Magnox North

Chapelcross Site

Nr Annan
Dumfriesshire DG12 6RF
Tel: +44 (0)1461 202835
Fax: +44 (0)1461 208497
www.magnoxnorthsites.com

22 September 2008

Mr Hugh Fearn
Scottish Environment Protection Agency
Graesser House
Fodderty Way
Dingwall Business Park
DINGWALL
IV15 9XB

Direct tel: 01461 208246
Direct fax: 01461 208498

Your ref:
Our ref: CXA55018R

DINGWALL
24 SEP 2008
RECEIVED

Dear Mr Fearn

Application for disposal of radioactive waste

Please find enclosed a request for authorisation to use two additional waste disposal routes as discussed with David Orr during your recent visit to Chapelcross. As discussed, Chapelcross has become aware of alternative waste disposal routes that we believe provide the best practicable environmental option for surface contaminated metal that cannot be decontaminated on site using currently available technology.

The application is described in the enclosed note "Disposal of Surface Contaminated Metal Waste Meeting the Definition of LLW" and is supported by two BPEO reports. Completed copies of additional sections 11 of the RSA3 form are also enclosed.

Four CDs are also enclosed as requested. Each CD contains the following files:

Completed RSA3 application form;

Additional RSA3 section 11 describing Studsvik and Siempelkamp disposal routes;

Chapelcross RSA93 Support Document;

Chapelcross BPEO Report;

Site map;

Site plan;

NDA Strategic BPEO – Options Identification and Screening;

NDA Strategic BPEO – Options Evaluation.

Magnox Electric Ltd, a company owned by Energy*Solutions*, LLC

Registered Office: Berkeley Centre
Berkeley, Gloucestershire GL13 9PB
Company Registration No. 2264251

I would be grateful if you could describe the steps of the application determination process and give an indication of the time each step of the process is expected to take.

Please let me know if there is any further information I can supply in order to take this application forward.

Yours sincerely

DAVE R WILSON
Site Director
dave.r.wilson]@magnoxnorthsites.com

Enc

cc: CX SEPA File
D.Orr

Magnox Electric Ltd, a company owned by Energy*Solutions*, LLC

Registered Office: Berkeley Centre
Berkeley, Gloucestershire GL13 9PB
Company Registration No. 2264251

Disposal of Surface Contaminated Metal Waste Meeting the Definition of LLW

The application for authorisation under section 13 of the Radioactive Substances Act 1993 submitted by Magnox Electric Limited (Magnox) was accompanied by a report prepared following a Best Practicable Environmental Options study.

The study identified "Decontamination to SoLA" as the optimum management option for contaminated metals and the option with the next highest score was "Dispose to National LLWR near Drigg".

Magnox believes that the majority of contaminated metal produced during the decommissioning of Chapelcross can be successfully decontaminated using currently available techniques. It is anticipated that due to a number of factors such as safety considerations, shape and size it may not be able to completely decontaminate all metal items using technology currently available at Chapelcross and an application has therefore been made to dispose of waste to LLWR Limited. An application has also been made to transfer some solid waste to Waste Management Technology at Winfrith for treatment before disposal at LLWR Limited.

Since the application was submitted in November 2007, Magnox has become aware of alternative disposal routes for surface contaminated metals. In particular, we are aware of the Strategic BPEO for Metal Waste Management study commissioned by the NDA and carried out by Studsvik UK Limited in 2006. Copies of the Options Identification and Screening and the Options Evaluations reports are enclosed.

The BPEO study followed a methodology consistent with the guidance published by the environment agencies in "Guidance for the Environment Agencies' Assessment of Best Practicable Environmental Option Studies at Nuclear Sites".

The study concluded that the best management option for contaminated metals is treatment at an overseas facility. Included in the factors that supported this finding were: immediate availability, low construction and decommissioning costs, reduction in solid waste disposal, low nuisance, recycling of material and associated resource conservation.

Magnox is aware of two facilities in Europe that have an established track record of receiving contaminated metals and treating the waste by melting. The melting process recovers useful metal that is available for reuse and the volume of radioactive waste (which is concentrated in the slag produced) is reduced by more than 90%.

The first company, Siempelkamp Nukleartechnik GmbH, operates a smelting facility in Germany. They have twenty years of experience of treating metallic radioactive waste by smelting and the metal they recover is used in the production of shielded metal boxes designed for the storage of intermediate level waste. Waste is processed in batches and systems are in place to ensure recovered radioactive waste is returned to the originator.

The process used by Siempelkamp has been used on a trial basis by a number of nuclear operators in England in Wales.

