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TELEX 425546

ALAN C. CAMPBELL

March 18, 1988

DIRECT DIAL NO.

857-2788

H. Walker Feaster  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, DC 20554

Re: Station WCKY(AM)  
Cincinnati, Ohio  
BP-860530AJ

RECEIVED  
880318

FCC  
FEE SECTION

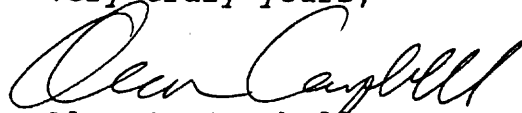
Dear Mr. Feaster:

Transmitted herewith and filed in triplicate on behalf of Pathfinder Communications Corporation is an application for license on FCC Form 302 covering modifications to the facilities of Station WCKY(AM), Cincinnati, Ohio.

A check in the amount of \$700.00 payable to the Federal Communications Commission is enclosed to cover the required filing fee. This application was filed originally on March 7, 1988; however, it was returned because an insufficient payment was tendered at that time.

Should you have any questions concerning this application, please contact the undersigned.

Very truly yours,

  
Alan C. Campbell

Enclosure

72880307215

3-28-88 ples

FEE NO: 08007876

FEE NO: 08007877

FEE TYPE: MAD

FEE AMT: 375.00

ID SEQ: 09

FEE NO: 08007877

FEE AMT: 325.00

ID SEQ: 09

For Commission Use Only

File No.

SECTION I General Data

Legal Name of Applicant

Mailing Address

Pathfinder Communicatins Corporation 219 W. McFarland

City

State

ZIP Code

Telephone No.

Cincinnati,

OH

45202

(Include Area Code)

(513) 241-6565

1. Facilities authorized by construction permit

This application is for:



Commercial



Noncommercial



AM



FM



TV

Call Letters	Community of License	Construction Permit File No.	Modification of Construction Permit File No(s).	Expiration Date of last Construction Permit
WCKY	Cincinnati	BP-860530AJ	--	February 7, 1988

2. Is the station now operating pursuant to automatic program test authority in accordance with Section 73.1620 of the Commission's Rules?



YES



NO

If No, explain.

Station operating pursuant to Section 73.1615(b)(6)

3. Have all the terms, conditions, and obligations set forth in the above described construction permit been fully met?



YES



NO

If No, state exceptions.

4. Apart from changes already reported, has any cause or circumstance arisen since the grant of the underlying construction permit which would cause any statement or representation contained in the construction permit application to be now incorrect?



YES



NO

If Yes, explain.

THE APPLICANT hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same whether by license or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)  
THE APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations, and all exhibits are a material part hereof and are incorporated herein.

CERTIFICATION

I certify that the statements in this application are true, complete and correct to the best of my knowledge and belief, and are made in good faith.

Signed and dated this 7 day of February, 1988.

Pathfinder Communications Corp.

Name of Applicant

Signature

President

Title

WILLFUL FALSE STATEMENTS MADE  
ON THIS FORM ARE PUNISHABLE  
BY FINE AND IMPRISONMENT U.S.  
CODE, TITLE 18, SECTION 1001

Name of Applicant

PATHFINDER COMMUNICATIONS CORP.

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

☒ Station LicenseAnswer Items  
1-9☐ Direct measurement of power

1, 2, 6, 7, 8 and 10

## 1. Facilities authorized in construction permit

Call Sign	File No. of Construction Permit	Frequency	Hours of operation	Power in kilowatts	
				Night	Day
WCKY	BP-860530AJ	1530 kHz	Unlimited	50	50

## 2. Station location

State	City or town
Ohio	Cincinnati

## 3. Transmitter location

State	County	City or town	State address (or other identification)
Kentucky	Kenton	Villa Hills	1100 Radio Road

## 4. Main Studio location

State	County	City or town	Number and Street
Ohio	Hamilton	Cincinnati	219 Marland Street

## 5. Remote control point location (only if authorized)

State	City or town	Street address (or other identification)
Ohio	Cincinnati	219 Marland Street

## 6. Operating constants:

RF common point or antenna current without modulation for night power in amperes 32.4		RF common point or antenna current without modulation for day power in amperes 30.15	
Actual measured antenna or common point resistance (in ohms) at operating frequency Night 50 Day 55		Actual measured antenna or common point reactance (in ohms) at operating frequency Night 0 Day -124	

## Antenna monitor indication for directional operation

Tower	Phase reading in degrees		Antenna base current		Antenna monitor sample current ratio	
	Night	Day	Night A	Day A	Night	Day
1 E	0	- -	14.1	- -	1.00	- -
2 EC	+77	- -	15.45	30.15	.59	1.0
3 WC	-34	- -	9.6	- -	.415	- -
4 W	-49	- -	3.84	- -	.574	- -

## Manufacturer and type of antenna monitor:

Potomac Instruments AM-19 (204), SN 1325

## 7. Description of antenna system

(If directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary. Height figures should not include obstruction lighting.)

Type radiator	Height in feet of complete radiator above base insulator, or above base if grounded.	Overall height in feet above ground (without obstruction lighting)	If antenna is either top loaded or tionalized, describe fully in Exhibi No. --
Four uniform cross-section guyed steel towers	1, 3, 4 300' 2 350'	1, 3, 4 305' 2 355'	N/A

Excitation

☒ Series☐ Shunt

Geographic coordinate to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North latitude 39 ° 03 ' 55 "

West longitude 84 ° 36 ' 27 "

If not fully described above, attach as Exhibit No. E further details and dimensions including any other antenna mounted on tower and associated isolation circuits. Also, if necessary for a complete description attach as Exhibit No.      a sketch of the details and dimensions of ground system.

8. Antenna resistance measurement

Attach as Exhibit No. E the following:

- |   |  |
|---|--|
| (a) Qualifications of persons taking measurements.  | (d) Manufacturer's name of each calibrated instrument used and manufacturer's rated accuracy.                            |
| (b) Schematic diagram showing clearly all components of coupling circuits, point of resistance measurements, location of antenna ammeter, connection to and characteristics of all tower lighting isolation circuits, static drains, and any other fixtures, lines, etc. connected to or supported by the antenna, including other antennas, and associated circuits. | (e) Date, accuracy, and by whom each instrument was last calibrated.   |
| (c) Full description of method used to make measurements.   | (f) Table of complete data taken.  |
|   | (g) The graph drawn of 10 to 12 readings in a band 50 to 60 kilohertz wide with the operating frequency near the center. |

9. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

STL, TSL, antenna side mounted on #3 WC tower with iso-couplers feeding transmission lines across tower base.

10. Give reasons for the change in antenna or common point resistance.

N/A

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Date February 1, 1988

(202) 296-2722  
Telephone No. (Include Area Code)

LOHNES AND CULVER  
Frederick D. Veihmeyer  
Name (Please Print or Type)

Signature   
(Check appropriate box below)

1156 15th Street, N.W., Suite 606  
Address (Include ZIP Code)

Washington, D. C. 20005

☐ Technical Director

☐ Registered Professional Engineer

☐ Chief Operator

☒ Technical Consultant

☐ Other (specify)

ENGINEERING STATEMENT  
RE: PROOF OF PERFORMANCE  
WCKY 50 kW-U DA-N 1530 kHz  
CINCINNATI, OHIO

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FIGURES

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Prepared by  
Lohnes and Culver Washington, D.C.  
October, 1987

FIGURE 7

FIELD STRENGTH GRAPHS

WCKY 50 kW-U, DA-N 1530 kHz

CINCINNATI, OHIO

Lohnes and Culver

Prepared by  
September, 1987

Washington, D.C.



KILOMETERS FROM ANTENNA

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MILLIVOLTS/METER

FIGURE 7B  
GROUND WAVE FIELD STRENGTH

STATION WCKY  
FREQUENCY 1530 kHz  
POWER 50 kW N-DA  
DIRECTION N 32° E

RADIATION - 3000 mV/m

2.5 mS/m

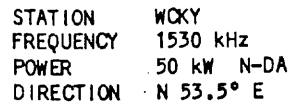
1.5 mS/m

KILOMETERS FROM ANTENNA

Graphs and graph paper should not be copied. Office copiers introduce geometric distortions which will affect accuracy. Copies for submission to the FCC and station files should only be made after all data have been plotted.



