

THIS AGREEMENT made the 7th day of April 1987
between the ~~UNITED STATES OF AMERICA~~ represented herein by the (Initials)
United States Department of Energy (hereinafter referred to as DOE) and the AUSTRALIAN ATOMIC ENERGY COMMISSION (hereinafter
referred to as "the AAEC") its successors and assigns. JRC 

WHEREAS

- A. The Governments of the Commonwealth of Australia and the United Kingdom have agreed to support a program of six studies into the residual contamination of the Maralinga and Emu sites and have requested to the AAEC to coordinate the provision of the studies..
- B. The AAEC has requested DOE to perform an aerial radiological survey over an area of land situated in the State of South Australia using high resolution detection equipment and on-board computerised spectroscopic analysis to locate areas of residual contamination.
- C. DOE have agreed to provide such survey.
- D. This Agreement is executed under the Authority of the United States Department of Energy Organizations Act 1977, the United States Atomic Energy Act of 1954, as amended, and the Agreement for Co-operation between the Government of the United States and the Government of Australia done at Canberra on 5 July 1979, as amended.

NOW THEREFORE, the parties mutually agree as follows:

1. Definitions

The following terms, as used herein, shall have the following meanings -

- (a) words importing one gender shall include the other genders;
- (b) words importing the singular shall include the plural and vice-versa as the case requires;
- (c) a reference to a person shall include a corporation as well as an individual; and
- (d) a cross-reference to a clause number shall be a reference to all of its sub-clauses.
- (e) the term Contractor shall also mean Sub-contractor and the term Sub-contractor shall also mean Contractor.

"this Agreement" means this Agreement and includes the Appendix to this Agreement.

(Initials)
CRC [Signature]

2. Term

The Agreement shall commence on the date of signature and shall end on completion of the final report expected to occur by approximately 31 December 1987. This Agreement may be extended or reduced for such terms and upon such conditions as the parties may agree from time to time.

3. Services provided

DOE agree to provide the aerial radiological survey specified in Appendix A in accordance with the requirements of this Agreement.

Scope

4.1 This Agreement provides the terms and conditions which apply to the performance of a aerial radiological survey over areas situated in the Maralinga and Emu districts of the State of South Australia.

4.2 It is understood that the following parameters comprise the general outline of the work to be performed by the DOE:

Place to be surveyed:	Maralinga and Emu Districts South Australia
Area to be surveyed:	1000 to 2000 square kilometres
Estimated survey time:	8-14 weeks
Flying time required:	200 to 400 hours
Starting Time:	Approximately 1 May 1987
Estimated costs:	\$US675,000 (not to exceed)

DOE Obligations

5.1 With respect to the provision of the radiological survey, the DOE shall perform such aerial radiological survey utilizing the services of its contractor EG & G Energy Measurements, Inc to provide the raw data and a draft final report consisting of maps, charts, computer print-outs, data reduction, data analysis, and data interpretation in accordance with the general requirements of Appendix A.

5.2 DOE shall provide the following equipment, including, but not limited to:

- (1) Gamma detector pods compatible to Wessex Mark II helicopters;
- (2) REDAR IV data acquisition units;
- (3) Mini REDAC data reduction units;
- (4) Ultra High Frequency Ranging System (URS)/Navigation/Position Systems; and
- (5) Other electronic and mechanical equipment ancillary to that in (1) through (4) above and necessary to perform the aerial radiological survey.

5.3 The DOE and its sub-contractors shall have the right to rotate personnel in the survey party or any individuals in the party as required to support other on-going DOE projects.

6. Charges for DOE Services

6.1 It is expressly agreed and declared between the parties that the basis of this agreement is that the DOE will receive full cost reimbursement for expenses incurred by their contractor EG & G Energy Measurements, Inc.

6.2 The AAEC shall pay to DOE a total amount of US\$675,000 with respect to the provision of the aerial radiological survey in the following manner:

- . by an advance payment of US\$400,000 (less US\$25,000 already paid) within 7 days of the date of signing of this Agreement;

. by a further payment of US\$275,000 on or before
1 June 1987.

6.3 In the event of the costs not reaching the estimated sum
of US\$675,000 the DOE will refund to the AAEC the
unexpended portion.

6.4 It is expressly agreed and declared that if the scope of
the tasks the subject of this Agreement are extended by
the AAEC that any costs shall be payable by the AAEC on
full cost reimbursement basis.

6.5 For the purposes of this clause full cost reimbursement
means costs for contractual services provided by EG & G
Energy Measurements Inc, including labour, materials and
any other direct expenses and associated allocations of
indirect and overhead costs plus a depreciation charge of
10% and an added factor of 16% which covers DOE general
and administrative costs.

