Note of SAFESPUR Meeting

SAFEGROUNDS guidance – have your say
AMEC NNC, Warrington, 4 October 2007

This meeting was held to give consultants and contractors the opportunity to hear about the revision of the SAFEGROUNDS guidance documents and to discuss three of them: the land management guidance (LMG), the guidance on comparison of land management options and the site characterisation guidance. The meeting was chaired by Andy Thomas, who has been involved in SAFEGROUNDS since it started in 1998 and is chair of its project steering group (PSG). About thirty people attended. There were four presentations, two breakout sessions and plenary discussions.

Importance of the SAFEGROUNDS guidance

The first presentation was by Sean Amos of AWE, who is a long-standing member of the SAFEGROUNDS PSG. It was about the importance of the SAFEGROUNDS guidance for successful delivery of land management projects. Sean reminded the meeting that before the first (current) versions of the LMG and the site characterisation guidance were published there was very little guidance available on dealing with radioactively contaminated land. Site owners and operators, and their consultants and contractors, had to rely largely on health physics guidance and guidance on the management of non-radioactively contaminated land. As well as meeting a need, another reason for the success of SAFEGROUNDS has been the involvement, almost throughout, of all the major nuclear industry organisations (civil and defence), all their regulators, and some NGOs and community-based organisations (CBOs). AWE had joined because it has both radioactively and non-radioactively contaminated land.

The SAFEGROUNDS guidance documents are referenced in its contaminated land strategy and safety case, in its 'process map' for contaminated land, and in all its tender documents for contaminated land projects. AWE finds the guidance useful for both established and new contractors at its sites. It thinks that the guidance has improved the standard of bids in competitive tendering processes. AWE expects its consultants and contractors to demonstrate an in-depth knowledge of the SAFEGROUNDS guidance and to be prepared to challenge other staff.

Revision of the LMG

The second speaker was Philippa Towler of Enviros, who is leading the consortium that is revising the SAFEGROUNDS guidance documents under contract to CIRIA. Her presentation was about the preparation of the second version of the LMG (LMGv2). Two consultations had been held on the scope, form and contents of LMGv2; a third consultation, on a first full draft of the document, was in progress at the time of the meeting. The LMG focuses on nuclear-licensed sites and non-nuclear defence sites where there is radioactive contamination. The second version will also contain limited guidance for other types of site with radioactively contaminated land, namely non-licensed nuclear defence sites, industrial, medial and research sites, and sites contaminated by a radiological emergency or accident. The main audiences for the LMG are site owners and operators, and their consultants and contractors, who must understand their customers' needs. There are a number of technical guidance documents that will support LMGv2 (see Table 1 for details). There will also be a 'citizens' guide', for non-technical audiences. LMGv2 will be based around the SAFEGROUNDS key principles for the management of contaminated land and the generic flow diagram that has been developed for land management processes (see first draft of LMGv2 for details). Philippa's presentation was followed by a question and answer session. The main points made are summarised in Table 2.

Table 1 SAFEGROUNDS Guidance Documents

Topic	*Date (version)*	*Type of document*
Management of contaminated land on nuclear and defence sites	2002 (1st) 2008 (2nd)	Main guidance
Site characterisation	2000 (1st) 2008 (2nd)	Supporting guidance, technical
Comparison of land management options	2008 (1st)	Supporting guidance, technical
Assessment of health and environmental risks	2002 (1st) 2005 (2nd)	Supporting guidance, technical
Community stakeholder involvement	2002 (1st) 2005 (2nd)	Supporting guidance, non-technical
Record keeping	2007 (1st)	Supporting guidance, technical
Citizens' guide	2008 (1st)	Non-technical guidance
Regulatory framework	2007 (5th)	Information paper