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1



MILLIVOLTS/METER

KILOMETERS FROM ANTENNA

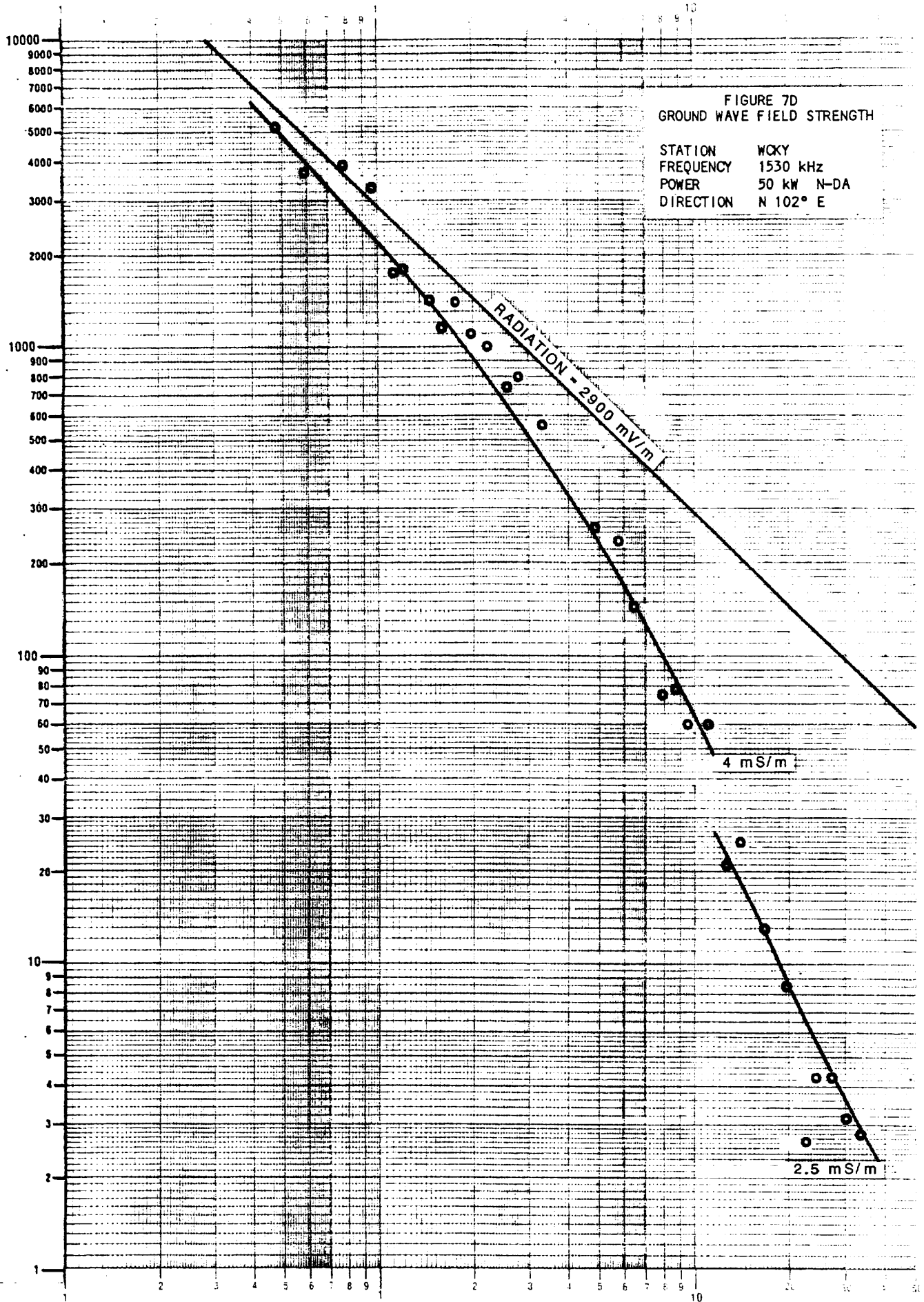
Graphs and graph paper should not be copied. Office copiers introduce geometric distortions which will affect accuracy. Copies for submission to the FCC and station files should only be made after all data have been plotted.

# KILOMETERS FROM ANTENNA

FIGURE 7D  
GROUND WAVE FIELD STRENGTH

STATION WKY  
FREQUENCY 1530 kHz  
POWER 50 kW N-DA  
DIRECTION N 102° E

MILLIVOLTS/METER



KILOMETERS FROM ANTENNA

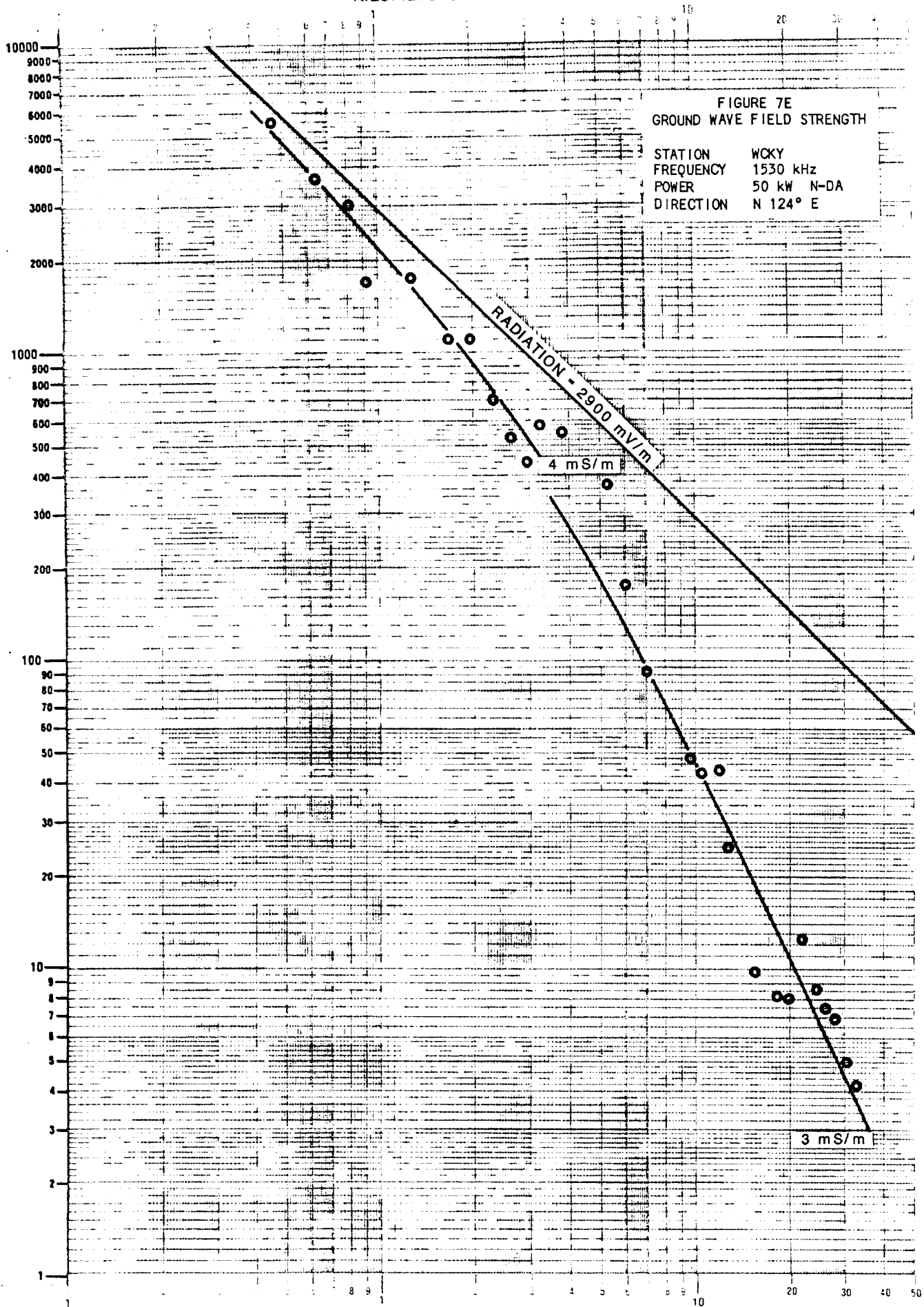
Graphs and graph paper should not be copied.  
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which will affect accuracy. Copies for sub-  
mission to the FCC and station files should  
only be made after all data have been plotted.

