DEPARTMENT OF THE ARMY **ERADCOM**

Environmental Assessment

Turntable Facility

Combat Surveillance and Target Acquisition Laboratory

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Environmental Assessment Turntable Project

I. Purpose and Need:

The turntable test facility proposed for the Evans Area at Fort Monmouth, New Jersey will be used for purposes of acquiring radar signal returns from specific target vehicles. This facility is needed for the acquisition and evaluation of large sets of engineering data in a more efficient, cost-effective manner. Some of the data which will be gathered at this facility would normally be obtained with a radar on board an aircraft and making many passes over the target of interest. The turntable facility will permit this information to be gathered with all equipment, including the radar and the target under test, to be within the Evans Area.

II. Description of Proposed Action:

A 30 foot diameter turntable will be installed within the Evans Area as indicated in Figure I. The turntable surface will be imbedded such that the table surfact is approximately level with the ground. Target vehicles will be driven onto or placed upon the turntable.

Radars will be located at the control tower approximately 1,000 feet from the turntable. The radars will illuminate the target vehicle at the turntable. Energy will be reflected from the target vehicle back to the radars. This reflected energy will be collected at the radar location.

The radar energy reflected from the target contains characteristics unique to the specific vehicle under test. This returned target signal, called the target signature, will be measured for various aspect angles of the target with respect to the radars. These various target aspect angles will be obtained by controlling the turntable azimuth rotation from the control tower.

III.Alternatives Considered:

Alternative sites to the Evans Area location were considered. The alternative sites include:

- a. The Wayside Laser Range at the Naval Weapons Station, Earle, New Jersey. The Navy did not authorize the use of this property.
- b. The Charles Wood Area, Fort Monmouth, New Jersey. The Charles Wood site was rejected because of inadequate size and the location was accessible to the public.

Engineering/modeling studies are not feasible alternatives to actual measurements. Mathematical modeling of radar target vehicles is an exceedingly difficult problem and can cause low confidence in results when compared to actual measured data. Furthermore, targets would need to be measured on a quick-reaction basis as they become available. Thus the turntable measurement permits timely and accurate measurements.

IV. Environmental Impact of Turntable:

There are no significant environmental impacts associated with the turntable facility. An access road and utility lines to the site are currently in place. Impact to the cleared, grassy site will be limited to the placement of the turntable and any required underground utility lines linking the turntable to the tower. No endangered species are known to exist at the Evans site.

Precautions will be taken to protect operators and other personnel from entering the target zone. No hazardous effects due to non-ionizing RF radiation from the turntable operations will exist beyond the Evans Area boundaries. Once the turntable facility is operational, radiation safety surveys will be performed in order to verify that the non-ionizing radiation levels are within acceptable limits as described in ANSI C95.1-1982. Boundaries of the turntable test area are secure and prevent public entry.

V. Contacts Made:

Contacts made during preparation of the Environmental Assessment include:

- 1. Richard Renne, Health Physicist, DRDEL-SS-H
- 2. John Borowick, Acting Chief, TSMT Branch, DELCS-R-T.
- 3. Joseph Cocco, Jr., Facility Engineer, DELSD-F
- 4. Juanita Gallaway, Environmental Coord., DRDEL-IS-E

VI. Points of Contact:

Points of contact for information relative to the Environmental Assessment of the turntable project are Juanita Gallaway, AUTOVON 290-3594 and Emanuel Fliegler, AUTOVON 996-5143.

VII. Finding of no Significant Impact:

Based on the information presented in this Environmental Assessment, a Finding of No Significant Impact (FNSI) shall be prepared for the turntable facility. The FNSI will be published in a local Fort Monmouth, NJ publication.

FINDING OF NO SIGNIFICANT IMPACT

An Environmental Assessment prepared for the Turntable Facility Project at the Fort Monmouth Evans Area site concluded with a Finding of No Significant Impact. The project requires the placement of a 30 foot diameter turntable in a grassy, cleared field. Radar equipment will be located at an existing tower at the site to be utilized for target vehicle signature measurements. Alternative sites were considered. For further information on the Turntable Project contact Juanita Gallaway at (202) 394-3594 or Emanuel Fliegler at (201) 544-5143.