;

(b) except in the case of carbon-14 and tritium, any single item contains less than 40 kBq of total activity;

(c) each $0.1m^3$ of waste contains less than 4000 kBq of carbon-14 and tritium, taken together; and

(d) any single item contains less than 400 kBq of carbon-14 and tritium, taken together.

Schedule 1 - Operations

Table S1.1: Activities			
Activity reference	**Activity listed in Schedule 23 of the Environmental Permitting Regulations**	**Description of specified activity**	**Limit of specified activity**
	Sch 23 Part 2 para 11(2)(a)	Keeping or use of radioactive material in the form of an open source	5 – Production of Isotopes 14 – Electronic apparatus
	Sch 23 Part 2 para 11(2)(c)	Accumulation of radioactive waste on the premises	
	Sch 23 Part 2 para 11(2)(b)	Disposal of radioactive waste on or from the premises	

Table S1.2: Radioactive material – open sources	
Radionuclide	**Maximum Activity**
Tritium	50 TBq
Iodine 123	100 MBq
Iodine 124	100 MBq
Iodine 125	100 MBq
Iodine 129	100 MBq
Iodine 131	1 GBq
Lutetium 177	100 MBq
Radium 226	50 MBq
Actinium 225	100 MBq
Terbium 161	100 MBq
Copper 64	100 MBq
Copper 67	100 MBq
Lead 212	100 MBq
Gold 199	100 MBq
Total radionuclides	1 GBq

Table S1.3: Pre-operational measures	
Reference	**Pre-operational measures**
	No measures specified

Table S1.4: Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1	The Operator shall provide a written report that reviews the limits for holding open sources, accumulating radioactive waste and disposing of radioactive waste from the premises. The report shall include, but not be limited to: - a review of the annual holdings, accumulations and disposals from commencement of site operations. - an assessment of the holdings, accumulations and disposals against the limits specified in Schedules 1 to 3 of this permit to determine whether they remain appropriate to cover the site operations (including any radionuclides produced that are not specifically listed). - proposed future holdings, accumulation and disposal limits, noting that these proposed limits should be justified based on realistically expected values and a permit variation would be required for any changes. - A review of current BAT to the limits for accumulation and disposals.	2 years from the date of initial permit issue

Schedule 2 – Accumulation of radioactive waste

Table S2.1: Accumulation of radioactive waste				
Specified waste type	**Radionuclide or group of radionuclides permitted to be present in the waste[1 2]**	**Activity limit**	**Volume limit**	**Period limit**
Aqueous	Iodine 123	1 GBq	100 litres	3 months
	Iodine 124	1 GBq		
	Iodine 125	1 GBq		
	Iodine 129	1 GBq		
	Iodine 131	10 GBq		
	Radium 226	50 MBq	5 litres	
	Lutetium 177	100 MBq	100 Litres	
	Actinium 225	100 MBq		
	Terbium 161	100 MBq		
	Copper 64	100 MBq		
	Copper 67	100 MBq		
	Lead 212	100 MBq		
	Gold 199	100 MBq		
	Total radionuclides	1 GBq		
Organic liquid waste	Iodine 123	100 MBq	500 litres	2 years
	Iodine 124	100 MBq		
	Iodine 125	100 MBq		
	Iodine 129	100 MBq		
	Iodine 131	1 GBq		
	Radium 226	50 MBq	5 litres	6 months
	Lutetium 177	100 MBq	500 litres	6 months
	Actinium 225	100 MBq		
	Terbium 161	100 MBq		
	Copper 64	100 MBq		
	Copper 67	100 MBq		
	Lead 212	100 MBq		
	Gold 199	100 MBq		
	Total radionuclides	1 GBq		
Solid waste	Iodine 123	100 MBq	$0.5m^3$	2 years
	Iodine 124	100 MBq		
	Iodine 125	100 MBq		
	Iodine 129	100 MBq		
	Iodine 131	1 GBq		
	Radium 226	50 MBq	$0.005m^3$	6 months
	Lutetium 177	100 MBq	$0.5m^3$	6 months
	Actinium 225	100 MBq		
	Terbium 161	100 MBq		
	Copper 64	100 MBq		
	Copper 67	100 MBq		
	Lead 212	100 MBq		
	Gold 199	100 MBq		
	Total radionuclides	1 GBq		

[1] together with any associated decay products present in amounts not exceeding those which could be present through radioactive decay of the specified radionuclides

