violators of the treaties. The Council could declare that any violation of IAEA safeguards, the NPT, or any other legally-binding nuclear non-proliferation obligation would be considered a threat to peace and would require consideration of strong sanctions.

The appropriate monitoring and surveillance procedures are important for a CTBT. Data collection and distribution, consultation and clarification, and on-site inspections are the elements of administrative synergism that make a strong function of the technical aspects. For example, on-site inspection will have an important role to play in verifying compliance with a CTBT. An international organization designed to carry out inspections will serve as a deterrent to cheating, build confidence in the CTBT regime, and assist significantly in uncovering any prohibited nuclear tests.

VII. METHODOLOGY OF TECHNICAL SYNERGY ENHANCEMENTS

Structural Relation

The main objective of the NPT's nuclear safeguards is to deter the diversion of nuclear material from peaceful activities to military purposes by the risk of early detection. But the deterrent role of safeguards is secondary to that of building confidence between nations by demonstrating that states which have undertaken not to acquire nuclear weapons abide by their undertakings.

A Fissile Material Cutoff Convention is needed which gives information on the variables contributing to the risk of potential diversion paths for nuclear weapons fissile material. An extensive, systematic outline of potential diversion paths, covering both declared and undeclared sources of fissile material, is needed basically, such as:

- Uranium mine → natural Uranium
- Enrichment cascades → LEU, HEU
- Reactor \rightarrow production Rx. power Rx.
- Reprocessing → Plutonium, TRU

The various facilities, or material acquisition sources, that may potentially contribute to the production and acquisition of the three fissile material isotopes are generally in the order of the progression of the civilian or military fuel cycle route needed to achieve an adequately pure fissile isotope for weapon use. The only fissile isotopes from which fission weapons have been made to date, are:

- U-235,
- U-233, and
- Pu-239.

Any nuclear weapon is made from these nuclear fissile materials, needs to be tested, and is then placed in a controlled arsenal.

A CTBT has become an article of faith among US government officials. The argument is twofold: