EXHIBIT F

BRIEFING BOOK FOR 28 SEPTEMBER 1994 HEARING BEFORE THE SUBCOMMITTEE ON LEGISLATION AND NATIONAL SECURITY OF THE COMMITTEE ON GOVERNMENT OPERATIONS

VOLUME II: CHEMICAL AND BIOLOGICAL WARFARE AND DRUG TESTING

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Briefing Book Two: Chemical and Biological Warfare Program and Drug Testing Program Information

On 28 June 1918, the President of the United States directed the organization of the Chemical Warfare Service (CWS), under the Secretary of War. In October 1922, the CWS created a Medical Research Division to conduct research directed at providing therapeutic and prophylactic defense measures against chemical agents.

The evidence from this period indicates that volunteer employees of Edgewood Arsenal were the subjects used in various tests of mustard, phosgene, and other chemical agents. In early 1941, the threat of war caused greater urgency for the development of protective items and consequently a larger source of volunteers was needed. The first recorded recruiting arrangement was a request made to all technical and officer personnel at Edgewood Arsenal to participate in various tests. A method which soon proved to be unsatisfactory. Generally, it was considered that repeated exposure to agents was hazardous because the cumulative effects of the compounds were not known, and many of the volunteers, because of their technical qualifications had preconceived opinions as to the reactions they should have to certain agents and thus were considered biased.

The documentation from this World War II period does not show who authorized the use of human volunteers, or if it was a point of concern. If a source of authority did exist, it was probably informal and rested with the local commander. June 1942 records reflect that the Secretary of War was requested to rule on the permissibility of using enlisted men for detail testing of mustard type agents. Reportedly, the Acting Secretary approved the test in principle and granted authorization. Large-scale human experimentation was thereafter conducted at Edgewood Arsenal, as well as at field laboratories located at Camp Siebert, Alabama, Bushnell, Florida, Dugway Proving Ground, Utah, and San Jose Island.

The Army's World War II mustard agent test program tested protective clothing, equipment, and antivesicant ointments. In addition, the Army developed and tested offensive chemical weapons and evaluated the effectiveness and persistency of mustard agents in different environments. Test documents show that gas chamber tests and skin tests were conducted at Edgewood Arsenal, Maryland, and that field tests were conducted at Bushnell Field, Florida, Fort Pierce, Florida, Dry Tortugas, Florida Keys, San Jose Island, Panama Canal Zone, Camp Siebert, Alabama, Dugway Proving Grounds, Utah, Camp Polk, Louisiana, Gulfport, Mississippi, El Centro, California, San Carlos, California, Fort Richardson, Alaska, and New Guinea.

The Army's records of mustard agent test activities do not identify soldiers who participated in World War II chemical tests. However, the review of "Medical Research in Chemical Warfare," estimates that the number of participants to be in the thousands. The history shows that over 1000 soldiers were commended for their participation in tests in which they subjected themselves to "pain, discomfort, and possible permanent injury for the advancement of research in protection of our armed force." The records do not indicate however what types of tests these soldiers participated in. According to the report 200 and 300 soldiers were available at Edgewood and Dugway Proving Grounds to participate in experiments from December 1944 until the end of the war.

Following WW II, it was clear that Germany had stockpiled organic phosphate compounds (nerve agents) far more deadly than chemical agents in the Allied arsenal. This developed a new series of

challenges for the Corps. Discovering methods to counteract the lethal effects of these compounds became a primary goal of the medical research. American researchers were unable to locate any usable research evidence that the Germans had conducted meaningful human experimentation's with the nerve agents. Thus it was necessary to spend the next several years confirming German research data by animal experimentation and by compiling sufficient information to determine the safe experimental dose for man. When the necessary animal experiments had been concluded and the Chemical Corps investigators were confident of their ability to safely conduct experiments in man, the question again surfaced as to where the volunteers would come from.