KILOMETERS FROM ANTENNA

MILLVOLTS/METER

FIGURE 7E  
GROUND WAVE FIELD STRENGTH

STATION WCKY  
FREQUENCY 1530 kHz  
POWER 50 kW N-DA  
DIRECTION N 124° E



KILOMETERS FROM ANTENNA

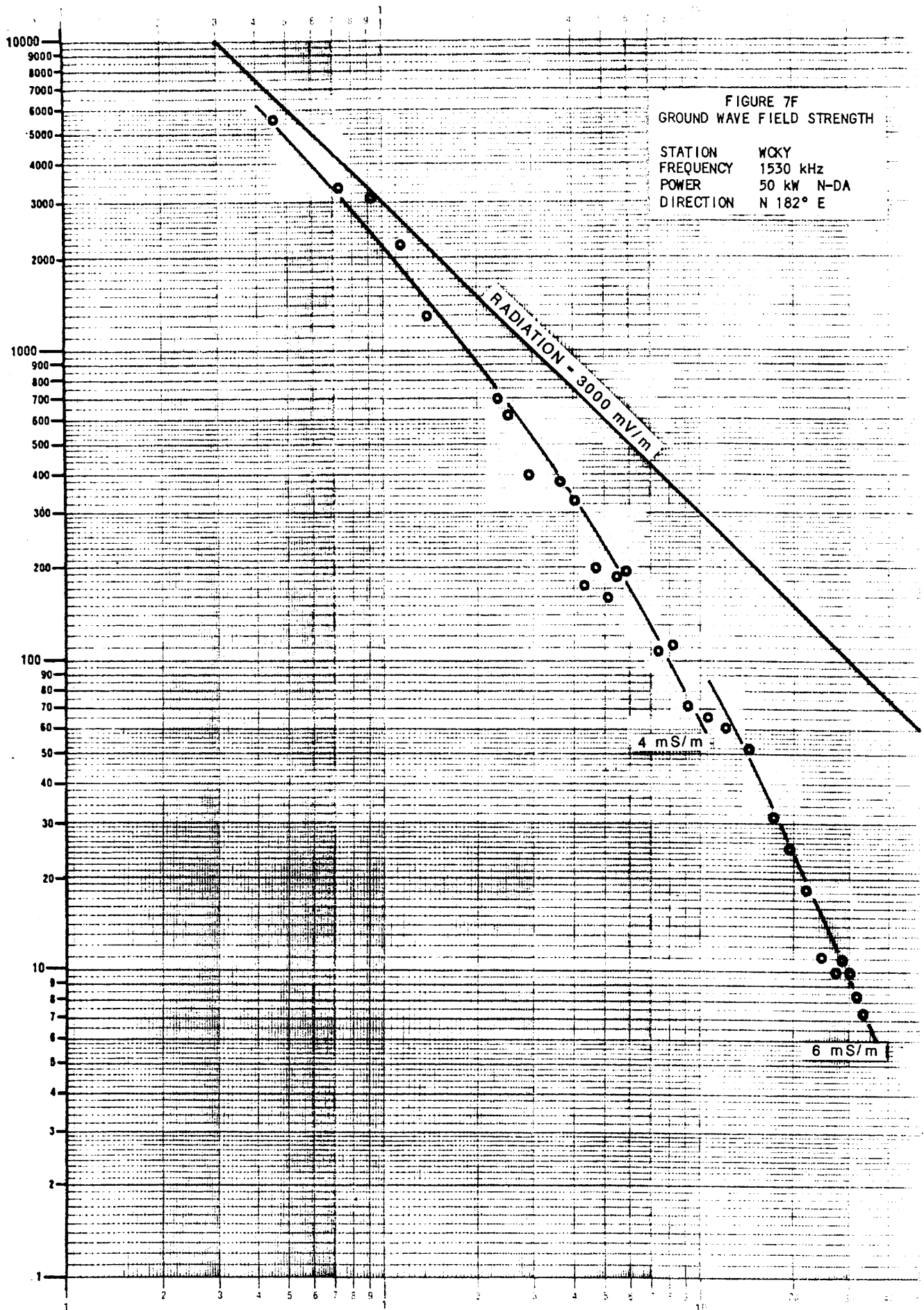
Graphs and graph paper should not be copied. Office copies introduce geometric distortions which will affect accuracy. Copies for submission to the FCC and station files should only be made after graphs have been plotted.

KILOMETERS FROM ANTENNA

MILLIVOLTS/METER

FIGURE 7F  
GROUND WAVE FIELD STRENGTH

STATION WCKY  
FREQUENCY 1530 kHz  
POWER 50 kW N-DA  
DIRECTION N 182° E

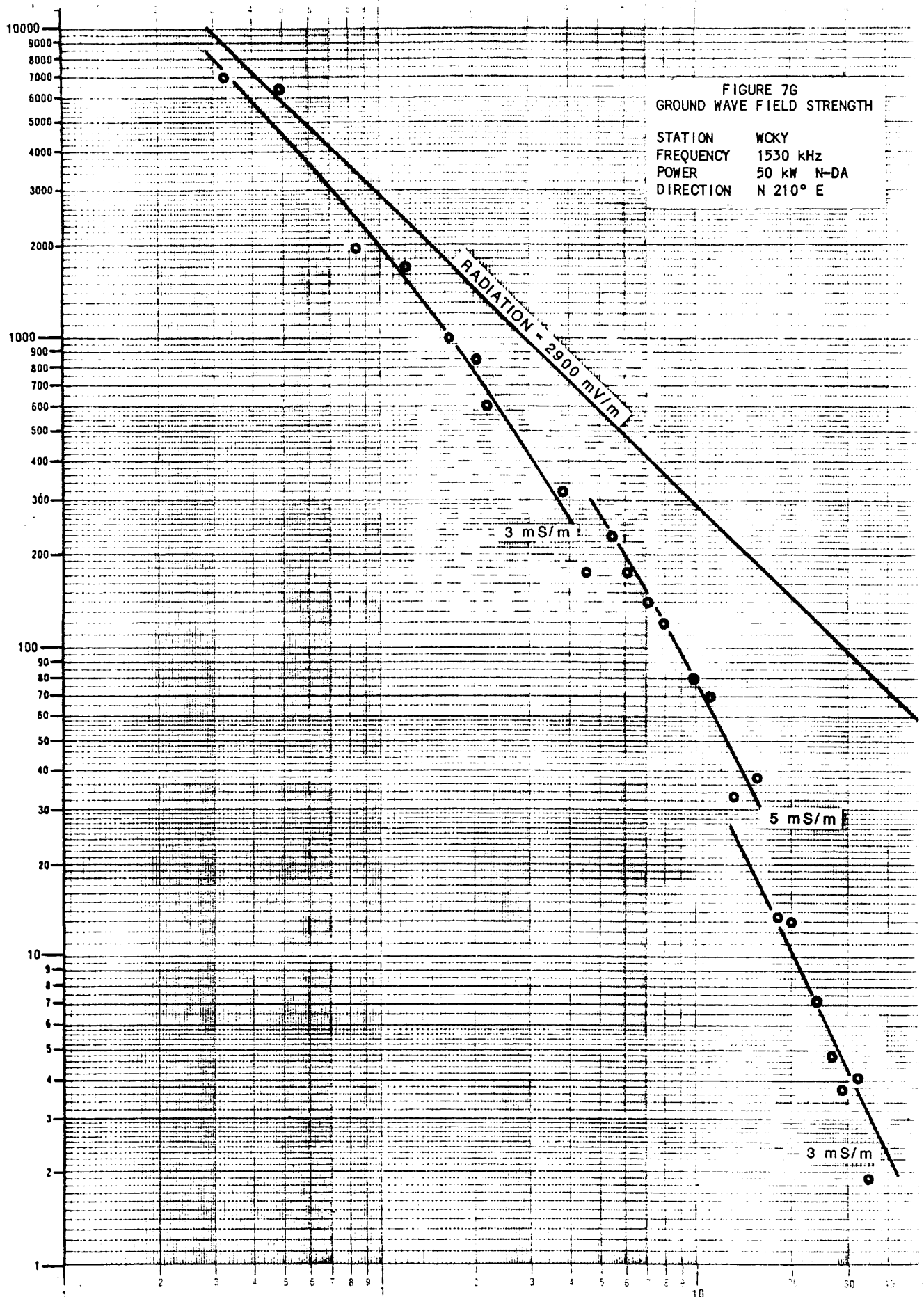


KILOMETERS FROM ANTENNA

Graphs and graph paper should not be copied. Office copiers introduce geometric distortions which will affect accuracy. Copies for submission to the FCC and station files should only be made after the data have been plotted.