Magnox proposes to enter into an arrangement with Siempelkamp that will result in metallic low level waste that cannot be decontaminated using the technology currently available at Chapelcross being sent to Germany for processing with the recovered low level waste being returned to Chapelcross for disposal at the Low Level Waste Repository. The recovered metal will be used in the construction of ILW containers that will be fabricated by Siempelkamp and sent to Chapelcross for future use.

The second company Studsvik AB operates a similar smelting facility in Sweden where it has provided a decontamination and metal recovery service to nuclear operators for twenty years. As is the case with Siempelkamp, Studsvik operates a smelting facility and waste is handled on a batch process. Useful metal recovered by Studsvik is recycled into the metals market. Several nuclear operators in England and Wales have used the Studsvik facility and it is understood that SEPA is currently determining an application for authorisation submitted by a company in Scotland.

Studsvik UK Ltd operates a metal recovery facility in Cumbria and Magnox is seeking authorisation to dispose of contaminated metal to those premises. Studsvik hold a Nuclear Site Licence and an RSA93 authorisation to dispose of radioactive waste to LLWR or to their facility in Sweden. Under the terms of that authorisation, waste that cannot be successfully decontaminated at the Cumbrian facility can be transferred to Studvik's smelting facility in Sweden. In this case, waste that originates at Chapelcross would be returned to Studsvik in Cumbria for disposal to the LLWR

Both Siempelkamp and Studsvik AB are regulated by their national authorities and both hold all the necessary permissions to carry out this work.

It is understood that the transfer of radioactive waste to and from these facilities will be subject to authorisation under the Transfrontier Shipment of Radioactive Waste Regulations 1993 and The Radioactive Substances Act 1993.

Magnox believes the shipment of contaminated metal wastes to Siempelkamp or Studsvik will result in the recovery of re-useable materials and the treatment by smelting, which will reduce the volume of LLW requiring to be disposed, will make the subsequent storage and disposal of the waste more manageable. Magnox therefore believes this proposal aligns with the UK and Scotland Governments' policy for the long term management of solid low level radioactive waste in the United Kingdom

Copies of section 11 of the RSA3 application form have been completed for both Siempelkamp and Studsvik and these are enclosed and we request that these are treated as part of the application for authorisation under section 13 of RSA93 previously submitted.

Please note that the Strategic BPEO for Metal waste Management documents contain commercially sensitive information and have been marked "Commercial-in-Confidence".

Magnox North

Chapelcross Site

Nr Annan
Dumfriesshire DG12 6RF
Tel: +44 (0)1461 202835
Fax: +44 (0)1461 208497
www.magnoxnorthsites.com

29 November 2007

The Registrar
FAO Mr David Orr
SEPA
Greyhope House
Greyhope Road
Torry
ABERDEEN
AB11 9RD

Direct tel: 01461 208246
Direct fax: 01461208498

Your ref:
Our ref: WBK/JMC

SEPA
ABERDEEN
30 NOV 2007
RECEIVED

Dear David,

RSA93 MULTIMEDIA APPLICATION

Please find enclosed copies the following documents relating to the above:-

1. One copy of Radioactive Substances Act 1993 (as amended) application form for Authorisation to accumulate and dispose of radioactive waste.

2. Three copies of information in support of Application by Magnox Electric Limited under the Radioactive Substances Act 1993 to dispose and discharge radioactive waste from the Chapelcross Site.

3. Three sets of drawings showing the Chapelcross Site.

You will already have in your possession the following documents.

1. Three copies of the Site Master Building Plan.

2. Three copies best practicable environmental option for care and maintenance preparation waste at Chapelcross.

3. Three copies of effluent drain to Solway drawings.

An additional letter of intent will be issued separately from the Magnox Electric Limited Company Secretary, Dr Michael Cogbill.

Yours sincerely

Mike Travis

Mike Travis
Site Director
mike.travis@magnoxnorthsites.com

RSA/A/70246

SEPA
Scottish Environment Protection Agency

SEPA
ABERDEEN
30 NOV 2007
RECEIVED

Radioactive Substances Act 1993 (as amended)

APPLICATION FORM

For

Authorisation to accumulate and dispose of radioactive waste

PLEASE SEND TO THE REGISTRAR AT THE APPROPRIATE AREA OFFICE:

Aberdeen Office
Greyhope House
Greyhope Road
Aberdeen
AB11 9RD
Tel: 01224 248338
Fax: 01224 248591

Dingwall Office
Fodderty Way
Dingwall Business Park
Dingwall
IV15 9XB
Tel: 01349 862021
Fax: 01349 863987

Edinburgh Office
Clearwater House
Heriot Watt Research Park
Avenue North
Riccarton
Edinburgh
EH14 4AP
Tel: 0131 4497296
Fax: 0131 4497277

East Kilbride Office
5 Redwood Crescent
Peel Park
East Kilbride
G74 5PP
Tel: 01355 574200
Fax: 01355 574688

Perth Office
7 Whitefriars Crescent
Perth
PH2 0PA
Tel: 01738 627989
Fax: 01738 630997

The Data Protection Act 1998

"The Scottish Environment Protection Agency is responsible for maintaining and improving the environment and regulating environmental emissions. It has a duty to discharge its functions to protect and enhance the environment and to promote conservation and recreation.

