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Report of Field Measurements of the R.F. Fields, and Analyzed as to Soil Conductivity in units of mS/m of the area around the stations KAFY & KG6XDP, Temporary at Lancaster, Ca.



Lancaster, Ca.



Oildale, Ca.

Directed & Presented by Norwood & Dawn Patterson, Engineering Consultants

Conductivity Measurement Report

For

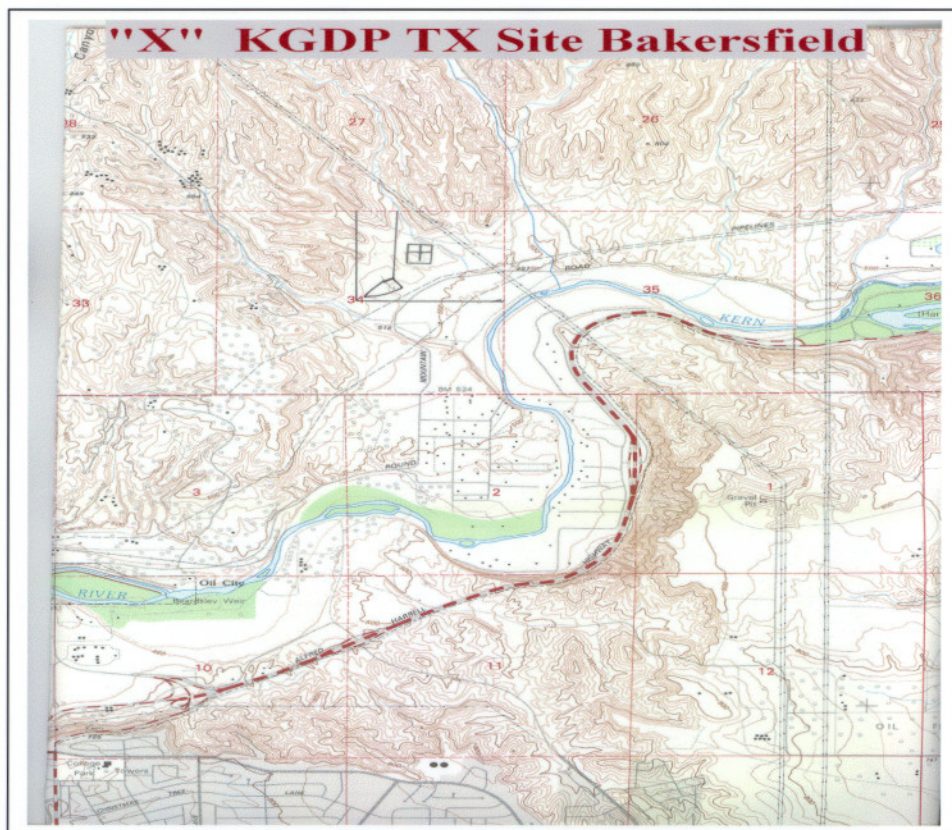
RRI, Inc. dba KGDP & KG6XDP

to

FCC

AS AN ADDENDUM TO

FCC 301 Application



Prepared by Norwood & Dawn Patterson

EXHIBIT INDEX



- i* Norwood J. Patterson Engineering Statement
- A FCC Authorization for FSTA
- B Measured Coordinates FSTA
- C FCC Data Base for KAFY and KIRN CP
- D RMS Radiation efficiency KAFY and KG6XDP
- E Power Calculations I^2R Lancaster
- F Antenna Impedance Measurements Lancaster: $Z_a = R_a \pm jX_a$
- G Conductivity Data with Summary KAFY, Oildale, CA
- H Conductivity Data with Summary KG6XDP, Lancaster, CA
- I Test Equipment Used, including tower sketch
- J Calibration & Procedures of Test Equipment Used
- K Picture of KAFY, Oildale Towers and KG6XDP, Lancaster
Portable Tower and Portable Tansmitter
- L Picture of Lancaster Tower
- M Profile of Engineer Norwood J. Patterson & Field Engineers
- N Transmitter Log readings from Lancaster KG6XDP