Table 2 Summary of Points made during Discussion of LMGv2

Usefulness of LMG to consultants and contractors • the LMG is useful, especially in bringing together all the various pieces of guidance from outside SAFEGROUNDS • its usefulness depends on how site owners and operators view it.
Ways to make the LMG more useful to site owners' operators and consultants and contractors • link it more closely to regulatory requirements, especially the SAPs for nuclear-licensed sites • provide more guidance on matching the degree of stakeholder involvement to the significance of the problem (perhaps including 'benchmarks') • obtain more buy-in to it from the environment agencies (especially SEPA) • increase awareness of the LMG amongst project teams (higher management are already sufficiently aware of it at many sites) • identify any inconsistencies between regulatory regimes and make government, regulators and others (eg NDA) aware of them.
Link between LMG and CLR11 • do not over-emphasise the differences between the LMG and CLR11 approaches • show how the CLR11 approach for non-radioactively contaminated land can be augmented to be consistent with the SAFEGROUNDS key principles.

Guidance on Comparison of Land Management Options

James Penfold of Quintessa, who is the main author of the options comparison guidance document, gave the third presentation. The aim of this new SAFEGROUNDS document is to establish some guiding principles for comparisons of land management options, describe a recommended general approach to comparisons, set out the range of methods available for carrying out comparisons, and to provide guidance on selecting and applying appropriate

methods. The first full draft of the guide had been produced after consultations on its scope, form and outline contents; it was out for consultation at the time of the meeting. The draft contains five guiding principles for options comparison. These cover: the need for comparisons to be structured, systematic and transparent; the extent of stakeholder involvement; the level of detail; information and data; and output.

The guide introduces the concept of a 'performance matrix', which consists of qualitative or quantitative 'scores' for options against chosen criteria. It then describes six types of method for generating and using such a matrix to compare land management options. The three simplest types of method are: direct evaluation (ie qualitative reasoning); non-compensatory methods (ie deriving requirements and eliminating options that do not meet them); and trade-off analysis (ie scoring options and reasoning from these scores to identify the preferred option). More complex types of method are (in order of increasing complexity): the linear additive method, the analytical hierarchy, and multi-criteria decision-analysis (MCDA). The draft guide contains advice on the selection of a method in the form of a table that shows the performance of each type of method on a number of criteria (eg level of detail in which options can be compared, ease with which a wide range of stakeholders can be involved). There are also 'maps' of the area of applicability of each type of method, with axes that relate to stakeholder involvement (low is 'management only' and high 'everyone') and to the scale of the contaminated land problem (low is 'small patch' and high 'whole complex site'). The options comparison guide was discussed in a breakout session. The main points made are shown in Table 3.

Table 3 Summary of Points made during Discussion of Options Comparison Guidance

Guiding principles for options comparison
• the principles should be given more emphasis, the methods are just ways to implement them
• perhaps add a new principle about progressive approaches to comparisons
  ○ needed to avoid the impression that comparisons are written to justify a decision that has already been taken
  ○ could say that scoping studies are useful to get buy-in from stakeholders and find out what to focus on in detailed comparisons
• make it clearer that comparisons do not need to be complex.

Role of performance matrix • appropriate for matrix to be central to guidance • helps with keeping a record of the comparison.
Range of comparison methods • the range is OK but they should be presented as part of a spectrum, not discrete alternatives • do not exclude other methods (eg scenario analysis), particularly for strategic problems.

Selection of a comparison method
• the table of features of each type of method is useful
• the maps are a little confusing at first but also useful; it would be preferable to:
  ○ blur the boundaries between areas of applicability of each method
  ○ add a description of what it means to move along the axes (eg comparison processes are longer when a whole complex site is being considered and/or may stakeholders are involved)
• it would be helpful to extract summary information from the maps (eg MCDA is rarely appropriate for comparing contaminated land management options)
• the guidance should not be too prescriptive about which type of method to apply to each type of contaminated and management problem
• make readers aware that their choice of method has to be defensible, possibly in court
• refer to other guidance on how to compare options, especially government guidance.

Application of option comparison methods • guide should say that unquantifiable issues need to be included and indicate how (eg expert advice approach) • it is important to consider uncertainties in every comparison and to avoid believing that numbers mean precision.
Scope of the option comparison guide • the guide should be generic and leave site-type specific guidance to the LMG (including integrating a contaminated land strategy with decommissioning and waste management strategies on nuclear sites) • give clearer guidance on setting the boundaries for a comparison, linking to the LMG • in the worked examples, try to show that results of a comparison do not depend on the method used • add a little more on generating options • include guidance on peer review / independent evaluation of comparisons.

