

UKAEA Beach Monitoring Steering Group

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|---------------|----------------------------|
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SANDSIDE BAY, CAITHNESS



**Locations of Particle finds
(to October 2003)**

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Extent of Dounreay offshore area
from which Particles have been recovered

Extent of FEPA
Exclusion Zone

Dounreay
Foreshore

Sandside Beach

- Legend**
- Particles recovered
 - Particles recovered
 - Particles recovered

600 0



Websites

- <http://www.ukaea.org.uk/dounreay/particles.htm>

press releases, registers of particle finds, maps, reports, dose and risk estimates,

- <http://www.ukaea.org.uk/dounreay/beach.htm>

BMSG terms of reference, minutes of meetings

Typical Press Release

Particle find on Sandside Beach

A suspected radioactive particle resulting from historical operations at Dounreay was found during routine monitoring of Sandside Beach today. The particle was removed from the beach and taken to the site for analysis. Regulatory and other interested parties have been informed.

A total of 47 particles have been found on the beach since 1984. The particles are specks of irradiated fuel, similar in size to a grain of sand.

Notes to Editors:

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Summary of particle finds at Sandside since deployment of Groundhog Evolution system

| Date found | Depth (cm) | Radioactivity (Bq of Cs137) |
|-------------|------------|-----------------------------|
| 29 Nov 2003 | 13 | 89,000 |
| 23 Dec | n/a | 39,000 |
| 26 Feb | 7 | 13,000 |
| 27 Feb | 18 | 65,600 |
| 27 Feb | 13 | 82,900 |
| 3 Mar | 4 | 19,000 |
| 13 Mar | 4 | 8,400 |
| 18 Mar | 0 | 27,000 |

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CURRENT MONITORING SYSTEM



**Groundhog
Evolution**

Present contract runs until December 2006

BMSG Terms of Reference

On behalf of UKAEA:

- explore possible increase in monitoring performance
- review alternative technologies
- assist with an OJEU notice (release date March 2004?)
- place relevant reference material on website
- assess Eols and select promising suppliers
- assess bids
- arrange validation trials (lab & exptl)

Possible Performance Improvements

- sensitivity in detecting particles
- speed of operation (more frequent deployment)
- differentiate beach particles and natural radiation sources
- ease of deployment, data collection and analysis
- cost of procurement and deployment
- positional accuracy
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Other considerations

- **Payment to potential contractors to participate in trials and “prove” their system**
- **Present requirement:**
 - **find and remove particles of $> 100 \text{ kBq } ^{137}\text{Cs}$ to depth of 10 cm in sand**
 - **monitor at least 250,000 m² per month for largest beach**
 - **several smaller beaches - less frequent monitoring**
 - **related interest in monitoring beach for “low activity” particles without compromising area coverage requirement**

Contacts

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