# KILOMETERS FROM ANTENNA

MILLIVOLTS/METER

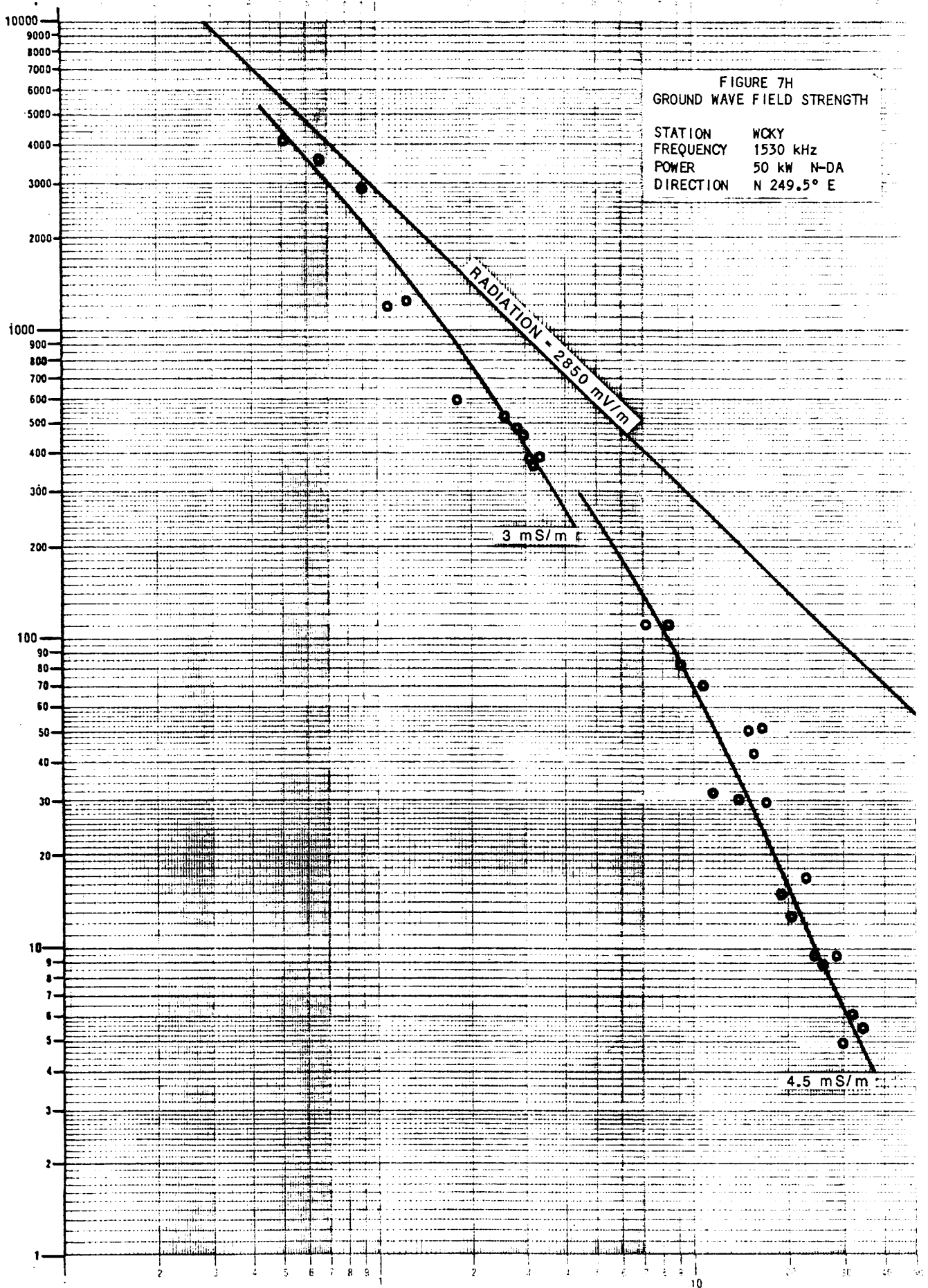
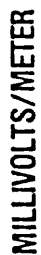


KILOMETERS FROM ANTENNA

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FIGURE 7H  
GROUND WAVE FIELD STRENGTH

STATION	WCKY
FREQUENCY	1530 kHz
POWER	50 kW N-DA
DIRECTION	N 249.5° E



KILOMETERS FROM ANTENNA



# KILOMETERS FROM ANTENNA

MILLIVOLTS/METER

FIGURE 71  
GROUND WAVE FIELD STRENGTH

STATION WQKY  
FREQUENCY 1530 kHz  
POWER 50 kW N-DA  
DIRECTION N 270.5° E

RADIATION - 2850 mV/m

3 mS/m

KILOMETERS FROM ANTENNA

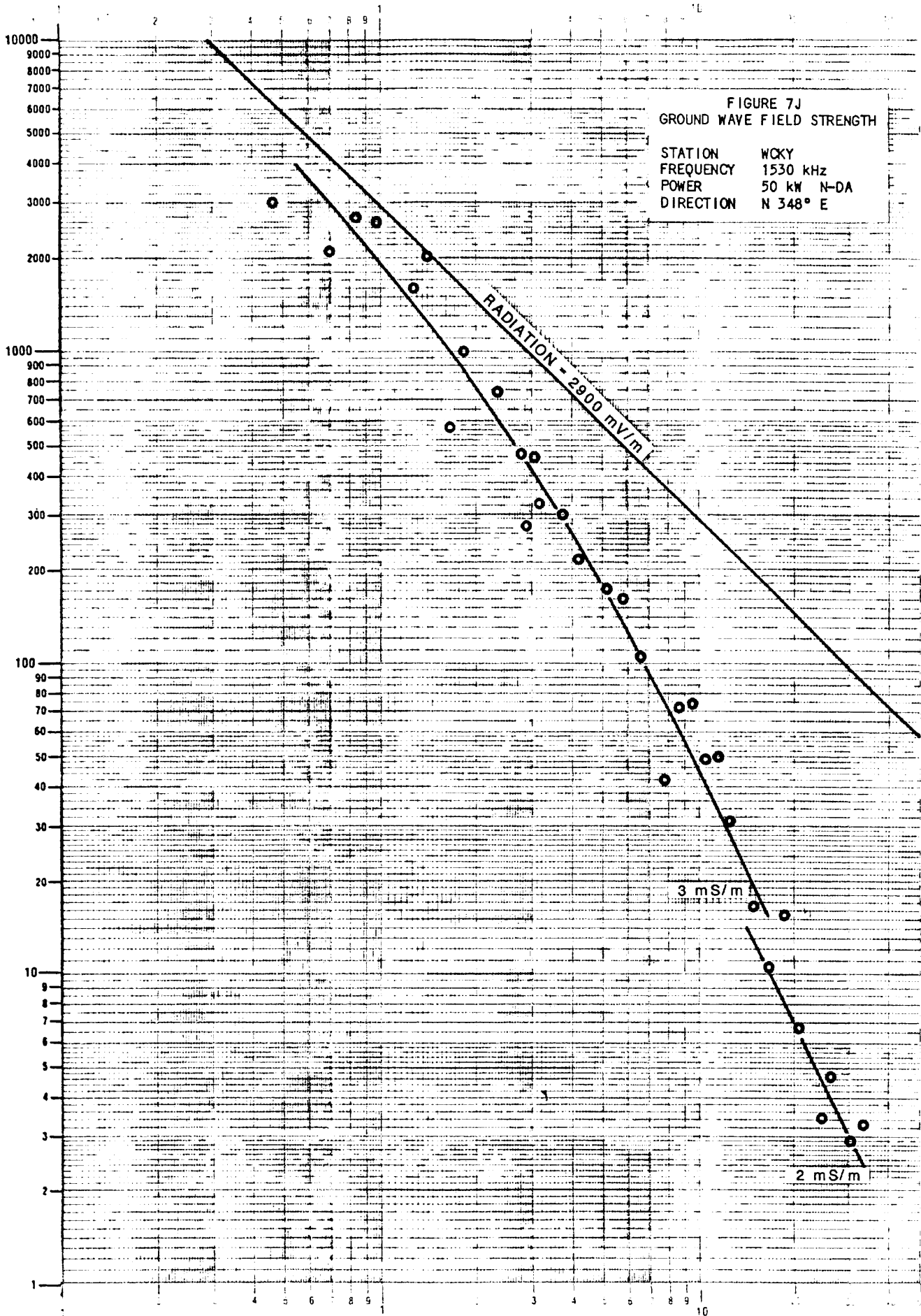
Graphs and graph paper should not be copied.  
Other copiers introduce geometric distortions  
which will affect accuracy. Copies for sub-  
mission to the FCC and station files should  
only be made after all data have been plotted.