The information provided will be processed by the Scottish Environment Protection Agency to deal with your application, to monitor compliance with the licence/permit/registration conditions, to process renewals, and for maintaining the relevant public register(s).

We may also process and/or disclose it in connection with the following:

- offering/providing you with our literature/services relating to environmental affairs
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, Local Authorities, Emergency Services, Scottish Executive) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law and taking any resulting action
- preventing breaches of environmental law
- assessing customer service satisfaction and improving our service.

We may pass it on to our agents/representatives to do these things on our behalf.

You should ensure that any persons named on this form are informed of the contents of this Data Protection Notice

THE SCOTTISH ENVIRONMENT PROTECTION AGENCY
APPLICATION FOR AUTHORISATION TO ACCUMULATE AND DISPOSE OF RADIOACTIVE WASTE UNDER SECTION 13 AND 14 OF THE RADIOACTIVE SUBSTANCES ACT 1993 (as amended)

Please complete this form clearly in black ink. Further information may be submitted on additional sheets that should be clearly marked with the name and address of the applicant. Applications that are incorrect or incomplete may be deemed not to be Duly Made.

To assist with completing this form, guidance notes are provided in each section.

1. APPLICANT DETAILS

Guidance Note: This section requires you to provide details of the Registered Company (as defined by the Companies Act), NHS Board Head Office etc. Do not give details here of a local office or the premises that are to be authorised etc unless it is the same as that of the Registered address or head office etc. Details of the premises on or from which radioactive material is to be accumulated or disposed must be given in section 5. Where possible SEPA will try to process applications in accordance with the needs of the applicant. However applicants should normally allow up to 4 months from the date an application is deemed Duly Made for an authorisation to come into effect.
It is an offence under the Act to accumulate or dispose radioactive material without a valid authorisation.

1a Please state the company registered address

Name: MAGNOX ELECTRIC LTD

Address: BERKELEY CENTRE

BERKELEY, GLOUCESTERSHIRE

Postcode: GL13 9PB Telephone No:

1b Please state the registered company number (if applicable)

2264251

1c If there are existing certificates of registration or authorisation at the address on or from which radioactive waste will be accumulated or disposed provide details below

Registration Certificate number/s:

Authorisation Certificate number/s: IPB/4/1/2/3 305/95

Please give details of why a new authorisation is being sought?

CHAPELCROSS SITE IS MOVING FROM THE OPERATIONAL PHASE TO THE DECOMMISSIONING PHASE OF ITS LIFECYCLE

1d Please state when would you like the authorisation to come into effect?

Date: 1st November 2009

(This can take up to 4 months from the date of receiving the application with all information and fee. After you receive your authorisation there is usually another 28 days before you can start accumulating and disposing of radioactive waste.)

2. CONTACT DETAILS

Guidance Note: The person named below should be authorised by the company to be the primary contact for queries about the application. Queries are likely to be of a technical nature.

2a Please provide details about the person that we may contact about the application

Name: Mr Mike Travis

Address: Chapelcross Site

Annan

Postcode: DG12 6RF Tel No: 01461 208246

Email mike.travis@magnoxnorthsites.com

Position/Designation Site Director

3. NATIONAL SECURITY

Guidance Note: ***National security.*** You may claim that your application includes information that needs to be protected for reasons of national security. Any such claim should be submitted for determination by the Scottish Ministers, who will direct SEPA. If you believe there is any information in your application that should be kept from the public register for reasons of national security, please **do not write anything on the Application Form that reveals this information**. Rather, you should provide details on a separate sheet and attach a copy of the application that you have made to the Scottish Ministers for a national security direction. You should contact the appropriate SEPA office before submitting the application to ascertain who is authorised to receive such information. You should then submit the full application in a sealed package with the name of that person clearly marked upon it. To assist prompt processing, the Application Form only, (i.e. not any attachments) should be photocopied and, together with any application fee, should be sent at the same time as the full application to the relevant SEPA office.

3a Please inform us about any National Security claim

Is there any information that you believe should be kept from the public register on the grounds of national security?

