

Box 132

NOTICE: If the film images below are less clear than the
original, it is due to the quality of the documents being filmed.

12.

Further description and detail on the above may be found in the Appendix.

The systems described have received provisional endorsement by the Public Health Engineering Office of the State of Madhya Pradesh in Bhopal. At present there are no State or Central Government laws and/or regulations for environmental protection, though enactment is expected in the near future. It is not expected, however, that this will require any design modifications.

Technology Risks

The comparative risk of poor performance and of consequent need for further investment to correct it is considerably higher in the UCIL operation than it would be had proven technology been followed throughout. CO and 1-Naphthol processes have not been tried commercially and even the MIC-to-Sevin process, as developed by UCC, has had only a limited trial run. Furthermore, while similar waste streams have been handled elsewhere, this particular combination of materials to be disposed of is new and, accordingly, affords further chance for difficulty. In short, it can be expected that there will be interruptions in operations and delays in reaching capacity or product quality that might have been avoided by adoption of proven technology.

UCIL finds the business risk in the proposed mode of operation acceptable, however, in view of the desired long term objectives of minimum capital and foreign exchange expenditures. As long as UCIL is diligent in pursuing solutions, it is their feeling any shortfalls can be mitigated by imports. UCC concurs.

Start-Up Schedule

Following is the start-up schedule:

Formulation Plant	In Operation
Temik 10 G, semi-works	3 Qtr. 1973
Sevin, 1-Naphthol	1 Qtr. 1976
Temik 10 G, full scale	1 Qtr. 1976
Phosgene, CO, MIC	3 Qtr. 1976

Technical Sevin is now being imported as the raw material for the formulation plant. MIC and Temik oxime will be imported to support Temik manufacture until the MIC unit is completed, after which only the oxime import will be required.