7. Helicopters to be provided by the Government of the
United Kingdom

7.1 The AAEC shall coordinate the provision by the Government
of the United Kingdom of two (2) Wessex Mark II
helicopters with sufficient logistic support and crew to
provide an aerial platform for the EG & G Energy
Measurements, Inc. radiological measurement equipment.

8. Equipment Provided by the AAEC

8.1 The AAEC shall arrange for the provision of URS towers
for a navigation positioning system and a supply of heavy
duty marine batteries of type suitable to operate the URS
navigation positioning equipment (hereinafter referred to
as "the equipment").

8.2 All equipment provided by the AAEC shall remain the property of the AAEC and shall not be used other than for the purposes of this Agreement without the prior written approval of the AAEC.

8.3 Should the DOE or its sub-contractors detect any deficiencies affecting the function of the equipment such deficiencies shall be reported to the AAEC by DOE or its sub-contractors and the AAEC shall take such rectifying action as it deems necessary.

8.4 During the continuance of this Agreement the AAEC shall provide the following to the DOE and its, sub-contractors -

- . arrangement for, or reservation of housing accommodation in Australia for DOE and DOE contractor personnel and provision of accommodation and meals while in the field;
- . payment for, or arrangement of, travel and transport for DOE and DOE contractor personnel and equipment in Australia to and from the work sites;
- . a paramedic or other medical personnel equivalent at the base camp at the Maralinga, as well as a method by which personnel requiring medical attention could be brought to a medical practitioner or medical facility in a timely manner;
- . co-ordinate as necessary with the United Kingdom the provision of health physics supervision for all DOE and DOE contractor personnel at site during the radiological survey.

9. Negation of Employment

9.1 DOE, or persons engaged by DOE in the carrying out of the radiological survey shall not, by virtue of this Agreement deemed to be or become employees of the AAEC.

10. Indemnity

10.1 The AAEC indemnifies the DOE and its sub-contractors against all claims, actions, proceedings costs and expenses arising out of or by reason of the performance of this Agreement, except where caused by the gross negligence or wilful misconduct of the DOE or its sub-contractors and provided such claims, actions, proceedings, costs and expenses shall be notified to the AAEC as soon as possible and not admitted, compounded or settled without the consent of the AAEC.

11. Ownership of contract material

11.1 The property and copyright in all material created in connection with the provision of the radiological survey shall vest in the AAEC, DOE and persons engaged by DOE in the provision of the results of the aerial radiological survey, shall not without prior written approval of the AAEC use or reproduce any such material for purposes other than fulfillment of this contract.

12. Disclosure of information

12.1 DOE and persons engaged by DOE, in carrying out the aerial radiological survey shall not, without prior written approval of the AAEC, disclose other than to the AAEC any information acquired in connection with the radiological survey or release other than to the AAEC any material created in connection with the provision of the aerial radiological survey.

12.2 Notwithstanding clauses 11 and 12 above nothing in this agreement is meant to obviate the requirements of the Freedom of Information Act of the United States of America, or the DOE acquisition regulations.

(Initials)

CRC [Signature]

13. Entire agreement

13.1 The terms and conditions of this Agreement are those set out in this document, and no written or oral agreement, arrangement or understanding made or entered into prior to the execution of this Agreement shall in any way be read or incorporated into this Agreement.

14. Arbitration

14.1 Except as otherwise provided in this Agreement, all disputes concerning questions of fact which may arise under this agreement, and which are not disposed of by mutual agreement, shall be referred to arbitration by a board composed of three arbitrators. One of such arbitrators shall be appointed by the DOE, one shall be appointed by the AAEC, and the third arbitrator shall be selected by the first two. In the event that the first two arbitrators so selected are unable to agree upon a third arbitrator then each of the parties shall designate another person to act as an arbitrator in lieu of the person previously appointed by such party, which two new arbitrators shall endeavour to agree upon the third arbitrator. Such procedure shall be repeated until a third arbitrator shall have been selected. The arbitration proceedings shall be in accordance with the rules established by the American Arbitration Association for Commercial Arbitration. The decision of a majority of the arbitrators on the arbitration board shall be final and binding unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by

substantial evidence. Allocation of the costs of arbitration shall be as determined by the board of arbitrators; provided however, that neither party shall be obliged to pay the costs of the other party's arbitrator.

14.2 This "Arbitration" clause does not preclude consideration of law questions in connection with decisions provided for in paragraph 14.1 above, provided, that nothing in this Agreement shall be construed as making final the decision of the arbitration board on a question of law.

