

THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS
ACTION AGENDA SUMMARY

DEPT: Planning & Community Development *BK*

Urgent _____ Routine X

CEO Concurs with Recommendation YES _____ NO _____
(Information Attached)

BOARD AGENDA # 9:35 a.m.

AGENDA DATE: June 5, 2001

4/5 Vote Required YES _____ NO X

SUBJECT:

APPEAL BY JANIE MEILY OF PLANNING COMMISSION/STAFF APPROVAL OF SAA NO. 2000-09 FOR A 54 FOOT HIGH CELLULAR TOWER AT 5243 PARADISE ROAD - CONTINUED FROM MAY 8, 2001

PLANNING COMMISSION DECISION:

BASED ON A STAFF RECOMMENDATION, THE PLANNING COMMISSION DENIED THE APPEAL AT ITS MEETING OF APRIL 5, 2001. STAFF SUPPORTS THE COMMISSION DECISION AND RECOMMENDS THAT THE APPEAL BE DENIED WHICH WOULD ALLOW STAFF APPROVAL APPLICATION NO. 2000-09 TO BE GRANTED TO PACIFIC BELL WIRELESS.

THIS MATTER WAS HEARD BY THE BOARD OF SUPERVISORS ON MAY 8, 2001. THE BOARD CONTINUED THE HEARING TO JUNE TO ALLOW PACIFIC BELL TO TEST A NEW SITE FOR SUITABILITY FOR BEING A TOWER SITE. PACIFIC BELL WIRELESS WILL REPORT ON THOSE RESULTS AT THIS HEARING.

FISCAL IMPACT:

None.

BOARD ACTION AS FOLLOWS:

No. 2001-413

On motion of Supervisor Simon, Seconded by Supervisor Caruso

and approved by the following vote,

Ayes: Supervisors: Mayfield, Simon, Caruso, and Chair Paul

Noes: Supervisors: None

Excused or Absent: Supervisors: None

Abstaining: Supervisor: Blom

- 1) _____ Approved as recommended
- 2) _____ Denied
- 3) X Approved as amended

MOTION:

DENIED THE APPEAL BASED UPON THE STAFF REPORT AND THE TESTIMONY RECEIVED TODAY, AS WELL AS THE TESTIMONY RECEIVED AT THE PREVIOUS HEARING ON 5/8/01, THE BOARD SUPPORTED THE STAFF APPROVAL APPLICATION #2000-09 AND MADE THE FOLLOWING FINDINGS: 1) THAT THE PROPOSAL WILL NOT BE DETRIMENTAL TO PERSONS OR PROPERTY IN THE VICINITY; 2) IS CONSISTENT WITH ALL REQUIREMENTS FOR COMMUNICATIONS FACILITIES; 3) UNDER PROVISIONS OF THE 1996 TELECOMMUNICATIONS ACT, THERE IS NOT SUBSTANTIAL EVIDENCE, EITHER WRITTEN OR ORAL, TO DENY THE TOWER REQUEST AND THE APPEAL IS DENIED; AND, DIRECTED STAFF TO ISSUE STAFF APPROVAL #2000-09 WITH THE CONDITIONS OF APPROVAL THAT ARE SET FORTH

ATTEST: CHRISTINE FERRARO TALLMAN, Clerk

By: Christine Ferraro Deputy

File No.

SUBJECT: APPEAL BY JANIE MEILY OF PLANNING COMMISSION/STAFF APPROVAL OF SAA NO. 2000-09 FOR A 54 FOOT HIGH CELLULAR TOWER AT 5243 PARADISE ROAD - CONTINUED FROM MAY 8, 2001

PAGE 2

DISCUSSION: **BACKGROUND**

This item before you is an appeal filed by Janie Meily. She is appealing a staff decision, upheld by the Planning Commission on April 5, 2001, to issue Staff Approval #2000-09 to Pacific Bell Wireless to allow installation of a cellular tower. As such appeals are very rare, some background information seems appropriate.

Chapter 21.91 of the Stanislaus Ordinance Code was adopted in December of 1995 to address siting of various communication facilities that were then beginning to proliferate. Since the siting of communication facilities is generally a routine matter, the Planning Commission Advisory Committee worked to develop siting standards and a streamlined permitting process for communication facilities, including communication towers, antennas, microwave dish antennas and equipment shelters. The Chapter states that if communication facilities meet the siting standards, they may be approved via issuance of a Staff Approval. Provisions were made to provide notification to surrounding landowners for conforming communication facilities in the A-2 zoning district. Only proposed facilities which do not conform to the standards in Chapter 21.91 require use permits. The exact language of Chapter 21.91 is contained within the body of the attached Planning Commission staff report.

That report also contains other important information regarding the matter, and the issue which can be addressed in making your decision. The discussion under the heading "Federal Legislation" is particularly important as it explains that County decision makers may not regulate "...on the basis of the environmental effects of radio frequency emissions..." A great deal of the written evidence submitted in opposition to this proposed cellular tower was based on arguments related to emissions. However, this limitation was explained to the Commission and the audience at the April 5 hearing and all participants did a very good job of abiding by the federal limitations.

PROJECT DESCRIPTION

The original Staff Approval Application # 2000- 09 from Pacific Bell Wireless proposed to install a 108' tall monopole tower with six antennas, two microwave dishes and two equipment cabinets on a 2500 square foot area of a 46+ acre parcel located at 5243 Paradise Road, west of Modesto. The dishes and antennas would be mounted on the tower in the manner that is commonly seen on other facilities.

Pacific Bell chose the site after reviewing several other possible locations in the vicinity. A map showing many of those locations is attached. Referrals of the project were sent to all landowners within one quarter of a mile from the proposed site. Staff determined that the proposal did meet all required development standards and has recommended approval of the staff approval. However, area landowner Janie Meily has filed a formal appeal of our approval. A petition signed by residents of the general area who oppose the tower has also been received. Also submitted by the appellants is a package of information that has been attached to this report for your consideration.

SUBJECT: APPEAL BY JANIE MEILY OF PLANNING COMMISSION/STAFF APPROVAL OF SAA NO. 2000-09 FOR A 54 FOOT HIGH CELLULAR TOWER AT 5243 PARADISE ROAD - CONTINUED FROM MAY 8, 2001

PAGE 3

**DISCUSSION
CONTINUED:**

Following the filing of the appeal, Pacific Bell Wireless revisited its proposal. The company met with County officials to try to determine if there were other possible locations that could be considered. Other properties were discussed, but Pacific Bell Wireless has chosen to pursue the original location and to address the neighborhood issues directly.

A very important and significant modification has been made to the project. The height of the tower has been reduced from 108 feet to 54 feet. This certainly will reduce potential impacts to spraying activities and to aesthetics, both issues that were cited by opponents. The company has determined that needed coverage for cellular service can still be provided with the much lower tower. At 54 feet in height, the proposed tower would be basically the same height as utility poles found in the area.

On April 5, 2001, the Planning Commission held a public hearing on the appeal by Ms. Meily. Notices of the hearing had been mailed, as per County policy, to all landowners within a quarter mile of the project site. They were also sent to all crop dusters based in Stanislaus County.

At the hearing, Bob Kachel gave the staff report regarding the appeal. Deputy County Counsel, Vernon Seeley, explained to the Commission and the audience the pertinent provisions of the 1995 Federal Communication Act which regulates communication facilities such as the one being proposed.

Two representatives of Pacific Bell Wireless spoke in opposition to the appeal (in favor of issuance of the Staff Approval). Following that, a number of project area residents spoke in favor of granting the appeal. Much of the support for the appeal was based on aesthetic concerns about impacting view sheds and changes in the agricultural nature of the area. Rosemary Ott testified that similar towers elsewhere have adversely effected operation of her needed medical equipment.

Other testimony involved possible emissions but Pacific Bell had testified that the towers would operate with significantly lower levels of emissions than allowed by federal regulations. They also recognized that both safety and visual impact concerns had been lessened by the lowered tower height.

On a motion by Commissioner Wetherbee, seconded by Commissioner McWilliams, the Commission voted 8-0 to deny the appeal, and thus to allow issuance of Staff Approval 2000-09.

**POLICY
ISSUES:**

None.

**STAFFING
IMPACT:**

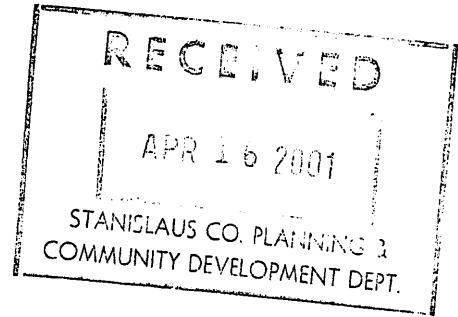
None.

ATTACHMENTS: Appeal Letter, Janie Meily, dated April 12, 2001
Planning Commission Staff Report, April 5, 2001
Planning Commission Minutes, April 5, 2001

T 10-2001
\$375.00
Rec. # 1679
B.M.

April 12, 2001

Stanislaus County Board of Supervisors
Tenth Street Plaza
1010 10th Street, Suite 6500
Modesto, California 95354



Board of Supervisors:

This is a request for the Board of Supervisors to appeal the Stanislaus County Department of Planning and Development Staff Approval of Application Number 2000-09-Pacific Bell Wireless-Ott Farms at 5243 Paradise Road for a monopole tower (54 foot), two microwaves dishes and two equipment cabinets for the following reasons:

1. The above mentioned area is strictly agricultural & agricultural related. This is a commercial entity & should not be allowed here.
2. This 54' tower poses a flight hazard to crop dusting planes and pilots working in this area who are necessities to the agricultural industry. And, unless the power supply source to these cabinets and tower is placed underground, additional power poles and power lines to the cabinets will be needed which, in turn, will add even greater hazards to crop dusters and effect their ability to properly spray the adjoining area and crops close to the tower and subsequent power poles and lines and will then effect farm income.
3. The disruptive effects of the electromagnetic frequencies from those microwave dishes on highly sensitive medically necessary electronic devices (ie. pace makers & insulin pumps) used by the members of the community as well those using Paradise Road on their daily travels.

There have been recently recognized potential health hazards from the microwaves from cell phones (ie. brain cell and DNA damage, sleep pattern disruptions, etc. per recent British studies, prompting warnings to minimize cell phone usage particularly by children) and the subsequent extensive tests and studies being conducted due to those findings cause us great concern. If there are potential health problems resulting from cell phone usage, what affects could result from the cumulative exposure of twenty-four hours a day, seven days a week? This is one of the greatest concerns throughout this community, particularly to those with young children.

4. The close proximity to an elementary school.
5. The esthetics of constructing a 54' tower & microwave dishes in this particular area. Those in this community cherish the panoramic view and this tower & subsequent

microwave dishes & equipment cabinets are no more than visual pollution and do not benefit the community sufficiently to warrant their construction. Due to the flight hazards to crop dusters and the created visual pollution to those surrounding property owners these towers, microwave dishes and equipment cabinets only serve to diminish property value.

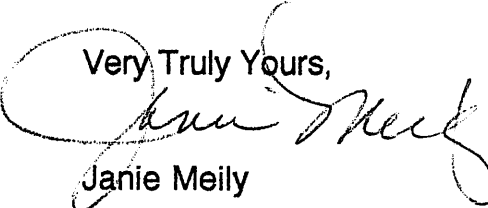
6. Section 21.91.040 states co-location is preferred to minimize the number of communication towers throughout the County. With the reduction in height from 108' to 54', co-location is impossible/improbable, insuring the construction of another tower either by this company to increase range of service or another telecommunications company. Why not locate this tower in an alternate site where a 108' tower would not pose such problems and which, in turn would serve to minimize the number of towers in this area? Pacific Bell has been notified of alternative sites in the community with willing land owners with adjacent power sources available. Why weren't those sites investigated? There are other sites in the vicinity better suited than this one.

7. Concerns re television & phone reception interruption/interference due to the microwave emanations.

8. A petition (original documents submitted to the Department of Planning & Community Development) signed by 78 members of this community objecting to this tower (108' at this time). If necessary, a petition listing objections to the reduced size of 54' would/could be obtained.

Cellular towers are not permitted in residential communities...why? Do they lower property values? My property value is of importance to me as are property values to my neighbors. Are there health concerns? The lives of my loved ones and neighbors and their children are just as important and valuable to me and to the other members of this community...as much so as to those who live in protected 'residential areas'. My neighbors and I enjoy our lives and standard of living and resent the fact that our chosen life style be threatened by outside influences and guided by selfish interests. This IS a community and those members of the community should have a say in determining what effects their homes, their friends, their families and their lives.

For the aforementioned reasons, I, as a resident of this community object to the construction of this tower, microwave dishes and equipment cabinets at this site.

Very Truly Yours,

Janie Meily

I know the Board of Supervisors meets on Tuesdays and I hope this does not present

a scheduling problem for the agenda but, due to prior commitments, I will be unavailable until May 29th. I hope these date restrictions can be taken into consideration in the placement of this matter on the agenda.

Appeal of
Pac Bell
Staff Approval

PLANNING
DEPT.

04/16/01 1:58PM
000EW1679

PLA PMTS \$315.00
BOARD \$60.00

ITENS 20
CHECK \$375.00

STANISLAUS COUNTY PLANNING COMMISSION

April 5, 2001

STAFF REPORT

APPEAL OF STAFF APPROVAL APPLICATION 2000- 09 / PACIFIC BELL WIRELESS
JANIE MEILY

REQUEST: APPEAL OF A STAFF DETERMINATION TO APPROVE A STAFF APPROVAL TO ALLOW CONSTRUCTION OF A 54 FOOT HIGH MONOPOLE TOWER AND RELATED GROUND FACILITIES.

APPLICATION INFORMATION

Owner:	Ott Farms
Applicant:	Pacific Bell Wireless
Agent:	None
Location:	5243 Paradise Rd., between Hart Road and Stone Road, west of Modesto
Section, Township, Range:	4-4-8
Supervisory District:	District Three (Supervisor Blom)
Assessor's Parcel:	017-06-10
Referrals:	See Exhibit "C "
Area of Parcels:	46 + acres
Water Supply:	N/A
Sewage Disposal:	N/A
Existing Zoning:	A-2-40
General Plan Designation:	Agriculture
Community Plan Designation:	N/A
Environmental Review:	Categorical Exemption (Class 3)
Present Land Use:	Farming, row crops
Surrounding Land Use:	Orchards, row crops, and scattered residences.

BACKGROUND

This item before you is an appeal filed by Janie Meily. She is appealing a staff decision to issue Staff Approval # 2000-09 to Pacific Bell Wireless to allow installation of a cellular tower. As such appeals are very rare, some background information seems appropriate.

Chapter 21.91 of the Stanislaus Ordinance Code was adopted in December of 1995 to address siting of various communication facilities that were then beginning to proliferate. Since the siting of communication facilities is generally a routine matter, the Planning Commission

Advisory Committee worked to develop siting standards and a streamlined permitting process for communication facilities, including communication towers, antennas, microwave dish antennas and equipment shelters. The Chapter states that if communication facilities meet the siting standards, they may be approved via issuance of a Staff Approval. Provisions were made to provide notification to surrounding landowners for conforming communication facilities in the A-2 zoning district. Only proposed facilities which do not conform to the standards in Chapter 21.91 require use permits.

Following is the complete text of the chapter of the County ordinance code which applies to communications facilities:

21.91.010 Applicability.

The regulations set forth in this chapter shall apply to the location in all zoning districts of all communication facilities, including communication towers, antennas, microwave dish antennas, and equipment shelters, except the following:

- A. Conventional television antennas, amateur radio antennas and similar types of communication equipment for personal, non-commercial use, and that are not over 60 feet above ground level, are not subject to the requirements of this chapter.
- B. Commercial communication facilities in industrial or commercial zoning districts that are not over 75 feet above ground level are not subject to the requirements of this chapter.
- C. Microwave dish antennas for personal, non-commercial use, and commercial microwave dish antennas less than three feet in diameter that receive signals only are not subject to the requirements of this chapter. (Commercial microwave dish antennas that are greater than three feet in diameter or that send signals are subject to the requirements of this chapter.) (Ord. CS 600 1(part), 1995).

21.91.020 Appropriate authority.

Communication facilities, including communication towers, antennas, microwave dish antennas, and equipment shelters, may be permitted in any zoning district subject to approval of a use permit or staff approval permit by the appropriate authority as follows:

- A. Planning Director--Any communication facilities that meet the siting standards of this chapter are subject to a staff approval permit, pursuant to Chapter 21.100. Prior to action by the Planning Director on communication facilities in the A-2 (General Agriculture) district, surrounding property owners and appropriate agencies shall be notified as provided in Section 21.96.040(A).
- B. Planning Commission--Any communication facilities, including ancillary equipment buildings, that do not meet the siting standards of this chapter are subject to issuance

of a use permit by the Planning Commission, pursuant to Chapter 21.96. (Ord. CS 600 § 1(part), 1995).

21.91.030 Siting standards.

A. General standards

The following standards apply to all communication towers, antennas, microwave dish antennas, and equipment shelters:

1. The facility shall be located in any area other than a residential district or historical site (H-S) district or an area designated Residential on the General Plan map.
2. The facility shall meet all yard requirements for structures in the particular zoning district in which it is located.
3. The communication facilities shall not significantly displace or impair agricultural operations, including crop dusting, on the subject parcel or surrounding parcels.
4. Identification signs, including emergency phone numbers of the service provider, shall be posted at all tower and equipment sites.
5. All unused or obsolete towers and equipment shall be removed from their respective sites within six months after their operation has ceased, at the landowner's expense.

B. Siting standards for communication towers

1. The tower shall be a monopole design unless the Planning Director determines that it would not be visible to the general public, in which case a lattice tower design may be approved.
2. The height of the tower shall not exceed 130 feet above ground level.
3. The tower shall be located a distance equal to at least twice the height of the tower from residential structures on adjoining properties.

C. Siting standards for antennas, including microwave dish antennas

1. Antennas may be mounted on communication towers, water towers, billboards, building facades, or other structures if they are screened or mounted in an aesthetically acceptable manner. Both the antenna and any screening structure are subject to all applicable building code requirements including building structure and wind load integrity.

2. The overall height of the antenna, including mounting hardware or base, shall not exceed ten feet above the height of the building or structure on which it is mounted, or the height of the building plus the horizontal distance from the antenna to the edge of the roof, whichever is greater.
3. Equipment shelters shall be a maximum of 600 square feet in size. (Ord. CS 600 1(part), 1995).

21.91.040 Co-location preferred.

To minimize the number of communication towers throughout the County, service providers shall employ all reasonable measures to co-locate their antenna equipment on existing towers prior to applying for approval of new towers. All County agencies and service providers shall be encouraged to permit co-location of microwave dishes and cellular facilities on appropriate existing structures subject to reasonable engineering requirements. (Ord. CS 600 § 1(part), 1995).

21.91.050 Aesthetic considerations.

Decisions on use permits or staff approval permits may take into consideration the aesthetic impact of the proposed microwave dish antennas and/or communications facilities and may include conditions of approval for the purpose of reducing the visual impact of the antenna and/or facility as seen from adjacent properties or for the purpose of reducing the potential of safety or health hazards. Such conditions may include, but are not limited to partitions, screening, landscaping, mountings, fencing, height of antenna, and site location within the parcel. (Ord. CS 600 § 1(part), 1995).

21.91.060 Other requirements.

In addition to the requirements listed herein, cellular communication facilities are subject to all other applicable regulations and permits, including those of the Public Utilities Commission (PUC) of the State of California and the Federal Communication Commission (FCC). (Ord. CS 600 § 1(part), 1995).

Since January of 2000, the Planning Department has processed a total of thirteen (13) requests for approvals under this ordinance section. These have included both new towers, and addition of facilities, including co-locations, to existing sites. All were submitted as Staff Approval applications. Of those, twelve were approved as submitted. One new tower proposal ended up being moved from the original site. In that instance, the tower was to be approximately one half mile and in direct line of a crop dusting airport runway. Based on input from the duster, a new site nearby was found and the tower installed there instead of the first site.

PROJECT DESCRIPTION

The original Staff Approval Application # 2000- 09 from Pacific Bell Wireless proposed to install a 108' tall monopole tower with six antennas, two microwave dishes and two equipment cabinets on a 2500 square foot area of a 46+ acre parcel located at 5243 Paradise Road, west of Modesto. The dishes and antennas would be mounted on the tower in the manner that is commonly seen on other facilities.

Pacific Bell chose the site after reviewing several other possible locations in the vicinity. A map showing many of those locations is attached. Referrals of the project were sent to all landowners within one quarter of a mile from the proposed site. Staff determined that the proposal did meet all required development standards and has recommended approval of the staff approval. However, area landowner Janie Meily has filed a formal appeal of our approval. A petition signed by residents of the general area who oppose the tower has also been received. Also submitted by the appellants is a package of information that has been attached to this report for your consideration.

Following the filing of the appeal, Pacific Bell Wireless revisited its proposal. The company met with County officials to try to determine if there were other possible locations that could be considered. Other properties were discussed, but Pacific Bell Wireless has chosen to pursue the original location and to address the neighborhood issues directly.

A very important and significant modification has been made to the project. The height of the tower has been reduced from 108 feet to 54 feet. This certainly will reduce potential impacts to spraying activities and to aesthetics, both issues that were cited by opponents. The company has determined that needed coverage for cellular service can still be provided with the much lower tower. At 54 feet in height, the proposed tower would be basically the same as utility poles found in the area.

21.100.030 ISSUANCE OR DENIAL

- A. In order to obtain a staff approval permit, the applicant must introduce evidence in support of his application sufficient to enable the Planning Director to find that the establishment, maintenance and operation of the proposed use or building applied for is consistent with the general plan and will not, under the circumstances of the particular case, be detrimental to the health, safety and general welfare of persons residing or working in the neighborhood of the use and that it will not be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the county.

As indicated above, the County, based on input from the Planning Commission Advisory Committee has found in adopting Chapter 21.91 that communication facilities which are consistent with the siting standards will not have adverse impacts. Most are installed routinely with staff approvals only. From our perspective, there is nothing about this particular tower,

especially at its now reduced height, that indicates that it will be substantially detrimental in any way.

Visually it will be of a height commonly found for poles and trees in the area. The reduced height should also lessen any potential impacts to agricultural spraying operations. Should the Commission so desire, you may wish to consider moving the tower to a site adjacent to the palm trees on the Ott Farms property. This would also help to even further reduce visual and spraying related concerns by clustering it with the already taller trees.

FEDERAL LEGISLATION

The field of review and approval of cellular communications towers is one which has, to a certain extent, been pre-empted by federal regulation. Specifically, the 1996 Telecommunications Act establishes criteria regarding what local agencies can and cannot look at in dealing with such facilities as we have in this instance. In fact, the Stanislaus County ordinance language is itself based on the provisions of the federal law. We have attached to this report a copy of the 1996 language, interpretive notes and decisions, and the remainder of the law. This information (Exhibit E) is provided by the Office of the County Counsel. Mr Vernon Seeley of that office will be prepared to discuss this with you prior to opening the public hearing on the matter.

Of particular note is Section 332(c)(7) which defines limitations on local agencies. Among them are that the county cannot unreasonably discriminate among service providers and shall not prohibit or have the effect of prohibiting provision of personal wireless services. Pacific Bell has indicated, and staff's real world experience confirms that this area proposed for service is one where there presently is a gap in cell phone reception.

Any decision to deny a request to build facilities "...shall be in writing and supported by substantial evidence in a written record." This topic is very important and is discussed in some of the cases cited in the attachment. In this case, much of the written evidence is directed to the 108' tall tower. Although that tower did conform to all county standards for towers, the now reduced height will serve to further reduce impacts.

One type of potential impact cannot be considered at all in making your decision. As long as the facility conforms to Federal Communications Commission emissions, which it, by law must do, the local government may not regulate "...on the basis of the environmental effects of radio frequency emissions..." As you will see, much of the written material submitted by project appellants addressing this very emissions issue. With all due respect to concerns in this regard, the law is clear that potential effects of radiation cannot enter into the decision making process. In other words, our hands are tied when it comes to considering the effects of emissions in reaching your decision on this appeal. Federal lawmakers were quite specific in this regard, as this legislation was designed to facilitate placement of communications facilities. Only additional legislation could change the situation at this time.

Staff Report
SAA2000-09
April 5, 2001
Page 7

RECOMMENDATION

As discussed, staff is supportive of issuing the staff approval for this project. We recommend that you find the proposal will not be detrimental to persons or property in the vicinity, and is consistent with all requirements for communications facilities. You should also find that, under provisions of the 1996 Telecommunications Act there is not substantial written evidence to deny the tower request.

The appeal should, therefore, be denied. This would allow staff to issue Staff Approval #2000-09.

Report written by: Bob Kachel, Senior Planner, March 21, 2001

Attachments: Exhibit A - Maps
Exhibit B - SAA 2000-09 Conditions of Approval
Exhibit C - Appeal Letter and Opponent's information
Exhibit D - Communication Towers Special Report
Exhibit E - 1996 Telecommunications Act Information

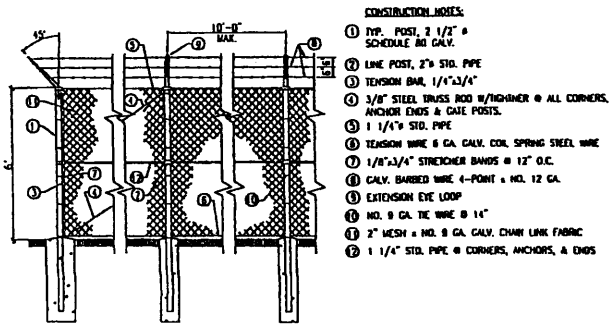
I:\STAFFRPT\saa2000-09.pac bell.wpd

NOTE: Approval of this application is valid only if the following conditions are met. This permit shall expire unless activated within 18 months of the date of approval. In order to activate the permit, it must be signed by the applicant and one of the following actions must occur: (a) a valid building permit must be obtained to construct the necessary structures and appurtenances; or, (b) the property must be used for the purpose for which the permit is granted. (Stanislaus County Ordinance 21.104.030)

CONDITIONS OF APPROVAL

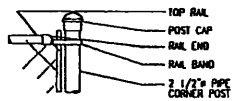
Department of Planning and Community Development

1. This use shall be conducted in accordance with plans approved by the Department of Planning and Community Development and in accordance with applicable laws and ordinances.
2. That a Building Permit shall be obtained from the Department of Building Inspections. (UBC Section 307)
3. The applicant is required to defend, indemnify, or hold harmless the County, it's officers and employees from any claim, action, or proceedings against the County to set aside the approval of the project which is brought within the applicable Statute of limitations. The County shall promptly notify the applicant of any claim, action, or proceeding to set aside the approval and shall cooperate fully in the defense.
4. That this facility shall be made available to other service providers for co-location purposes.
5. That if the facility is no longer used for transmission purposes, the tower and all equipment shall be removed within six months of the cessation of operations.



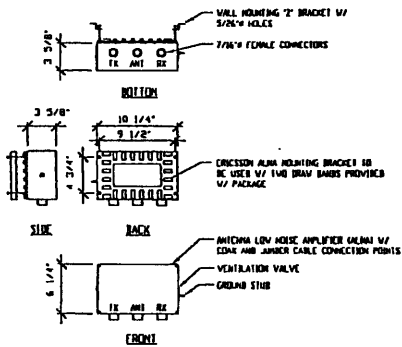
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SCALE: NTS



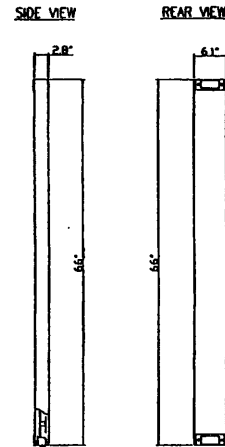
FENCE POST CAP DETAIL AS REQ.

SCALE: NTS



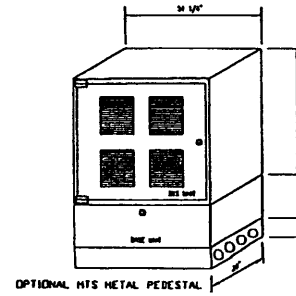
ERICSSON NARROW BAND ALNA MOUNTING BRACKET

SCALE: N.T.S.



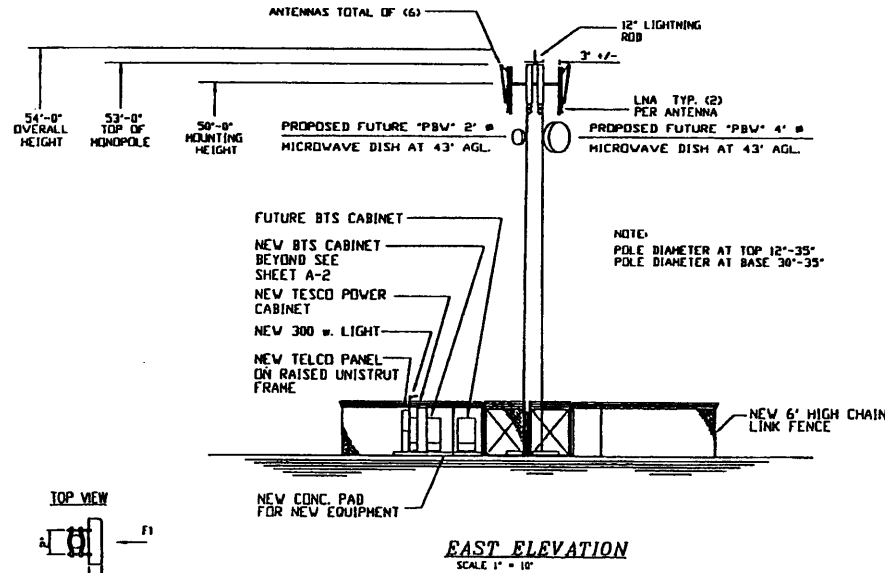
PCS PANEL ANTENNA

SCALE: NTS



BTS COMMUNICATIONS BOX

SCALE: NTS



CONCRETE PAD SPECS.	
CONC. MIX DESIGNS SHALL CONFORM TO UBC SECTION 2604	
PORTLAND CEMENT SHALL BE TYPE II AND CONFORM TO ASTM C150	
CONC. SHALL HAVE A MIN. 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI	
#4 REBAR AT 12" OC. REINFORCEMENT FOR SLAB ON GRADE SHALL CONFORM TO GEOTECH. REPORT VERIFY	

SITE ADDRESS:
5243 Paradise Rd.
Modesto, CA 95358

PACIFIC BELL
Wireless
3851 NORTH FREEWAY BOULEVARD
SACRAMENTO, CALIFORNIA 95834

This drawing contains information which is the proprietary property of BELLCO. Its unauthorized reuse or duplication, in any form or by any information contained herein, without the express written consent.

J. lee buckingham
architect
13620 Lincoln Way, Suite 200
Oakburn California 95603
19164 000-0720 © 1987

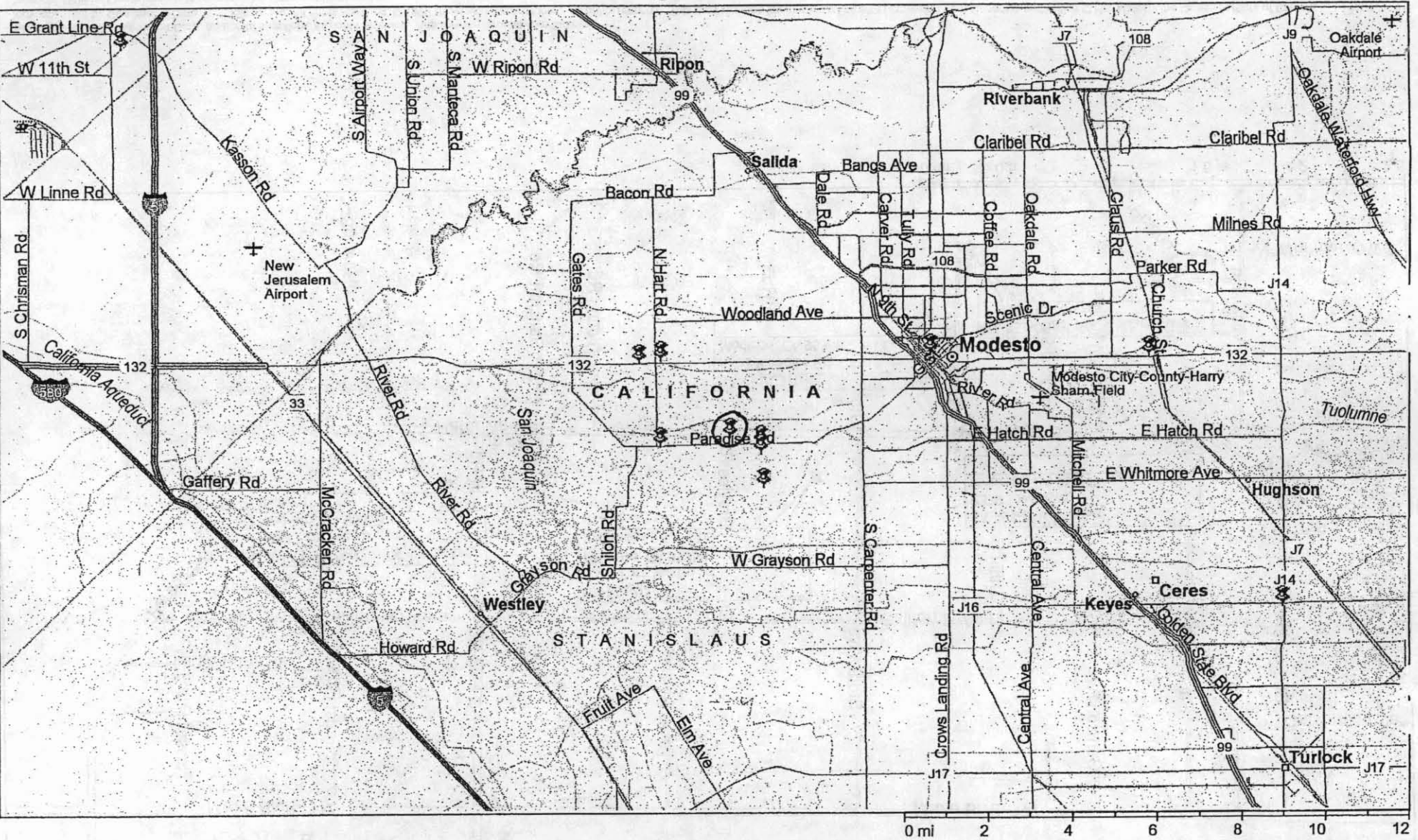
NO.	REVISION/DESCRIPTION	DATE
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2	100Z Zoning Doc's.	4-17-88
3	98Z CONSTRUCTION DOC'S.	5-18-88
4	100Z CONSTRUCTION DOC'S.	5-22-88
5	RAB CENTER CHANGE	1-8-89
6	ZONING REVISIONS	1-18-89

PROJECT:
PARADISE & STONE RD.

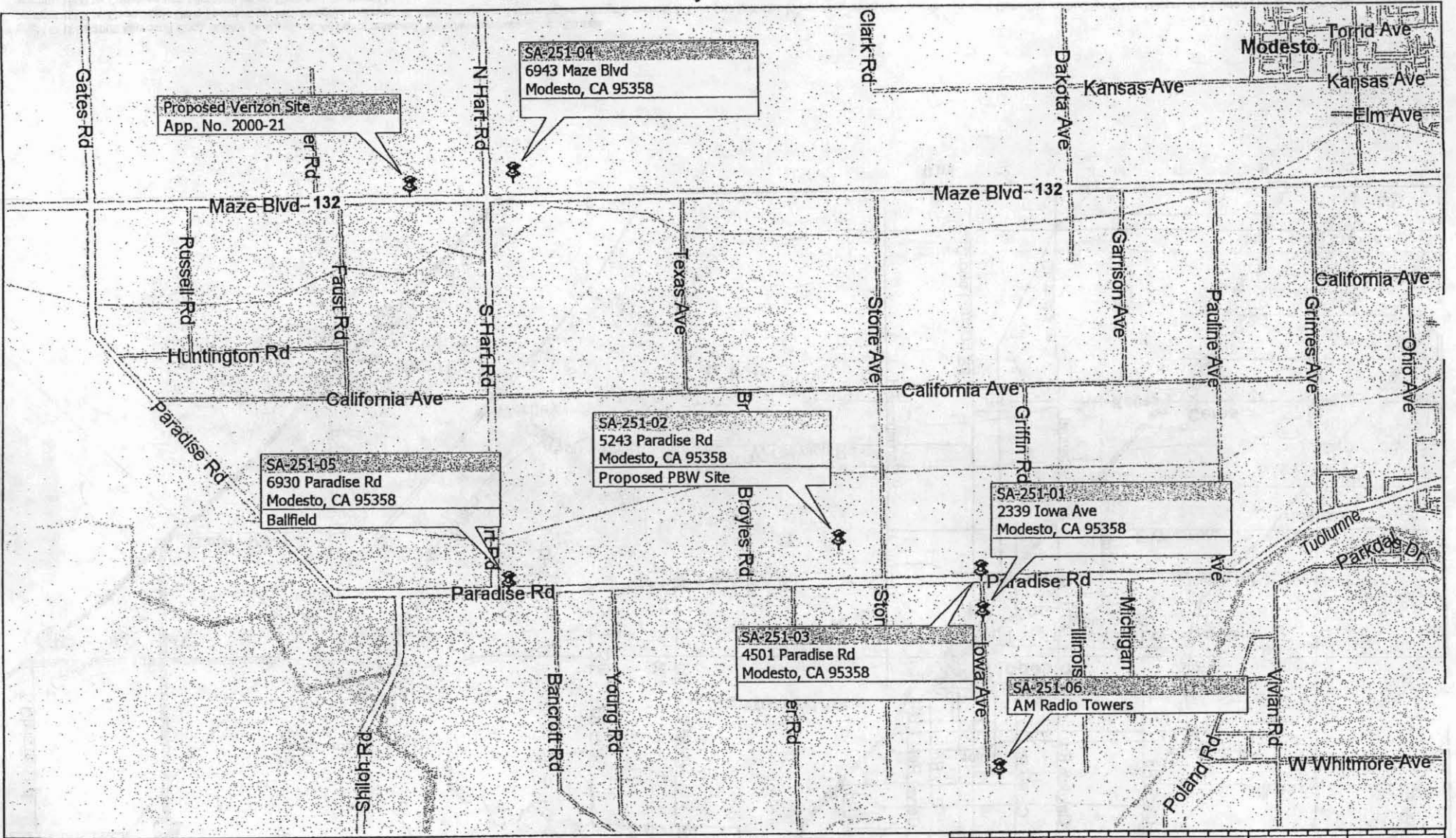
DRAWING TITLE:
Ext. Elevation / Details

SCALE	DRAWN BY	PROJECT NO.
	JHR	SA-251-82
	CHECKED BY	CARD FILE NO.
	SCALE	DRAWING NO.
	AS NOTED	A-2
	DATE	
	3-28-88	
	PRINTED	SHEET OF

Regional Map



Sites Reviewed by Pacific Bell Wireless



Proposed Verizon Site
App. No. 2000-21

SA-251-04
6943 Maze Blvd
Modesto, CA 95358

SA-251-05
6930 Paradise Rd
Modesto, CA 95358
Ballfield

SA-251-02
5243 Paradise Rd
Modesto, CA 95358
Proposed PBW Site

SA-251-01
2339 Iowa Ave
Modesto, CA 95358

SA-251-03
4501 Paradise Rd
Modesto, CA 95358

SA-251-06
AM Radio Towers

0 mi 0.5 1 1.5 2 2.5



017-06-10



Assessor Parcel Number: 017-0-10

Ott Farms 5243 Paradise

559 0 559 1118 Feet



June 25, 2000

Stanislaus Planning Commission
Department of Planning & Community Development
Tenth Street Plaza
1010 10th Street, Suite 3400
Modesto, California 95354

Re: Appeal of Staff Approval of Application No. 2000-09-Pacific Bell Wireless-Ott Farms to locate a 108 foot high monopole tower and two microwave dishes and two equipment cabinets on a portion of a 46 acre parcel located at 5243 Paradise Road, southwest of Modesto.

Dear Commissioners:

I am submitting this letter of appeal on behalf of myself and the undersigned residents of the community (see Attachment A) surrounding the proposed site described above to urge you to revoke the Staff Approval of Application No. 2000-09.

This area is solely zoned agricultural, A-2-40. The proposed tower, microwave dishes & equipment cabinets are not agriculturally related and are of a commercial nature.

The tower violates General Standards A-2 in that the tower poses a safety hazard to crop dusting planes and pilots working within the area. See Attachment B.

After making inquiries at two local electronic firms, a specific problem to be anticipated from the microwave dishes and subsequent dishes (21.91.040 Co-Location Preferred) would be electronic interference for neighboring homes (ie television and cordless telephone reception). There is also the question as to the affect the electromagnetic frequencies from those microwave dishes on highly sensitive medically necessary electronic devices (ie pace makers & insulin pumps) used by the members of the community.

Visual pollution has been one of the main concerns of those signers

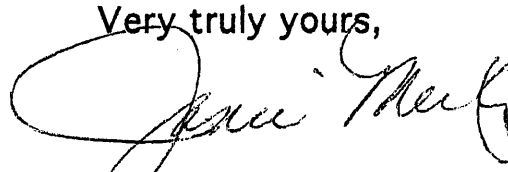
(Attachment A), especially with knowledge that even more dishes & communication devices could be added in the future. The panoramic view in this agricultural area is one of the most desirable advantages of living in this community. More & more communities are contesting the construction of these towers due to their unsightliness. See Attachment C.

There has been some question lately as to the safety of cell phones, prompting new studies to be funded by the Cell Phone Industry & overseen by the FCC (See Attachment D). If there is a question of safety about using cell phones, what about the safety of the radiation emitted from the microwave dishes? We of this community would rather err on the side of safety and not have the tower & microwave dishes in this area, especially in such close proximity to an elementary school.

The proposed tower, microwaves dishes and equipment cabinets are to be located adjacent to my property and I fear a severe impact from the problems noted above as well as a possibly adverse affect on my property value.

We, the undersigned members of the community, urge the Planning Commission to revoke Application No. 2000-09.

Very truly yours,



Janie Meily

June 11, 2000

Modesto, California
95358

TO: Bob Kachel, Senior Planner
Dept. of Planning & Community Development
1010 10th St., Suite 3400
Modesto, CA 95354
Phone: (209) 525-6330
Fax: (209) 525-5911

RE: Staff Approval Application No. 2000-29- Pacific Bell Wireless-Ott
Farms

We, the undersigned, are residents of the community surrounding the proposed tower/microwave dish site on 5243 Paradise Road. We object to and oppose the approval of the said tower & microwave dishes for the following reasons:

1. The above mentioned area is strictly agricultural & agricultural related. This is a commercial entity & should not be allowed here.
2. This 108' tower poses a flight hazard to crop dusting planes/pilots working in this area.
3. In lieu of the concerns of the recently realized potential health hazards from the microwaves & cell phones (ie brain cell damage), prompting warnings to minimize cell phone usage (especially by children) and the resulting subsequent extensive tests and studies to be conducted as to those hazards.
4. The close proximity to an elementary school.
5. The esthetics of constructing a 108' tower & microwave dishes in this

area.

For the afore mentioned reasons, we, the residents of this community object to the construction of this tower & the microwave dishes.

Due to the fact that the petitions contain personal addresses, they are not being placed on the internet, but are available from the Clerk.

VALLEY CROP DUSTER'S, INC.

POST OFFICE BOX 208
WESTLEY, CALIFORNIA 95387
(209) 894-3611
June 16, 2000

Stanislaus County
Dept. of Planning and
Community Development
1010 Tenth Street
Modesto, CA. 95354

ATTN: Bob Kachel, Senior Planner

RE: Application No. 2000-09

Dear Mr. Kachel:

We have just been notified of the proposed Pacific Bell Communications tower to be located at 5243 Paradise Road, Modesto.

Our concerns for the proposed location involve the safety of our pilots. Much of our aerial applications are in the west Modesto area directly near the tower site. The tower would propose a hazard to pilots and aircraft due to the fact that our usual working altitude is three feet above the crop.

Please consider our serious concerns.

Thank you,

Sincerely,

Leo Yoppini
Leo Yoppini, President
VALLEY CROP DUSTERS, INC.

Atwood Flying Service
207 Villa Manucha Rd.
Newman, California 95360

Bob Kachel
1010 10th Street, Suite 3400
Modesto, California 95354

ATTN: Bob Kachel, Senior Planner

Dear Mr. Kachel,

I am writing this letter in regards to the Pacific Bell Communications tower at 5243 Paradise Road. I am against it.

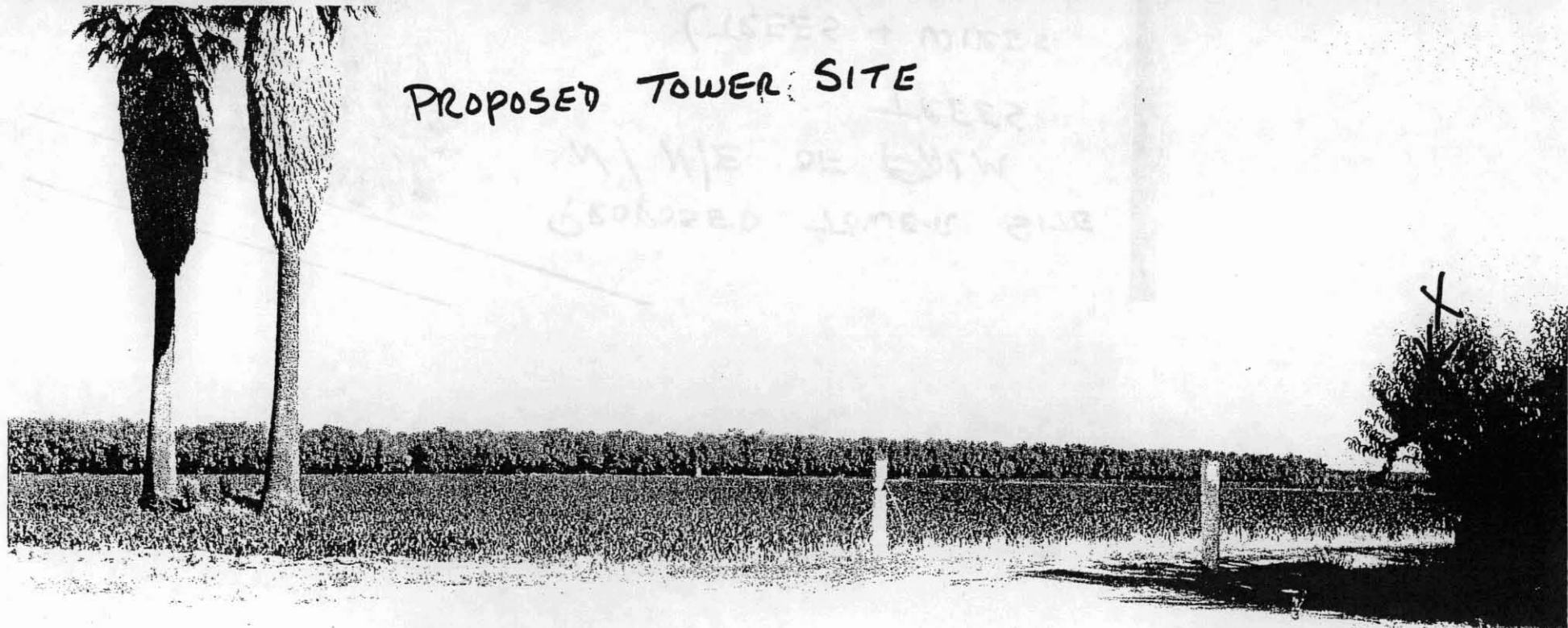
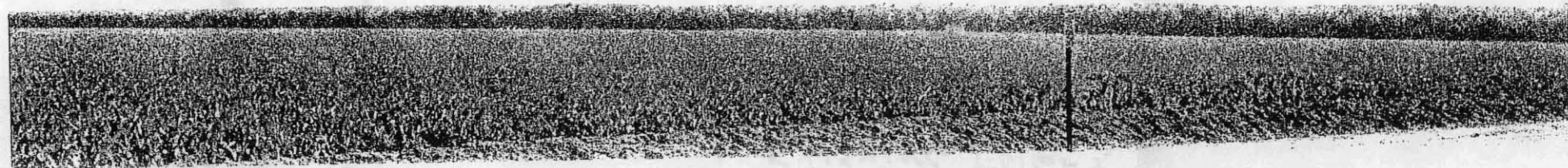
Being involved in the crop ducting industry, I must say that we do not need anymore obstacles to avoid. The tower would propose a hazard to pilots, like myself, who are working in the area.

Also, The Agriculture Community has been impacted by Urban Sprawl. My point is that this is FARM COUNTRY! This area is also zoned for Ag!

Sincerely,
David E Stein

David E. Stein
Crop Duster

TREES ON WEST SIDE OF 5243 PARADISE RD. (USE OF CROP DUSTER)



PROPOSED TOWER SITE
N/N/E OF PALM
TREES

(TREES + WIRES
EXISTING FLIGHT
HAZARDS)

J. Madeleine Nash

Not in My Front Yard!

Ugly towers are sprouting like toadstools in suburbia

IMAGINE WAKING UP ONE MORNING AND DISCOVERING AN UNGAINLY METAL tower, 150 ft. tall, looming above the trees in your front yard. No, such a contraption—a stout monopole topped with a crown of antennas—doesn't yet mar my leafy corner of suburbia. But it will soon, unless I do something about it, and that prospect has spurred me, along with my neighbors, to churn out a torrent of letters, petitions and telephone calls. Why, we wonder, must Dallas-based PrimeCo Personal Communications plop its tower in a residential area of Du Page County, Illinois, when there are plenty of other sites nearby where it wouldn't be so conspicuous or so jarring?

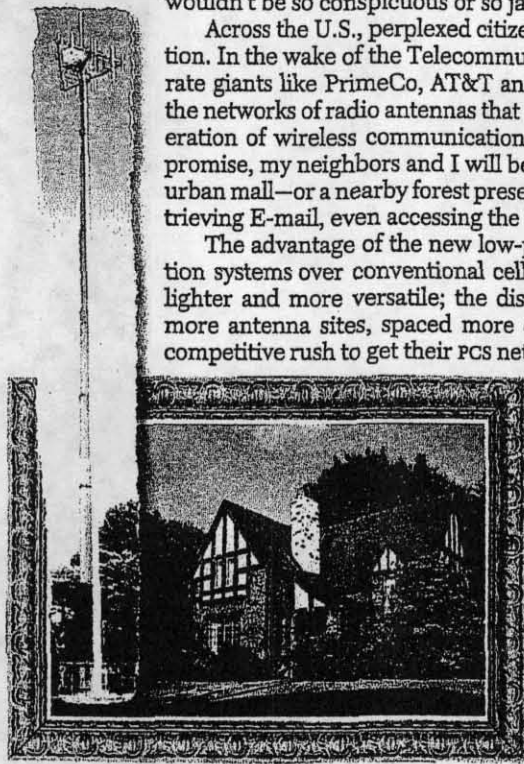
Across the U.S., perplexed citizens are asking the same question. In the wake of the Telecommunications Act of 1996, corporate giants like PrimeCo, AT&T and Sprint are racing to set up the networks of radio antennas that are required by the next generation of wireless communications services. Soon, enthusiasts promise, my neighbors and I will be able to stroll through a suburban mall—or a nearby forest preserve—while sending faxes, retrieving E-mail, even accessing the World Wide Web.

The advantage of the new low-power personal communication systems over conventional cellular phones is that they are lighter and more versatile; the disadvantage is that they need more antenna sites, spaced more closely together. And in the competitive rush to get their PCS networks up and running, companies are cobbling together erector-set structures and slapping them down willy-nilly. "Pretty soon when we look out at a sunset," says Jacksonville, Florida, homeowner Suzanne Jenkins, "these towers will be what we see."

The irony, says Chicago architect Nestor Popowych, president of a wireless-development group, is that there is a better way. After all, a tower is just a post for antennas, and any tall structure—a water tower, a billboard, a stanchion in a football stadium—can serve the purpose. Companies can further lessen the unsightliness by clustering their antennas at a common site. When a tower must be built, it can often be camouflaged so that it looks like a silo on a barn, a bell tower on a church, even a palm or pine tree. In fact, insists Lowell McAdam, PrimeCo's chief operating officer, a free-standing tower in an open field, like the field bordering my home, is the last thing his company wants to build.

So why build it? PrimeCo—which plunked down more than a billion dollars to license airwaves in 11 metropolitan areas—is in a hurry to start selling its services. And it is barred from more logical sites in Wheaton, Illinois, just next door, by a recently imposed six-month moratorium on antenna permits. So it zoomed in on our unincorporated neighborhood as a convenient, and vulnerable, target.

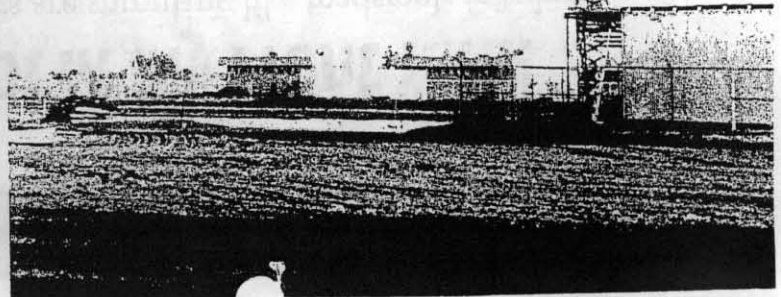
But public opinion does count. Suzanne Jenkins and her Florida neighbors have been living since August in the shadow of a 150-ft. tower that sprouted, toadstool-like, almost overnight. A month ago, however, the company that built it, Inter-Cel, bowed to community pressure and consented to take the tower down. Here in Du Page County, PrimeCo has agreed to consider other sites. "If these companies aren't careful," says Gayle Franzen, chairman of the Du Page County board, "they may get the one thing they don't want"—a tough new set of regulations. ■



DIGITALLY ALTERED IMAGE; HOUSE: SAVAGE—THE STOCK MARKET

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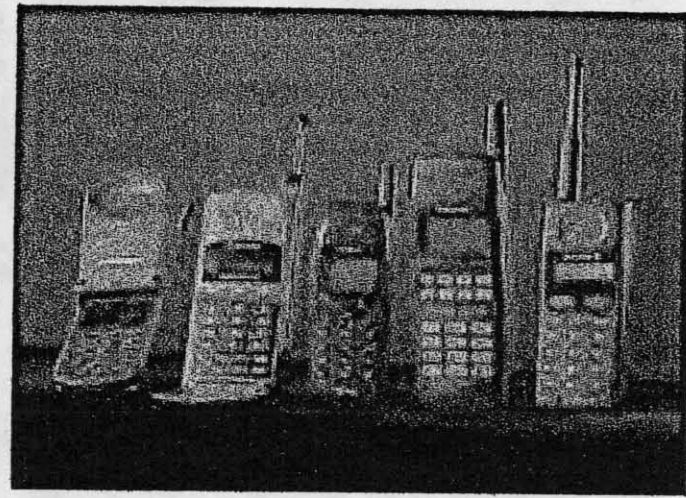


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Wireless Worries?



New Studies Call for More Research, Some Scientists Say

20/20 examines the possible link between cell phone use and health risks. (ABCNEWS)

By *Brian Ross*

abc NEWS.com

Oct. 20 — While the cell phone industry has assured consumers for years that cellular phones are completely safe, the industry's former research director has now come forward to say this can no longer be presumed.



video
ABCNEWS' Brian Ross reports

"The industry had come out and said that there were thousands of studies that proved that wireless phones are safe, and the fact was that there were no studies that were directly relevant," says Dr. George Carlo.

For the past six years, Carlo ran the cell phone industry's \$25 million research program, which has studied the effects of microwave

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20/20: New Questions about Cell Phone Safety



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ROSS reports about new questions on cell phone risks.

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needed.

The \$200-billion-a-year cell phone industry maintains the devices are safe.

"There is a preponderance of evidence that there is not a linkage between the use of wireless phones and health effects," says Thomas Wheeler, president of the Cellular Telecommunications Industry Association, the industry's trade group.

The industry has announced that it supports and will sponsor follow-up research.

radiation from cell phones.

"We've moved into an area where we now have some direct evidence of possible harm from cellular phones," Carlo says in an interview with ABCNEWS' 20/20.

Although Carlo does not say that cell phones are unsafe, he does say that more research is

Electromagnetic Waves Sent Into Brain

What many of the country's 80 million cell phone users may not know is that cell phones send electromagnetic waves into users' brains. In fact, every cell phone model sold in the United States has a specific measurement of how much microwave energy from the phone can penetrate the brain.

Depending on how close the cell phone antenna is to the head, as much as 60 percent of the microwave radiation is absorbed by and actually penetrates the area around the head, some reaching an inch to an inch-and-a-half into the brain.

"This is the first generation that has put relatively high-powered transmitters against the head, day after day," says Dr. Ross Adey, who has worked for industry and government for decades studying microwave radiation, and is one of the most respected scientists in the field.

Position Matters

The cell phone industry says every phone it sells is safe and meets government radiation safety limits. But tests conducted by 20/20 and being made public on tonight's program have found that some of the country's most popular cell phones can — depending on how they're held — exceed the radiation limit.

20/20 reports that government testing guidelines are so vague that a phone can pass the Federal Communications Commission's requirements when tested in one position and exceed those maximum levels when held

20/20

WEB LINKS

[Independent Expert Group on Mobile Phones](#)

[Health Risk Management Group](#)

[FDA Consumer Update on Mobile Phones](#)

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The cell phone industry says every phone sold in the United States meets the federal safety standard, and that there is a huge margin of safety built into the standard.

"There isn't data to show that what is happening has a health effect," Wheeler says, adding that there is no need for Americans to cut back on their cell phone use.

Along with the test results, the 20/20 story shows how users can significantly reduce their exposure to microwave radiation from cell phones.

Richard Allyn and Brenda Breslauer contributed to this report.

