

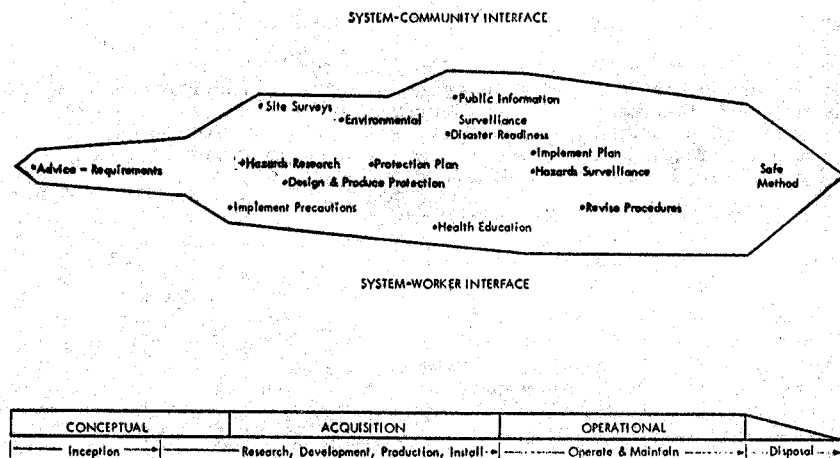


FIGURE 2. Typical considerations in systems analysis. In the analysis of the inplant-worker, and the plant-community interfaces environmental health considerations must take into account the state of knowledge as to potential hazards, as soon as possible. Based on these evaluations requirements are developed for research to be accomplished along with development of the system. Tentative health precautions and plans based on present knowledge are prepared. As results of research become available, health protection measures are finalized. Vigorous public information and worker health education measures are taken to reduce unwarranted apprehension. Once the system becomes operational, surveillance measures become routine, and protective measures are modified as experience dictates. When the system becomes obsolete, disposal of hazardous components must be in a safe manner.

at this point research was continuing on the development of environmental sensors and also on environmental pollution characteristics of the propellants.

During this phase, extensive ecological investigations were undertaken at the two principal military test sites. These involved the conduct of studies and investigations including laboratory analyses to determine the existing state of the environment in order that a base line could be available against which to measure the effect of any accident or any slow buildup of contaminants. Less comprehensive studies were also initiated with regard to each of the operational sites.

Since it was realized that the hazardous materials involved would have to be moved from the point of manufacture to test locations; would be involved in systems checkout at manufacturers' plants; and would have to be transported from the point of manufacture to operational locations (and ultimately from those operational locations to some point of disposition when the system became obsolete); a detailed systems transportation study was undertaken and appropriate precautionary procedures to provide for the event of a transportation accident. As the facilities were built and the operational components of the systems produced as part of the program of installation and checkout there was included evaluation and testing of the environmental surveillance devices and of the efficiency of the air and water pollution control measures.

As operational readiness was achieved all of these elements relating to protection of the environment were implemented. A necessary adjunct of the routine operations is the maintenance of environmental surveillance as well as a constant state of readiness to meet a possible accident or disaster. Throughout all of this effort there has been a conscious attention to the question of public relations and public information. It is noteworthy that the plan for coping with accidents in the case of this system has been tested in an actual disaster situation and found to be adequate, requiring only minor modification. In advance of