Yes ☐ No ☑

If you have ticked yes please:

- Give full information on separate sheets
- Provide a copy of the application form to Scottish Ministers for a Direction on the issue of national security.

4. DETAILS OF PREMISES TO WHICH THE APPLICATION RELATES

Guidance Note: Details of the premises on or from which it is intended to accumulate or dispose of radioactive waste must be provided in this section. The name provided here should identify the premises to which this application relates e.g. A particular hospital, campus, department etc.

4a Please provide details of premises to be authorised

For offshore installations operating in Scottish area, please go to 4f

Name: CHAPELCROSS SITE

Address: ANNAN

DUMFRIES

Postcode: DG12 6RF

Telephone No: 01461206496 / 01461208835

Fax: 01461208497

4b Please provide details of the location of premises

Please enclose a map detailing the location of the above premises and delineate the site boundary by marking this clearly in red on each copy. The map scale must be sufficient to allow the location to be identified and a clear distinction to be made between the premises for which authorisation is being sought and surrounding premises.

Please give the grid reference of the main entrance to the premises NY 216 675

4c Please provide a detailed site plan

Please enclose 3 copies of a plan showing the extent of the premises for which authorisation is being sought by marking this clearly in red on each copy.

In circumstances where the premises comprise a building that is occupied by more than one organisation, a site that contains several buildings or where only part of a building or premises is to be used, then the plan must clearly delineate the boundary or boundaries for which authorisation is being sought.

4d Please provide a description of the premises to be authorised

Please give a sufficiently detailed written description of the premises to support the plan provided. Together the plan the description must clearly allow identification of the locations on the authorised premises where radioactive waste will be accumulated and disposed.

CHAPELCROSS LICENSED SITE COMPRISES OF :

4 MAGNOX NUCLEAR REACTORS
POND BUILDING
BLD 141 U03 STORE
CHAPELCROSS PROCESSING PLANT.
GRAPHITE HANDLING FACILITY
TECHNICAL LABORATORIES
NORTH SITE BUILDINGS
FLASK HANDLING BUILDING

4e Please state the local government area in which the premises are situated.

DUMFRIES AND GALLOWAY

4f Please give details of offshore installations operating in the Scottish area.

Only list those sub-sea facilities under the direct supervision and managerial control of the installation operator.

Name of installation: _____

Name of installation operator: _____

Location (block number): _____

List sub-sea installations tied-back to this installation:

4g **Please give the operational contact who will have the responsibility for the day to day overall supervision of the accumulation and disposal of the radioactive waste?**

Name: Mr Mike Travis

Address: Chapelcross Site

Annan

Postcode: DG12 6RF

Telephone No: 01461 208246 Fax: 01461 208498

Email: mike.travis6@magnoxnorthsites.com

Position/Designation: Site Director

5. DETAILS OF THE UNDERTAKING FOR WHICH PREMISES ARE USED

Guidance Note: "Undertaking" is defined in Section 47 of the Radioactive Substances Act 1993 as follows - "includes any trade, business or profession, and, in relation to a public or local authority, includes any of the powers or duties of that authority, and, in relation to any other body of persons, whether corporate or unincorporate includes any of the activities of that body."

5a **Please provide details of the undertaking carried on by the applicant at the premises specified at question 4 (a) or 4 (f) above**

Nuclear licensed site Ex Power Generation

5b **Please say how the radioactive wastes are produced**

Radioactive wastes are produced by the defuelling and decommissioning of the reactors. Decommissioning of the Pond Building, Chapelcross Processing Plant and other site buildings in preparation and progression towards care and maintenance

5c **Do any of the processes result in the accumulation or disposal of alpha emitting radionuclide?**

Yes ☑ No ☐

5d **Describe the process and the modifications considered for reducing the quantities of radioactive waste likely to arise.**

Magnox Electric Ltd are committed to use BOTH BPEO and BPM PROCESS

SEE THE FOLLOWING SECTIONS OF INFORMATION IN SUPPORT OF APPLICATION DOCUMENT,
3.6.2, 4.7, 4.1, 5.1, 5.6,

5e **Do you intend to receive and dispose of radioactive waste from other premises? (give details)**

No

6. GASEOUS WASTE – DISPOSAL OF GASEOUS RADIOACTIVE WASTE

6a **Do you intend to dispose of radioactive waste in the form of gas mist or dust?**

Yes	☑	Please continue with the rest of this section
No	☐	Please go to question 7

6b **For each discharge point please give a full description of the waste and identify or describe the discharge point.**

Guidance note: Should you require more space than is available in this table, please ensure that any additional information is supplied in the same format, is clearly identified and listed in section 12a of this application form.