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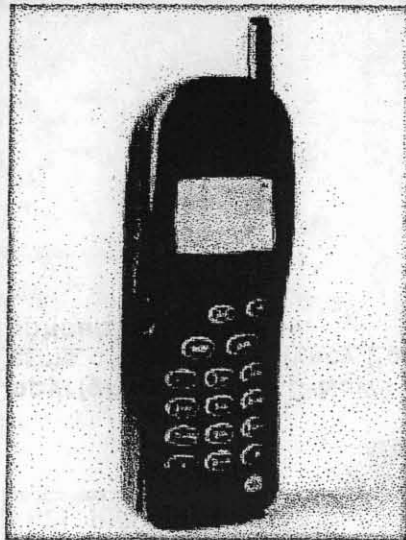
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Cell Phone Safety

FDA to Oversee Major New Research

To deal with public concern that cell phones might cause cancer or other problems, the Food and Drug Administration announced a partnership with the phone industry to perform about \$1 million in scientific studies of possible health risks. (Art Today)

Lauran Neergaard
The Associated Press

WASHINGTON, June 9 — Hoping to settle whether there really are any health risks from cellular phones, the Food and Drug Administration negotiated an unusual partnership with the phone industry Thursday to perform about \$1 million worth of scientific studies.

Despite public concern that cell phones might cause cancer or other problems, there is no evidence yet that radiation from the hugely popular phones poses a significant health risk, FDA scientists stressed Thursday.

However, there is also no proof that cell phones are totally risk-free, the FDA cautioned.

Just last month advisers to the British government recommended that children be discouraged from using cell phones for nonessential calls, because they could not rule out the possibility that scientists one day might discover long-term use is harmful. If harm ever is discovered

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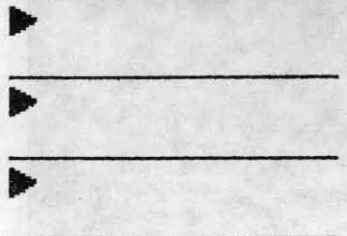
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...day might discover long term use is harmful. If harm ever is discovered, the British panel theorized children could be more vulnerable because their nervous systems are still developing.

Sorting Out the Confusion

There are a few studies that suggest the radio waves emitted by cell phone antennas might cause certain biological effects. With 80 million Americans using cell phones, and more buying them each day, uncovering even a small risk could be important to public health.

So the FDA, which oversees the safety of radiation-emitting consumer products, hopes its new research collaboration with the Cellular Telecommunications Industry Association will sort out the confusion.

"The vast majority of scientific evidence shows that there is no public health concern from people using wireless phones," said CTIA spokesman Jeff Nelson.

But, "there are some conflicting pieces of information" that require more research, said Harvey Rudolph, deputy director of FDA's Office of Science and Technology. "Everybody wants to find out if there are any problems."

Under the agreement, CTIA will fund about \$1 million in safety studies. But the FDA will gather a panel of international experts to choose what to study, pick independent scientists to do the work, and then oversee that the science is done properly.

Funding the Research

Backers of the study say all the results must undergo standard scientific review for publication in medical journals, so doctors and consumers can be confident in the findings — and confident that if studies uncover any problem, it won't be hidden.

"It's clear industry is not controlling the research," Rudolph stressed. "The only thing they're doing is funding it."

First on the agenda: studies to see if cell phones' low-level radiation is capable of causing genetic toxicity — a key to certain health problems — and if so, at what levels. Not all cell phones emit the same amount of radio waves. Rudolph said those key studies will start "as quickly as possible," and results could be obtained in two years.

A few animal studies have suggested that cell phones' low-level radiation could accelerate cancer growth, and some research suggests it also causes subtle alterations in signals from brain cells.

But those studies all have scientific flaws, and Rudolph noted they're outnumbered by other studies suggesting cell phones are safe.

Until the issue's settled, what should consumers think? First, the one clear risk from cell phones is using them while driving, which increases the risk of a car crash. Rudolph stressed

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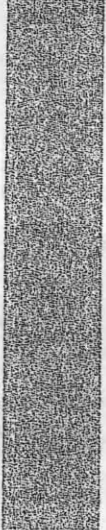
Some critics urge reserving cell phones for shorter calls or using earphones that keep the antenna away from the head. Says Rudolph: "These are prudent things that if you're concerned you can do."

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Sacramento, CA

FDA to oversee major new research into cell phone safety

ASSOCIATED PRESS

WASHINGTON, June 12 - Hoping to settle whether there really are any health risks from cellular phones, the Food and Drug Administration negotiated an unusual partnership with the phone industry last week to perform about \$1 million worth of scientific studies.

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DESPITE PUBLIC CONCERN that cell phones might cause cancer or other problems, there is no evidence yet that radiation from the hugely popular phones poses a significant health risk. FDA scientists stressed

popular phones poses a significant health risk, FDA scientists announced Thursday.

But nor is there proof that cell phones are totally risk-free, the FDA cautioned.

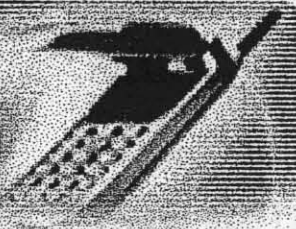
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BACKGROUND ON CELL PHONE SAFETY

Below are some FDA responses to typical questions about cell phone safety.



-Select-

With more than 82 million Americans using cell phones, there's been growing interest in further studies to try to determine, once and for all, if cell phones pose health risks. The Food & Drug Administration prepared this backgrounder to help explain what's known, and what's left to be researched.

Source: Food & Drug Administration

Telecommunications Industry Association will sort out the confusion.

"The vast majority of scientific evidence shows that there is no public health concern from people using wireless phones," said CTIA spokesman Jeff Nelson

But, "there are some conflicting pieces of information" that require more research, said Harvey Rudolph, deputy director of FDA's Office of Science and Technology. "Everybody wants to find out if there are any problems."

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On the Net:

FDA's cell phone information for consumers:
<http://www.fda.gov/cdrh/ocd/mobilphone.html>

Cellular Telecommunications Industry Association: <http://www.ctia.org>

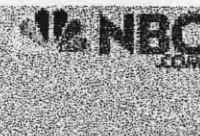
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SPECIAL INVESTIGATION MOBILE PHONES

FOR ADULTS ONLY

By Duncan Graham-Rowe and Andy Coghlan

Put down that phone, kid, it'll scramble your brain

CHILDREN should avoid using mobile phones for all but essential calls because of possible health effects on young brains. This is one of the expected conclusions of an official government report to be published this week. The report is expected to call for the mobile phone industry to refrain from promoting phone use by children, and to start labelling phones with data on the amount of radiation they emit.

The Independent Expert Group on Mobile Phones, chaired by former government chief scientist William Stewart, has spent eight months reviewing existing scientific evidence on all aspects of the health effects of using mobile phones. Its report, published on 11 May, is believed to conclude that because we don't fully understand the non-thermal effects of radiation on human tissue, the government should adopt a precautionary approach, particularly in relation to children.

There is currently no evidence that mobile phones harm users or people living near transmitter masts. But some studies show that cellphones operating at radiation levels within current safety limits do have some sort of biological effect on the brain.

John Tattersall, a researcher on the health effects of radiation at the Defence Evaluation and Research Agency's site at Porton Down, agrees



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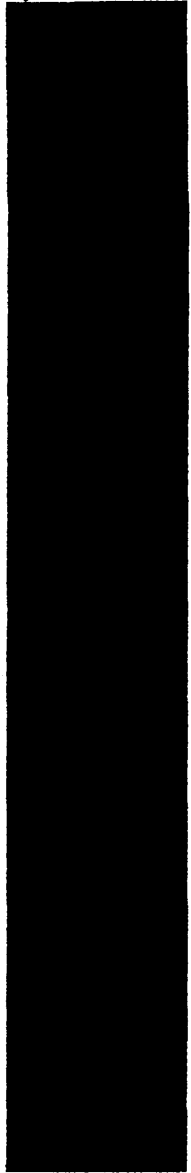
that it might be wise to limit phone use by children. "If you have a developing nervous system, it's known to be more susceptible to environmental insults," he says. "So if phones did prove to be hazardous--which they haven't yet--it would be sensible."

In 1998, Tattersall showed that radiation levels similar to those emitted by mobile phones could alter signals from brain cells in slices of rat brain (New Scientist, 10 April 1999, p 20). "What we've found is an effect, but we don't know if it's hazardous," he says.

Alan Preece of the University of Bristol, who found last year that microwaves increase reaction times in test subjects, agreed that children's exposure would be greater. "There's a lot less tissue in the way, and the skull is thinner, so children's heads are considerably closer," he says.

Stewart's report is likely to recommend that the current British safety standards on energy emissions from cellphones should be cut to the level recommended by the International Commission on Non-Ionizing Radiation Protection, which is one-fifth of the current British limit. "The extra safety factor of five is somewhat arbitrary," says Michael Clark of the National Radiological Protection Board. "But we accept that it's difficult for the UK to have different standards from an international body." Other controversial recommendations expected include discouraging the use of mobiles while driving, with or without a hands-free kit. Such proposals would be welcomed by the Royal Society for the Prevention of Accidents, which has been campaigning for a ban.

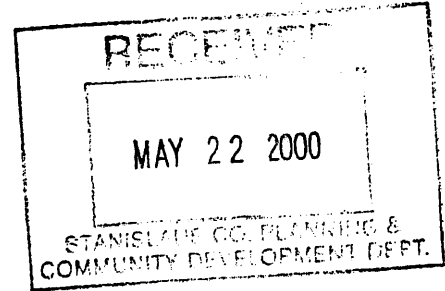
"We have 12 deaths where courts have been satisfied that mobile phones were to blame for distracting drivers, and they're only the ones that have come to our attention," says Dave Rogers, RoSPA's road safety adviser. An international survey by the society showed that drivers using mobile phones are four times as likely to have an accident, and that the effect lasts as long as 5 minutes after a call has finished.



from New Scientist, 13 May 2000

New Scientist Home  **GO**

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DATE: May 5, 2000
TO: Surrounding Property Owners
Public Works, Chuck Barnes
P.G.&E.
FROM: Bob Kachel, Senior Planner

Staff Approval Application No. 2000-09, under the name of Pacific Bell Wireless - Ott Farms has recently been submitted to the Stanislaus County Planning Department for approval.

As these applications are handled at Staff level, we request your comments by May 19, 2000 to incorporate them in our decision for approval or denial.

The request is to:

Locate a 118' high monopole tower, and two microwave dishes and two equipment cabinets on a portion of a 46 acre parcel, located at 5243 Paradise Road, southwest of Modesto. The pole will be located near the northwest corner of Paradise Road and Stone avenue.

Thank you.

COMMENTS:

No - I object strongly - This^{is} Agriculture Area - towers, wires, metal, blinking lights are for non-use land - Not Ag. Land - Nothing has been
(Response prepared by) (Department Name) (Date)

kh\:\Kay\Referral\2000\Staff Approvals\SAA2000-09.ref

proven it would not harm anyone's health - I believe your statement is in error. Ott Farms should be ashamed to distract the beauty of agriculture - This is not an improvement to the neighborhood -



Stanislaus County

Department of Planning and
Community Development

S 4 T 4 R 8
APP. NO. 2000-09
G.P. AS
ZONE A-2-40
DATE 4/25/00
REC. NO. 0023
BY AF

STAFF APPROVAL APPLICATION

The undersigned hereby makes application for a Staff Approval in accordance with the provisions of the Stanislaus County Code, Chapter 21.100 and any amendments to the same, and submits the following information for consideration:

1. NAME OF APPLICANT: (a) Pacific Bell Wireless
Name of firm or person

(b) 3851 N. FREEMAN BLVD. (c) EMERYVILLE 94634 (d) 916 561-4032
Address City Zip Phone
2. NAME OF PROPERTY OWNER: (a) OTY FARMS
Name of firm or person

(b) 5243 PARADISE ROAD (c) MODESTO 95358 (d) _____
Address City Zip Phone
3. LOCATION OF PROPERTY: 5243 PARADISE ROAD
Address

Between SOUTH HART and STATE AVENUE
Street Street
4. A DETAILED WRITTEN DESCRIPTION OF USE REQUESTED: CONSTRUCTION OF
A 108' MONOPOLES W/ 6 ANTENNAS, 2 MICROWAVE DISHES
2 EQUIPMENT CABINETS ON A 2500 SQ. FT. LEASE AREA.
5. ASSESSMENT NO. & ACREAGE OF PROPERTY: 017 - 06 - 10 / 46⁺ ACRES
6. LIST THE NUMBER AND USE OF ALL EXISTING STRUCTURES ON PROPERTY: NONE
7. A DETAILED SKETCH SHOWING THE APPROXIMATE LOCATION OF ANY PROPOSED AND EXISTING STRUCTURES ON PROPERTY OR LAND IMPROVEMENTS WITH RESPECT TO ROAD INTERSECTIONS, EXISTING BUILDINGS AND/OR SIGNS.
8. A FILING FEE IN THE AMOUNT OF FOUR HUNDRED THIRTY-FOUR DOLLARS (\$434.00).
9. A COPY OF THE DEED OR A LEGAL DESCRIPTION OF THE PROPERTY.
10. I, THE UNDERSIGNED, DO HEREBY CERTIFY THAT THE FACTS AND INFORMATION CONTAINED IN THE ABOVE APPLICATION ARE TRUE AND CORRECT, TO THE BEST OF MY KNOWLEDGE.

Signature of Agent, Representative or Owner

If Ott Farms is desperate for money
& dont have time to farm the piece of
property - then sell & move to the City -

Communication/utility Companies dont
need good land

Department of Planning - Please
dont ruin good land. Deny Request.

If Planning Department approves request
then Pacific Bell & Ott Farms
should provide free services
to the people who own land &
farm land as agriculture within a
three mile area around the tower
for life

Towers are ugly!!

Sharon McLeathy 5-16-00
5236 California
Modesto CA 95358

SPECIAL REPORT!

Communication Towers



THE SUBSTANTIAL EVIDENCE STANDARD OF THE TELECOMMUNICATIONS ACT OF 1996

by Alexander D. Ruskell, Esq.

Congress enacted the Telecommunications Act of 1996 to promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.

The Act preserves the authority of state and local governments to regulate the placement and construction of wireless service towers. However, it also limits the manner in which state and local governments may exercise that authority, providing state and local governments may not deny construction of a wireless facility unless the denial is in writing and supported by substantial evidence contained in the written record. Also, the denial cannot have the effect of prohibiting the provision of personal wireless services. Finally, the Act prohibits discrimination among wireless service providers, requires local governments to act on permit applications within a reasonable time period, and disallows local governments from considering the environmental effects of radio frequency emissions.

Much of the time, after a permit application is denied, the permit applicant will attack the local government's decision by claiming it is unsupported by substantial evidence. Substantial evidence does not mean a large or considerable amount of evidence, but rather such evidence as a reasonable mind might accept as adequate to support a conclusion. Substantial evidence is more than a scintilla, but less than a preponderance. The reviewing court also grants a degree of deference to the decisions of local decision-making authorities. However, the substantial evidence standard must be applied using common sense standards of reason.

In *Telespectrum Inc. v. Public Service Commission of Kentucky*, the court ordered the local authority to approve a tower permit because it found the original denial was not based on substantial evidence. The decision to deny the application rested on the testimony and a letter from the Chambers, whose home was approximately 412 feet from the proposed site of the tower. The only recorded opposition to the site was the Chambers' concerns they would be exposed to harmful microwave emissions and that their property value would diminish.

The court believed, while the Chambers may have been credible, sympathetic witnesses, their testimony was no more than unsupported opinion that there were alternative sites available. Importantly, under the Act, concerns of health risks due to emissions could not constitute substantial evidence in support of a denial.

The Fourth Circuit found sufficient evidence existed to deny a permit application from 360 Degrees Communications Company of

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Charlottesville. The proposed tower would have risen from the ridgeline of a mountain and extended 40 to 50 feet above the tree canopy. Except for the property owner who intended to lease the property to build the tower, the county's citizens were unanimous in their opposition to the tower siting. Forty citizens signed a petition in opposition, while 23 spoke in opposition during hearings on the proposal. Most importantly, the proposed tower would be inconsistent with the county's comprehensive plan, open space plan, and zoning ordinance, which discouraged activities that would alter the continuity of the ridgeline.

In a Pennsylvania case, the tower applicant applied for a variance necessary for construction of the tower. Under the local ordinance, variances could only be granted if the applicant established unique physical characteristics of the property inflicted undue hardship, the property could not be developed in strict conformity with the ordinance, the applicant did not create the hardship, the essential character of the neighborhood would not be changed, and the variance requested was the minimum necessary to afford relief.

At the hearing, the tower applicant provided almost no evidence about the physical characteristics of the property in question. Instead of focusing on the characteristics of the property, the applicant fixed on the quality of service it could provide customers. In particular, it argued it needed the variance to "provide seamless coverage as required under its FCC license." The applicant never provided a description of how the particular land in question was unique and how its alleged hardship was directly related to the unique characteristics of the land.

The applicant's tower design called for a tower height nearly five times the height restriction in the district. It presented no evidence explaining why a shorter tower would prevent it from closing its gap in service. It showed no evidence of efforts to acquire other properties, locate on other sites, or explore alternative tower designs. Ultimately, for the above reasons, the local authority correctly denied the applicant's permit application.

The U.S. District Court for the Southern District of California ruled a decision must be based on more than just residents' concern about neighborhood aesthetics. However, the court ruled the City of El Cajon properly denied a permit application because the proposed tower would create safety and security problems, which was a question of police power, not simply another "Not in My Backyard" complaint. Both the city and the applicant agreed the proposal was more compatible with commercially zoned properties than the suggested residentially zoned district. The court was also presented with a petition signed by 212 residents opposing the project. Finally, the residents' experiences with another wireless provider made their observations on visual blight, noise, etc., more credible since they were based on personal experience.

The ultimate lesson is that if you choose to deny a permit application for a wireless communications tower, make sure you have ample reasonable, credible, and clear evidence supporting your decision.

Citations:

Telespectrum Inc. v. Public Service Commission of Kentucky, 6th U.S. Circuit Court of Appeals, Nos. 99-5822, 99-5871, & 99-5919 (2000).

The 6th Circuit has jurisdiction over Kentucky, Michigan, Ohio, and Tennessee.

360 Degrees Communications Company of Charlottesville v. The Board of Supervisors of Albemarle County, 4th U.S. Circuit Court of Appeals, Nos. 99-1816 & 99-1897 (2000).

The 4th Circuit has jurisdiction over Maryland, North Carolina, South Carolina, Virginia, and West Virginia.

APT Pittsburgh Limited Partnership v. Lower Yoder Township, U.S. District Court for the Western Dist. of Pennsylvania, No. 98-187J (2000).

Airtouch Cellular v. The City of El Cajon, U.S. District Court for the Southern Dist. of California, No. 99-1801-B (LAB) (2000).

SUPPLEMENTAL

DOCUMENTS

TO

APPEAL OF STAFF APPROVAL

2000-09

March 21, 2001

To whom it may concern;

Over the past thirty years my husband and I have owned land on the West side of Paradise Road. This land was our first plot of land and from it have built what we feel to be a very successful business. Our children are active in the farming business and together we have learned to appreciate what nature has thrown our way.

Well, now it is not nature altering the landscape but the Cellular Phone Industry. They are planning on building a cell tower not more than 75 yards from our property line. If this property we owned was uninhabited or the surrounding area for a twenty mile radius was uninhabited I don't think there would be so much of an opposition. The truth is many individuals live within a mile radius of the tower.

After researching and finding very disturbing information regarding studies I can not support the tower. Many studies reported the increase of brain tumors to individuals who use cell phones. The comparison to a cell phone and a tower is great. The cell phone is used on a sporadic schedule while the tower would be in use non-stop. This means the individuals living next to the tower would have continually exposure to the dangerous waves. There is no way I can consciously agree with the building of the tower and be able to look my neighbors in the eye.

I invite the individuals who are considering a yes vote on this tower to put themselves in the situation or any of their loved ones. I am positive their vote would quickly change to a no.

