

SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 6)

(e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following:

Exhibit No.
N/A

- (1) Protected and interfering contours, in all directions (360°), for the proposed operation.
- (2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as transmitter location.
- (3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur.
- (4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (5) The official title(s) of the map(s) used in the exhibits(s).

24. Is the proposed station for a channel in the range from Channel 201 to 220 (88.1 through 91.9 MHz) and the proposed antenna location within the distance to an affected TV Channel 6 station(s) as defined in 47 C.F.R. Section 73.525?

Yes No

If Yes, attach as an Exhibit either a TV Channel 6 agreement letter dated and signed by both parties or a map and an engineering statement with calculations demonstrating compliance with 47 C.F.R. Section 73.525 for each affected TV Channel 6 station.

Exhibit No.
E6

25. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1-107.9 MHz)?

Yes No

If Yes, attach as an Exhibit information required in 1/. (Except for Class D (secondary) proposals.)

Exhibit No.
N/A

26. Environmental Statement (See 47 C.F.R. Section 1.1301 et seq.)

Would a Commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact?

Yes No

If you answer Yes, submit as an Exhibit an Environmental Assessment required by Section 1.1311.

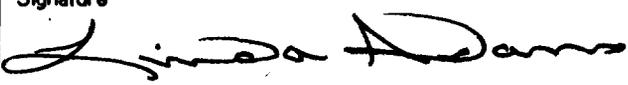
Antenna is to be sidemounted on existing tower.

If No, explain briefly why not. **See Exhibit E7 for rf radiation exposure limit compliance.**

Exhibit No.
N/A

CERTIFICATION

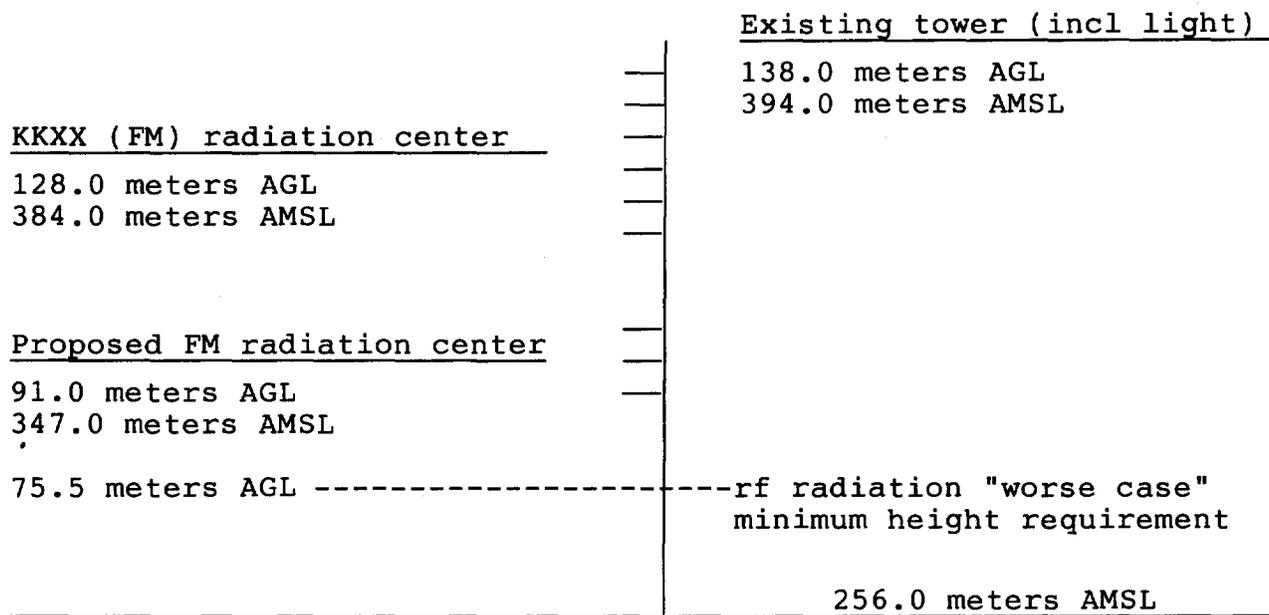
I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined the foregoing and found it to be accurate and true to the best of my knowledge and belief.

Name (Typed or Printed) Linda Adams	Relationship to Applicant (e.g., Consulting Engineer) Technical Consultant
Signature 	Address (Include ZIP Code) 3108 Fulton Avenue, Suite 1 Sacramento, CA 95821
Date July 26, 1989	Telephone No. (Include Area Code) (916) 481-8191

Family Stations, Inc.
New Educational FM
Bakersfield, CA

EXHIBIT E1

JULY 1989



MSL

NOT TO SCALE

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New Educational FM
Bakersfield, CA

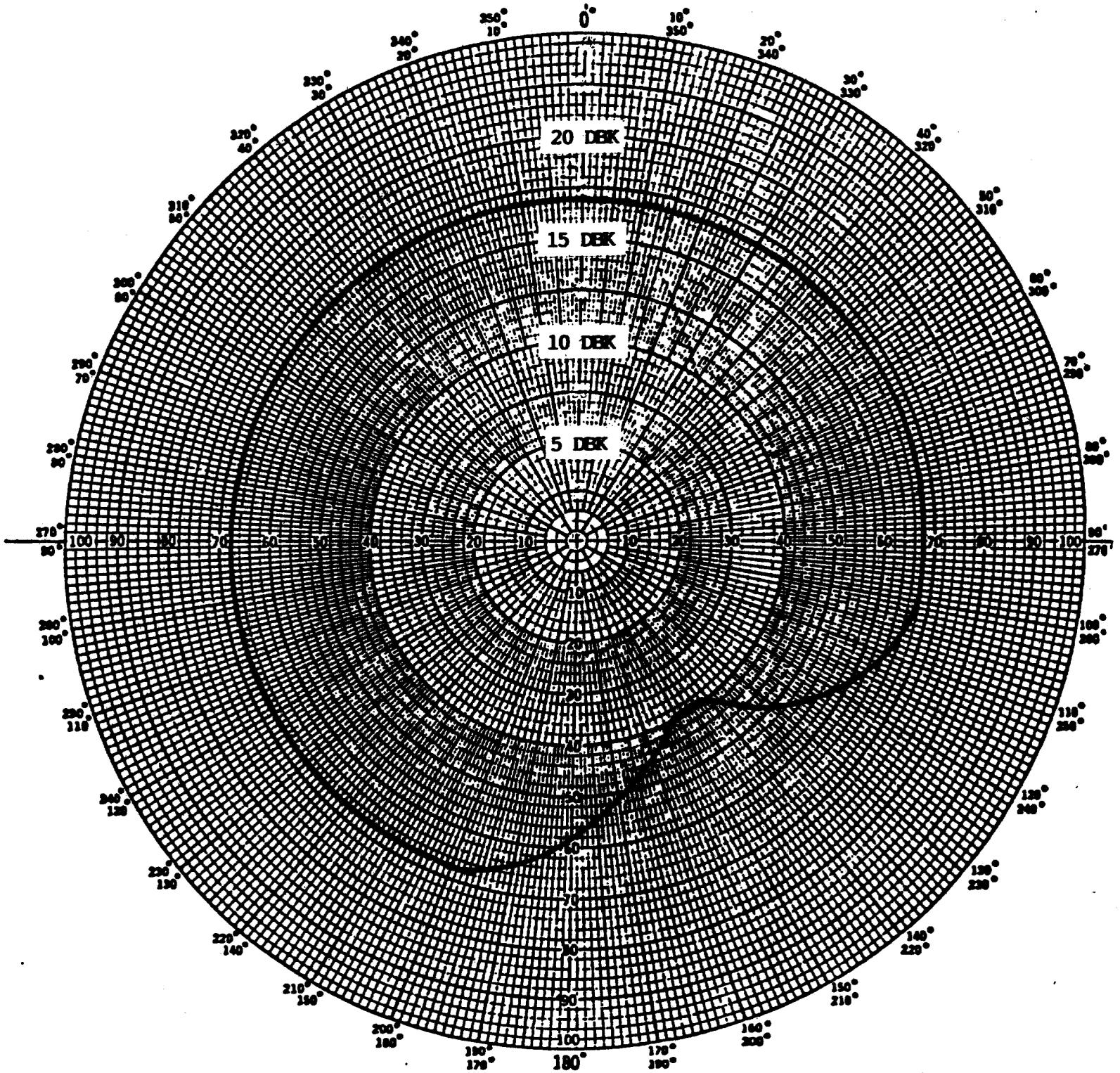
EXHIBIT E2
JULY 1989

Horizontal and Vertical Plane Pattern

<u>Bearing</u>	<u>Rel. Fld</u>	<u>ERP (KW)</u>	<u>dbk</u>	<u>HAAT</u>	<u>60 dbu (km)</u>
0	1.00	50.00	16.990	102.7	44.9
10	1.00	50.00	16.990	85.0	41.4
20	1.00	50.00	16.990	66.1	37.5
30	1.00	50.00	16.990	46.4	32.3
40	1.00	50.00	16.990	40.7	30.4
45	1.00	50.00	16.990	38.7	29.6
50	1.00	50.00	16.990	43.2	31.2
60	1.00	50.00	16.990	62.5	36.7
70	1.00	50.00	16.990	73.3	39.0
80	1.00	50.00	16.990	82.2	40.8
90	1.00	50.00	16.990	75.1	39.4
100	1.00	50.00	16.990	16.8	26.7
110	.90	40.50	16.075	57.8	34.1
120	.75	28.13	14.492	90.5	37.8
130	.62	19.22	12.838	102.4	36.9
135	.53	14.05	11.477	111.1	35.8
140	.44	9.68	9.859	121.3	34.3
150	.44	9.68	9.859	139.0	36.3
160	.53	14.05	11.477	159.7	41.8
170	.62	19.22	12.838	175.8	46.5
180	.75	28.13	14.492	191.8	51.5
190	.90	40.50	16.075	196.9	55.2
200	1.00	50.00	16.990	204.6	57.7
210	1.00	50.00	16.990	213.4	58.5
220	1.00	50.00	16.990	218.2	58.9
225	1.00	50.00	16.990	221.3	59.1
230	1.00	50.00	16.990	219.8	59.0
240	1.00	50.00	16.990	217.8	58.8
250	1.00	50.00	16.990	214.3	58.6
260	1.00	50.00	16.990	209.4	58.1
270	1.00	50.00	16.990	205.2	57.8
280	1.00	50.00	16.990	194.9	56.9
290	1.00	50.00	16.990	189.5	56.5
300	1.00	50.00	16.990	186.1	56.2
310	1.00	50.00	16.990	179.8	55.6
315	1.00	50.00	16.990	176.4	55.3
320	1.00	50.00	16.990	171.5	54.8
330	1.00	50.00	16.990	159.0	53.4
340	1.00	50.00	16.990	141.8	51.1
350	1.00	50.00	16.990	116.2	47.3

EXHIBIT E2

JULY 1989

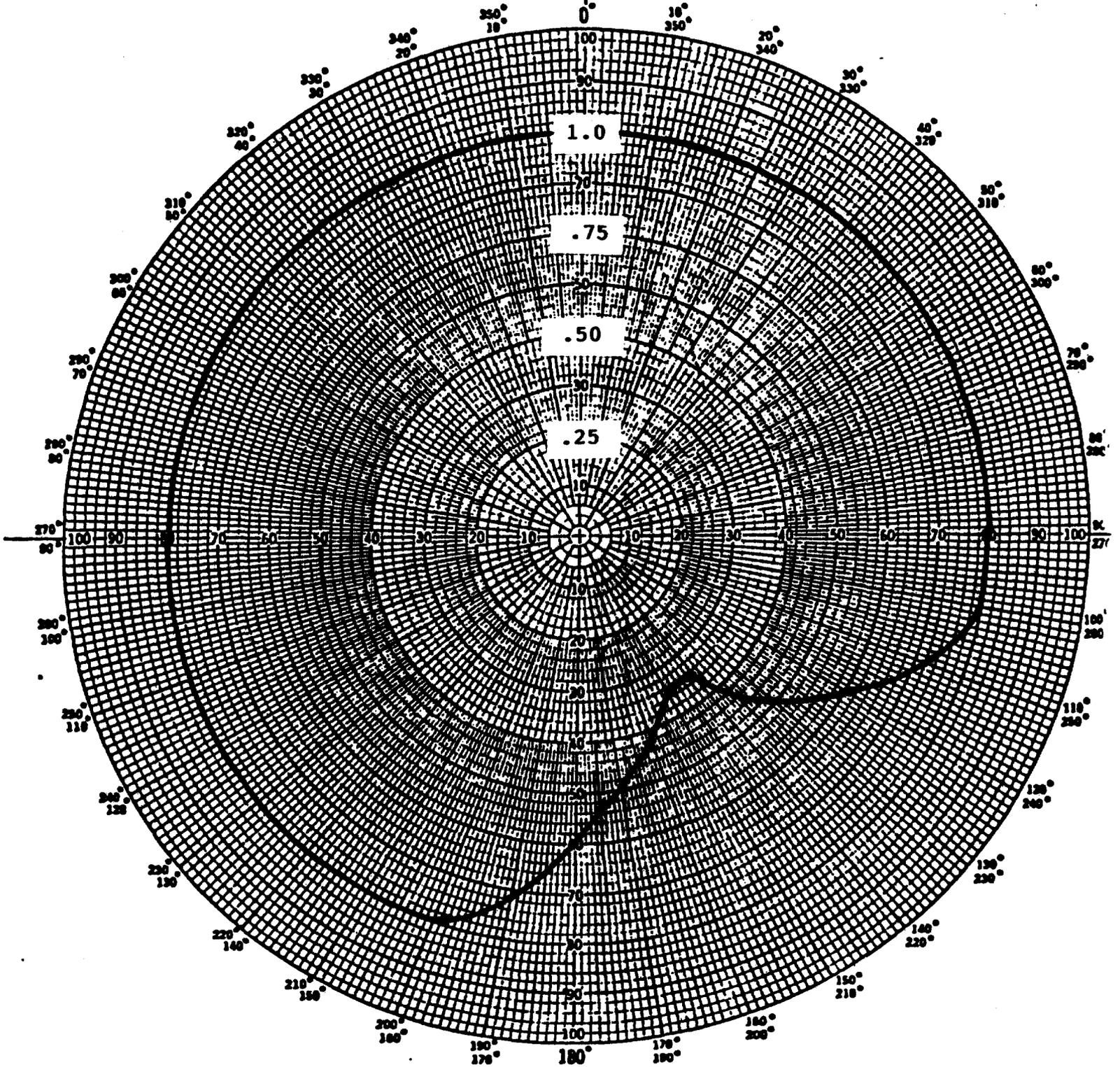


Proposed Horizontal & Vertical Radiation Power Pattern

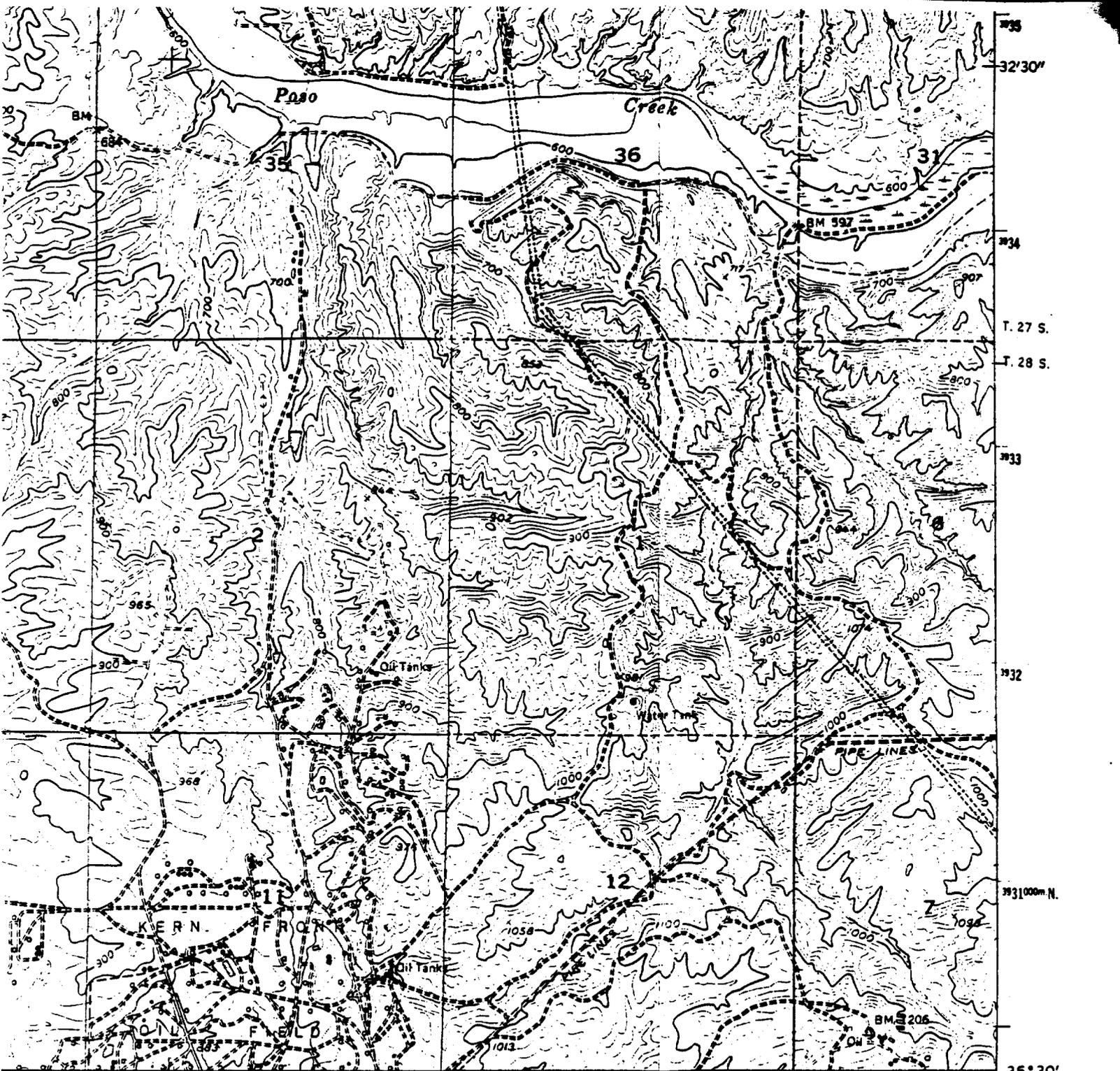
Family Stations, Inc.
New Educational FM
Bakersfield, CA

EXHIBIT E2

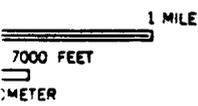
JULY 1989



Proposed Horizontal & Vertical Plane Radiation Field



INTERIOR GEOLOGICAL SURVEY, WASHINGTON, D. C. - 1970
 317 R. 27 E. R. 28 E. 318 000m E. 119° 00'



ROAD CLASSIFICATION

- Heavy-duty
- Medium-duty
- Light-duty
- Unimproved dirt
- State Route



NORTH OF OILDALE, CALIF.