# KILOMETERS FROM ANTENNA

FIGURE 7J  
GROUND WAVE FIELD STRENGTH

STATION WCKY  
FREQUENCY 1530 kHz  
POWER 50 kW N-DA  
DIRECTION N 348° E

MILLIVOLTS/METER

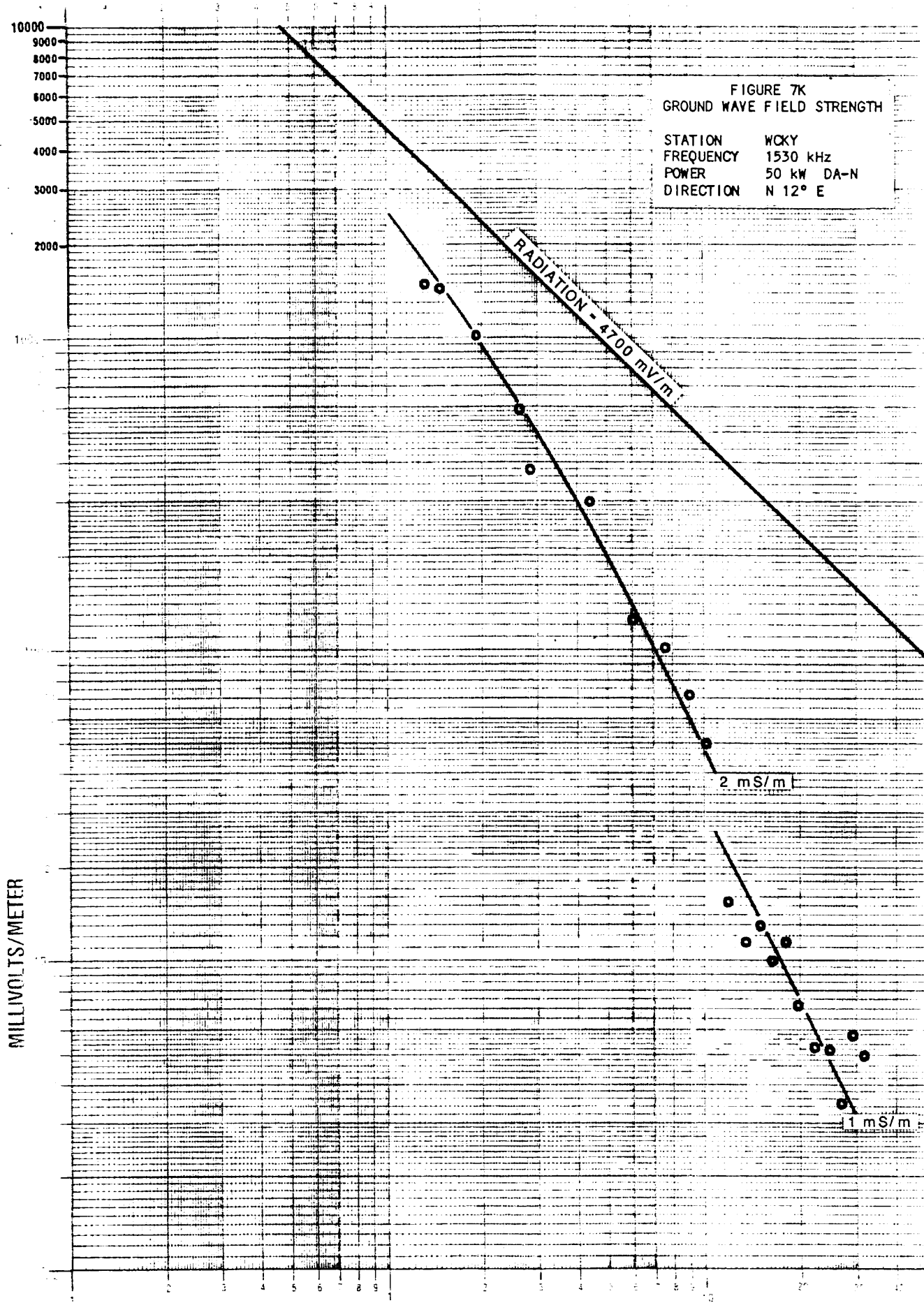


KILOMETERS FROM ANTENNA

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# KILOMETERS FROM ANTENNA



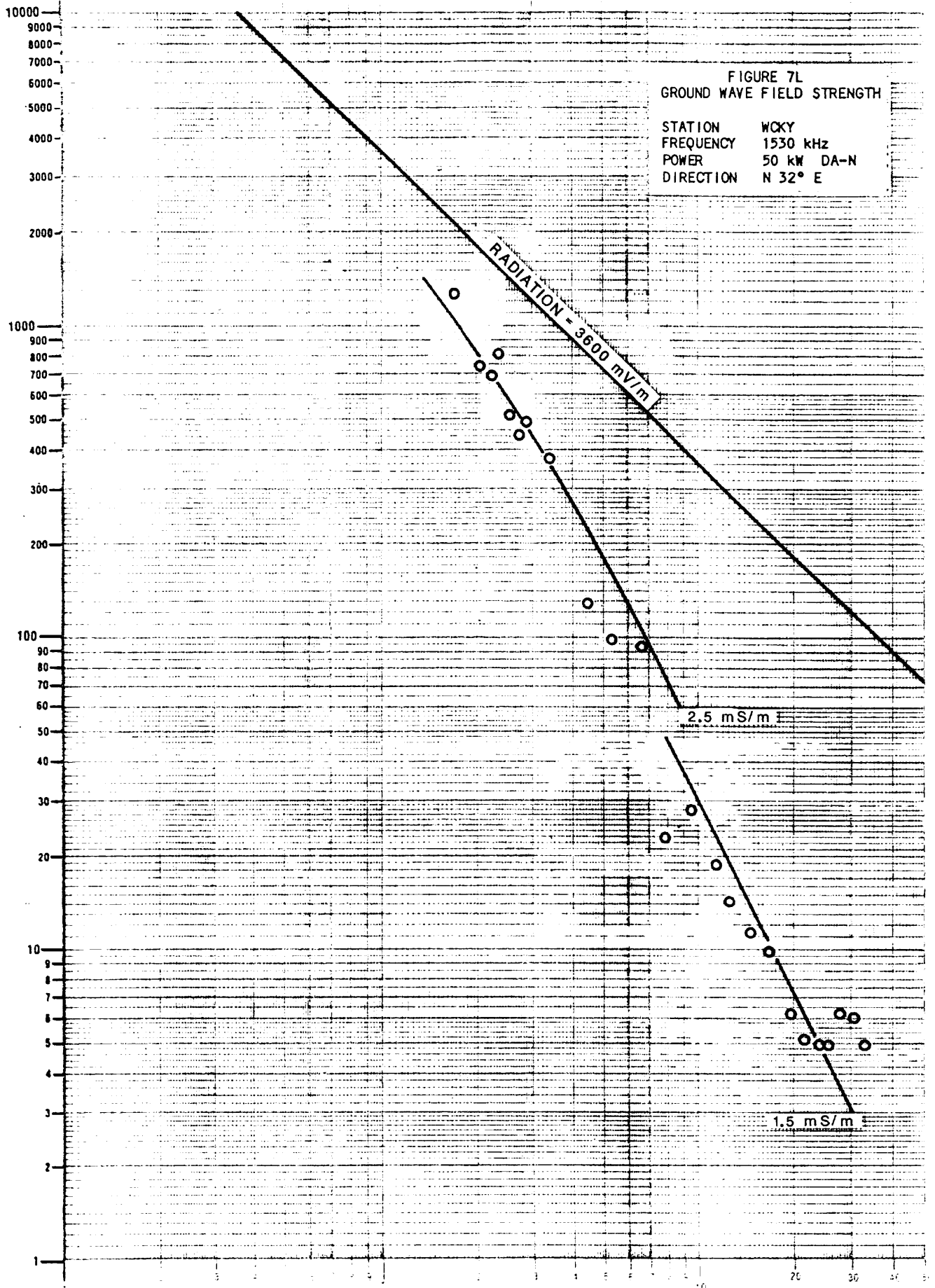
Graphs and plain paper should not be copied.  
Office copies introduce geometric distortions  
which will affect accuracy. Copies for sub-  
mission to the FCC and station files should  
only be made after all data have been plotted.

