

PRE [redacted]

WGPNE(73)M13

AWRE WORKING GROUP ON THE PEACEFUL USES OF NUCLEAR EXPLOSIVES

Minutes of the 13th Meeting held on Monday 7 May at 1400 hrs  
in the Small Conference Room, [redacted]

Present

CPA [redacted] (Chairman)

SSDS  
SDR  
SDO  
SRGS

[redacted]

SCE  
SSCT  
SRC  
SSDM  
SME

[redacted] } Secretaries

Apologies were received from SBME12, [redacted],  
SRC [redacted] and SSD, [redacted].

The Chairman welcomed [redacted], a new member of the  
Working Group, who replaced [redacted]

ACTION

MINUTES OF THE 12TH MEETING (WGPNE(73)M12)

- 1. The minutes were agreed without amendment.

MATTERS ARISING

- 2. It was noted that matters arising from the minutes had been incorporated in the agenda.

REVIEWS OF PNE TOPICS

- 3. Review 1 (Radioactivity)

3.1 The Draft Introduction and Table of Contents (WGPNE(73)48) including the single paragraph addition circulated separately was discussed. [redacted] took note of suggested amendments.

3.2 Chapter I produced by [redacted] has already been discussed and agreed.

3.3 It was agreed that Chapter II could consist largely of tabular material giving the mean properties and relative importance of radionuclides. [redacted] agreed that [redacted] should write this chapter.

3.4 Chapter III - [redacted] had produced a draft which was considered at a meeting called by [redacted] on 13 March. [redacted] said that [redacted] would prepare a revised version taking into account the comments made then.



ACTION

3.5 Chapter IV. (WGPNE(73)51) (Partial Draft) was discussed and [redacted] noted suggested amendments.

3.6 Chapter V. Although this chapter was to be based on [redacted] Vienna paper, it was agreed that reference should be made to Russian, French and US fallout prediction methods. [redacted] agreed to make the necessary arrangements.

3.7 Chapter VI. [redacted] said that this would be produced by [redacted].

3.8 Chapter VII. [redacted] reported that [redacted] is recasting and extending his earlier survey to produce this chapter.

3.9 It was agreed that the co-authors of the review would make every effort to complete their drafts by 10 August. [redacted] agreed to convene a progress meeting about 20 June.

4. Review 2 (Ground motion and seismic damage)

[redacted] reported that, at a meeting between [redacted] and himself on 2 May, it was decided to reduce the size of the second part of the review and to concentrate on the simpler semi-empirical methods of damage prediction which were of value in an initial examination of any project.

It was estimated that completion of the paper would involve one man working for 3 months. The Chairman said that he would consider where this effort might be found.

5. Review 3 (Air blast)

The synopsis (WGPNE(73)45(Synopsis)) produced by [redacted] was approved. [redacted] agreed to aim at having the second version of the review ready by 10 August.

6. Review 4 (Yield estimation by close-in seismic methods)

This had been agreed at the last meeting subject to some minor amendments. These had been circulated, and the review is now finalised as WGPNE(72)36(Final).

7. Review 5 (Cavities from contained explosions)

WGPNE(73)46(Synopsis) was approved. Suggested amendments were noted by [redacted] who will aim to produce a draft by 10 August.

8. Review 6 (Containment)

[redacted] reported that [redacted] was working to an outline agreed by [redacted] and himself. Subject to other commitments he hoped that a draft would be available by 10 August.

ION

9. Review 7 (Cratering)

It was agreed that WGPNE(72)41(Revised) met the criticisms of this review made at the 12th meeting of the Working Party and the paper was accepted as a final version of this review.

10. PUBLICATION OF PNE REVIEWS

The Chairman said he would consider how the reviews might best be published. It would be necessary to consult the UKAEA with whom we were now in a contractor-customer relationship.

11. FRENCH AND RUSSIAN PAPERS ON PNE

AWRE Translation 65 has been circulated. [REDACTED] drew attention to:

- (a) Russian papers nos. 20 and 21 and French paper 14 which contained calculations of seismic damage.
- (b) The specific proposal for creating oil storage, also in French paper no. 14.
- (c) The information on radioactivity dispersion in papers 13, 23 and 24.
- (d) The mechanics and geology of salt storage vaults in paper 19.

The papers contained no technological revelations but reported sound scientific work.

12. OIL STORAGE

12.1 [REDACTED] reported that he had been considering the staffing and cost requirements of a feasibility study on oil storage. WGPNE(73)49, which should be completed by the next meeting, will contain a proposal for such a feasibility study to be carried out in cooperation with an oil company. The cost would be at least £0.25M.

12.2 [REDACTED] attended a meeting with the Scottish Office and the DTI on 17 January. Applications had been made to build oil storage facilities on the coast of Scotland; one in particular was in association with proposed oil refinery at Hunterston. There was concern that the coastal amenities might be damaged by the erection of tank farms. AWRE advice had been that under sea oil storage created by nuclear explosives could not be closer to Hunterston than 10 to 15 miles off shore: this had caused some loss of enthusiasm.

12.3 The other parties at the meeting had been given written material to study but nothing further had been heard.

[REDACTED] thought that further action is unlikely unless the UKAEA presses the matter.

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ACTION

13. PNE FINANCING 1973-74

It was reported that the UKAEA had "approved the expenditure of up to £40,000 in 1973/74 on PNE work at Aldermaston". [ARD(NNN)(73)M2 Item V A,B].

13. WGPNE - Change of title

It was agreed that the Working Party should now be known as a Working Group so that the WG would no longer be associated with the term "Weapons Group".

15. RESPONSIBILITY FOR PNE WITHIN UKAEA

██████████ is leaving the UKAEA to become Director General of Energy at the EEC. His place as project officer for PNE will be taken by ██████████ ██████████ ██████████ ██████████. Head of Economics and Programming in the UKAEA London Office.

16. YIELDS OF US NUCLEAR EXPLOSIONS

An attempt is being made within CMP to estimate the yields of some US nuclear explosions using the peak acceleration and displacement data recorded by seismic stations near the Nevada Test Site. A fuller report should be available for the next meeting.

18. BOUND COPIES OF PNE PAPERS

Each secretary now holds a bound copy of the WGPNE papers up to no. 32, and the process will be continued as further batches of papers become available for binding.

Members who prefer not to keep their own copies may refer to the bound copies.

19. It was agreed that the next meeting would be held on Monday 17 September at 1400 hrs in the Small Conference Room ██████████. Papers and items for the agenda should be in the hands of the Secretaries by 10 August.

All members

May 1973

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Distribution

Members

|            |              |
|------------|--------------|
| CPA        | [REDACTED]   |
| SSDS       | [REDACTED]   |
| SBME12     | [REDACTED]   |
| SDR        | [REDACTED]   |
| SRC        | [REDACTED]   |
| SDO        | [REDACTED]   |
| WD5        | [REDACTED]   |
| SRGS       | [REDACTED]   |
| SSD        | [REDACTED]   |
| [REDACTED] | SCE          |
| [REDACTED] | SSCT         |
| [REDACTED] | Army Element |
| [REDACTED] | SRC          |
| [REDACTED] | SSDM         |
| [REDACTED] | SSDM         |
| [REDACTED] | SMF          |

Others

|            |            |
|------------|------------|
| Director   | [REDACTED] |
| CMP        | [REDACTED] |
| SSCD       | [REDACTED] |
| SSCT       | [REDACTED] |
| [REDACTED] | SRGS       |
| [REDACTED] | SRGS       |
| [REDACTED] | SSDM       |
| [REDACTED] | SCT        |
| [REDACTED] | SDO        |