

TSD-SDB MEMO #92
10 July 1964

MEMORANDUM FOR: C/WII/SA
ATTENTION : Mr. Alfonso Rodriguez
FROM : TSD/OA/Special Devices Branch
SUBJECT : Identification and Purpose of Contents of
Box marked "Special Fireworks"

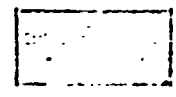
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1. In response to your request for an evaluation of the contents of the box marked "Special Fireworks," the following information and conclusions are offered.

2. The nailed plywood box was pried open on 24 June. It is a kit for making an incendiary device. Contents are six clear plastic, pill type bottles with white plastic tops, filled with metallic colored powders, a plastic box and lid. Two bottles are labeled "Continental Plastics Oklahoma City" on the bottoms, one marked 5 drams, the other, 8 drams. The other four bottles are not marked with a manufacturer's name but are stamped "P-7" on the bottoms; one has the numbers 23 and 0 opposite each other on the bottom, the second has 16 and 0, the third, 10 and 0 and the last, 4 and 0.

3. The box, similar to a soap box, measuring 4" X 2 1/2" X 1" and the lid measuring 4 1/2" X 2-7/8", are either plastic or celluloid. In one end of the box is a round hole sealed on the inside by a thin piece of celluloid covered with aluminum foil. A compartment is formed by a thin piece of celluloid, 7/8" from the end with the hole. This partition is perforated with several holes and covered on one side with a layer of aluminum foil. The lid is perforated with several holes and sealed on the inside surface with what appears to be a piece of wide transparent tape. With the exception of a stamped number "1" on the inside of the bottom of the box there are no identifying marks on the box or lid. From the appearance of the box, covered on the inside with silvery particles of powder, it must have been loaded at least once. Glue or rubber cement, probably a sealant with water-

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proofing capabilities, was used to seal the lid to the box.

4. Four of the plastic bottles are marked with the number "3" on their tops, one with number "2" and the other with number "1". Those marked "3" contain extremely fine silver colored powder; the one marked "2" slightly coarser silver powder and the bottle marked "1" a small amount of coarse pale red granules. All the bottles contain the following substances:

Fe (iron)
K (potassium)
KNO₃ (potassium nitrate)
KClO₃ (potassium chlorate)
KClO₄ (potassium perchlorate)

A trace of Na (sodium) is also present in all bottles.

5. The following ratios have been determined:

Bottle #1		Bottle #2		Bottle #3	
Fe	1	<	2	<	3
KNO ₃	1	"	1	"	1
KClO ₃	1	"	2	"	1
KClO ₄	1	"	2	"	2

6. Because of the high oxygen content in each of the three mixtures they obviously are used as first fire mixes, i.e., easily ignitable substances which in turn can ignite other harder-to-ignite materials. In this case it appears that an ignition device (a length of safety fuse or incendiary time pencil) is inserted in the hole into the smaller compartment. The pale red mixture, because of its relatively high oxygen content, is probably used as a first fire mix in this compartment. Mixed with it may be the contents of bottle number "2", slightly less in oxygen content but higher in iron and consequently hotter burning. In the main compartment would be the contents of bottles number "3" high in oxygen content, hottest burning of all three mixtures and relatively more difficult to ignite were it not for the boost given by the contents of bottle number "2". As the material in the smaller compartment ignites it burns through the perforations in the partition igniting the contents of the main compartment. The heat from this combustion melts the tape covering the perforations in the lid thus allowing oxygen in the air to aid and accelerate the burning.

7. The device may be used to start fires by surrounding it with combustible secondary media such as paper, oily rags, wood shavings, paints and turpentine in a ship's paint locker, small metal shavings in a machine shop, excelsior in a warehouse, etc. Only when a sufficient quantity of the secondary combustible material is burning is there a reasonable chance that the primary target will be ignited. The device might also be placed in the seat cushions of an automobile, wedged in a corner of a vehicle engine or placed in a box of ammunition.

8. There is nothing new in the composition of this device; it appears to utilize well known principles of incendiary attack using substances that are readily available and proven as dependable ingredients. Great care would have to be exercised in waterproofing an assembled device if it was planned to leave it exposed for a long period of time; several hours in a hot, damp climate would be an example of such an exposure. In the absence of actual field tests it is not possible to determine the effectiveness of the device: how long it will burn, what proportions of the three mixtures are most effective, how it performs under various temperatures and other environmental factors, how it stands up in storage, etc.

9. When the plywood box was opened it was observed that the contents were packed in sawdust. Protruding from the sawdust was a stubbed out filter cigarette. There was no indication of scorched sawdust.

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[*Robert W. Ricker*]
ROBERT W. RICKER
TSD/OA/SDB

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