[2] numerical limits apply only to the head of chain radionuclides

Schedule 3 – Disposals of radioactive waste

Table S3.1: Specified disposals to air				
Specified waste type	**Disposal outlet ref**	**Radionuclide or group of radionuclides permitted to be present in the waste[1 2]**	**Annual limits**	**Daily limits**
Gaseous waste	8m high stacks No.1 and 2, Unit H2	Tritium	0.99 TBq	100 GBq
		Iodine 123	100 MBq	1 MBq
		Iodine 124	100 MBq	1 MBq
		Iodine 125	100 MBq	1 MBq
		Iodine 129	100 MBq	1 MBq
		Iodine 131	1 GBq	5 MBq

Table S3.2: Specified disposals to sewer or water				
Specified waste type	**Disposal outlet ref**	**Radionuclide or group of radionuclides permitted to be present in the waste[1 2]**	**Annual limits**	**Monthly limits**
Aqueous waste	The drainage system of the premises authorised for disposal	Tritium	10 GBq	1 GBq
		Iodine 123	1 GBq	100 MBq
		Iodine 124	1 GBq	100 MBq
		Iodine 125	1 GBq	100 MBq
		Iodine 129	1 GBq	100 MBq
		Iodine 131	1 GBq	100 MBq
		Radium 226	10 MBq	1 MBq
		Lutetium 177	1 GBq	100 MBq
		Actinium 225	10 MBq	1 MBq
		Terbium 161	1 GBq	100 MBq
		Copper 64	1 GBq	100 MBq
		Copper 67	1 GBq	100 MBq
		Lead 212	1 GBq	100 MBq
		Gold 199	1 GBq	100 MBq
		Total beta/gamma emitting radionuclides	10 GBq	1 GBq
		Total alpha emitting radionuclides	1GBq	100 MBq

Table S3.3: Specified transfers to other premises					
Specified waste type	**Person to whom waste may be transferred**	**Purpose of transfer**	**Radionuclide or group of radionuclides permitted to be present in the waste[1] [2]**	**Annual limits**	**Annual volume limitsm[3]**
Solid waste	The holder of a permit under the Environmental Permitting Regulations to receive and dispose of radioactive waste by incineration	Waste disposal	Iodine 123	100 MBq	-
			Iodine 124	100 MBq	-
			Iodine 125	100 MBq	-
			Iodine 129	100 MBq	-
			Iodine 131	1 GBq	-
			Radium 226	50 MBq	-
			Lutetium 177	100 MBq	-
			Actinium 225	100 MBq	-
			Terbium 161	100 MBq	-
			Copper 64	100 MBq	-
			Copper 67	100 MBq	-
			Lead 212	100 MBq	-
			Gold 199	100 MBq	-
			Total radionuclides	1 GBq	-
Organic liquid waste	The holder of a permit under the Environmental Permitting Regulations to receive and dispose of radioactive waste by incineration	Waste disposal	Iodine 123	100 MBq	-
			Iodine 124	100 MBq	-
			Iodine 125	100 MBq	-
			Iodine 129	100 MBq	-
			Iodine 131	1 GBq	-
			Radium 226	50 MBq	-
			Lutetium 177	100 MBq	-
			Actinium 225	100 MBq	-
			Terbium 161	100 MBq	-
			Copper 64	100 MBq	-
			Copper 67	100 MBq	-
			Lead 212	100 MBq	-
			Gold 199	100 MBq	-
			Total radionuclides	1 GBq	-

Table S3.4: Specified disposal by on–site incineration				
Specified waste type	**Incinerator unit**	**Radionuclide or group of radionuclides permitted to be present in the waste[1 2]**	**Monthly limits**	**Daily limits**
No on-site incineration authorised	-	-	-	-

[1] together with any associated decay products present in amounts not exceeding those which could be present through radioactive decay of the specified radionuclides

[2] numerical limits apply only to the head of chain radionuclides

Schedule 4 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the disposal. Where appropriate, a comparison should be made of actual disposals and permitted disposal limits.

Part A

Permit Number	EPR/SB3850TF
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or disposal which has caused, is causing or may cause significant pollution or may generate significant amounts of radioactive waste	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any disposal into the environment took place	
Radionuclides potentially released	
Best estimate of the quantity or rate of release of radionuclides or amount of radioactive waste generated	
Measures taken, or intended to be taken, to stop any disposal	
Description of the failure or accident	

(b) Notification requirements for the breach of a limit		
To be notified within 24 hours of detection unless otherwise specified below		
Disposal outlet reference/source		
Radionuclides		
Limit		
Measured value and uncertainty		
Date and time of monitoring		
Measures taken, or intended to be taken, to stop the disposal		
Time periods for notification following detection of a breach of a limit		
Parameter		Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Radionuclides detected	
Activity of radionuclides detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any contamination of the environment which has been or may be caused by the disposal	
The dates of any unauthorised disposals from the facility in the preceding 24 months	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of ***Astral Neutronics Limited***

Schedule 5 - Site plan

END of PERMIT