KILOMETERS FROM ANTENNA

FIGURE 7L  
GROUND WAVE FIELD STRENGTH

STATION WCKY  
FREQUENCY 1530 kHz  
POWER 50 kW DA-N  
DIRECTION N 32° E

MILLIVOLTS/METER



KILOMETERS FROM ANTENNA

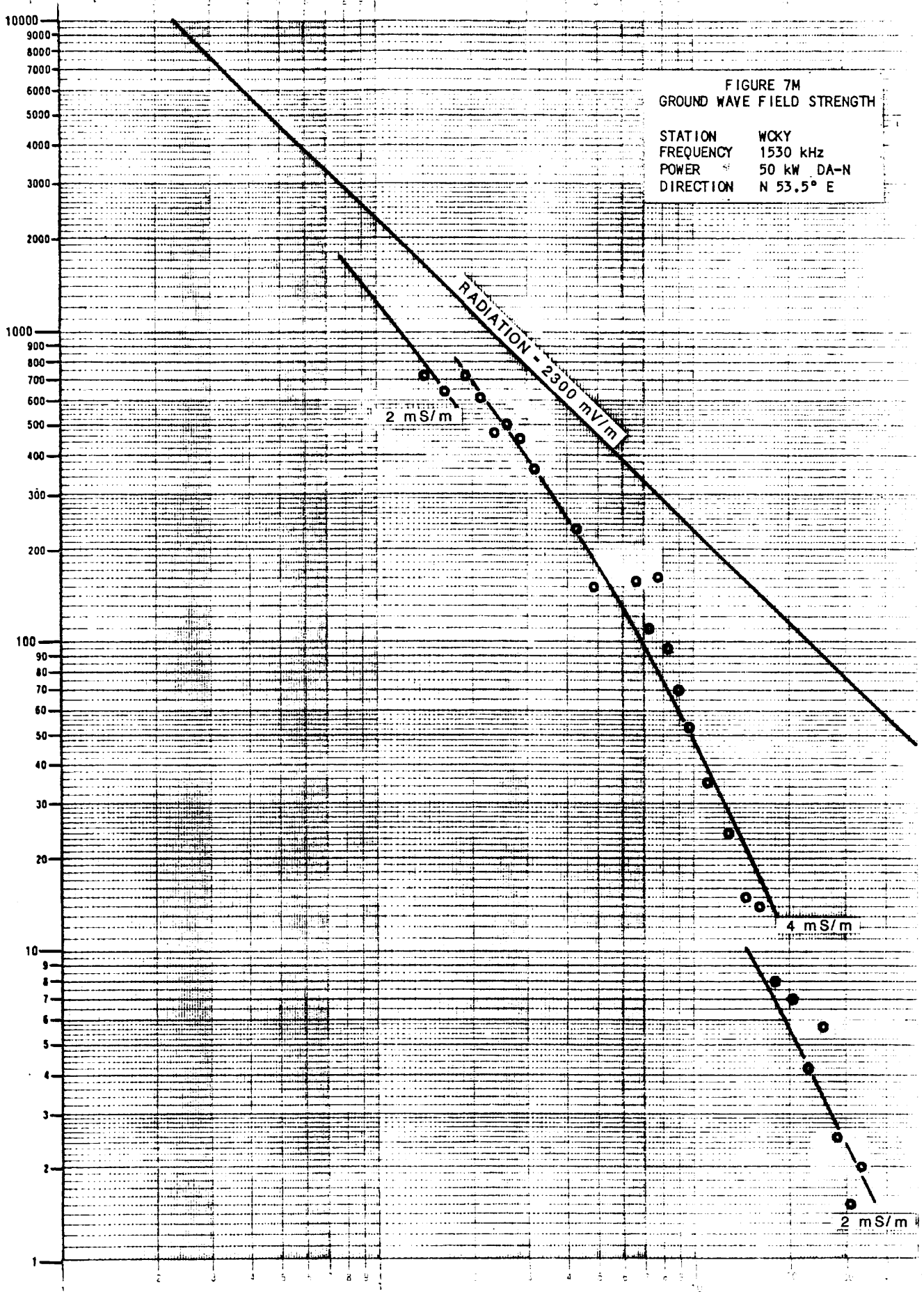
NOTE: The data points shown in this figure are based on the ground wave field strength measurements made at the WCKY station. The data points shown in this figure are not necessarily representative of the ground wave field strength in all areas covered by the ground wave field strength measurements.

# KILOMETERS FROM ANTENNA

FIGURE 7M  
GROUND WAVE FIELD STRENGTH

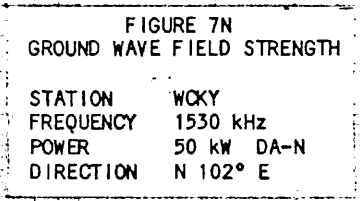
STATION WCKY  
FREQUENCY 1530 kHz  
POWER 50 kW DA-N  
DIRECTION N 53.5° E