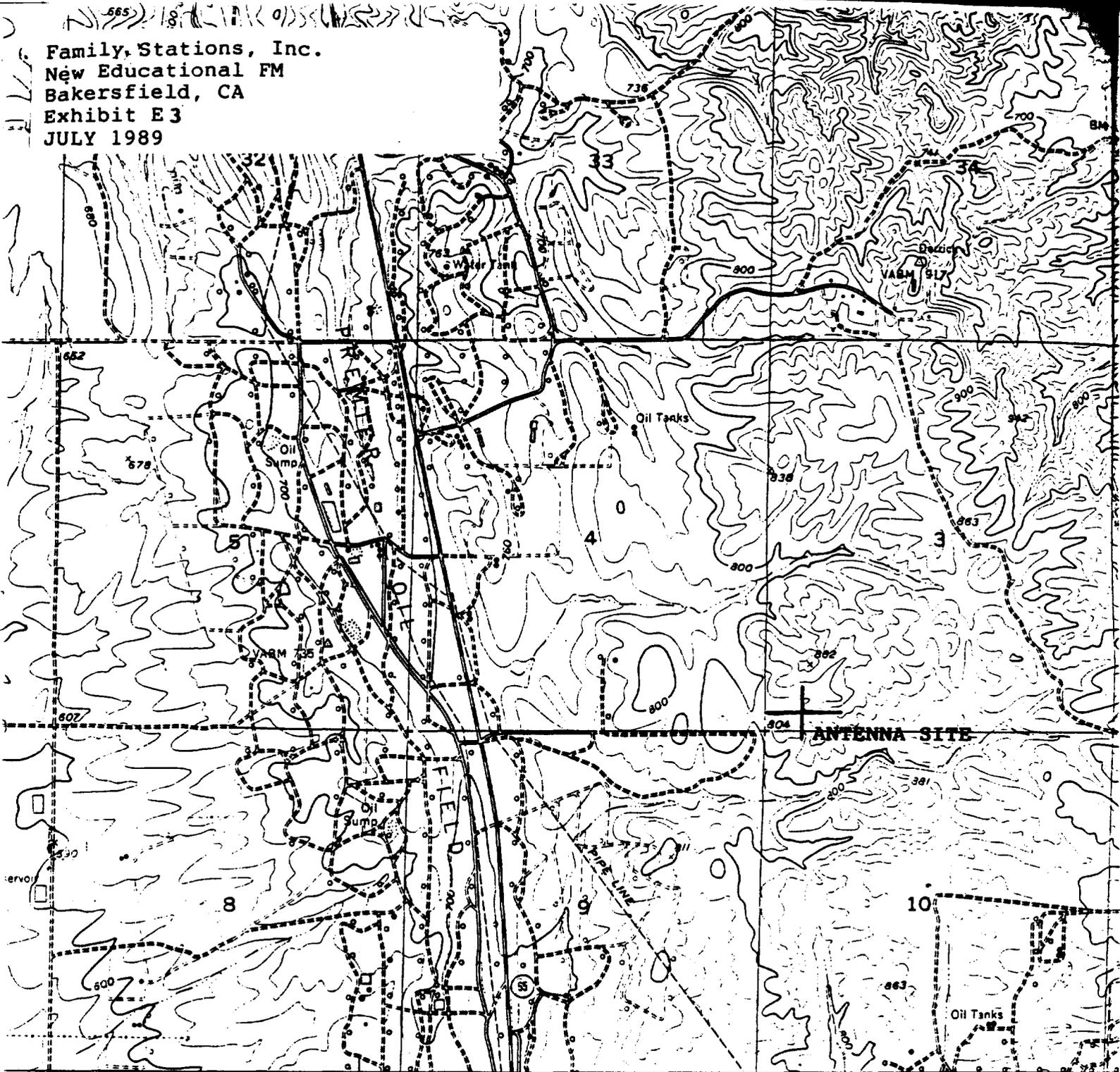
SE/4 SLATER 15' QUADRANGLE
 N 3530 - W 11900/7.5

1954
 PHOTOREVISED 1968
 AMS 2155 II SE-SERIES V895

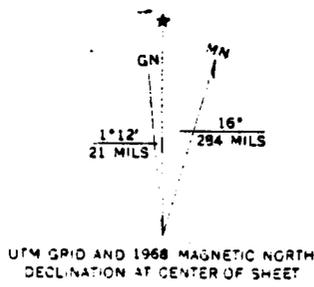
NGTON, D. C. 20242
 REQUEST

(OIL CENTER)
 225-14 NW

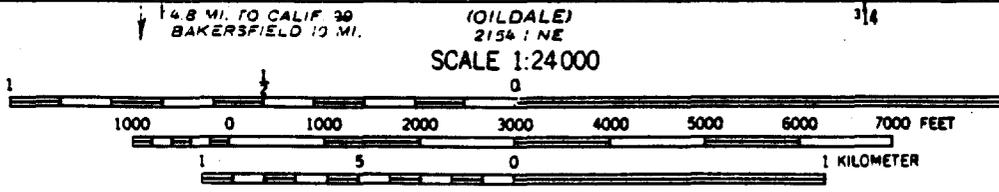
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 Exhibit E3
 JULY 1989



Methods



UTM GRID AND 1968 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET



CONTOUR INTERVAL 20 FEET
 DATUM IS MEAN SEA LEVEL

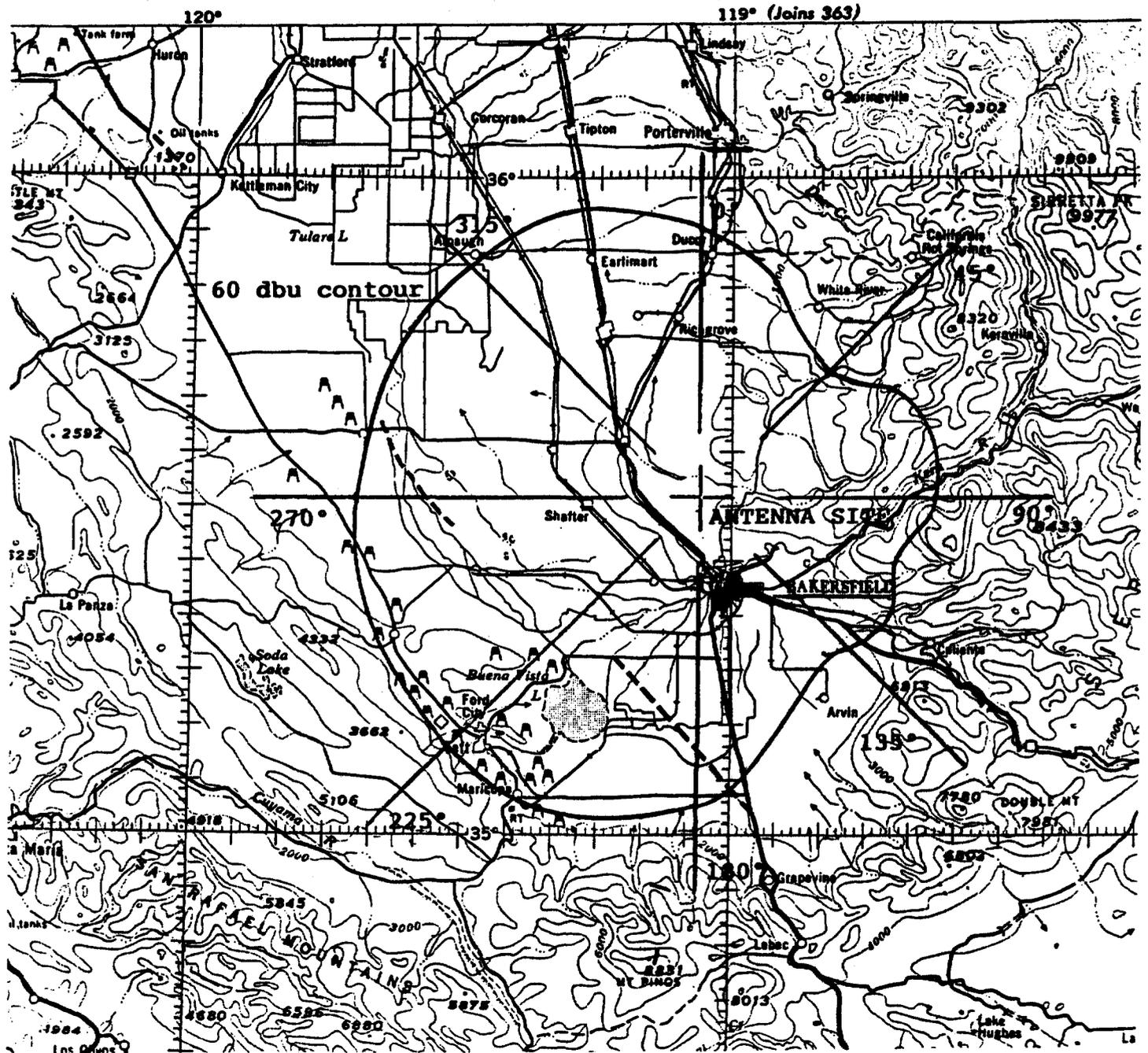
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
 FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D. C.
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

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World Aeronautical Chart; Mojave
 Desert 1:1 million scale

EXHIBIT E4

JULY 1989



Kilometers	0	10	20	30	40	50	60	70	80	90	100
Nautical Miles	0	10	20	30	40	50	60	70	80	90	100
Statute Miles	0	10	20	30	40	50	60	70	80	90	100

Handwritten notes and scribbles at the bottom of the page, including the text 'LAKE HUGHES' and other illegible markings.

Family Stations, Inc.
New Educational FM
Bakersfield, CA

EXHIBIT E5
JULY 1989

Allocation Study

The proposed FM meets the minimum distance separation requirements with regard to co-channel, first, second, and third adjacent stations (channels 212 - 218). Stations with less than 30 km clearance beyond the separation requirement are listed below:

213 B KUFW (lic) Woodlake, CA BLED830524AA
Geographical coordinates: 36-17-09 / 118-50-15
ERP: .85 KW
HAAT (avg): 761.0 meters
HAAT (193°): 1049.5 meters
60 dbu contour (193°): 55.1 km
80 dbu contour (193°): 17.0 km

Proposed FM at 13° - ERP: 50 KW
HAAT: 84.2 meters
60 dbu contour: 41.2 km
80 dbu contour: 14.2 km

Actual distance: 87.9 km
Required distance: 69.3 km
Clear: 18.6 km

214 B KPFK (lic) Los Angeles, CA BLED830425AF
Geographical coordinates: 34-13-45 / 118-04-03
ERP: 110.0 KW
HAAT (avg): 863.0 meters
HAAT (328°): 484.0 meters
60 dbu contour (328°): 86.8 km
54 dbu contour (328°): 129.6 km

Proposed FM at 148° - ERP: 9.68 KW
HAAT: 134.4 meters
60 dbu contour: 35.8 km
54 dbu contour: 54.5 km

Actual distance: 169.1 km
Required distance: 165.4 km
Clear: 3.7 km

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Exhibit E5 (cont)

216 B KCPB (lic) Thousand Oaks, CA BLED791109AN
Geographical coordinates: 34-24-47 / 119-11-10
ERP: 4.8 KW
HAAT (avg): 390.0 meters
HAAT (5°): 10.6 meters
60 dbu contour (5°): 15.2 km
54 dbu contour (5°): 22.9 km

Proposed FM at 185° - ERP: 33.62 KW
HAAT: 195.1 meters
60 dbu contour: 53.3 km
54 dbu contour: 78.8 km

Actual distance: 122.8 km
Required distance: 94.0
Clear: 28.8 km

The proposed FM also meets the minimum distance separation requirements with regard to stations separated by 53 or 54 channels (CH 268 & 269). The station with less than 15 km clearance beyond the separation requirement is listed below:

268 B KGFM (lic) Bakersfield, CA BLH4497
Geographical coordinates: 35-26-20 / 118-44-23
Actual distance: 30.4 km
Required distance: 20.0 km
Clear: 10.4 km

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EXHIBIT E6
JULY 1989

FM / CH 6 Interference Study

CH 6 within the 180 km required study distance:

KSBY-TV (lic) San Luis Obispo, CA
Geographical coordinates: 35-21-37 / 120-39-17
ERP: 100 KW
HAAT (avg): 542.5 meters
HAAT (83°): 473.3 meters
47 dbu contour (83°): 118.1 km

U/D ratio for CH 6 - 47 dbu contour: 27.0 db

Proposed FM at 263° - ERP: 50 KW
HAAT: 208.1 meters
80 dbu contour: 24.1 km
(CH 6 - 47 dbu contour & U/D ratio of 27 db,
plus 6 db for television receiving antenna
directivity)