Revision of the Site Characterisation Guidance

The fourth presentation was also by Philippa Towler, this time in her role as the main author of the second version of the SAFEGROUNDS site characterisation guidance. A consultation on the form and function of this version had been held in August and September 2007 and a first full draft is due to be produced before the end of the year. The document is intended to provide technical guidance to an informed audience. The first version, of which Philippa was also an author, preceded the LMG and other SAFEGROUNDS guidance documents and thus had to contain material that is now covered in more detail elsewhere. This second version can reference out much of this material but should still aim to be a 'one-stop manual' for those planning and carrying out site characterisation. It should have strong links to the LMG and to other guidance that has been issued in the past few years.

The principal sections of the revised site characterisation guidance document will be those on: the objectives of site characterisation, planning site investigations, characterisation methods, and waste management and the transport of radioactive materials. Each of these principal sections will have a sub-section on relevant legislation and regulatory requirements. The document will also have sections on radioactivity in the environment; health, safety and environmental protection; data management; and new practices and techniques. There will be a stronger emphasis on data quality than in the first version of the document. CIRIA will be making a request for more site characterisation case studies, but these will be placed on the SAFEGROUNDS website rather than being included in the document. The main points made during the breakout session on the site characterisation guidance are shown in Table 4.

Table 4 Summary of Points made during Discussion of Site Characterisation Guidance

Form of guidance • should not be too prescriptive but should provide enough guidance about satisfying regulatory requirements • flow diagrams would be very helpful • there should be good links to other guidance (hyperlinks should preferably be to specific documents or areas on a website, references may need to be to specific sections in other documents).

Important objectives when planning site characterisation • the safety of all concerned is always the prime objective • budget control is important • there may be different objectives for the various phases of a site investigation • investigations should be tailored to the site end point, if known, but recognise that the results of the investigation may lead to a change in the end point • think about possible remediation techniques when planning investigations • obtaining a good site history is key to most investigations and efforts should be made to gain access to all data sources (eg safety cases, if possible) • laboratories should be involved at the earliest possible stage • data quality objectives should be set during planning • minimising wastes arising from site investigations is essential (eg use low flow sampling techniques) • maximise the information collected via each technique (eg each borehole).
Stakeholder involvement • identify the stakeholders to be involved at the outset • always involve regulators, site owners/operators and other consultants/contractors • when appropriate, involve local residents, CBOs, NGOs • involve people with knowledge of the history of the site (eg current and former employees).
Waste management guidance • mention the waste hierarchy and site waste management plans (signpost SD:SPUR good practice tools paper for further details) • for radioactive wastes, refer readers to the Clearance and Exemption Working Group code of practice (signpost SD:SPUR good practice tools paper for details of scope) • for regulatory framework, signpost SD:SPUR regulatory framework paper (covers all solid wastes, radioactive and non-radioactive) • mention integrated waste strategies on nuclear sites (signpost SD:SPUR good practice tools paper for further details).
Practices and techniques • identify both the advantages and the disadvantages of new techniques • recommend consulting BS 10175 and BS 5930 • identify the advantages and disadvantages of real-time data gathering • note that coastal erosion and climate change need to be considered at many sites • emphasise the need to meet site-specific health, safety and environmental protection requirements, as well as general regulatory requirements.

Next steps

A request was made for volunteers to attend the workshop on the SAFEGROUNDS guidance revision on 6 November 2007. The workshop will cover the LMG, the options comparison guidance, the site characterisation guidance, and the citizens' guide. Four people from different organisations came forward and will aim to represent the views expressed at this meeting, as well as their own opinions. Participants were also asked to respond to the current and further consultations on the LMG, the options comparison guidance, the site characterisation guidance and the citizens' guide, and to encourage their colleagues to do likewise. The aim is to finalise all four documents in March or April 2008.

Marion Hill

19 October 2007