Proposal Abstract C114(A83)

1. **Arms Control Problem:**
   Chemical weapons - use
   - production

2. **Verification Type:**
   (a) On-site inspection - selective
   - sampling
   (b) Short-range sensors - sampling

3. **Source:**
   Miettinen, J.K. "A Neutral View on Chemical Warfare and Arms Control". In Chemical Weapons and Arms Control: Views from Europe, pp. 32-41. Rome: Centro di Studi Strategic, June 1983.

4. **Summary:**

The author reviews several topics connected with the use of chemical weapons including: the stalled negotiations in the Committee on Disarmament; inconclusive evidence of the use of chemical weapons in Indochina and Afghanistan; ambiguous evidence of the presence of biological agents in the Sverdlovsk incident in the USSR; and the ineffectiveness of a chemical weapon deterrent.

The author notes that a small country such as Finland can make a contribution to promoting chemical disarmament. Since 1971 Finland has conducted a research project on the analytical verification of chemical warfare agents. The results of this project have been recorded in a series of working papers and "Blue Books" (see abstract I9(G79)). The creation of an accurate and sensitive verification system which can produce unambiguous information and can be used even by technically less developed countries requires a number of years of systematic work. Verifying the production of chemical weapons agents (in violation of a ban) is more difficult than verifying battlefield use of chemical weapons because no casualties exist in the former case. Environmental samples from different phases of a production process, solid wastes or waste waters may be useful for verification of production. If data are recorded in digital form, then unambiguous computerized comparison of samples with reference data for prohibited compounds is possible. However, if the results of analysis are so complex that they can be interpreted only by experienced chemical weapons chemists then their usefulness is limited because they are likely not completely unambiguous.

The Finnish Blue Books have described the application of several highly sensitive instrumental techniques and explored the possibility of their automation in order to improve the reliability of the identification of individual compounds. A 1980 study covered the identification of the degradation products of all important nerve