MILLIVOLTS/METER



KILOMETERS FROM ANTENNA

## 10



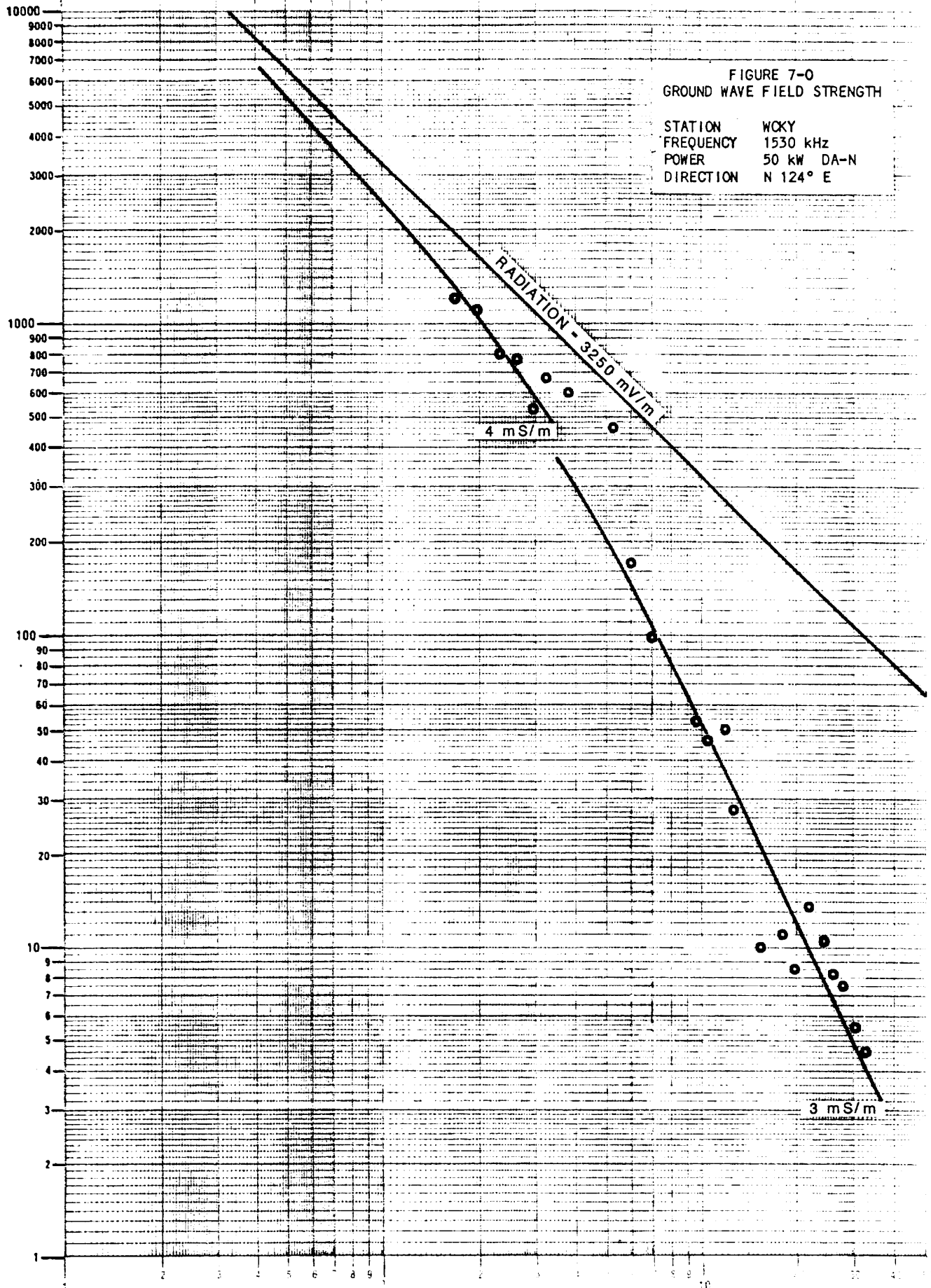
KILOMETERS FROM ANTENNA

KILOMETERS FROM ANTENNA

FIGURE 7-0  
GROUND WAVE FIELD STRENGTH

STATION WCKY  
FREQUENCY 1530 kHz  
POWER 50 kW DA-N  
DIRECTION N 124° E

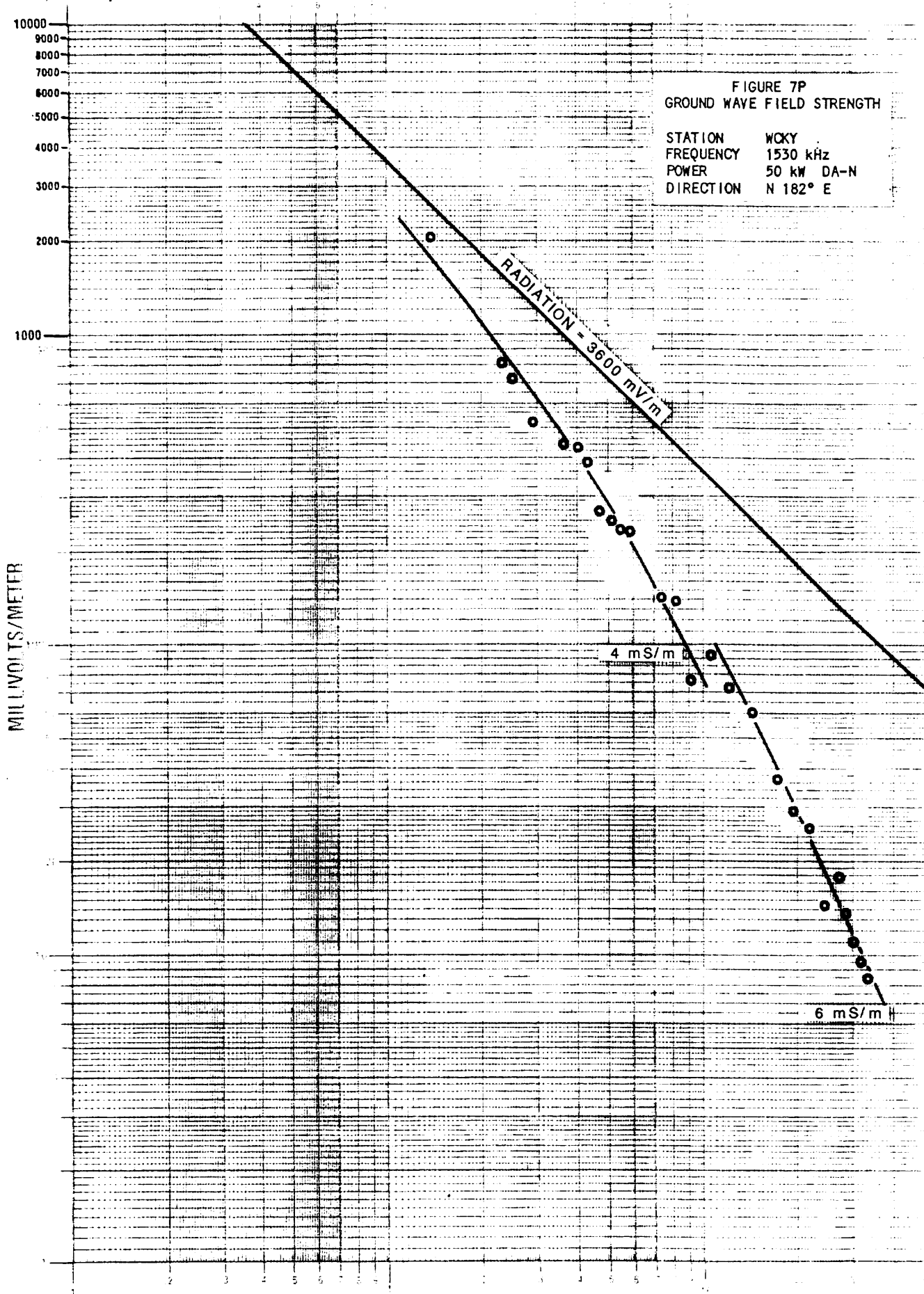
MILLIVOLTS/METER



KILOMETERS FROM ANTENNA

Graphs and graph paper should not be copied. Office copiers introduce geometric distortions which will affect accuracy. Copies for submission to the FCC and station files should only be made after all data have been plotted.

# KILOMETERS FROM ANTENNA



KILOMETERS FROM ANTENNA



KILOMETERS FROM ANTENNA

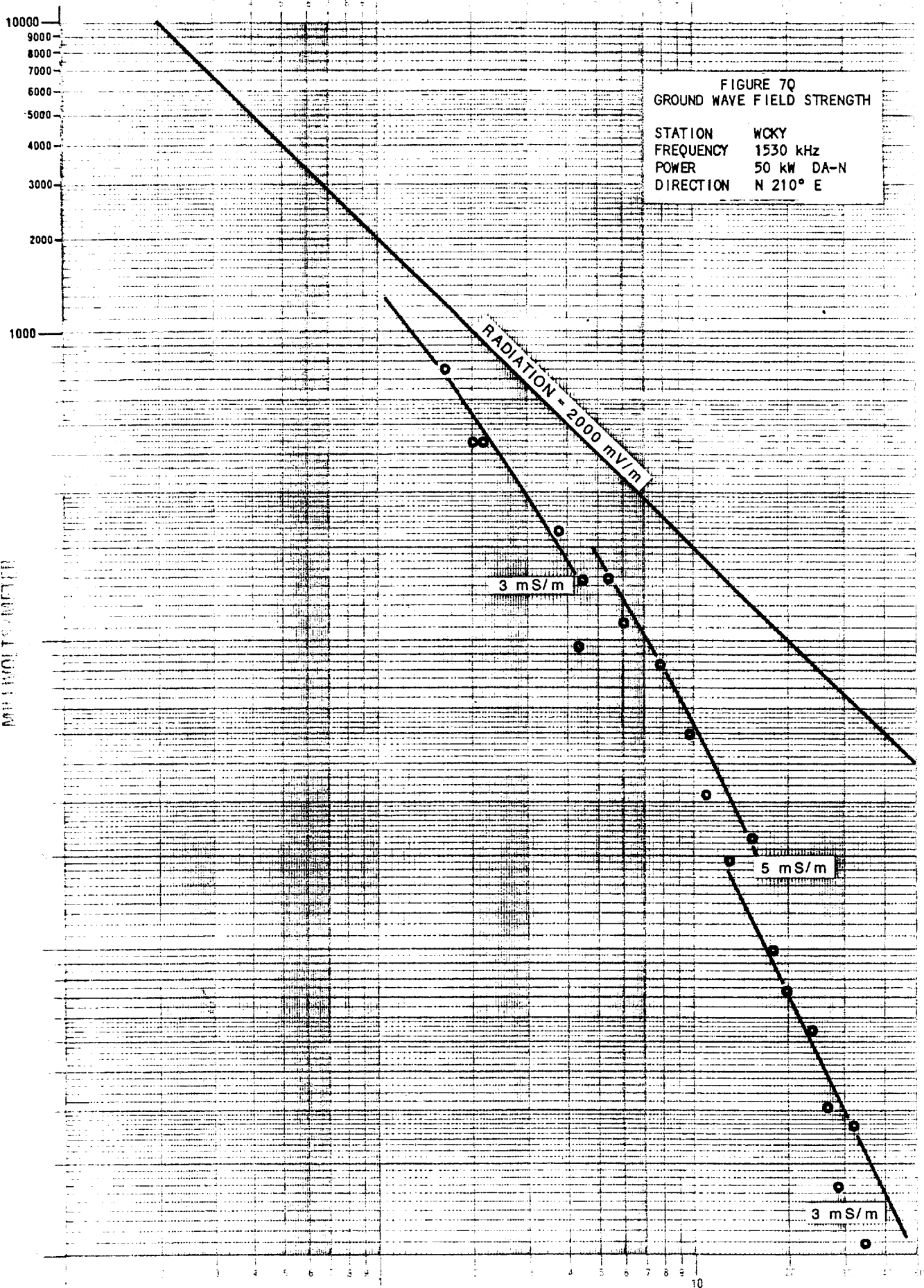


FIGURE 7Q  
GROUND WAVE FIELD STRENGTH

STATION WCKY  
FREQUENCY 1530 kHz  
POWER 50 kW DA-N  
DIRECTION N 210° E

KILOMETERS FROM ANTENNA

1. The ground wave field strength is plotted in millivolts per meter (mV/m) on the y-axis and in kilometers from the antenna on the x-axis. The radiation field strength is plotted in millivolts per meter (mV/m) on the y-axis and in kilometers from the antenna on the x-axis. The ground wave field strength is plotted in millivolts per meter (mV/m) on the y-axis and in kilometers from the antenna on the x-axis. The radiation field strength is plotted in millivolts per meter (mV/m) on the y-axis and in kilometers from the antenna on the x-axis.

