Dalgety Bay Radiological Support
Quality Control and Sample Management
(Ref: 23218Q240i2)

1. Introduction

This document presents the quality control and sample management procedures to be followed during recovery of radioactive material from Dalgety Bay site. It should be read in conjunction with the relevant sampling plan which will identify the criteria relating to what material should be sampled and subjected to these procedures.

2. Sampling

2.1 Safety

In order to maintain worker doses As Low As Reasonably Practicable (ALARP), volume reduction / source segregation beyond that which is necessary and incidental to identifying the source material shall not be undertaken.

2.2 Sampling Process

The following checks and controls shall be made to minimise reduction in sample quality:

- The location of samples shall be marked using flags, and recorded on the radiological survey data card, to assist re-location;
- Samples shall be taken with care to limit disturbance and potential spreading of the source material during sampling;
- Probe measurements shall be taken and recorded during re-location of the point source during the recovery phase;
- During recovery, probe measurements shall be taken frequently, as required by the recovery process to ensure effective location and recovery of the point source;
- Following recovery of the point source a contact dose rate with the point source shall be recorded;
- Once the point source is isolated and recovered, a completion probe measurement of the location and immediate area shall be taken and recorded.

2.3 Sample Identification

- Disturbed sample containers shall be appropriate the material being sampled and will typically be new snap-seal plastic pots of 500 ml nominal volume. Where small sample volumes are anticipated zip lock bags may be used to maximise effective use of the storage facility;
- Samples shall be recorded on the sample log, and uniquely identified using a number from the log, in the format 23218-SXXX. Sample containers shall be marked with the sample details using an indelible marker. Details shall include sample log number, date collected, probe activity reading and, if appropriate, dose rate reading. The sample weight should also be recorded.
- Samples are to be stored in 205L drums within the radioactive materials store. Each sample should be placed in to the drum and recorded as placed with a signature.

2.4 Sample Logging and Management

All samples which are taken shall be logged on a continuation sample log of the form presented in Appendix A (reference S23218Q050). A hard copy of this log shall be maintained on site, and the soft copy on the project file shall be updated as soon as practicable.

Samples shall be stored in a locked steel temporary storage facility located at the Sailing Club. Samples shall be stored sorted by their condition (i.e. disturbed or undisturbed) and by their log number. Samples which yield a high dose rate on contact shall be segregated and stored in a separate enclosure within the building.

External dose rate measurements should be undertaken at the outside of the storage facility to ensure that they remain as low as possible and, in any case, below 7.5 $\mu Svhr^{-1}$.

Appendix A
Sample Log Format
(Ref: 23218Q050)

23218 - Dalgety Bay Sampling Log

Sample Reference	Sample Location (Eastings)	Sample Location (Northings)	Depth (m bgl)	Date & Time Taken	Material Description / Main Constituents	Disturbed / Undisturbed	Wet / Dry	Probe Reading (cps)	Probe Used	External Dose Rate (if applicable)	Sampler	Sample Storage Location	Comments
23218-S001													
23218-S002													
23218-S003													
23218-S004													
23218-S005													
23218-S006													
23218-S007													
23218-S008													
23218-S009													
23218-S010													
23218-S011													
23218-S012													
23218-S013													
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23218-S025													
23218-S026													
23218-S027													
23218-S028													
23218-S029													
23218-S030													