

UNCLASSIFIED

~~CONFIDENTIAL~~

NAO-87-3

DRAFT MEMO

TO: CARL HENRY/BILL CHAMBERS, J-DO MS K497  
FROM: RICHARD F. SMALE, HSE-1 MS K483  
SUBJECT: FIRST IMPRESSIONS, MIGHTY DERRINGER, CONSEQUENCE PHASE

GREAT THINGS

TECHNICAL ORGANIZATION & DEPLOYMENT This continues to be one of the very best aspects of the DOE/NEST; this exercise was no exception. The Hazards & Effects people arrived promptly, set up rapidly and had the situation under control in a minimum of time. They utilized their logistics support well.

TECHNICAL EXPERTISE They knew what they wanted and how to go about getting the data and information that was necessary. This extended through the search, pre-detonation and post detonation phases.

FLEXIBILITY As the consequence data came in, the Hazards & Effects group could rapidly absorb the information and use it to plan on the next step. Their data management system was excellent.

THINGS TO THINK ABOUT FOR NEXT TIME

PRESENTATION OF RADIOLOGICAL DATA TO NON-TECHNICAL AUDIENCES In a NEST type deployment this is especially important. There are fundamental differences between prompt radiation effects from a nuclear yield, downwind plutonium dispersal from a one point detonation or disablement and nuclear yield fallout. In MIGHTY DERRINGER, too much pre-detonation emphasis was placed only on the nuclear yield aspect. The one briefing chart that did show a dispersal prediction was juxtaposed on a prompt effects (blast, thermal & prompt rad) chart. It is the role of NEST, and the Hazards & Effects people to make balanced presentations and, if possible, inform the non-NEST people such as State & Local authorities, FEMA & others of the mitigated dispersion, non-mitigated dispersion and less than full yield consequences as well as the "worst case" scenario. To do this the H&E people need to interact more closely with the Damage Limitation people & the Commander for Science so that they can keep abreast of the technical situation. In the Indianapolis portion, very little of this was done. The nuclear yield was a "given"; everyone expected it and slanted their calculations toward it.

UNCLASSIFIED

~~CONFIDENTIAL~~

UNCLASSIFIED

~~CONFIDENTIAL~~

NAO-873

INTERACTION WITH STATE, LOCAL & FEMA Most of the interaction with State, Local & FEMA officials (in the consequence management phase) was done at formal briefings in the FEMA building. While this is the correct method for dispensing data, the NEST should be aware of the value of educating these people to the NEST resources and expertise. There was very little state, local or FEMA presence in the NEST/FBI CP (gymnasium). This is not intended to be a suggestion that there should be a formal liason office, but more a suggestion that we should bring these people over to show them how we develop a fallout plot or why we calculate lung doses or just where we live. Many of the State & Local people think we do these things with mirrors.

#### EXERCISE PROBLEMS

Not enough consequence time to develop good fallout plots, ground survey data, radiation & blast damage consequences. This was due to the fact that the exercise played in daylight hours only & Friday morning was not utilized very well by FEMA.

Post detonation data was given to the players on a time line that (to my mind) was overly optimistic; it was the time lines that the organizations say that they can operate on. With the general confusion, chaos and logistics problems inherent to a national disaster, some of the data (isotopic sample analysis, well constructed fallout plots, iodine in milk data) may well lag days behind the best estimates for delivery.

The simulation of the Damage Limitation function (in IND) meant that the possibility of achieving a mitigated dispersal, or no dispersal at all, was not given very much weight.

UNCLASSIFIED

~~CONFIDENTIAL~~

FROM LANL HSE-1 57378