Sincerely,



Els Blom

2613 Illinois Ave
Modesto, CA 95358

March 20, 2001

To whom it may concern;

I have grown up on the West side of Paradise Road my entire life, and have learned that there are several things out here that will never change. The first being that people who don't live out here will always drive too fast down Paradise Road. Second, no matter where someone lives on Paradise Road, if they are within a 5 mile radius they are your neighbor. Third, and most importantly this is productive agriculture land and it is always a wonderful sight to see Mother Natures hand producing the valleys finest crops.

Unfortunately, this third rule of thumb maybe tarnished by the building of a cell phone tower. This tower is planned to be built less than 150 yards from my home. Knowing my neighbors none of them are elite executives in the cellular phone business and if they were this tower would not be going up next to their home.

I find this tower not only a major eye soar and a destruction to AG. land, but they are extremely dangerous. Just out of observation while I was driving down a road where one of these towers exist, I noticed the individuals working on it put on a lot of protective gear. This gear was not due to the height of the tower or weather conditions, it was due to the amount of dangerous waves these individuals were submitting themselves to. Remember they were just on the tower for a few moments, I would live next to the tower. Will my family and visitors be given a protective garment so that we will be safe too?

I understand growth happens. I also understand to an outsider this area looks so untouched, but reality is the need for the tower is not great. Nothing is needed more greatly than my family and my neighbors families safety.

Sincerely,

Charles & Marika Morrison

Charles & Marika Morrison
5461 Paradise Rd.
Modesto, CA 95358

**Mary Connolly Kidd
4912 Paradise Rd.
Modesto, Ca. 95358
(209) 549-9471**

**County Planning Commission
1100 H. Street
Modesto, Ca. 95354**

RE: Application No. 2000-09

Dear Members of the Commission,

I am writing this letter in regard to the proposed Pacific Bell communications tower and microwave dishes to be located at 5243 Paradise Rd., west of Modesto.

My main concern is the close proximity that the proposed tower and dishes will be to my residence on Paradise Rd., as well as many others.

The cellular phone industry is a relatively new one, and there are many conflicting studies and beliefs as to whether or not cellular phones and these types of towers and dishes pose any health risks to human beings. As individuals we can choose whether or not we want to use cell phones, and if we do choose to take some precautions while doing so (i.e. limit amount used, have antennae on roof of car). By placing this tower and dishes by our homes we are given no choices.

Although this area is not considered a residential one, there are many children and adults living very close to the proposed site. I would greatly appreciate if you could take that into consideration when deciding on this application.

This is an industry where much further study is needed. Only time will truly tell if in fact these towers and dishes pose any health risks. Being the mother of a seventeen month old son I do not want to take any chances.

Thank You,

Sincerely


Mary Kidd

TO: Bob Kachel, Senior Planner
Dept. of Planning & Community Development
1010 10th St., Suite 3400
Modesto, CA 95354
Phone: (209) 525-6330
Fax: (209) 525-5911

RE: Staff Approval Application No. 2000-29- Pacific Bell Wireless-Ott
Farms

I am a resident of the community surrounding the proposed tower/microwave dish site on 5243 Paradise Road. In fact, I own the property adjoining the proposed site. I object to and appeal the approval of the said tower, microwave dishes & two equipment towers for the following reasons:

1. The above mentioned area is strictly agricultural & agricultural related. This is a commercial entity & should not be allowed here.
2. This 54' tower poses a flight hazard to crop dusting planes/pilots working in this area and are necessities to the agricultural industry.
3. The recently recognized potential health hazards from the microwaves from cell phones (ie brain cell and DNA damage, sleep pattern disruptions, etc. per recent British studies, prompting warnings to minimize cell phone usage particularly by children) and the subsequent extensive tests and studies being conducted due to those findings cause us great concern. If there are potential health problems resulting from cell phone usage, what affects could result from the cumulative exposure of twenty-four hours a day, seven days a week? This is one of the greatest concerns throughout this community, particularly to those with young children.
4. The close proximity to an elementary school.
5. The esthetics of constructing a 54' tower & microwave dishes in this particular area. Those in this community cherish the panoramic view and this tower & subsequent microwave dishes & equipment cabinets are no

more than visual pollution and do not benefit the community sufficiently to warrant their construction. Due to the flight hazards to crop dusters and the created visual pollution to those surrounding property owners these towers only serve to diminish property value.

6. Section 21.91.040 states co-location is preferred to minimize the number of communication towers throughout the County. There is an existing communications tower in the community located on Paradise & Huntington Roads and a probable tower site to be on Maze & Hart Roads.

7. Concerns re television & phone reception interruption/interference due to the microwave emanations.

Pacific Bell has been notified of alternative sites in the community. Why weren't those sites investigated?

Cellular towers are not permitted in residential communities...why? Do they lower property values? My property value is of importance to me as are property values to my neighbors. Are there health concerns? The lives of my loved ones and neighbors and their children are just as important and valuable to me and to the other members of this community...as much so as to those who live in protected 'residential areas'. My neighbors and I enjoy our lives and standard of living and resent the fact that our chosen life style be threatened by outside influences and guided by selfish interests. This IS a community and those members of the community should have a say in determining what affects their homes, their friends, their families and their lives.

For the aforementioned reasons, I, as a resident of this community object to the construction of this tower & the microwave dishes.



Janie Meily



PANORAMIC VIEW - PARADISE RD.

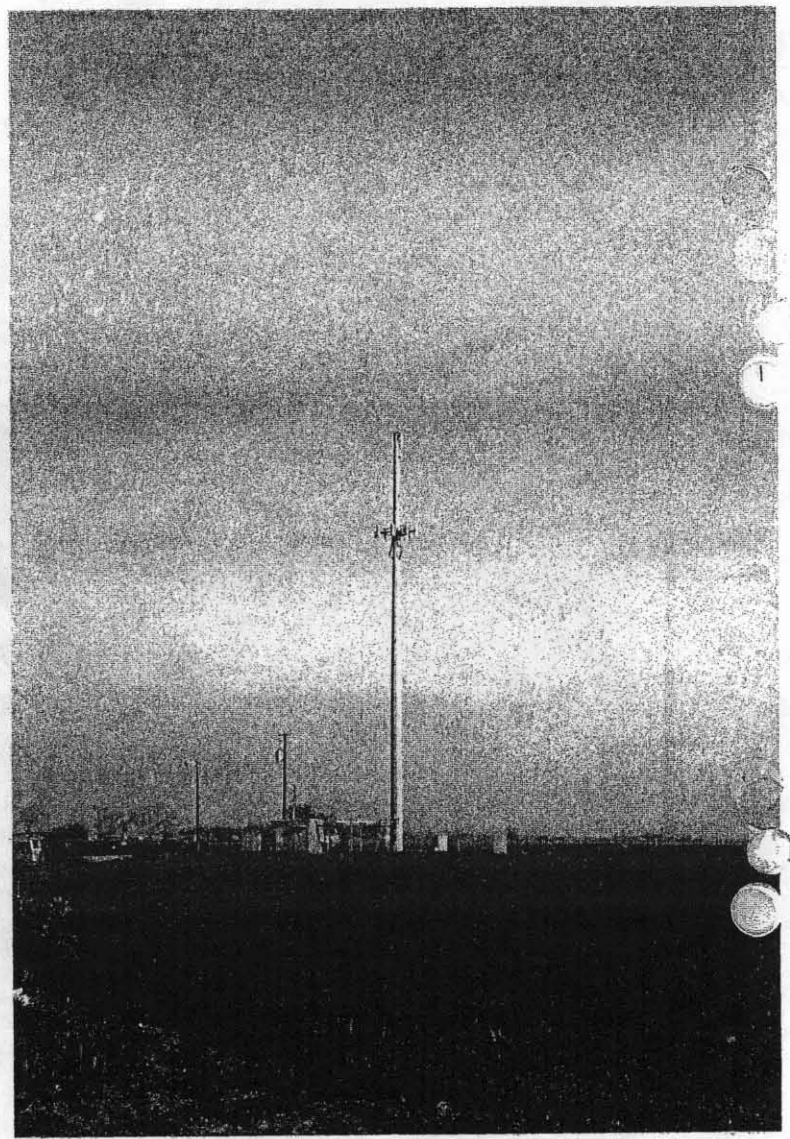
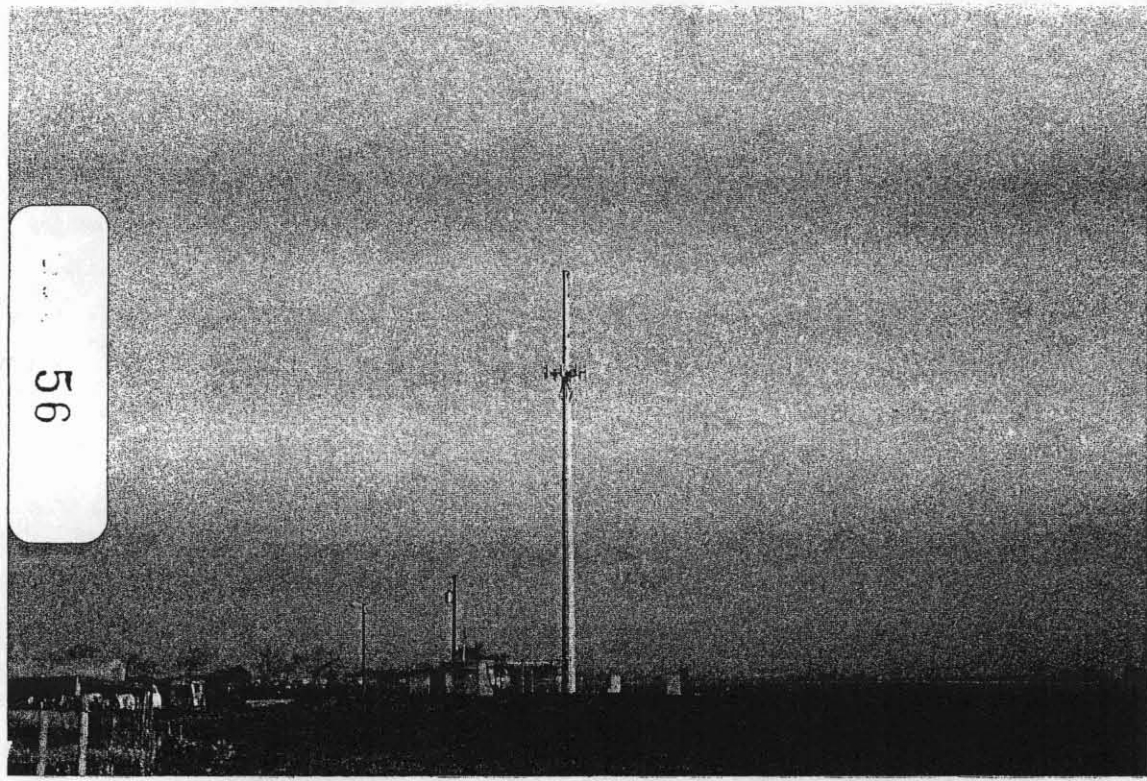
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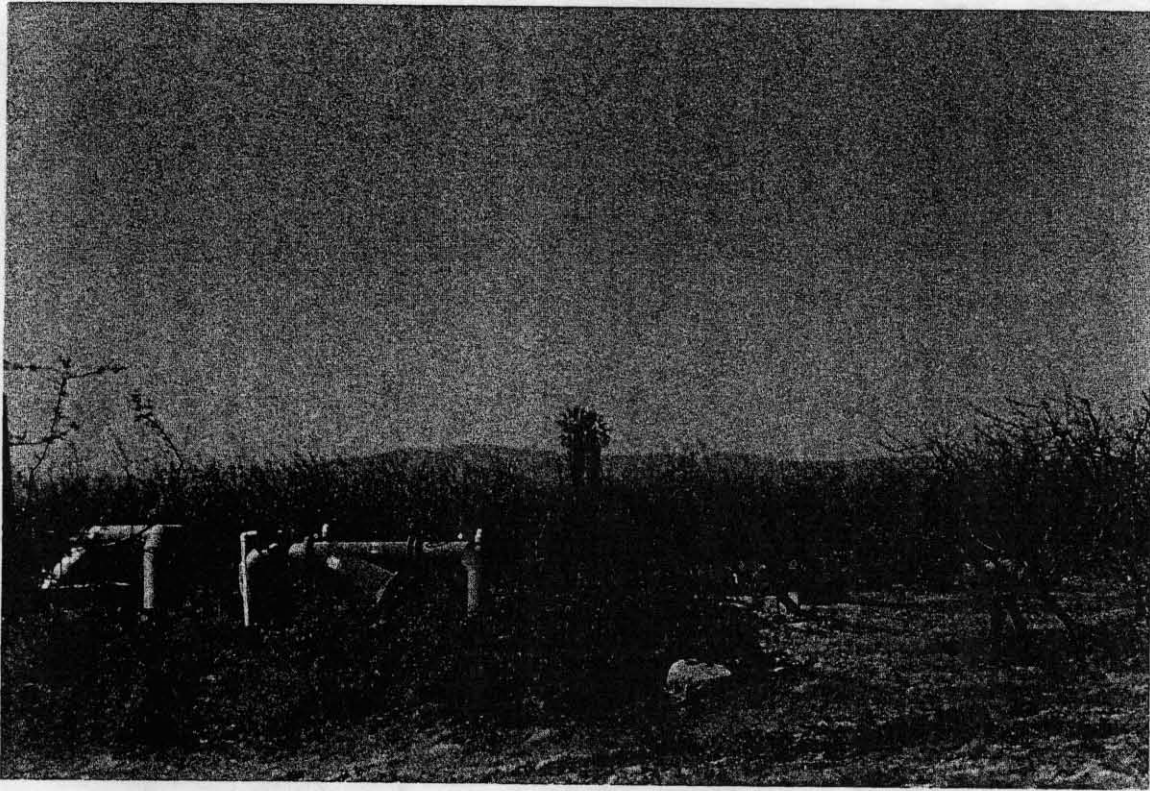
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EXISTING COMMUNICATIONS TOWER
ON
PARADISE & HUNTINGTON



TO THE STATE
OF CALIFORNIA
COUNTY OF
SANTA BARBARA
CITY OF
SANTA BARBARA
I, THE COUNTY CLERK,
DO HEREBY CERTIFY
THAT THE ABOVE
IS A TRUE AND
CORRECT COPY
OF THE ORIGINAL
FILED IN MY
OFFICE ON
THIS 10th DAY
OF MARCH 1968
AT SANTA BARBARA,
CALIFORNIA



To the Stanislaus County Planning Commission

My wife and I live within a short distance of the proposed tower at 5243 Paradise Road and have owned property in this community for a good many years. We object to this tower being built. There are already too many of these things around here now. Combine them instead of building more. This is agricultural area and it not only poses a hazard to our crop dusters but possibly also to our health. We have many young grandchildren living within a short distance from this thing and do not want them or any of our neighbors exposed to this.

This is a good community with people that care. We do not want it!

Hans & Rosie Omlin
2743 Baker Road
Modesto, California 95358

Hans Omlin
Rosie Omlin

Joe & Nellie Omlin
5818 Paradise Road
Modesto, California 95358

To: Stanislaus County Planning Commissioners
Pertaining to: Appeal of Staff Approval Application #2008-09

My husband, our three young daughters and I live in a home diagonally across from the tower/microwave dish site on 5245 Paradise Road. We are submitting this letter to appeal the approval for that tower and microwave dishes.

Our three daughters range in age from 3 years to 6 months. The British studies recommending children not use cell phones combined with further results indicating a relationship between microwave radiation from cell phones and the devices emanating that radiation from and the prospect of living within such a short distance from a tower and microwave dishes is frightening. The possibility of effects from the microwave radiation on innocent children as well as to those in the neighborhood is abhorrent to my husband, myself and our families.

This 54' tower poses a flight hazard to crop dusting planes and pilots working in this area and are necessities for the agricultural industry. Since our home is in such close proximity to this proposed tower, it could also endanger our home and family if control is lost.

There are already several towers in this area. Why is it necessary to construct more? If additional microwave dishes are felt to be necessary, does it not make more sense to utilize the same towers instead of building more?

This is an agricultural area. The only reason all these cell phone companies are 'invading' this area is because restrictions are minimized since we are not considered a residential area, where these things are prohibited. We should not be penalized because our chosen profession, to raise foodstuffs for this community and the world, necessitates us living in an agricultural environment and in not a high density, 'protected' residential location.

Please take this letter into consideration and appeal the Staff Approval of this tower, microwave dishes & equipment cabinets. Please take into consideration the wishes of the members of this community.

March 15, 2001

To Whom It May Concern:

I am writing to you on behalf of the proposed installation of a cellular tower on Paradise Road and Stone Avenue. As a resident and farmer for the past 45 years, I strongly disagree on the construction of towers or antennas of any kind in the farming community. These towers are dangerous for the crop dusting planes that are essential to our crops growth and development. Towers of this structure should be built in industrial type areas of this county where they are commonly seen. Agricultural farmland is zoned for farming, so therefore it should ban any type of antenna or tower. I hope you will take my disapproval into consideration when deciding on this proposal. Thank you.

Sincerely yours,

A handwritten signature in cursive script that reads "Ron Crum".

Ron Crum

I was asked to right a letter in regards to the cellular phone tower that has been proposed to reside close to my home. I call this area of Modesto my home with great pride. Our ranch on Iowa avenue has been in my family for over sixty years. I was born and raised here. My husband and I lived on this ranch for the first six years of our marriage and our two children were born here. A great job offer brought us to live in Folsom. As a result, my husband and I were able to purchase this ranch to secure its place in our family. We have gone through great lengths to assure our children have the luxury of open fields, clean air, and beautiful settings.

One aspect of this purchase struck a deep cord with us. My father and his brothers had signed a petition back in the seventies to secure this land as an agricultural entity. This promise was to be assumed by any purchaser and gladly was. When we were informed of the tower, the term agricultural entity kept coming to mind. I find it impossible to figure in the need for microwaves in the production and raising of California's gold.

I don't feel qualified to discuss the health effects of radio frequency radiation but what research we have done caused us to discontinue our use of cellular phones. This was way before the current proposed tower was brought to our attention so you can imagine the level of our concerns about having a tower practically in our back yard. Our children don't go to school in this area but that does not diminish my concerns for the children who will be in such close proximity on a daily bases let alone the families, our family. In fact when we moved to Folsom we refused to even look at homes near any type of high power towers when we were looking to rent and then to buy. So you can't tell us that there is no reflection on real estate values as well since we personally used towers as criteria against properties.

Several times over the years my family has been approached with petitions regarding neighbors who wish to do simple modifications to their property to accommodate their growing families. In fact when we were adding on to a home on the ranch we had to see if there were any environmental impact issues. I find it hard to believe that such measures are taken to secure our agricultural integrity yet the tables are turned in the matter of this proposed tower. Instead of them getting our okay we must petition against it.

Our goals are to provide our family and friends a safe, pure, and open home to get away from the fast pace of the city. We hope that this dream will not be compromised and its purity questioned if the cellular tower is built.

Lemos Family

March 20, 2001

Stanislaus County Planning Commission

Members,

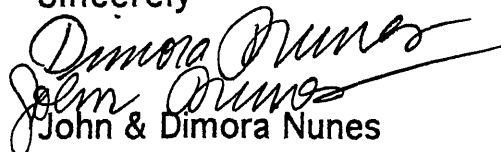
My parents have asked me to write this letter on their behalf to register their opposition to and to add their support of the appeal of the construction of a monopole tower and equipment cabinets to support microwave dishes.

Not only is this area solely zoned for agricultural use, it is prime agriculture land. We resent the intrusion of non agricultural, commercial usage. This tower doesn't belong here. New inferences about possible health problems from cell phone usage are now appearing with greater frequency, suggesting little to no usage by children and that radiation levels from the phones may not be safe for adults as previously thought. Does it not follow that continuous, long term exposure from these microwave dishes could/would be harmful to the local residents as well? Previously acceptable levels of many contaminants are constantly found to be dangerous and are lowered. Not only is this tower too close to an elementary school but there are many, many young families with small children in the immediate vicinity of this thing. We also are aware of the dangers to crop dusters, adding another obstacle (the tower) to avoid.