15. Applicable Law

15.1 This Agreement shall be construed in accordance with the internal federal law applicable in the United States District Courts to agreements to which the Government of the United States of America is a party.

16. Assignment

16.1 Neither this Contract, nor any interest therein or claim thereunder shall be assigned or transferred by the DOE, without the express written approval of the AAEC.

17. Regulations and Requirements: Permits

17.1 The AAEC shall procure all necessary permits or licenses and DOE shall comply with all applicable laws, regulations, and ordinances of the Commonwealth of Australia and of any States, Territory of the said Commonwealth.

18. Notices

18.1 Any notice or other communication under or in relation to this Agreement shall be deemed to have been duly given if it is in writing and posted in a prepaid letter and shall

be deemed to have been received when it would have been delivered in the ordinary course of the post.

- 18.2 Notices or communications by DOE to the AAEC shall unless otherwise notified in writing by the AAEC to DOE be addressed to the AAEC as follows:

The Secretary,
Australian Atomic Energy Commission
Lock Mail Bag No. 1
MENAI NSW 2234

Attention: Dr J.M. Costello

Telephone: (02) 543 3111

Telex: AA 24562

Fax: (02) 543-5097

- 18.3 Notices or communications by the AAEC to DOE shall unless otherwise notified in writing by DOE to the Commission be addressed to DOE as follows:

Mr Thomas R. Clark
Manager
Nevada Operations Office
United States Department of Energy
P.O. Box 98518
LAS VEGAS NEVADA 89193-8518
U.S.A

(Attention: Mr R. Stearns)

Telephone: (702) 295-1299

Fax: (702) 295-1374

IN WITNESS WHEREOF the parties have executed this Agreement as at the day and year first above written.

Signed for and on behalf of the)
AUSTRALIAN ATOMIC ENERGY COMMISSION)
by W H RATCLIFF)
Secretary)
in the presence of:)

[Handwritten signature]
Elysech M. ...

U.S. Department of Energy)
By: Thomas R. Clark)
Title: . Manager, Nevada Operations Office)
.....)
U. S. Department of Energy)

Thomas R. Clark
Manager, Nevada Operations
U.S. Department of Energy
April 7, 1987

APPENDIX A

Maralinga Rehabilitation Study
Radiological Survey

Technical Specification

Scope of Study

Using the serviced helicopter and flight crew provided by the UK, the DOE shall supply and install instrumentation and conduct an aerial radiological survey at Maralinga and Emu, South Australia over the regions of approximately 1500 km² in total area marked on the attached topographic map to detect the presence of surface plutonium contamination at a sensitivity of a few Bq of plutonium per gram of soil.

RADIOMETRIC EQUIPMENT

1. The DOE shall supply, install and operate two detector pods containing twenty sodium iodide detectors of dimensions 127 mm diameter by 51 mm thickness provided with cadmium shielding as used by the DOE in surveys of Enewetak atoll and the Northern Marshall islands.
2. The detectors are to have a minimum detection sensitivity for gamma radiation from Americium-241 in the 60 keV energy region in the range 15 to 45 kBq/m² Am-241 (0.4 to 1.2 uCi/m²) in background gamma radiation fields of 0.1 to 1.0 micro Sv (10 to 100 micro R h⁻¹) respectively.

DATA ACQUISITION AND REDUCTION EQUIPMENT

3. The DOE shall supply, install, and operate a system for acquisition of data and a system with adequate spares for reduction of data for the sodium iodide detectors of gamma radiation energy and intensity.

INSTALLATION OF RADIOMETRIC EQUIPMENT

4. The DOE, in collaboration with UK helicopter personnel, shall mount the detectors externally on the helicopter provided.

CALIBRATION OF RADIOMETRIC EQUIPMENT

5. AAEC shall provide appropriate sources containing 1.9 to 3.8 MBq (50 to 100 microcuries) of Am-241 and Na-22 for gain adjustment of the sodium iodide crystals by the DOE.

NAVIGATION EQUIPMENT

6. The DOE shall supply, install, and operate two remote navigation transponders, each of mass 11.5 kg on two towers.
7. The survey shall be conducted at an approximate speed of sixty knots, at an altitude of approximately 30 metres with a minimum line spacing of 50 metres.
8. Spectral data between 30 keV and 3MeV shall be obtained in one second increments.
9. The DOE shall process data at Maralinga for gamma radiation from Am-241, fission and activation products, and natural background where applicable.

REPORTING

10. The DOE will provide a final report in draft form.