SEE SECTION 5.1 OF INFORMATION IN SUPPORT OF APPLICATION DOCUMENT

6c List the radionuclides you intend to discharge

Guidance note: Should you require more space than is available in this table, please ensure that any additional information is supplied in the same format, is clearly identified and listed in section 12a of this application form.

Radionuclide	Maximum discharge in a single day (Bq)	Maximum discharge in a year (Bq)
TRITIUM H3		7.5 E+14
CARBON 14		1.0 E+11
BETA PARTICULATE		2.5 E+08

Maximum number of days in a year aqueous waste will be discharged: 365

6d For each of the radionuclides listed above, what will be the concentrations in the waste disposed of?

Guidance note: Should you require more space than is available in this table, please ensure that any additional information is supplied in the same format, is clearly identified and listed in section 12a of this application form.

Radionuclide	Concentration in waste disposed of (m^3)
SEE SECTION 5	OF THE INFORMATION IN SUPPORT
OF APPLICATION	DOCUMENT
CONCENTRATIONS	WILL BE VARIABLE

6e How do you intend to measure or estimate the activity of the discharge? Please explain

SEE SECTION 5 OF INFORMATION IN SUPPORT OF APPLICATION DOCUMENT.

6f Please attach your radiological assessment of the proposed discharges to this form.

Assess the dose to the most likely exposed individual(s) who are not involved in the work with the radioactive material.

For each discharge point you should give details of

- The height of the discharge point
- The height of the discharge point above the highest part of the nearest building
- The distance between the discharge point and the nearest building or place to which the public has access
- Describe the nature and purpose of the adjacent building or place
- Plan of the premises showing the discharge points, the premises and adjacent buildings
- The discharge efflux velocity in meters per second
- Details of any filtration on the discharge system

7. LIQUID WASTE – ACCUMULATION AND DISPOSAL OF LIQUID RADIOACTIVE WASTE

7a Do you intend to accumulate or dispose of radioactive aqueous waste, including organic combustible waste?

Guidance note: This includes accumulation of waste to enable short-lived radionuclides to decay.

Yes	☑	Please continue with the rest of this section
No	☐	Please go to question 8

7b What is the chemical and physical nature of the waste you intend to accumulate or dispose of?

PLEASE SEE SECTION 6, 4 OF INFORMATION IN SUPPORT OF APPLICATION DOCUMENT

7c Why do you intend to accumulate aqueous waste?

N/A

7d How do you intend to accumulate aqueous waste?

Guidance note: Describe the facilities and controls that will be used to store the accumulated aqueous waste safely

N/A

7e How long do you intend to accumulate aqueous waste for?

Guidance note: Please give the maximum time that radioactive aqueous waste will be stored from creation or receipt until final disposal

N/A

7f How much radioactive waste do you intend to accumulate?

Guidance note: Should you require more space than is available in this table, please ensure that any additional information is supplied in the same format, is clearly identified and listed in section 12a of this application form.

Radionuclide	Maximum Activity (Bq)	Maximum Volume at any one time (m^3)
N/A		

7g Where will you dispose of the aqueous waste?

Please tick all that apply and answer the questions shown

- [x] To a public sewer, water course or water body section 7h to 7m
- [ ] to premises own sewage treatment works or septic tank section 7n to 7t
- [ ] Incineration on own premises section 10
- [x] Transfer of the waste to a contractor (other than the operator of the nuclear site at Drigg or Sellafield) section 11

DISPOSAL TO A PUBLIC SEWER, WATER COURSE OR WATER BODY

7h What is the name and 8 figure National Grid Reference of the sewerage treatment to which your premises discharges liquid radioactive waste?

SOLWAY FIRTH, NATIONAL GRID REFERENCE
NY 20656438

7i What is the approximate daily total volume of water which you intend to discharge from the premises into the sewer?

VARI NONE Cubic metres

7j What is the maximum monthly total of each radionuclide you intend to discharge?

Guidance note: Should you require more space than is available in this table, please ensure that any additional information is supplied in the same format, is clearly identified and listed in section 12a of this application form.

Radionuclide	Maximum total activity in any single month (Bq)	Concentrations in the waste disposed of (Bq/m^3)
TRITIUM H3	5.5E+10	6.0E+07
TOTAL ALPHA		
TOTAL BETA		

7k **Will the waste include any substances liable to render it unacceptable for disposal to the drainage system serving the premises?** If yes, please explain

7l **How do you intend to measure or estimate the activity of the discharge?** Please explain

7m **Please attach your radiological assessment of the proposed discharge to this form**

Assess the dose should to the most likely exposed individual(s) who are not involved in the work with the radioactive material. You could include consideration of discharges to the sewerage treatment works which treats your discharge, give details of the calculations you use. Please include a copy of the Trade Effluent Consent from your sewerage undertaker.