Personally, we don't want any of these communication towers in the neighborhood but there must be better sites....in a commercial area (where this belongs), down by the river or in a more isolated location.

Please take our objections into consideration and appeal the approval of application # 2000-09.

Sincerely


John & Dimora Nunes

2230 Iowa
MOdesto, CA 95358

March 22, 01

To: Stanislaus planning Commission

Re: application #2000-09

Tower for 2 micro-dishes.

Being that we now have high intensity waves about our area, two within 600 ft, we are definitely against more. We are in the down winds and everyone in our area will be affected physically, from pace-makers to ringing of our ears and TV. reception. Cell phones have already caused too many problems, we don't need more which these towers will cause.

We trust you will consider many ramifications these towers and dishes will create - Property values will decrease immensley. Let them install them on Pelendale area and North East Modesto. There are more people out there that have cell-phones. We do not want any more infringement of Micro Waves in our area.

Yours Truly

LeRoy and Margaret Wright

March 10, 2001

To: County Planning Commission
Concerning: Appeal of Staff Approval of Application #2000-09 (microwave tower, two microwave dishes & two equipment cabinets)

My parents & I have lived on this property since 1939. After I married & began my family of 6 children, we chose to live on the home site because of the non-urban environment, free of commercial entities, less pollution, less traffic, less outside influences intruding on the difficult job of raising children, not to mention the connection to the land and natural beauty found in fewer and fewer areas.

The view from my living room has a 12 foot window that is solace for me, my children and grandchildren. That encompasses an exquisite panoramic, picture-perfect view of the mountain ranges to the west, unhindered by the encroachment of commercialism and I resent the intrusion of a commercial entity (particularly a non agricultural entity) intruding on that place of solace.

This area is zoned strictly agriculture. This a commercial enterprise that will bring with it more harm than benefit: destroying the natural vista through visual pollution, the dangers to crop dusters working in the area (an agricultural necessity) having to 'dodge' the towers, the increasing recognition of the detrimental affects of

microwave radiation on both short term and long term bases, resulting in increased evidence of health problems. Toxic and contaminant levels acceptable years ago and thought to be safe are now found to be harmful and no longer tolerated. Experiments are being conducted presently that show there IS harm from microwave levels previously thought to be safe or have results indicating claims cannot be made that cell phone/microwave radiation is harmless. These earlier experiments declaring cell phone microwaves 'harmless' have been funded by the industry itself, a \$200 billion a year industry, by the way. I'm old enough to remember the tobacco 'studies' funded by the tobacco industry itself & their findings that cigarettes presented no health threat.

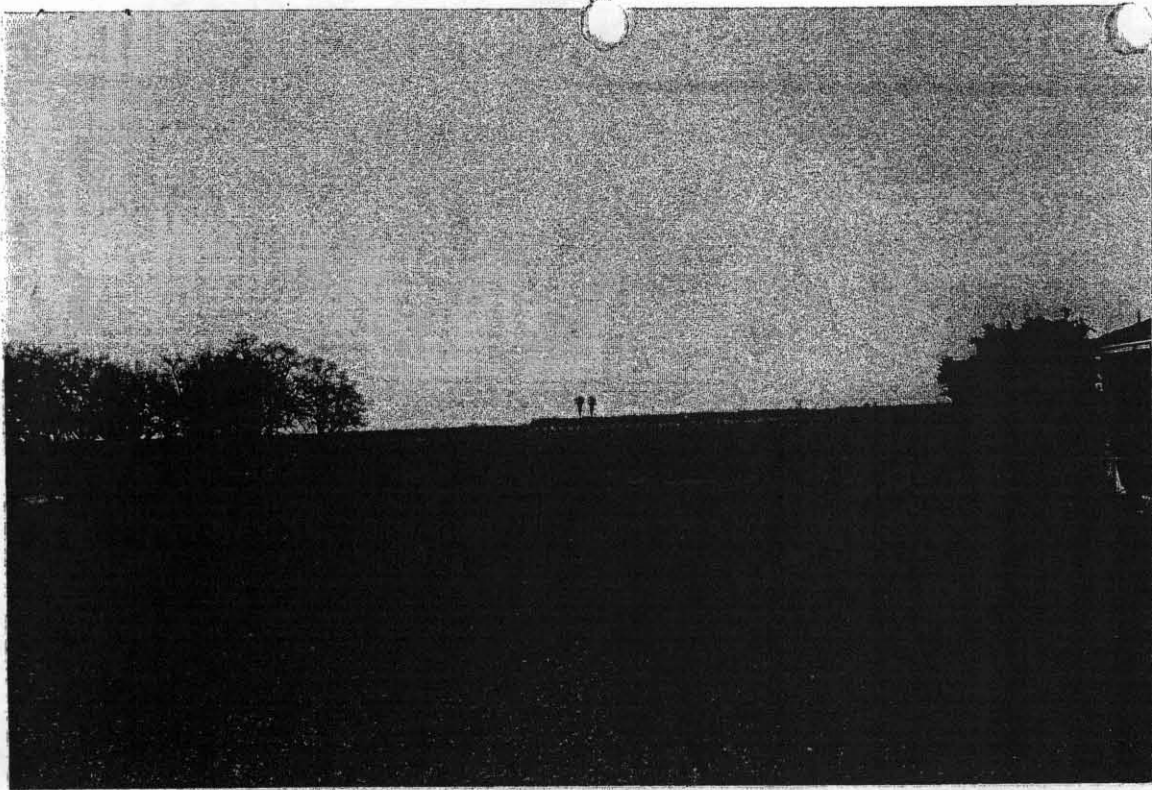
There is a reason why these towers cannot be placed in residential neighborhoods. Why? Health dangers, affecting television and phone reception, effecting property values? Why should those of us owning property and/or living in this area be subjected to those possible potentialities?

There are at least 5 communication towers within an approximate 3-6 road mile radius, which would be even closer if measured linearly. Why not utilize those towers instead of constructing more, creating more visual pollution and exposing even more people to the potential health problems.

Please consider this appeal and rescind the approval for this tower, dishes and cabinets.

Thank You,

Sharon McCarty



VIEW FROM S. MCCARTHY HOME
ON
CALIFORNIA AVE



March 21, 2001

Stanislaus County Planning Commission

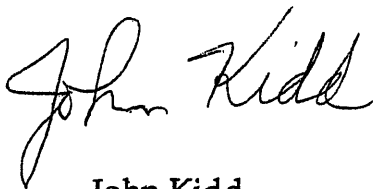
Dear Members,

We would like to have Application 2000-09 changed to an alternate site so that the monopole tower would be a half mile or more from the nearest residence. We have contacted Pacific Bell in December of 2000 to notify them of alternative sites in the community. We were told due to year-end back-log, they would get back to us after the first of the year. They were contacted again after the first of the year. There has been no follow-up by Pacific Bell representatives. We also contacted Stanislaus County Staff members in December of 2000 and in March of 2001 about those alternative sites. There are better sites in our area than the proposed one at 5243 Paradise Road.

A better site could be found by utilizing MID electricity already in place for agricultural operations along Lateral 5. This irrigation canal crosses Stone Ave. about 1/2 mile between Paradise Road & California Ave. There is electrical service available along the canal. There are several parcels along the canal that could be used for the tower that would be a safe distance away from the busy country roads. The surrounding country roads are now being used for dumping furniture, garbage, yard prunings, etc. and also as drag strips.

With correct placement, the tower would be away from busy roadways and located close to one of several farm driveways for good access. Most farm driveways are sturdy and used for trucking crops, fertilizer, spray rigs and heavy equipment year round.

If a tower is necessary in this area, please consider alternate, better, acceptable sites.



John Kidd

MID Dir Div 5



Researchers warns of potential damage from cell towers

By Stacy D. Stumbo

Responding to public outcry, the Board of County Commissioners held a special workshop on the biological effects of cellular phone towers Tuesday.

Three scientists specializing in radio-frequency research, and two representatives from the Washington State Department of Health debated the ramifications of exposure to cell towers. More than 30 people, primarily from Lopez Island where AirTouch Cellular intends to build two towers, packed the commissioners' chambers.

Henry Lai, Ph.D., who has performed extensive research on the subject, explained to the commissioners and the crowd some of the adverse effects prolonged exposure to radio-frequency radiation can result in. He advised the group that in his study he found reproductive dysfunction and a decrease in memory, the ability to learn, the desire to eat and drink. Lai conducted his research on mice.

After eight to 10 months of chronic exposure Lai said that low-intensity radiation can cause significant DNA damage which may result in a change in cell proliferation, alterations in EEG brain waves, and may compromise the blood-brain barrier. Some of these effects may make individuals susceptible to Parkinson's and Hodgkin's Disease.

"There is some indication that the effects are cumulative," he said.

Charles Cobbs, Ph.D., has also studied health impacts stemming from cell tower exposure. He said that he has developed Cobbs Protocol for situations like that of Lopez Islanders who are afraid of having cell towers in their backyard. His protocol calls for examination of a site before and after a tower is built so that residents might have some redress should something go terribly wrong.

He said that the cellular industry is generally against studies such as he suggested because, "it's expensive, it's time consuming, and it leads to culpability."

Electrical engineer Don Webber, who was hired by Lopez Islanders a year ago to do baseline testing, said that the island is a very pristine environment and is relatively clean electro-magnetically speaking. He believes the presence of the towers would raise electro-magnetic radiation by one micro-watt per centimeter. About 99 percent of the population of the United States receives less than 4,380 micro-watts of electro-magnetic radiation per centimeter per year. He said that cell towers can radiate as much as 12,000 micro-watts per centimeter per year, and said that this will create an entirely new environment across the county, not to mention Lopez Island.

Agents of the Department of Health said that they are not so sure exposure from cell towers can result in the kind of problems that the scientist suggested. They said that very little research has been done on the topic, and they would not hazard a guess as to the validity of Lai's and the other scientists' assertions. They said that the department is hesitant to regulate without more information.

In a shaking voice, Commissioner Rhea Miller related that an eight-year-old boy who lives near the potential tower sites asked her what she would do if he were diagnosed with leukemia as a result of exposure. She asked Drew Thatcher of the Department of Health how she should respond to the boy and other children like him.

Thatcher told her that there are no easy answers, but reassured her that the levels of exposure on Lopez would not be extreme enough to cause cancer. "That's never going to happen here," he said.

Miller said she believes the department as well as the board should err on the side of caution in this case, pointing out that in the past government has allowed industries to build technology that has proved hazardous to the general populous. "It's not like it's never happened before," she said.

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Posted at 06:28 a.m. PST; Friday, March 6, 1998

A cell tower runaround that sidesteps dissent

MOVING smoothly through the Legislature is Senate Bill 6515, almost a textbook case of law that is reacting to public pressure - and attempting to stifle it.

Among other things, SB 6515 would eliminate local government's ability to regulate cellular telephone towers in neighborhoods. The telecommunications industry is heavily backing the bill, for obvious reason. If passed, cities and counties would no longer be able to impose moratoriums on cell towers and local jurisdictions would no longer collect fees beyond simple permit costs. Fees averaging \$1,000 a month to churches, schools or city halls would be eliminated in favor of cell tower placement in current utility rights of way. The measure has passed the Senate and is in the House, moving toward law.

Industry lobbyists and the bill's co-author, Sen. Bill Finkbeiner, R-Redmond, say it's all part of the telecom revolution. Getting the state wired with cell phones and fiber optic lines requires ready access to land for high-tech purposes.

What's wrong with the bill is that it cuts off community participation, stifles dissent and rolls over local public office-holders who are trying to represent their communities.

It's true the opponents to cell tower proliferation can be a pain in the neck, and it's true the debate over the potential ill effects of cell tower wave radiation is largely a scientific one that can't be resolved at the local city hall.

But SB 6515 threatens to make city and county officials powerless to speak on behalf of neighborhoods, and if anything, will cause a greater backlash certain to be heard in Olympia next year.

Among steps to make the phone companies better neighbors is emphasis on more co-location of cell equipment, something the industry has resisted on competitive grounds.

Cell towers are all over the place, and few people believe the technology can or should be stopped. But SB 6515 would end the moratoriums in place in the San Juan Islands and a dozen other communities and permit only one moratorium for each newly incorporated city until 2004.

While irritating to the cell companies, moratoriums were imposed to give local governments time to assess the impact of a proliferation of towers and whip antennas in their neighborhoods. That's not an inappropriate role for local government, no matter how inconvenient to the providers of cellular service.

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A Cellular Phone Tower on Ossining High School?

The Ossining School Board voted to allow placement of a PCS Base Station atop the Ossining High School on the basis of a "Safety Analysis" which claimed to report the health effects of the radiation emitted from such antennas.⁽¹⁾ Instead, it suppressed current areas of controversy and uncertainty and claimed falsely that this technology is, in effect, universally considered safe.

Critical questions concerning the health effects and safety of **radiofrequency electromagnetic radiation (RF)** remain! *Should we expose our children and ourselves to this radiation for the next twenty years when so much uncertainty exists?*

Our School Board was told that concerns about health effects from exposure to magnetic fields from electric power distribution lines or the use of hand held cell phones are based on fear, not fact. The Board was not told that a National Institute of Environmental Health Sciences panel this year designated power frequency electromagnetic fields (EMF) as "possible human carcinogens."⁽²⁾

There is a robust and ongoing controversy over many aspects of RF health effects. While no one disagrees that serious health hazards occur when living cells in the body are heated, as happens with high intensity RF exposure (just like in a microwave oven), scientists are currently still investigating the health hazards of low intensity exposure. Low intensity exposure is exposure which does not raise the temperature of the living cells in the body.

The telecommunications industry claims cellular antennas are safe because the radiation they produce is too weak to cause heating, a "thermal effect." They point to "safety standards" from groups such as ANSI/IEEE or ICNIRP to support their claims. But these groups have explicitly stated that their claims of "safe levels of exposure" are based on thermal levels.⁽³⁾ Thus the claim that the RF exposure is harmless rests on the fact that it is too weak to produce a rise in temperature, a "thermal effect."

There is a large body of internationally accepted scientific evidence which points to the existence of nonthermal effects of microwave radiation. The issue at the present time is not whether such evidence exists, but rather what weight to give it.

Internationally acknowledged experts in the field of RF research have shown that RF of the type used in digital cellular antennas and phones can have critical effects on cell cultures, animals, and people in laboratories and have also found epidemiological evidence (studies of communities, not in the laboratory) of serious health effects at "non-thermal levels," where the intensity of the radiation was too low to cause heating. They have found:

- Increased cell growth of brain cancer cells⁽⁴⁾
- A doubling of the rate of lymphoma in mice⁽⁵⁾
- Changes in tumor growth in rats⁽⁶⁾
- An increased number of tumors in rats⁽⁷⁾

- Increased breaks in double and single stranded DNA, our genetic material⁽⁸⁾
- 2 to 4 times as many cancers in Polish soldiers exposed to RF⁽⁹⁾
- More childhood leukemia in children exposed to RF⁽¹⁰⁾
- Changes in sleep patterns and REM type sleep⁽¹¹⁾
- Headaches caused by RF exposure⁽¹²⁾
- Neurologic changes⁽¹³⁾ including
 - Changes in the blood-brain-barrier⁽¹⁴⁾
 - Changes in cellular morphology (including cell death)⁽¹⁵⁾
 - Changes in neural electrophysiology (EEG)⁽¹⁶⁾
 - Changes in neurotransmitters (which affect motivation and pain perception)⁽¹⁷⁾
 - Metabolic changes (of calcium ions, for instance)⁽¹⁸⁾
 - Cytogenetic effects (which can affect cancer, Alzheimer's, neurodegenerative diseases)⁽¹⁹⁾
- Decreased memory, attention, and slower reaction time in school children⁽²⁰⁾
- Retarded learning in rats indicating a deficit in spatial "working memory"⁽²¹⁾
- Increased blood pressure in healthy men⁽²²⁾
- Damage to eye cells when combined with commonly used glaucoma medications⁽²³⁾

Many national and international organizations have recognized the need to define the true risk of low intensity, non-thermal RF exposure, calling for intensive scientific investigation to answer the open questions. These include:

- The World Health Organization, noting reports of "cancer, reduced fertility, memory loss, and adverse changes in the behavior and development of children."⁽²⁴⁾
- The U. S. Food and Drug Administration (FDA)⁽²⁵⁾
- The International Agency for Research on Cancer (IARC)⁽²⁶⁾
- The Swedish Work Environmental Fund⁽²⁷⁾
- The National Cancer Institute (NCI)⁽²⁸⁾
- The European Commission (EC)⁽²⁹⁾
- New Zealand's Ministry of Health⁽³⁰⁾
- National Health and Medical Research Council of Australia⁽³¹⁾
- Commonwealth Scientific Industrial Research Organization of Australia (CSIRO)⁽³²⁾

Non-thermal effects are recognized by experts on RF and health to be potential health hazards. Safe levels of RF exposure for these low intensity, non-thermal effects have not yet been established.

The FDA has explicitly rejected claims that cellular phones are "safe."⁽³³⁾

The Environmental Protection Agency (PA) has rejected the current (ANSI/IEC) safety standards because they are based on thermal effects alone.⁽³⁴⁾

Many scientists and physicians question the safety of exposure to RF. The CSIRO study, for example, notes that there are no clear cutoff levels at which low intensity exposure has no effect, and that the results of ongoing studies will take years to analyze.⁽³⁵⁾

The county of Palm Beach, FL, the state of California, and the country of New Zealand have all prohibited cellular antennas near schools due to safety concerns.

What should we do while waiting for the much needed answers about the non-thermal effects of RF? This is the question we, as parents, students, and Ossining residents must answer.

The Board of Education has the responsibility of protecting and promoting the best interests of the students of our schools and of our community in general. The commercial interests of outside profit-making corporations can play no role in their decisions.

We simply don't know at this time what the possible health consequences of long term, low level exposure to RF of the type used by the PCS Base Station antenna will be. No one knows--the data just isn't there. The chairman of the ICNIRP, one of the main groups which formulated the current exposure guidelines, has stated that the guidelines include "no consideration regarding prudent avoidance" for health effects for which evidence is less than conclusive.⁽³⁶⁾

Should we allow ourselves to take this risk?

Should we allow our children to take this risk?

School buildings, youth centers, and other places where children are found are not the proper place for a technology which could endanger health and well being.

As noted at the start of this brief review, our School Board was told none of this when they were asked to decide on the siting of the cellular phone antenna. The "Safety Analysis" they received was not an honest attempt to explain the health effects of RF exposure, but rather a sophisticated "sale's pitch" designed to blind the Board to the real questions and uncertainties. While such behavior in an attempt to "make a sale" can never be condoned, in the case of the suppression of information about possible adverse health consequences for the children of our schools, it is unconscionable. Our children and their parents stand defenseless before such a strategy.

The only reasonable and responsible course is to "play it safe" with our children. The Ossining High School is not the proper place for a cellular telephone antenna.

[back] 1. "Safety Analysis of the Electromagnetic Environment in the Vicinity of a Proposed Personal Communications Services Base Station, Site 06-460I: Ossining High School, Ossining, New York" prepared by the Wireless & Optical Technologies Safety Department of Bell Laboratories for Sprint Spectrum L.P.

[back] 2. An international blue ribbon panel assembled by the National Institute of Environmental Health Sciences (NIEHS) designated power frequency electromagnetic fields (EMF) as "possible human carcinogens" on June 24, 1998. The panel's decision was based largely on the results of epidemiological studies of children exposed at home and workers exposed on the job. The evaluation of the EMF literature followed procedures developed by the International Agency for Research on Cancer (IARC), based in Lyon, France. The working group's report will be the basis for the NIEHS report to Congress on the EMF Research and Public Information Dissemination program (EMF RAPID). The National Radiological Protection Board (NRPB) of the United Kingdom noted that the views of its Advisory Group on Non-Ionizing Radiation are "consistent with those of the NIEHS expert panel."