In the early 1950's, the Army Chemical Corps began a classified medical research program for developing incapacitating agents that continued until 1975. This program involved testing chemicals including nerve agents, nerve agent antidotes, psychochemicals, irritants, and vesicant agents. Human volunteer nerve agent testing with G-agents was conducted during the early 1950's. In the late 1950's after approval by the Secretary of the Army, testing with V-agent began. The chemicals were given to volunteer service members at Edgewood Arsenal, Maryland, Dugway Proving Grounds, Utah, and Forts Benning, Bragg, and McClellan.

The Army conducted an extensive human testing program at Edgewood from 1955 to 1975. Human volunteers were exposed to chemical agents to see how that agent might affect humans and how such affected humans might respond to therapy. The program consisted of a wide variety of tests including: chemical agents, treatment drugs for chemical agents, personnel protective equipment, skin penetration, irritant agents, and personnel performance measurements. Approximately 7,000 soldiers took part in this program. The percentage of volunteer hours were broken down according to experimental categories: incapacitating compound - 29.9%, lethal compounds (anticholinesterases, cylinide) - 14.5%, riot control compounds - 14.2%, protective equipment and clothing (masks and climatic effects) - 13.2%, effects of drugs and environmental stress on human physiological mechanisms - 6.4%, development evaluation and test procedures (compounds in body fluids, stress condition) - 12.5%, human factors tests (ability of volunteers to follow instructions) - 2.1%, other (visual studies, sleep deprivation, incapacitating compounds effect on rifle team) - 7.2%.

Of the 34,500 compounds studied by the Chemical Corps, approximately 150 chemicals were used in the human volunteer program, of which approximately 50 were therapeutic agents approved by the Food and Drug Administration or are well known solvents and nutrients. The Army's Medical Research and Development Command, Fort Detrick, Maryland, maintains records of the test participants and the chemicals to which they were exposed.

The chemical compounds used in Human Testing at Edgewood Arsenal from 1955 to 1975 include: Anticholinergic - Scopolamine, BZ, Ditran, "several numbered"; Barbiturates - Amytal, Nembutal, Phenobarbital, Seconal; Diagnostic - Antipyrine, Sulfobromphthaleim, Indocardio green, Sodium Aminohippurate; Anticholinesterase Agents - DFP, Physostigmine, Prostigmine, GD, Malathion, GA, GF, VX, GB, G-V; Antidotes - Atropine, Benactyzine, Homatropine, Sodium Nitrite, Vasoxyl, Methscopolamine, BOL, metatropine, THA, BTA; Oximes - Protopam chloride, P2S, TMB4, Toxogonin; Irritants - DMHP, DEP, "several numbered"; Miscellaneous -

Adrenalin, Alcohol, Amyl Nitrite, Artane, Ammonium Chloride, Benadryl, Caffeine, Compazine, Cogentin, Curare, Dapsone, Dexedrine, Dilantin, Dibenzyline, Heparin, Inderal, Isuprel, Lanoxin, Lidocaine, Maisilid, Mecholyl Chloride, Meprobamate, Mylaxin, PABA, Propylene glycol, Prolixin, Pryibenzamine, Reserpine, Ritalin, Sodium Bicarbonate, Thiamin, Thorazine, Urecholin, Valium, ACTH, Nitrogen Dioxide, Semyl, LSD, 5HTP, Mustard, and N-Octylamine.

In addition to the testing previously discussed, field testing was also conducted on small military units to examine the effects of psychochemical agents on military operations. These tests were conducted at Fort Bragg, North Carolina; Fort McClellan, Alabama; Fort Benning, Georgia; and Dugway Proving Ground, Utah. The Army also conducted field testing in the late 1950's and early 1960's using a wide range of chemical compound, at Dugway Proving Ground, Utah; Edgewood Arsenal, Maryland; England; Hawaii; Horn Island, Mississippi; Marshall Islands; Maryland; San Jose Island, Panama; USAATC, Fort Greely, Alaska; Water Island, Virgin Islands; and Yuma Proving Ground, Arizona. Since that time limited field testing without human test subjects has been done at Dugway Proving Ground.