7n **What is the name of the watercourse or body of water that your sewage treatment works discharges into and your SEPA consent to discharge reference (i.e. – WPC/X/XXXX)?**

7o **What is the approximate daily total volume of water which you intend to discharge from the premises?**

Cubic metres

7p How do you intend to treat your liquid waste to minimise the radioactivity being disposed of?

BULK POND WATER - CAESIUM REMOVAL BY ION EXCHANGE

EFFLUENT - SETTLING OF SOLIDS IN SETTLING TANK (DETENTION)
FILTRATION BY STRAINER FILTERS

SEE SECTION 4.1 OF INFORMATION IN SUPPORT OF

7q What is the maximum monthly total of each radionuclide you intend to discharge?

Guidance note: Should you require more space than is available in this table, please ensure that any additional information is supplied in the same format, is clearly identified and listed in section 11 of this application form.

Radionuclide	Maximum total activity in any single month (Bq)	Concentrations in the waste disposed of (Bq/m^3)
TRITIUM	5.5 E +10	
Total Alpha	1.0 E +09	
Total Beta.	2.5 E +11	

7r What do you intend to do with any sludge or solids which are left after treatment?

THEY WILL REMAIN ON SITE AND BE TREATED AS PART OF THE ILW STRATEGY

7s How do you plan to assess the activity of any sludge or solids which are left after treatment before final disposal?

CLASSICAL RADIOCHEMICAL ANALYSIS

7t Please attach your radiological assessment of the proposed discharge to this form

Assess the dose to the most likely exposed individual(s) who are not involved in the work with the radioactive material. You could include consideration of discharges to the sewerage treatment works which treats your discharge. Please give details of the calculations you use.

8. SOLID WASTE – ACCUMULATION AND DISPOSAL OF SOLID WASTE

8a Do you intend to accumulate of solid waste?

Yes ☐ Please continue with the rest of this section

No ☑ Please go to question 9

8b How much radioactive waste do you intend to store?

Guidance note: Should you require more space than is available in this table, please ensure that any additional information is supplied in the same format, is clearly identified and listed in section 12a of this application form.

Radionuclide	Maximum Activity (Bq)	Maximum time of accumulation

8c How will you record and label this solid waste?

8d How will you store the accumulated waste until it is disposed of?

Guidance note: Please give details of measures and controls used to keep the waste safe, for example security, fire precautions and alarms, etc.

8e Do you intend to dispose of solid waste?

Yes ☐ Please continue with the rest of this section

No ☐ Please go to question 10

8f How do you intend to dispose of solid waste?

Please tick all that apply and answer the questions shown

- ☐ Disposal with ordinary refuse containing no other radioactive waste section 8g to8k
- ☐ Special precautions burial at a controlled landfill site section 8l to 9p
- ☑ Transfer of waste to the operator of the nuclear site at Drigg or Sellafield sites section 9
- ☑ by other means 'Other methods of solid waste disposal' section 11?
- ☐ Incineration on own premises section 10
- ☑ Transfer of the waste to a contractor (other than the operator of the nuclear site at Drigg or Sellafield) section 11

DISPOSAL OF SOLID WASTE WITH ORDINARY REFUSE CONTAINING NO OTHER RADIOACTIVE WASTE

8g What is the company name of the disposal site operator?

8h What is the address and National Grid Reference of the disposal site which will receive the waste?

Name: _____

Address: _____

_____

Postcode: _____

Telephone No: _____

National Grid Reference e.g. NB1234 5678 _____

8i In which local authority area is the disposal site operator's premises?

If premises are on a boundary please give names of all relevant authorities

8j What is the maximum amount of very low level solid waste you intend to dispose of with normal refuse in any one month?

Cubic metres

8k What is the average volume of normal refuse to landfill in any one month?

Cubic metres

SPECIAL PRECAUTIONS BURIAL

Please provide details and include supporting evidence with your application.

8l Please give details of any environmental licences held by the site operator?

8m How much radioactive waste do you intend to bury at the operator's disposal site?

Guidance note: Should you require more space than is available in this table, please ensure that any additional information is supplied in the same format, is clearly identified and listed in section 12a of this application form.

Radionuclide	Maximum Activity in any one month (Bq)	Concentration (Bq/m^3)

9. TRANSFER TO THE OPERATOR OF THE NUCLEAR PREMISES AT DRIGG OR SELLFIELD SITES

Please provide details and include supporting evidence with your application.

9a What is the chemical and physical nature of the waste?