June 26, 1998 statement of the National Radiological Protection Board, sited in Microwave News, July/August 1998

[back] 3. The International Commission on Non-Ionizing Radiation Protection (ICNIRP) statement "Health Issues Related to the Use of Hand-Held Radiotelephones and Base Transmitters" of 1996 reads:

"Thermally mediated effects of RF fields have been studied in animals, including primates. These data suggest effects that will probably occur in humans subjected to whole body or localized heating sufficient to increase tissue temperatures by greater than 1C. They include the induction of opacities of the lens of the eye, possible effects on development and male fertility, various physiological and thermoregulatory responses to heat, and a decreased ability to perform mental tasks as body temperature increases. Similar effects have been reported in people subject to heat stress, for example while working in hot environments or by fever. The various effects are well established and form the biological basis for restricting occupational and public exposure to radiofrequency fields. In contrast, non-thermal effects are not well established and currently do not form a scientifically acceptable basis for restricting human exposure for frequencies used by hand-held radiotelephones and base stations."

International Commission on Non-Ionizing Radiation Protection, "Health Issues Related to the Use of Hand-Held Radiotelephones and Base Transmitters," Health Physics 70:587-593, 1996

The ANSI/IEEE Standard for Safety Levels of 1992 similarly states:

"An extensive review of the literature revealed once again that the most sensitive measurements of potentially harmful biological effects were based on the disruption of ongoing behavior associated with an increase of body temperature in the presence of electromagnetic fields. Because of the paucity of reliable data on chronic exposures, IEEE Subcommittee IV focused on evidence of behavioral disruption under acute exposures, even disruption of a transient and fully reversible nature."

IEEE Standards Coordinating committee 28 on Non-Ionizing Radiation Hazards: Standard for Safe Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 KHz to 300 GHz (ANSI/IEEE C95.1-1991), The Institute of Electrical and Electronics Engineers, New York, 1992

[back] 4. Drs. Czerska, Casamento, Ning, and Davis (working for the Food and Drug Administration in 1997) using "a waveform identical to that used in digital cellular phones" at a power level within our current standards (SAR of 1.6 W/Kg, the maximum spatial peak exposure level recommended for the general population in the ANSI C95.1-1991 standard) found increases in cellular proliferation in human glioblastoma cells. This shows that "acceptable" levels of radiation can cause human cancer cells to multiply faster. The authors note that "because of reported associations between cellular phone exposure and the occurrence of a brain tumor, glioblastoma, a human glioblastoma cell line was used" in their research.

E.M. Czerska, J. Casamento, J. T. N. and C. Davis, "Effects of Radiofrequency Electromagnetic Radiation on Cell Proliferation," [Abstract presented on February 7, 1997 at the workshop 'Physical Characteristics and Possible Biological Effects of Microwaves Applied in Wireless Communication, Rockville, MD] E. M. Czerska, J. Casamento Centers for Devices and Radiological Health, Food and Drug Administration, Rockville, Maryland 20857, USA; H. T. Ning, Indian Health Service, Rockville, Maryland 20857, USA; C. Davis, Electrical Engineering Dept., Univ. of Maryland, College Park, Maryland 20742, USA

[back] 5. Dr. Michael Repacholi (in 1997, currently the director of the International Electromagnetic Fields Project at the World Health Organization) took one hundred transgenic mice and exposed some to radiation for two 30 minute periods a day for up to 18 months. He found that the exposed mice developed lymphomas (a type of cancer) at twice the rate of the unexposed mice. While telecommunications industry spokespersons criticized the experiment for using mice with a mutation which predisposed them to cancer (transgenic) the researchers pointed out that "some individuals inherit mutations in other genes...that predispose them to develop cancer, and these individuals may comprise a subpopulation at special risk from agents that would pose an otherwise insignificant risk of cancer."

Dr. Repacholi stated "I believe this is the first animal study showing a true nonthermal effect." He repeated the experiment in 1998 using 50 Hz fields instead of the 900 MHz pulsed radiation (the type used by cellular phones) used in the original experiment and found no cancer risk. He stated that this new data had implications for his original cellular phone study: "the control groups for both our RF and 50 Hz field studies showed no statistical differences, which lessens the possibility that the RF study result was a chance event or due to errors in methodology."

It is extremely important to note that Dr. Michael Repacholi was Chairman of the ICNIRP at the time its Statement on Health Issues Related to the Use of Hand-Held Radiotelephones and Base Transmitters was developed in 1996.

M. Repacholi et al., "Lymphomas in Eμ-Pim1 Transgenic Mice Exposed to Pulsed 900 MHz Electromagnetic Fields," Radiation Research, 147, pp.631-640, May 1997

[back] 6. Dr. Ross Adey (Veterans Administration Hospital in 1996) found what appeared to be a protective effect in rats exposed to the type of radiation used in digital cellular phones. The rats were exposed to an SAR of 0.58-0.75 W/Kg 836 MHz pulsed radiation of the TDMA type two hours a day, four days a week for 23 months, with the signals turned on and off every 7.5 minutes, so total exposure was 4 hours a week. Interestingly this effect was not present when a non-digital, analog signal was used. Rats exposed developed cancer less often. This study shows that low power fields of the digital cellular frequency can influence cancer development. Whether they would protect or promote in our children is a question for further study.

Ross Adey of the Veterans Administration Hospital of Loma Linda, CA presented the results of pulsed (digital cellular) radiation on June 13, 1996 at the 18th Annual Meeting of the Bioelectromagnetics Society in Victoria, Canada. He presented the findings of the analog cellular phone radiation effect at the June 1997 2nd World Congress for Electricity and Magnetism in Biology and Medicine in Bologna, Italy. Reviews can be found in Microwave News issues July/August, 1996 and March/April 1997.

[back] 7. Dr. A. W. Guy reported an extensive investigation on rats chronically exposed from 2 up to 27 months of age to low-level pulsed microwaves at SARs up to 0.4 W/Kg. The exposed group was found to have a significantly higher incidence of primary cancers.

A. W. Guy, C. K. Chou, L. Kunz, L. Crowley, and J. Krupp, "Effects of Long-Term Low-Level Radiofrequency Radiation Exposure on Rats." Volume 9. Summary. Brooks Air Force Base, Texas, USAF School of Aerospace Medicine, USF-SAM-TR-85-11; 1985

**This information is taken out of context (it is a 63 page document)
but can be found in it's entirety at:
www.emfguru.com/CellPhone/probable-health/Probable-health.htm**

Cellular Phone:

Probable Health Effects associated with cell phone towers

by: Dr. Neil Cherry

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Posted:

9 August 2000

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Probable health effects associated with mobile base stations in communities: the need for health studies

Dr Neil Cherry

8th June 2000

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Probable health effects associated with

mobile base stations in communities: the need for health studies

Dr Neil Cherry

Lincoln University

Canterbury, New Zealand.

8th June 2000

Introduction:

When measured or realistic radial radiation patterns from radio/TV broadcast towers are matched with cancer rates in people living in the vicinity of high-powered radio and television towers they produce consistent significant dose response relationships. These prove that chronic exposure to very low level RF radiation causes sleep disturbance, melatonin reduction and cancer in many part of the human body. With the consistency between the biological effects of studies involving powerlines, electrical occupations, diathermy, radio, radar and cell phone electromagnetic radiation exposure, it is highly probable that these adverse health effects will be found in the vicinity of cell sites. Because of the small population numbers around single sites, these effects will only be detectable by studying populations around hundreds of cell site

U.S. Embassy in Moscow Study:

Goldsmith (1997) reported elevated mutagenesis and carcinogenesis among the employees and dependents that were chronically exposed to a very low intensity radar signal the U.S. Embassy in Moscow in the 1950's to 1970's. For most of the time the external signal strength was measured at $5 \mu \text{ W/cm}^2$ for 9 hours/day on the West Facade of the building where the radar was pointed, Lilienfeld et al. (1978). To get the full strength of the signal a person would have to stand at an open window on the west side of the building at the 6th floor, Pollack (1979). Hence allowing for the internal signal strengths to be between 20 and 100 times lower, the occupants of the embassy were exposed to a long-term average radar signal in the range of 0.02 to $0.1 \mu \text{ W/cm}^2$. Blood tests showed significantly elevated chromosome aberrations in more than half of the people sampled. Leukaemia rates were elevated for adults and children.

The key results included:

The all cause mortality rate for Moscow males as 0.42 (0.3-0.6) and for females 1.1 (0.5-1.9). Hence males, primarily State Department employees, were much healthier and females were as healthy as the average U.S. residents. This is a good example of the "healthy worker" effect. State Department selection procedures rule out a range

of unhealthy people and favour healthy people.

The following tables set out some of the key results from the data tables within Lilienfeld et al. (1978). One of the most striking results is given in Lilienfeld Table 6.18. This shows the rates of various sicknesses as a function of years of service in the Embassy in Moscow and hence, years if low level radar exposure. All of these symptoms show significant dose-response relationships. The sickness rates increased independent of the age of arrival and faster than the influence of aging.

Table 2: Sickness rates increased in Moscow with years of service: (Table 6.18)

Under 2 yrs 2-3 years 4 + years p-value for trend

Number of people 316 455 45

Person-years 3709 5570 568

Male Conditions (%)

Present Health Summary 5.4 9.7 16.2 0.05

Arthritis/rheumatism 4.3 6.5 8.8 0.02

Back Pain 4.0 7.7 11.8 0.04

Ear problems 3.8 5.6 14.7 0.02

Vascular system 0.8 2.7 11.8 0.004

Skin & Lymphatic 9.4 12.2 28.0 0.02

Female Conditions (%)

Vaginal discharge 4.2 13.8 17.5 0.04

Table 6.31 in Lilienfeld, Table 3 here, show elevated and significantly elevated neurological symptoms for male employees who worked in the radar exposed situation.

Table 3: Neurological Symptoms per 1000 p-y, Male employees: (Table 6.31)

Moscow Comparison RR p-value

Depression 1.3 0.73 1.78 0.004

Migraine 1.8 0.97 1.86

Lassitude 1.2 0.78 1.54

Irritability 1.3 0.66 1.97 0.009

Nervous Disorders 1.5 0.64 2.34

Difficulty in Concentrating 1.4 0.52 2.96 0.001

Memory Loss 1.6 0.50 3.20 0.008

Dizziness 1.2 0.85 1.41

Finger Tremor 1.3 0.71 1.83

Insomnia 1.1 0.90 1.22

Neurosis 1.3 0.76 1.71

These symptoms are consistent with the "Microwave Syndrome" of the "Radiofrequency Radiation Sickness", Johnson-Liakouris (1998). Mild et al. (1998) identified significant dose-response relationships for the following symptoms from the use of mobile phones: Memory Loss, Difficulty in Concentrating, Headache and Fatigue. Hence it is now shown and known that RF/MW exposure from extremely low but chronic exposure over many years, occupational exposure and cell phone use all

produces significant and consistent neurological symptoms. The Risk Ratios were quite large but they were not quite significant because of the very small sample numbers.

Table 4 shows the congenital malformations and cancer in children. Some of this data was shown by the late Dr John Goldsmith to the Environment Court in New Zealand. It was this data that the court used for its decision.

Dose-Response Cancers in the Vicinity of Broadcast Towers:

With the similarity of FM radio and TV signals and analogue cell phones, studies of health effects at very low mean exposure levels for those living in the vicinity of broadcast towers is relevant to the consideration of the health effects around cell sites.

Broadcast towers provide a unique opportunity for determining whether or not RF/MW exposures are causally related to cancer. This arises from two factors. The first is the large populations that may be exposed and the second is the particular shape of the radial RF patterns. The ground level radial RF radiation patterns are complex undulating functions of the carrier frequency, the height of the tower and the antenna horizontal and vertical radiation patterns. When rates of disease follow these patterns it excludes all other factors, removing all possible confounders.

Around broadcast towers the ground level exposure patterns are a function of the power of the source signal and the antenna gain. The gain, is expressed as a function of the Equivalent Isotropic Radiated Power (EIRP) is a function of the technology used to focus the signal. Antennae are complex elements that attempt to efficiently focus the main beam and minimize the side-lobes. The ability to do this to some extent is a function of the carrier frequency. Because of these side-lobes a complex antenna pattern is formed with undulating peaks in the 'near field' towers, which extends out to 5 to 6 km typically. Figures 2 to 5.

Figure 2 shows the measured radial pattern near ground level around the Empire State Building in the 1930's, formed by the VHF stations installed on it tower.

Figure 2: Ground level radiation pattern for (a) the 44 MHz (VHF) signal from the Empire State Building in New York City, from Jones (1933) by merging his figures 6 and 8,

Figure 3, from 'Reference data for Engineers', Jordon (1985), shows the dependence on the distance of the peaks and troughs as a function of the carrier frequency. The higher frequencies, 300 MHz, have higher relative peaks further out and lower relative

peaks closer in than the 50 and 100 MHz signals. Note that the closest part of Figure 3, is 1 mile (1.6 km) from the tower. Figure 2 shows for a 44 MHz signal, a peak at 0.4 miles, 640m.

Figure 3: A theoretical set of radial VHF antennae patterns, Antenna height 1000', receiver height 30', power 1 kW, Reference data for Engineers, Jordon (1985).

Once the horizontal and vertical antenna patterns are known, the ground level exposure is a function of the gain for the particular elevation angle involved and the distance from the antenna, since the inverse square law operates along the ray of the beam. There are also signal strength variations caused by positive and negative reinforcement of the direct beam and the reflected beam at any point.

Epidemiological studies of Residential RF/MW exposure:

Sutra Tower Study: Selvin et al. (1992):

Professor Steve Selvin and his colleagues were interested in developing a statistical method for identifying from residential data, who was appropriately characterized as "exposed" compared with "non-exposed". They chose to use a data set for 4 childhood cancers, representing about 50 % of the total childhood cancer, for the San Francisco City area. A prominent feature of the area is the Sutra Tower. It is a very tall tower on a hill which can be seen from all over San Francisco. Since this is the primary radio and TV broadcast facility in the Bay Area, there are very high-powered outputs from the Tower. In broadcast facility in 1997 it had over 980 kW of VHF TV and FM radio, and 18,270 kW of UHF TV, expressed as EIRP, Hammett and Edison (1997). The tower is 300m high on a 276 m hill, placing the majority of the high-powered antennas at 520 m AMSL. The locations of children with leukaemia and "all cancer" are shown in Figures 9 and 10.

Diagrams correlating various antenna shapes and radiation falls compared to diagnosed cancers & other health problems can be found at this site. Diagrams also reflect lowered incidents of health problems when radiation levels are reduced by distance or blocked by hills.

This is a continuation of of the previous study but one that pertains directly to cell phone radiation. More information further applicable diagrams can be found at: www.emfguru.com/CellPhone/probable-health/Probable-health.htm

Cell Phone Radiation Research:

For years the cell phone companies and government authorities have assured us that cell phone are perfectly safe. They state that the particular set of radiation parameter associated with cell phones are not the same as any other radio signal and therefore earlier research does not apply. They also mount biased review teams who falsely dismiss any results that indicate adverse biological and health effects and the flawed pre-assumption that the only possible effect is tissue heating. There is a very large body of scientific research that challenges this view. Now we have published research, primarily funded by governments and industry that shows that cell phone radiation causes the following effects:

* Alters brain activity including EEG, Von Klitzing (1995), Mann and Roschkle (1996), Krause et al. (2000).

* Disturbs sleep, Mann and Roschkle (1996), Bordely et al. (1999)

* Alters human reaction times, Preece et al. (1999), Induced potentials, Eulitz et al. (1998), slow brain potentials, Freude et al. (1998), Response and speed of switching attention (need for car driving) significantly worse, Hladky et al. (1999). Altered reaction times and working memory function (positive), Koivisto et al. (2000), Krause et al. (2000).

* Weakens the blood brain barrier, BBB ($p < 0.0001$) with a dose above 1.5 J/kg. For a 2 minute exposure the SAR = 0.013 W/kg and 10 minutes, SAR - 0.0025W/kg: Persson, B.R.R., Salford, L.G. and Brun, A., (1997).

* A Fifteen-minute exposure, increased auditory brainstem response and hearing deficiency in 2 kHz to 10 kHz range, Kellenyi et al. (1999).

* While driving, with 50 minutes per month with a cell phone, a highly significant 5.6-fold increase in accident risk, Violanti et al. (1996); a 2-fold increase in fatal accidents with cell phone in car, Violanti et al. (1998); impairs cognitive load and detection thresholds, Lambie et al. (1999).

* Significant changes in local temperature, and in physiologic parameters of the CNS and cardiovascular system, Khdnisskii, Moshkarev and Fomenko (1999).

* Causes memory loss, concentration difficulties, fatigue, and headache, in a dose response manner, (Mild et al. (1998)). Headache, discomfort, nausea, Hocking (1998).

Figure 23: Prevalence of symptoms for Norwegian mobile phone users, mainly analogue, with various categories of length of calling time per day, Mild et al. (1998).
Figure 24: Prevalence of symptoms for Swedish mobile phone users, mainly digital, with various categories of length of calling time per day, Mild et al. (1998).

These are the same symptoms that have frequently been reported as "Microwave Sickness Syndrome" or "Radiofrequency Sickness Syndrome", Baranski and Czerski (1976) and Johnson-Liakouris (1998).

* Cardiac pacemaker interference: skipped three beats, Barbaro et al. (1996); showed interference, Hofgartner et al. (1996); significant interference, $p < 0.05$ Chen et al. (1996); extremely highly significant interference, $p = 0.0003$, Naegeli et al. (1996); $p < 0.0001$, Altamura et al. (1997); reversible interference, Schlegal et al. (1998); significantly induced electronic noise, Occhetta et al. (1999); various disturbances observed and warnings recommended, Trigano et al. (1999)

* Reduces the pituitary production of Thyrotropin (Thyroid Stimulating Hormone, TSH):

Figure 25: A significant reduction in Thyrotropin (Thyroid Stimulating Hormone) during

cell phone use, de Seze et al. (1998).

* Decreases in sperm counts and smaller tube development in testes, Dasdag et al. (1999).

* Increases embryonic mortality of chickens, Youbicier-Simo, Lebecq and Bastide (1998).

* Increases blood pressure, Braune et al. (1998).

* Reduces melatonin, Burch et al. (1997, 1998).

* Breaks DNA strands (Verschaeve et al. (1994), Maes et al. (1997), which is still significant at 0.0024W/kg (1 μ W/cm²), Phillips et al. (1998)).

* Produces an up to three-fold increase in chromosome aberrations in a dose response manner from all cell phones tested, Tice, Hook and McRee, reported in Microwave News, April/May 1999.

* Doubles c-fos gene activity (a proto oncogene) for analogue phones and increases it by 41 % for digital phones, Goswami et al. (1999), altered c-jun gene, Ivaschuk et al. (1997), Increased hsp70 messenger RNA, Fritz et al. (1997).

* Increases Tumour Necrosis Factor (TNF), Fesenko et al. (1999).

* Increases ODC activity, Penafiel et al. (1997).

* DNA synthesis and cell proliferation increased after 4 days of 20 min for 3 times/day exposure. Calcium ions were significantly altered, French, Donnellan and McKenzie (1997). Decreased cell proliferation, Kwee and Raskmark (1997), Velizarov, Raskmark and Kwee (1999)

* Doubles the cancer in mice, Repacholi et al. (1997).