**ENGINEERING STATEMENT of Norwood J. Patterson
on behalf of**

RADIO REPRESENTATIVES, INC. (RRI)

Licensee KGDP AM 660 KHZ AND KG6XDP

REC
LANCASTER
& OILDALE

**Conducted Field Measurements to determine Conductivity
in mountainous soil of the service area of Oildale, CA,
Proposed License for KGDP AM**

BACKGROUND

During the FCC Window of Opportunity, an application was filed as a major change of 660 AM, which was accepted. RRI has been requested to file an FCC application Form 301 with technical data included.

In preparation for timely filing of the 301, Radio & TV Engineering Co., a dba of Norwood & Dawn Patterson, have been conducting field measurements of KAFY. KAFY's transmitter and towers are located about 1000 ft. S.E. of KGDP's proposed transmitter site in Oildale, an adjacent city Northeast of Bakersfield, CA. A Conditional Use Permit (CUP) has been issued to RRI by Kern County authorizing RRI to build KGDP's transmitter site and towers. Construction will begin immediately upon getting the FCC Construction Permit (CP).

Field Measurements

In two areas surrounding the mountains of Oildale, it was desirable to know the measured ground conductivity;

- (1) Soil conductivity of KGDP's proposed TX site in the area around Oildale
- (2) Conductivity of KIRN, an adjacent station licensed to Simi Valley;
and a CP site removed about 60 km East to Northeast from the licensed site.

For several weeks three to four field engineers have been conducting field measurement tests and gathering accurate field strength using a Potomac field meter Model 41. At the precise point measured, each field engineering used one of several GPS receivers, 2 each GEO3 BOB, made by Trimble_, and MAGGELAN 330 receiver. Each field engineer was trained by Norwood J. Patterson as to proper operation of the GPS and FIM 41, and the engineers had previous experience making field measurements. Each engineer was provided a Cell Phone with daily access to Norwood J. Patterson, who supervised and instructed all field engineers from his engineering offices and lab.

Measurement Facilities:

1. KAFY during regular station's operations. TX is located about 1500' SE of KGDP's proposed TX site.
2. KG6XDP temporary 1 kW station with FCC authorization to operate on 1690 kHz. Location of the FSTA was at a temporary site 1.06 mi. North of KIRN's unbuilt CP site.

3. In compliance with FCC's FSTA specifications, KG6XDP operated on 1690 kHz with 1 kW transmitter, tower 145', and 120 ground radials.

Results of these tests are attached to the FCC 301

Facilities

During analysis of field data, REC made measurements on the same radial as the Proofs of KAFY. These Proofs were combined with REC measurements to support a "Full" radial. Other stub measurements were made by the REC field crew under direction of Norwood J. Patterson. Where no measured points were obtained, the FCC M3's were used to serve the complete distance under consideration.

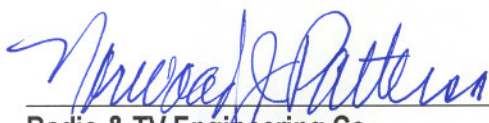
Equipment Used

1. 3 ea. Potomac FIM 41
2. 1 ea. GPS Receiver: Magellan 330
3. 2 ea. Trimble GPS Receivers with an error correction, receiver BOB on belt
4. 1 ea. SONY GPS receiver.

Preparation of measure points as used to determine soil conductivity vs distance.

I, Norwood J. Patterson, performed all analyses and values of the field points, using an HP computer, printer, scanner, and EDX Program AMDAT. This data was then prepared by my wife/assistant of 60-years, within her computer. Finally I placed all reports and data into a ".pdf" file on a CD. The attached report includes all data required by the FCC's FSTA. See the Index of Exhibits attached.

I, Norwood J. Patterson, do hereby certify that I have prepared the enclosed data and, under penalty of perjury, that data of my own knowledge is correct. As to other information and facts asserted herein, I believe that information also to be true.


Radio & TV Engineering Co.
Norwood J. Patterson, Owner

Date 12-19-04