



Federal Bureau of Investigation  
Digital Evidence Laboratory

Operational Technology  
ERF Building 27958A  
Quantico, Virginia 22135

**REPORT OF EXAMINATION**

To: Los Angeles  
LA-C-1  
Attn: SA [REDACTED]

Date: May 13, 2013

Case ID No.: 89-LA-0-ASSESS  
89A-LA-156

Lab No.: 121031251 JJ  
130201252 JJ

Reference: Communications dated October 25, 2012 and January 22, 2013

Ref. No.: Serials 8 and 3 respectively

Title: RFK  
KENSALT

Date specimen received: October 31, 2012 and February 1, 2013

Specimens received on October 31, 2012 under laboratory number: 121031251 JJ

- Q1 One five-inch-diameter reel of 0.25-inch-wide magnetic tape (1B84)
- Q2 One 7.5-inch-diameter reel of 0.25-inch-wide magnetic tape (1B84)
- NE1 Eight-page document received as a .pdf file via Sentinel.
- NE2 Seven-page document dated "7/2/69" received as a .pdf file via Sentinel.

Specimens received on February 1, 2013 under laboratory number: 130201252 JJ

- Q3 One Maxell C90 audio cassette, marked in part "6-(4-5)-68" on label affixed to side A (1B97)



Request:

SA [REDACTED] requested per the above referenced communication dated October 25, 2012 that the Forensic Audio, Video and Image Analysis Unit (FAVIAU) conduct an audio signal analysis examination on the submitted 1B84 items to determine the number of recorded gunshots.

The request was modified via electronic mail between SA [REDACTED] and Forensic Audio Examiner [REDACTED] on January 18, 2013 to include a copy of the recording contained at the State of California Archives in the audio signal analysis examination.

Opinions and Conclusions:

Specimen Q1 is an analog copy containing artifacts from the copying process. The results of the signal analysis examination may be limited, since the original recorded material cannot be evaluated to determine if it is of better quality than specimen Q1.

Specimen Q2 and the source material for specimen Q3 are enhanced versions of the recorded material contained on specimen Q1 and at a minimum are 2<sup>nd</sup> generation copies.

The designated area recorded on specimen Q1 was of insufficient quality to definitively classify the impulse events as gunshots, confirm the number of gunshots or determine the identification of specific weapon(s).

Summary of Examination:

See Opinions and Conclusions section

Details of Examination:

Critical listening, spectrographic, high-resolution waveform and narrow-band spectrum analyses were conducted on specimens Q1, Q2 and Q3.

Cross-correlation analysis was conducted on the designated area and other selected impulse events present on specimen Q1. Cross-correlation analysis allows impulse signals to be assigned a numerical value representing how close the compared signals resemble each other.

The specimen Q1 tape was received with a damaged plastic reel and was transferred to a new plastic reel. The damaged tape segments were placed on the damaged plastic reel and no further examinations were conducted.

89-LA-0-ASSESS

89A-LA-156

121031251 JJ

130201252 JJ

Page 2 of 3

For Official Use Only

Specimen Q1 is an analog copy containing artifacts from the copying process. The results of the signal analysis examination may be limited, since the original recorded material cannot be evaluated to determine if it is of better quality than specimen Q1.

The designated area recorded on specimen Q1 was of insufficient quality to definitively classify the impulse events as gunshots, confirm the number of gunshots or determine the identification of specific weapon(s).

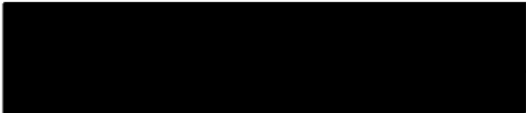
Specimen Q3 was submitted representing a copy of the recording contained at the State of California Archives.

Specimen Q2 and the source material for specimen Q3 are enhanced versions of the recorded material contained on specimen Q1 and at a minimum are 2<sup>nd</sup> generation copies.

The analysis method "Frequency Selective Integrated Loudness Envelope Evaluation" has not been published in any peer-reviewed scientific journals common to the fields related to audio, electronics, forensics or acoustics.

Disposition of Evidence:

Specimens Q1, Q2, Q3 and the damaged tape segments and plastic reel from specimen Q1 were forwarded to your office via FedEx on April 12, 2013. The NE1 and NE2 items are being retained.

Examiner: 

Operational Technology Division  
Forensic Audio, Video and Image Analysis Unit

89-LA-0-ASSESS  
89A-LA-156  
121031251 JJ  
130201252 JJ  
Page 3 of 3

For Official Use Only