

WXPost C(1A) AUG 3 1975
**Army Stockpiles
BZ Drug in Bombs**

By Bill Richards

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The Army manufactured a powerful hallucinogen known as BZ in 1963 and 1964 and still stockpiles the drug in bombs at the Pine Bluff Arsenal in Arkansas, according to an Army spokesman.

In response to a query from The Washington Post, the spokesman confirmed the stockpiles of the drug and said the Army is cleared to use it in situations such as civilian riots, protection of military combat areas and military rescue missions.

A ban on development, production or stockpiling of biological or toxic weapons signed by President Ford last January excluded several riot control agents, including BZ. Mr. Ford said at the signing of the ban that use of the excluded agents would require his personal approval.

The Army spokesman said that neither BZ nor any other hallucinogen has been used in a combat situation or a civilian riot. "It's in a bomb configuration as part of our defense arsenal," he said. "It would be difficult to use it any other way."

BZ, whose scientific name is 3-quinuclidinyl benzilate, is a drug that requires only extremely small doses to produce hallucinations and



DR. VAN M. SIM

... program director

disorientation lasting 80 or more hours in humans, according to researchers.

The Army tested BZ on a substantial number of the 6,983 servicemen and civilians who signed up for its drug experiments, that also included LSD and other hallucinogens conducted at Edgewood Arsenal in Maryland. The experiments, which have continued from 1956, were halted last week by the Army for a full evaluation of the program and its civilian director, Dr. Van M. Sim.

Sim, who has headed the

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program since 1956, was transferred from his post to that of a special adviser this week. The Army inspector general is looking into reports that he may have misused drugs while serving at a civilian clinic in 1951.

In a long interview last week at his home in Bel Air, Md., Sim told The Post that the Army followed up on only two persons who were given LSD during the Edgewood experiments. Earlier Sim had told a news conference that 10 per cent of the 585 servicemen in the LSD experiment had been given follow-up checks by the Army and none had shown adverse aftereffects from the drug.

"It was an estimate and I was mistaken," said the 60-year-old researcher.

After news reports of several persons who said they had physical or mental aftereffects following their participation in the LSD tests, the Army announced it planned complete physical and psychological tests for everyone who took part in the volunteer program.

The Army spokesman said Friday that the Army has received one unsolicited communication since its announcement from a man involved in the LSD experiments who said he had experienced psychological aftereffects.

In the interview, Sim also said the Army had funded experiments with hallucinogens on prisoners at Holmesburg Prison near Philadelphia. The prisoners were paid to take a type of hallucinogen known as an anticholinergic, Sim said.

The experiments, he said, were funded through the University of Pennsylvania medical school in the early 1960s, and later through a private concern known as Ivy Research, which was run by members of the Penn medical school faculty.

A week ago the Army released a list of what it said were all the drug programs funded by Edgewood and the Army Chemical Corps. The list made no mention of any program that involved prisoners or any program funded by the Army at the University of Pennsylvania.

Spokesmen for the medical school and the prison, which is run by Philadelphia County, said Friday they were not aware of tests of hallucinogens on prisoners.

A man who identified himself as Solomon McBride and who said he was medical administrator for Ivy Research, said in a telephone interview yesterday to the firm's Philadelphia office that anticholinergics had been tested by the university and Ivy Research on prisoners at Holmesburg Prison in the early 1960s.

McBride declined to answer

any other questions about the program. Dr. Albert Kligman, the head of Ivy Research and a dermatology professor at the University of Pennsylvania medical school, could not be reached for comment.

A former member of an Army LSD experiment who later developed epilepsy, was quoted in the Newport News, Va., Daily Press on Friday as saying he was unsuccessful in repeated attempts to get the Army to conduct follow-up checks on persons in the experiments.

William R. Jordan, a former Army lieutenant colonel now retired in Pensacola, Fla., told the newspaper the Army only agreed to begin locating and checking 34 members of an LSD experiment run by the Army at Ft. Benning, Ga., after pressure was applied by Florida Sen. Lawton Chiles.

The paper said Chiles found that scientists had determined that LSD was a "high risk" drug even before it began its experiments.

Sim said, however, that he considered the experiments conducted with LSD and other hallucinogens to be in the national interest. He said that in many cases experiments were tried with drugs that the Army found were being tried out by the Russians or other countries.

Formal tests of drugs on humans by the Army began with his arrival at Edgewood in 1956, Sim said. He said he tried every drug used on volunteers in the program on himself first, including LSD on several occasions.

"There was one drug that left me zonked for three days," he recalled. "I kept falling down and the people at the lab assigned someone to follow me around with a mattress. I woke up from it after three days without a bruise."

Sim said that drug was BZ.

The drug tests began in 1956, with just Sim and two military assistants, he said, and the staff grew to 80 persons in 1968. The size of the

research staff at Edgewood has dropped since then, he said.

Sim said he vetoed several types of drugs after first trying them on himself, and on one occasion rejected a proposal that the physical and emotional requirements for some volunteers be relaxed to determine the effects of LSD on those not thought to be most able to cope with the drug.

Experiments with LSD were dropped in 1967, Sim said, because the Army decided it really wanted a drug that would stun an enemy but leave it able to carry out orders, and LSD could not accomplish this. The Edgewood researchers did develop an effective antidote to LSD, he said.

The results of the experiments, Sim said in defense of the program, could prove fruitful both in wartime and peacetime.

"With the stuff we were handling, a riot like the one at Attica never would have hap-

pened," said Sim. "Why kill someone or beat his brains in when all you really need to do is incapacitate him. We had the answer. They just didn't come to the right people."

Dr. Albert Hofmann, the inventor of LSD, told reporters this week at a conference at the University of Connecticut that he had been contacted by the Army several times in the 1950s about making up large quantities of the chemical compound that forms LSD.

Hofmann said the contacts came from a U.S. Army laboratory in Maryland and said he told the Army the compound could not be produced in large amounts at that time. A senior civilian researcher at Edgewood Arsenal said this week that the Army had considered stockpiling LSD but had been told by researchers that the plan was impractical because the drug cost far more to make than BZ and was less predictable in its effects.