KILOMETERS FROM ANTENNA

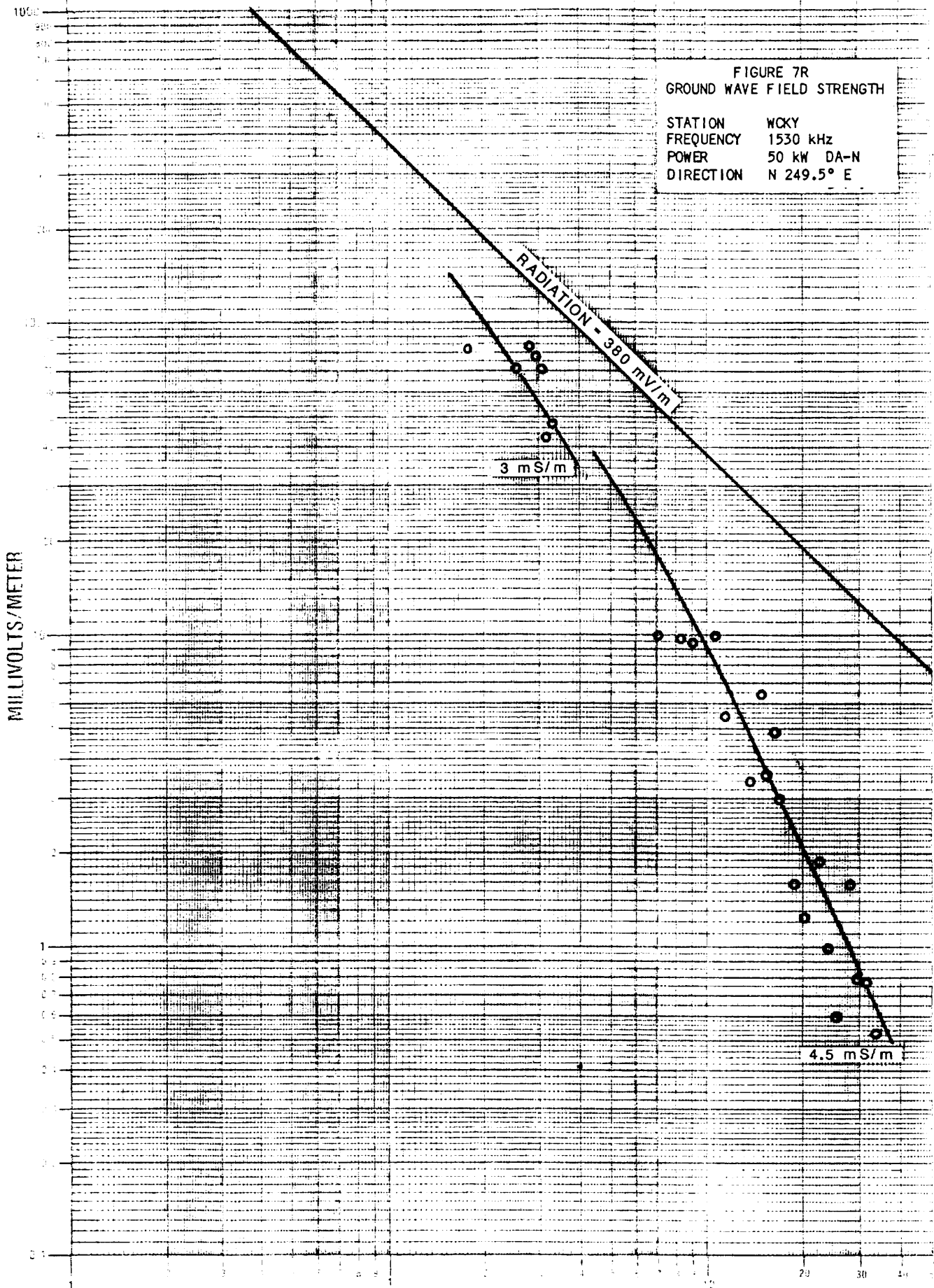


FIGURE 7R  
GROUND WAVE FIELD STRENGTH

STATION WCKY  
FREQUENCY 1530 kHz  
POWER 50 kW DA-N  
DIRECTION N 249.5° E

MILLIVOLTS/METER

KILOMETERS FROM ANTENNA

Graphs and data should be plotted on a log-log scale. If the data is plotted on a linear scale, the resulting curve will be distorted, which will affect accuracy. The curve should be plotted on the log-log scale and the data points should be plotted on the log-log scale.



KILOMETERS FROM ANTENNA

FIGURE 7S  
GROUND WAVE FIELD STRENGTH

STATION WCKY  
FREQUENCY 1530 kHz  
POWER 50 kW DA-N  
DIRECTION N 270.5° E

MILLIVOLTS/METER

RADIATION - 400 mV/m

3 mS/m

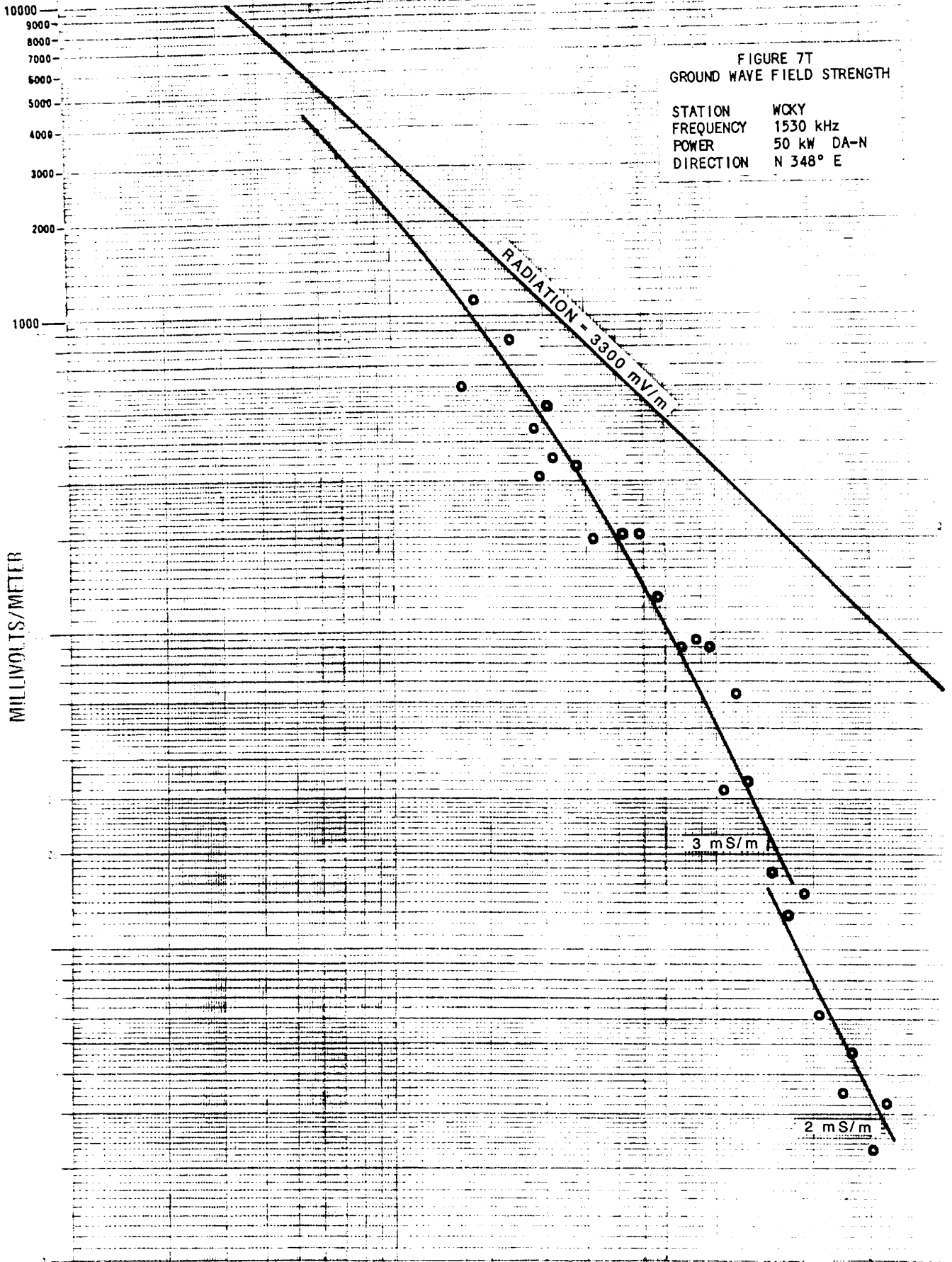
KILOMETERS FROM ANTENNA

Ground wave field strength is not to be confused with power level or antenna radiation pattern which will affect antenna coverage for each mission. Only the field strength should only be used for antenna coverage plotting.

KILOMETER FROM ANTENNA

FIGURE 7T  
GROUND WAVE FIELD STRENGTH

STATION WCKY  
FREQUENCY 1530 kHz  
POWER 50 kW DA-N  
DIRECTION N 348° E



KILOMETERS FROM ANTENNA

Graphs and charts showing the relationship between ground wave field strength and distance from the antenna. The graphs are plotted on a log-log scale. The y-axis is labeled 'MILLIVOLTS/METER' and the x-axis is labeled 'KILOMETERS FROM ANTENNA'. The graphs show a general downward trend, indicating that the field strength decreases as the distance from the antenna increases. The graphs are labeled with the station name 'WCKY', the frequency '1530 kHz', the power '50 kW DA-N', and the direction 'N 348° E'. The graphs are also labeled with the radiation field strength 'RADIATION = 3300 mV/m' and the ground wave field strength '3 mS/m' and '2 mS/m'.