PLEASE SEE SECTION 7 OF INFORMATION IN SUPPORT OF APPLICATION

9b What is the maximum annual disposal activity (at the time of transfer) for each of the following?

Guidance note: Should you require more space than is available in this table, please ensure that any additional information is supplied in the same format, is clearly identified and listed in section 12a of this application form.

Radionuclide	Becquerels
Uranium	1.0E+09
Radium 226 plus thorium 232	2.0E+08
Other alpha-emitters	5.0E+08
Carbon 14	2.0E+09
Iodine 129	2.0 E+09
Tritium	5 2 E+12
Cobalt 60	3.5E+10
Other beta-emitting radionuclides (half-life greater than 3 months)	4.0 E+11
Other beta-emitting radionuclides (half-life less than 3 months)	

9c What is the maximum amount of waste you plan to send to the operator of the nuclear premises at Drigg or Sellafield in any one year?

1200 Cubic metres

9d How many consignments are intended for the operator of the nuclear premises at Drigg or Sellafield in a year?

Up To 400

10. INCINERATION ON THE PREMISES

10a What is the SEPA reference of any environmental licence held in respect of your incinerator? (i.e. PPC/X/XXXX or WML/X/XXXX)

10b What type of incinerator do you have?

Please give the manufacturer and model or type number

10c Briefly describe any gas clean-up system or filtration on your incinerator.

10d What is the maximum daily and monthly activity of each radionuclide which you intend to incinerate?

Guidance note: Should you require more space than is available in this table, please ensure that any additional information is supplied in the same format, is clearly identified and listed in section 12a of this application form.

Radionuclide	Physical form of radionuclide	Maximum total activity in any single day (Bq)	Maximum discharge in a month (Bq)

Maximum volume in any one day in cubic metres

Maximum volume in any one month in cubic metres

10e How do you intend to access the activity content of the ash from the incinerator or solids from any filtration system?

10f How do you intend to dispose of ash from the incinerator or solids from any filtration system?

10g What will you do if your incinerator fails or breaks down?

10h Please attach your radiological assessment of the proposed disposal to this form

You should assess the dose to the most likely exposed individual(s) who are not involved in the work with the radioactive material.

You should give details of

- The height of the incinerator discharge point
- The height of the discharge point above the highest point of the nearest building
- The efflux velocity in meters per second
- Details of any filtration on the incinerator

Please give details of the calculations you use.

11. TRANSFER TO A CONTRACTOR (OTHER THAN THE OPERATOR OF THE NUCLEAR SITE AT DRIGG OR SELLAFIELD)

Please attach a brief summary of your agreement with the contractor to this form.

11a Give details of the radioactive waste you intend to transfer to your contractor?

Guidance note: Should you require more space than is available in this table, please ensure that any additional information is supplied in the same format, is clearly identified and listed in section 12a of this application form.

Radionuclide	Physical form of radionuclide	Maximum annual activity (Bq)
TRITIUM	ORGANIC LIQUID	3.0E+09
TOTAL ALPHA	ORGANIC LIQUID	1.0E+07
OTHER RADIONUCLIDES	ORGANIC LIQUID	3.0E+09
TRITIUM	ACTIVATED CHARCOAL	3.0E+09
OTHER ALL RADIONUCLIDES	ACTIVATED CHARCOAL	5.0E+07
TRITIUM	LIQUID SCINTILLANT	INCLUDED WITHIN ORGANIC LIQUID
TOTAL ALPHA	LIQUID SCINTILLANT	
OTHER RADIONUCLIDES	LIQUID SCINTILLANT	

Maximum volume of solids in any one year (m^3)	164
Maximum volume of combustible/liquid in any one year (m^3)	200

11b What is the registered company name of the contractor?

VEOLIA ES (UK) Ltd.

11c What are the contact details and address of the contractor's site which will receive the waste?

Name: MRS NICKI GREEN

Address: CHARLESTON ROAD, HARDLEY, HYTHE, SOUTHAMPTON

Postcode: SO45 3ZA

Telephone No: 02380 891286 Fax: 02380 883010

Email: nicki.green@veolia.co.uk

Position/Designation: CUSTOMER SERVICES MANAGER (RADIOACTIVES)

11d In which local authority area is the contractor's premises?

HAMPSHIRE

11e Please describe contingency arrangements if your planned transfer routes become unavailable.

If the planned transfer route was unavailable, another operator would be sought for the disposal of the organic waste for incineration a potential option is Studsvik

12. SUPPORTING DOCUMENTS AND ATTACHMENTS

12a Please list any supporting documents or additional pages supplied

Guidance Note: All supporting documents and attachments should be signed and dated by the applicant.

