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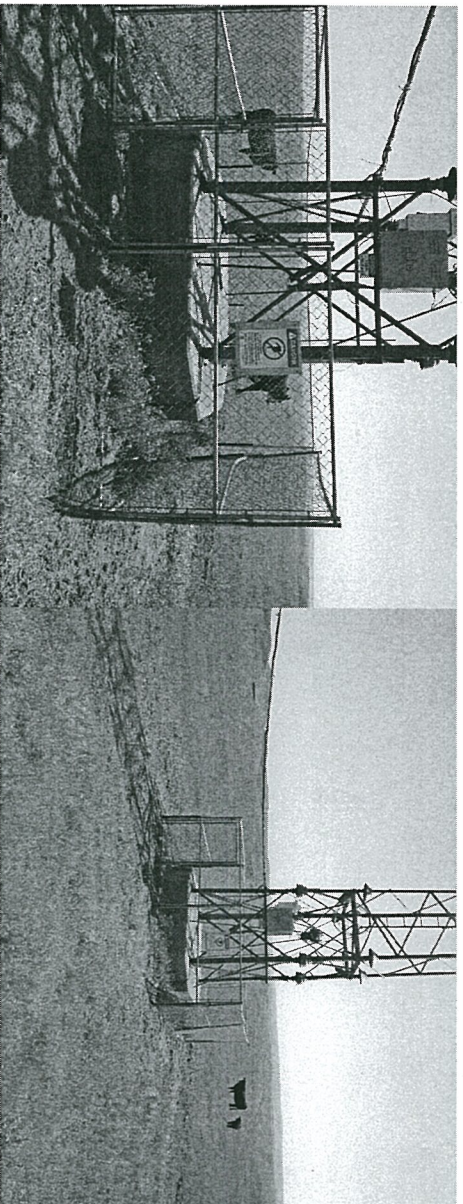
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MEMORANDUM REPORT:

Non-Ionizing Electromagnetic Radiation Measurements  
KODL The Dalles, OR, Facility ID 36629, BP-20160919AAE

On May 23, 2018 measurements of electric and magnetic fields from the operation authorized in BP-20160919AAE for KODL were made at the base and in the vicinity of the antenna system.



As can be seen in the photographs, the antenna is fenced, with appropriate hazard signage on opposite sides of the fence, as well as on the tower itself.

The unusual nature of the insulated tower can also be seen. This is one tower of a former CAA radiolocation facility, with insulators approximately 9 feet above the tower base. As a result, calculated values of E and H field in the vicinity of the tower base region are very low.

The measurements show this as well. The highest H fields measured are no greater than 50% of the equivalent power density occupational limit anywhere in the vicinity, and only in nearly direct contact with the tower legs. The only location where the equivalent H field power density exceeds 100 mW/cm<sup>2</sup> is in nearly direct contact with the front cover of the antenna tuning unit which, as shown in the photographs, is mounted just below the insulators and is above head height for a 2 meter person

standing on the concrete base.

E field values are similarly low. The measurements approach but do not exceed 30% of the equivalent power density occupational limit in nearly direct contact with the vertical tower base legs. The antenna tuning unit is mounted such that its "ground" connection is to the angled cross members on one side of the tower, and therefore the majority of the return current in the antenna is through those members, which, in nearly direct contact, measure 40-50% of the equivalent power density occupational limit.

The surrounding fence is located 46 inches from the tower legs, and measurements of E field at the fence top (which normally would show the highest values associated with the fence) are at 5 to 8% of the equivalent power density occupational limit.

These measurements were peak readings not spatially averaged and all measurements made at 20 cm from conducting objects were below 3-5% of the equivalent power density occupational limit.

The measurements were made by the undersigned, employing NARDA 8718B, 8754D and 8764D equipment in recent calibration.

Benj. F. Dawson III, P.E.