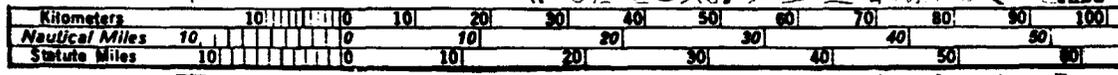
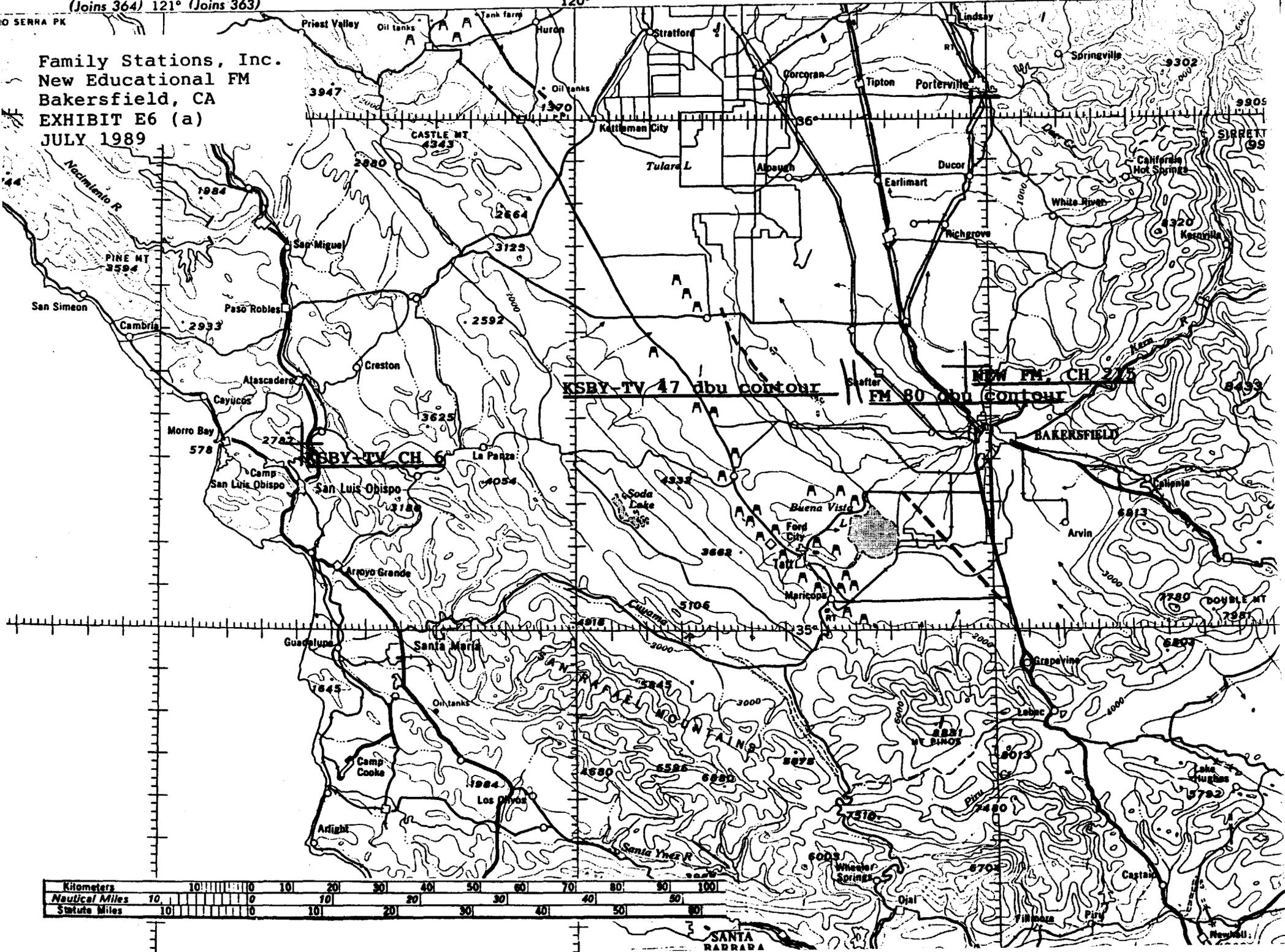
Actual distance: 145.7 km
Required distance: 142.2 km
Clear: 3.5 km

WORLD AERONAUTICAL CHART

(Joins 364) 121° (Joins 363)

119° (Joins 363) MOJAVE DESERT

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Bakersfield, CA
EXHIBIT E6 (a)
JULY 1989



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EXHIBIT E7

JULY 1989

RF Radiation Exposure Limit Compliance Statement

KKXX (FM) operates with a combined H&V ERP of 70.8 KW using a 6-bay antenna. The proposed FM will have a combined H&V ERP of 100 KW, with a 3-bay antenna. KKXX's radiation center is 128.0 meters above ground, and the proposed FM's radiation center will be 91.0 meters above ground.

Per the FCC OST Bulletin No. 65, Appendix B, Table 1, an antenna with a combined H&V ERP of 170.8 KW (KKXX and the proposed FM), for a "worse case", would be required to be a minimum of 75.5 meters above ground. As the lowest bay of the proposed FM's antenna will be at the 88.0 meters above ground level, 12.5 meters above the minimum height required for both FMs combined, there will therefore be no rf radiation hazard posed to anyone at ground level adjacent to the tower or in the general vicinity.