1. INFORMATION IN SUPPORT OF APPLICATION BY MAGNOX ELECTRIC LIMITED UNDER THE RADIOACTIVE SUBSTANCES ACT 1993 TO DISPOSE AND DISCHARGE RADIOACTIVE WASTES FROM CHAPELCROSS SITE
2. BEST PRACTABLE ENVIRONMENTAL OPTION FOR CARE AND MAINTENANCE PREPARATION WASTES AT CHAPELCROSS
3. 3 COPIES OF MASTER BUILDING PLAN
4. 3 SET OF DRAWINGS SHOWING THE POSITION OF THE CHAPELCROSS SITE
5. 3. COPIES OF EFFLUENT DRAIN TO SOLWAY

13. COMMERCIAL IN CONFIDENCE

13a Absence of relevant processes or trade secrets

I accept that the information contained in the application form will form part of the publicly available information held by the Scottish Environment Protection Agency and relevant public registers

SIGNED: DATE:

AUTHORISED ON BEHALF OF:
(Company, corporate body, firm etc)

14. DECLARATION

I/we hereby apply for authorisation under section 13 & 14 in respect of the premises referred to in Section 4 and in respect of the accumulation and disposal of radioactive material of the description and quantities referred to above. I/we declare that to the best of my/our knowledge the above particulars are true and accept that the information contained in the application form will form part of the publicly available information held by the Scottish Environment Protection Agency and relevant public registers. I have read the data protection notice and understand the implications of the Data Protection Act 1998. (Also all persons mentioned in the form should sign the data protection part).

SIGNED: PRINT NAME:

POSITION & DESIGNATION: DATE:

AUTHORISED ON BEHALF OF:
(Company, corporate body, firm etc)

For the application to be deemed to be duly made, all Sections of this application form must be completed legibly, the form signed and the appropriate fee included with the application.

15. COMPLETED FORMS

When completed this form should be sent, addresses to the 'The Registrar, Scottish Environment Protection Agency' [INSERT APPROPRIATE AREA OFFICE ADDRESS – See front page].

Information required by Section 11 of RSA3 application form in respect of the transfer of waste to Siempelkamp Nucleartechnik GmbH

11a	Give details of the radioactive waste you intend to transfer to your contractor?	
Radionuclide	Physical form of radionuclide	Maximum annual activity (Bq)
Beta/Gamma emitting radionuclides	Surface contaminated metal	100 E+09

Maximum volume of solids in any one year (m^3) 500
Maximum volume of combustible/liquid in any one year (m^3) nil

11b	What is the registered company name of the contractor?
	Siempelkamp Nucleartechnik GmbH

11c What are the contact details and address of the contractor's site which will receive the waste?
Siempelkamp Nucleartechnik GmbH Siempelkampstraße 45 47803 Krefeld Germany

11d	In which local authority area is the contractor's premises?

11e	Please describe contingency arrangements if your planned transfer routes become unavailable.
	It is the intention of Magnox Electric Ltd to decontaminate surface contaminated items on site at Chapelcross. It is recognised that it may not always be technically possible to do this and in those cases surface contaminated metal items will be transferred to another suitable person (in this case Siempelkamp Nucleartechnik GmbH) for treatment before disposal. If transfer of contaminated metal waste to Siempelkamp or another authorised person becomes unavailable low level waste will be disposed of by transfer to LLWR Ltd

Information required by Section 11 of RSA3 application form in respect of the transfer of waste to Studsvik UK Ltd

11a	Give details of the radioactive waste you intend to transfer to your contractor?	
Radionuclide	Physical form of radionuclide	Maximum annual activity (Bq)
Beta/Gamma emitting radionuclides	Surface contaminated metal	100 E+09

Maximum volume of solids in any one year (m^3) 500
Maximum volume of combustible/liquid in any one year (m^3) nil

11b	What is the registered company name of the contractor?
	Studsvik UK Limited

11c What are the contact details and address of the contractor's site which will receive the waste?
Studsvik UK Limited Joseph Noble Road Lillyhall Industrial Estate Workington Cumbria

11d	In which local authority area is the contractor's premises?
	Cumbria County Council

11e	Please describe contingency arrangements if your planned transfer routes become unavailable.
	It is the intention of Magnox Electric Ltd to decontaminate surface contaminated items on site at Chapelcross. It is recognised that it may not always be technically possible to do this and in those cases surface contaminated metal items will be transferred to another authorised person (in this case Studsvik UK Ltd) for treatment before disposal. If transfer of contaminated metal waste to Studsvik or another authorised person becomes unavailable low level waste will be disposed of by transfer to LLWR Ltd