A 1975 Department of the Army Inspector General report, concluded that, "the evidence clearly reflected that every possible medical consideration was observed by the professional investigators at the Medical Research Laboratories." The report also states, "(the) volunteers were not fully informed, as required, prior to their participation; and the methods of procuring their services, in many cases, appeared not to have been in accord with the intent of (the) Department of the Army policies governing (the) use of volunteers in research." On 28 July 1975 Acting Secretary of the Army Norman R. Augustine suspended testing of chemical compounds on human volunteers at Edgewood Arsenal.

Prepared by CPT Barnett/77001

Jeanne is this OK for your input?? Will fax to Gordon after you approve Norma 9/15/94 (3 pages)

Thank you for the opportunity to tell you what the Department of Defense is doing to identify and support military or civilian personnel who were exposed to chemical weapons agents as part of Defense research programs during and after World War II.

On March 9, 1993, Dr. Perry directed the Department to take immediate steps to determine the extent of the potential human exposure to chemical weapons agents through our testing program and to identify the individuals exposed. He immediately declassified all *relevant* information concerning chemical weapons testing programs that were conducted prior to 1968, and directed the Department to begin the declassification process for all programs since 1968. He also released any individuals who participated in testing, production, transportation, or storage associated with any chemical weapons research from any oaths of secrecy or non-disclosure restrictions concerning their participation in such testing.

Our first efforts focused on two things: first, a definition of the kinds of data we were seeking on the testing programs and on the individuals exposed; and second, identification of places where such information would be found. Unfortunately, there is no central repository for information concerning historical data on our chemical weapons testing programs. We worked with representatives from Veterans Affairs to ensure that we would collect information that would support their efforts to appropriately identify and compensate veterans exposed.

In addition to the National Archives in Suitland and St. Louis, we have identified five major DoD records holding sites and one University site where large volumes of records are stored. They are: Edgewood Arsenal, in Maryland; the Naval Research Laboratory, in Maryland; Dugway Proving Ground, in Utah; the Army Chemical School Library, in Alabama; Rocky Mountain Arsenal, in Colorado; and the University of

Chicago. We also believe that additional records may be stored at other contractor facilities and universities that we have not identified.

In general, these records are *not* indexed or sorted. They consist of thousands of linear feet of paper in filing cabinets or boxes, and thousands of sets of microfiche. They are in historical library collections, warehouse holding areas, and technical libraries. The files also contain weapons schematics, technical drawings, and operational directions as well as scientific formulae. Personnel information can sometimes be extracted from scientific notebooks, operational orders and plans, administrative correspondence, technical reports, personnel rosters, or medical records. Because of national security, foreign diplomacy, and personal privacy issues, review of this information can only be completed by personnel with appropriate security clearances and technical background, as well as knowledge of personnel issues. Each piece of paper in every collection must be reviewed page by page.

The records at the contractor-operated Chemical and Biological Information Analysis Center at Edgewood are completely automated. We contracted with them to perform a key words search on their records. The resulting report contains over 2,000 entries for about 500 sites. The sites include locations where chemical and biological agents were tested, produced, stored, or shipped. We are currently enhancing this report with additional information from on-site manual searches using contractor and DoD personnel.

One of our sources of information is correspondence from veterans and others who participated in or know something about the tests. We follow up on individual claims forwarded to us from Veterans Affairs and on phone conversations and letters. These contacts have resulted in identification of additional storage and testing sites.

We now have about 12,000 names of individuals who may have been exposed, including 504 from the Bari Harbor incident. We do not have complete information on all of them and not all of them are confirmed exposures.

The Department is committed to supporting these individuals, and we will continue to pursue review of records and follow-up on letters from veterans and personal conversations with veterans and former DoD employees.