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UNITED STATES GOVERNMENT

# Memorandum

TO : Assistant Attorney General  
Civil Division

DATE: August 20, 1970

*JW*  
FROM : Director, FBI

SUBJECT: Harold Weisberg v. Department of Justice  
USDC D. C., Civil Action No. 2301-70



*Reviewed  
to FILE  
12/12/79*

Reference is made to your memorandum dated August 13, 1970, (WDR:JFAxelrad:bd, 145-12-1449) requesting information relative to the above-described matter.

With respect to paragraphs 4, 5, and 6 of the Plaintiff's complaint, the following background information relating to the spectrographic examinations conducted in this matter is set forth. In regard to the metal fragments analyzed in the FBI Laboratory, the analytical procedures involved the use of an optical instrument known as the spectrograph. The spectrograph is an instrument which analyzes the light resulting from the burning or electrical excitation of samples taken from materials under examination. Every known element, when burned, will give off light which is characteristic of itself. The practical application, however, is normally restricted to the so-called metallic elements. The advantage of a spectrographic examination over a chemical type of analysis is that very small samples can be analyzed and metallic elements in trace amounts can be detected.

Relative to the spectrographic analyses of the exhibits in question, small samples were removed from each one under a binocular microscope and placed in pure graphite electrodes. Each sample was then burned with a direct current arc. The characteristic light from each sample was analyzed on a Jarrell-Ash grating spectrograph, the results of which were recorded on photographic plates. Subsequent detailed studies of the photographic plates revealed the metallic elements present and the relative order of their abundance.

Enclosures (7)

62-109060

*WDR: JFA - DGR*