* Increases the mortality of mobile phone users compared with portable phone users, RR = 1.38, 95%CI: 1.07-1.79, p=0.013, Rothman et al. (1996).

* Increases human brain tumor rate by 2.5 times (Hardell et al. (1999)). Associated with an angiosarcoma (case study), Hardell (1999)

* Hardell et al. (2000), for analogue phones OR = 2.67, 95%CI: 1.02-6.71, with higher tumour rates at brain areas of highest exposure.

Cell Site Health Surveys:

There is overwhelming evidence that cell sites are likely to cause a wide range of serious adverse health effects. Carefully designed health surveys are need to disprove or confirm this claim. Careful survey design includes consideration of exposure levels and patterns, as well as consideration of indoor and outdoor exposure levels that contribute differently to mean exposure levels.

Cell site antennas focus most of the radiation into the main beam in the horizontal and vertical directions. The vertical antenna pattern includes two or three main side-lobes that produce the near tower ground level radiation exposures, Figures 26 to 28.

Figure 26: Cell site profile showing the extent of the main beams and side lobes in which the $200 \mu W/cm^2$ standard is exceeded. This illustrates the directions of the beams and side lobes.

Cell site exposures for a low and high power sites are given in Figures 27 and 28. The side-lobes produce the nearer level and then the side of the main beam produces a wider peak and then falls off with distance from the tower. These two figures show the maximum exposure levels along the main beam direction. Figure 29 shows the horizontal pattern of a three-antenna tower radiation. The area between the main beam directions has a much lower exposure than in the main beam direction.

Figure 27: A low-powered cell site such as proposed for the Elmwood site.

Figure 28: A high-powered site as used at the Opawa Road site.

Figure 29: Three-panel horizontal radiation pattern, for a low powered site, as for the Elmwood Site.

Conclusions:

To over 40 studies have shown adverse biological or human health effects specifically from cell phone radiation. These research results to date clearly show that cell phones and cell phone radiation are a strong risk factor for all of the adverse health effects identified for EMR because they share the same biological mechanisms. The greatest risk is to cell phone users because of the high exposure to their heads and the great sensitivity of brain tissue and brain processes. DNA damage accelerates cell death in the brain, advancing neurodegenerative diseases and brain cancer. Brain tumour is already an identified risk factor. Cell phones are carried on people's belts and in breast pockets. Hence liver cancer, breast cancer and testicular cancer became probable risk factors.

Because the biological mechanisms for cell phone radiation mimics that of EMR, and the dose-response relationships have a threshold of **ZERO**, and this includes genetic damage, there is extremely strong evidence to conclude that cell sites are risk factors for:

- * Cancer, especially brain tumour and leukaemia, but all other cancers also.**
- * Cardiac arrhythmia, heart attack and heart disease, particularly arrhythmia.**
- * Neurological effects, including sleep disturbance, learning difficulties, depression and suicide.**
- * Reproductive effects, especially miscarriage and congenital malformation.**

*** Viral and infectious diseases because of reduce immune system competency as associated with reduced melatonin and altered calcium ion homeostasis.**

A recommended risk reduction target for the mean chronic public exposure is 10 nW/cm².

This is accomplished by setting the outside boundary exposure as 0.1 μ W/cm².

References:

Abelin, T., 1999: "Sleep disruption and melatonin reduction from exposure to a shortwave radio signal". Seminar at Canterbury Regional Council, New Zealand. August 1999.

Adey, W.R., Byus, C.V., Cain, C.D., Higgins, R.J., Jones, R.A., Kean, C.J., Kuster, N., MacMurray, A., Stagg, R.B., Zimmerman, G., Phillips, J.L. and Haggren, W., 1999: "Spontaneous and nitrosourea-induced primary tumors of the central nervous system in Fischer 344 rats chronically exposed to 836 MHz modulated microwaves". *Radiation Research* 152(3): 293-302.

Alberts, E.N., 1977: "Light and electron microscopic observations on the blood-brain barrier after microwave irradiation. In Symposium on Biological effects and measurement of Radio Frequency/Microwaves, HEW Publication (FDA) 77-8026, pp 294-309.

Alberts, E.N., 1978: "Reversibility of microwave induced blood-brain barrier permeability". *Radio Science Supplement*.

Altpeter, E.S., Krebs, Th., Pfluger, D.H., von Kanel, J., Blattmann, R., et al., 1995: "Study of health effects of Shortwave Transmitter Station of Schwarzenburg, Berne, Switzerland". University of Berne, Institute for Social and Preventative Medicine, August 1995.

Altamura G, Toscano S, Gentilucci G, Ammirati F, Castro A, Pandozi C, Santini M, 1997: "Influence of digital and analogue cellular telephones on implanted pacemakers". *Eur Heart J* 18(10): 1632-4161.

Arnetz, B.B. and Berg, M., 1996: "Melatonin and Andrenocorticotropic Hormone levels

in video display unit workers during work and leisure. *J Occup Med* 38(11): 1108-1110.

Balcer-Kubiczek, E.K. and Harrison, G.H., 1991: "Neoplastic transformation of C3H/10T1/2 cells following exposure to 120Hz modulated 2.45 GHz microwaves and phorbol ester tumor promoter". *Radiation Research*, 125: 65-72.

Balode, Z., 1996: "Assessment of radio-frequency electromagnetic radiation by the micronucleus test in Bovine peripheral erythrocytes". *The Science of the Total Environment*, 180: 81-86.

Barbaro V, Bartolini P, Donato A, Militello C, 1996: "Electromagnetic interference of analog cellular telephones with pacemakers". *Pacing Clin Electrophysiol* 19(10): 1410-1418.

Baris, D. and Armstrong, B., 1990: "Suicide among electric utility workers in England and Wales". *Br J Indust Med* 47:788-789.

Bawin, S.M. and Adey, W.R., 1976: "Sensitivity of calcium binding in cerebral tissue to weak electric fields oscillating at low frequency". *Proc. Natl. Acad. Sci. USA*, 73: 1999-2003.

Beall, C., Delzell, E., Cole, P., and Brill, I., 1996: "Brain tumors among electronics industry workers". *Epidemiology*, 7(2): 125-130.

Blackman, C.F., Benane, S.G., Elliott, D.J., and Pollock, M.M., 1988: "Influence of Electromagnetic Fields on the Efflux of Calcium Ions from Brain Tissue in Vitro: A Three-Model Analysis Consistent with the Frequency Response up to 510 Hz". *Bioelectromagnetics*, 9:215-227.

Blackman, C.F., Kinney, L.S., House, D.E., and Joines, W.T., 1989: "Multiple power-density windows and their possible origin". *Bioelectromagnetics*, 10: 115-128.

Blackman, C.F., 1990: "ELF effects on calcium homeostasis". In "Extremely low frequency electromagnetic fields: The question of cancer", BW Wilson, RG Stevens, LE Anderson Eds, Publ. Battelle Press Columbus: 1990; 187-208.

Borbely, AA, Huber, R, Graf, T, Fuchs, B, Gallmann, E, Achermann, P, 1999: Pulsed high-frequency electromagnetic field affects human sleep and sleep electroencephalogram. *Neurosci Lett* 275(3):207-210.

Bortkiewicz, A., Zmyslony, M., Palczynski, C., Gadzicka, E. and Szmigielski, S., 1995: "Dysregulation of autonomic control of cardiac function in workers at AM broadcasting stations (0.738-1.503 MHz)". *Electro- and Magnetobiology* 14(3): 177-191.

Bortkiewicz, A., Gadzicka, E. and Zmyslony, M., 1996: "Heart rate in workers exposed to medium-frequency electromagnetic fields". *J Auto Nerv Sys* 59: 91-97.

Bortkiewicz, A., Zmyslony, M., Gadzicka, E., Palczynski, C. and Szmigielski, S., 1997: "Ambulatory ECG monitoring in workers exposed to electromagnetic fields". *J Med Eng and Tech* 21(2):41-46.

Braune, S, Wrocklage, C, Raczek, J, Gailus, T, Lucking, CH, 1998: Resting blood pressure increase during exposure to a radio-frequency electromagnetic field. *Lancet* 351(9119):1857-1858.

Bruve, R., Feldmane, G., Heisele, O., Volrate, A. and Balodis, V., 1998: "Several immune system functions of the residents from territories exposed to pulse radio-frequency radiation". Presented to the Annual Conference of the ISEE and ISEA,

Boston Massachusetts July 1998.

Burch, J.B., Reif, J.S., Pittrat, C.A., Keefe, T.J. and Yost, M.G., 1997: "Cellular telephone use and excretion of a urinary melatonin metabolite". In: Annual review of Research in Biological Effects of electric and magnetic fields from the generation, delivery and use of electricity, San Diego, CA, Nov. 9-13, P-52.

Burch, J.B., Reif, J.S., Yost, M.G., Keefe, T.J. and Pittrat, C.A., 1998: "Nocturnal excretion of urinary melatonin metabolite among utility workers". *Scand J Work Environ Health* 24(3): 183-189.

Burch, J.B., Reif, J.S., Yost, M.G., Keefe, T.J. and Pittrat, C.A., 1999a: "Reduced excretion of a melatonin metabolite among workers exposed to 60 Hz magnetic fields" *Am J Epidemiology* 150(1): 27-36.

Burch, J.B., Reif, J.S. and Yost, M.G., 1999b: "Geomagnetic disturbances are associated with reduced nocturnal excretion of melatonin metabolite in humans". *Neurosci Lett* 266(3):209-212.

Burch, J.B., Reif, J.S., Noonan, C.W. and Yost, M.G., 2000: "Melatonin metabolite levels in workers exposed to 60-Hz magnetic fields: work in substations and with 3-phase conductors". *J of Occupational and Environmental Medicine*, 42(2): 136-142.

Byus, C.V., Kartun, K., Pieper, S. and Adey, W.R., 1988: "Increased ornithine decarboxylase activity in cultured cells exposed to low energy modulated microwave fields and phorbol ester tumor promoters". *Cancer research*, 48(15): 4222-4226.

Cantor, K.P., Stewart, P.A., Brinton, L.A., and Dosemeci, M., 1995: "Occupational exposures and female breast cancer mortality in the United States". *Journal of Occupational Medicine*, 37(3): 336-348.

Chen WH, Lau CP, Leung SK, Ho DS, Lee IS, 1996: "Interference of cellular phones with implanted permanent pacemakers". *Clin Cardiol* 19(11): 881-886.

Cossarizza, A., Angioni, S., Petraglia, F., Genazzani, A.R., Monti, D., Capri, M., Bersani, F., Cadossi, R. and Franceschi, C., 1993: "Exposure to low frequency pulsed electromagnetic fields increases interleukin-1 and interleukin-6 production by human peripheral blood mononuclear cells". *Exp Cell Res* 204(2):385-387.

Daniells, C, Duce, I, Thomas, D, Sewell, P, Tattersall, J, de Pomerai, D, 1998: "Transgenic nematodes as biomonitors of microwave-induced stress". *Mutat Res* 399: 55-64.

Dasdag, S, Ketani, MA, Akdag, Z, Ersay, AR, Sar,i I, Demirtas ,OC, Celik, MS, 1999: Whole-body microwave exposure emitted by cellular phones and testicular function of rats. *Urol Res* 27(3):219-223.

Davis, R.L. and Mostofl, 1993: "Cluster of testicular cancer in police officers exposed to hand-held radar". *Am. J. Indust. Med.* 24: 231-233.

Deroche, M., 1971: " Etude des perturbations biologiques chez les techniciens O.R.T.F. dans certains champs electromagnetiques de haute frequence". *Arch Mal. Prof*, 32: 679-683.

De Mattei, M., Caruso, A., Traina, G.C., Pezzetti, F., Baroni, T., and Sollazzo, V., 1999: "Correlation between pulsed electromagnetic fields exposure time and cell

proliferation increase in human osteosarcoma cell lines and human normal osteoblast cells in vitro". *Bioelectromagnetics* 20: 177-182.

De Pomerai, D., Daniells, C., David, H., Duce, I., Mutwakil, M., Thomas, D., Sewell, P., Tattersall, J., Jones, D., and candido, P., 2000: "Non-thermal heat-shock response to microwaves". *Nature* May 25,

de Seze R, Fabbro-Peray P, Miro L, 1998: GSM radiocellular telephones do not disturb the secretion of antepituitary hormones in humans. *Bioelectromagnetics* 19(5):271-8.

Dmoch, A. and Moszczynski, P., 1998: "Levels of immunoglobulin and subpopulations of T lymphocytes and NK cells in men occupationally exposed to microwave radiation in frequencies of 6-12GHz". *Med Pr* 49(1):45-49.

Dolk, H., Shaddick, G., Walls, P., Grundy, C., Thakrar, B., Kleinschmidt, I. and Elliott, P., 1997a: "Cancer incidence near radio and television transmitters in Great Britain, I - Sutton-Colfield transmitter". *American J. of Epidemiology*, 145(1):1-9.

Dolk, H., Elliott, P., Shaddick, G., Walls, P., Grundy, C., and Thakrar, B., 1997b: "Cancer incidence near radio and television transmitters in Great Britain, II All high power transmitters". *American J. of Epidemiology*, 145(1):10-17.

Donnellan M, McKenzie DR, French PW, 1997: Effects of exposure to electromagnetic radiation at 835 MHz on growth, morphology and secretory characteristics of a mast cell analogue, RBL-2H3. *Cell Biol Int* 21:427-439.

Eulitz, C, Ullsperger, P, Freude, G, Elbert, T, 1998: Mobile phones modulate response patterns of human brain activity. *Neuroreport* 9(14):3229-3232.

Fesenko, EE, Makar, VR, Novoselova, EG, Sadovnikov, VB, 1999: Microwaves and cellular immunity. I. Effect of whole body microwave irradiation on tumor necrosis factor production in mouse cells. *Bioelectrochem Bioenerg* 49(1):29-35.

Forman, S.A., Holmes, C.K., McManamon, T.V., and Wedding, W.R., 1982: "Physiological Symptoms and Intermittent Hypertension following acute microwave exposure". *J. of Occup. Med.* 24(11): 932-934.

Freude, G, Ullsperger, P, Eggert, S, Ruppe, I, 1998: Effects of microwaves emitted by cellular phones on human slow brain potentials. *Bioelectromagnetics* 19(6):384-387.

French PW, Donnellan M, McKenzie DR, 1997: Electromagnetic radiation at 835 MHz changes the morphology and inhibits proliferation of a human astrocytoma cell line. *Bioelectrochem Bioenerg* 43:13-18.

Freude, G, Ullsperger, P, Eggert, S, Ruppe, I, 2000: Microwaves emitted by cellular telephones affect human slow brain potentials. *Eur J Appl Physiol* 81(1-2):18-27.

Frey, A.H., Feld, S.R. and Frey. B., 1975: "Neural function and behavior: defining the relationship in biological effects of nonionizing radiation". *Ann. N.Y. Acad. Sci.* 247: 433-438.

Frey, A.H., 1998: "Headaches from cellular telephones: are they real and what are the impacts". *Environ Health Perspect* 106(3):101-103.

Fritze K, Wiessner C, Kuster N, Sommer C, Gass P, Hermann DM, Kiessling M, Hossmann KA, 1997: Effect of global system for mobile communication microwave exposure on the genomic response of the rat brain. *Neuroscience* 81(3):627-639.

Garaj-Vrhovac, V., Fucic, A, and Horvat, D., 1990: "Comparison of chromosome aberration and micronucleus induction in human lymphocytes after occupational

exposure to vinyl chloride monomer and microwave radiation"., *Periodicum Biologorum*, Vol 92, No.4, pp 411-416.

Garaj-Vrhovac, V., Horvat, D. and Koren, Z., 1991: "The relationship between colony-forming ability, chromosome aberrations and incidence of micronuclei in V79 Chinese Hamster cells exposed to microwave radiation". *Mutat Res* 263: 143-149.

Garaj-Vrhovac, V., Fucic, A, and Horvat, D., 1992: The correlation between the frequency of micronuclei and specific aberrations in human lymphocytes exposed to microwave radiation in vitro". *Mutation Research*, 281: 181-186.

Garaj-Vrhovac, V., and Fucic, A., 1993: "The rate of elimination of chromosomal aberrations after accidental exposure to microwave radiation". *Bioelectrochemistry and Bioenergetics*, 30:319-325.

Garaj-Vrhovac, V., 1999: "Micronucleus assay and lymphocyte mitotic activity in risk assessment of occupational exposure to microwave radiation. *Chemosphere* 39(13): 2301-2312.

Goldsmith, J.R., 1997a: "TV Broadcast Towers and Cancer: The end of innocence for Radiofrequency exposures". *Am. J. Industrial Medicine* 32 : 689-692.

Goldsmith, J.R., 1997b: "Epidemiologic evidence relevant to radar (microwave) effects". *Environmental Health Perspectives*, 105 (Suppl 6): 1579-1587.

Gordon, Z.V., 1966: "Problems of industrial hygiene and the biological effects of electromagnetic superhigh frequency fields". *Moscow Medicina [In Russian]* English translation in *NASA Rept TT-F-633*, 1976.

Goswami, P.C., Albee, L.D., Parsian, A.J., Baty, J.D., Moros, E.G., Pickard, W.F., Roti Roti, J.L. and Hunt, C.R., 1999: "Proto-oncogene mRNA levels and activities of multiple transcription factors in C3H 10T 1/2 murine embryonic fibroblasts exposed to 835.62 and 847.74 MHz cellular telephone communication frequency radiation". *Radiat Res* 151(3): 300-309.

Graham, C., Cook, M.R., Cohen, H.D. and Gerkovich, M.M., 1994: "A dose response study of human exposure to 60Hz electric and magnetic fields". *Bioelectromagnetics* 15: 447-463.

Graham, C., Cook, M.R., Sastre, A., Riffle, D.W. and Gerkovich, M.M., 2000: "Multi-night exposure to 60 Hz magnetic fields: effects on melatonin and its enzymatic metabolite". *J Pineal Res* 28(1): 1-8.

Grayson, J.K., 1996: "Radiation Exposure, Socioeconomic Status, and Brain Tumour Risk in the US Air Force: A nested Case-Control Study". *American J. of Epidemiology*, 143 (5), 480-486.

Haider, T., Knasmueller, S., Kundi, M, and Haider, M., 1994: "Clastogenic effects of radiofrequency radiation on chromosomes of *Tradescantia*". *Mutation Research*, 324:65-68.

Hamburger, S., Logue, J.N., and Sternthal, P.M., 1983: "Occupational exposure to non-ionizing radiation and an association with heart disease: an exploratory study". *J Chronic Diseases*, Vol 36, pp 791-802.

Hammett and Edison Inc., 1997: "Engineering analysis of radio frequency exposure conditions with addition of digital TV channels". Prepared for Sutra Tower Inc., San Francisco, California, January 3, 1997.

Hanson Mild, K, Oftedal, G, Sandstrom, M, Wilen, J, Tynes, T, Haugsdal, B, Hauger E, 1998: Comparison of symptoms experienced by users of analogue and digital mobile phones: a Swedish-Norwegian epidemiological study. *Arbetslivsrapport* 23.

Hardell, L, Reizenstein, J, Johansson, B, Gertzen, H, Mild, KH, 1999: Angiosarcoma of the scalp and use of a cordless (portable) telephone. *Epidemiology* 10(6):785-786.

Hardell, L, Nasman, A, Pahlson, A, Hallquist, A, Hansson Mild, K, 1999: Use of cellular telephones and the risk for brain tumours: A case-control study. *Int J Oncol* 15(1):113-116.

Hardell, L, Nasman, A, Hallquist, A, 2000: "Case-control study of radiology work, medical X-ray investigations and use of cellular telephones as risk factors". *J of General Medicine*.
www.medscape.com/Medscape/GeneralMedicine/journal/2000/v02.n03/

Hayes, R.B., Morris Brown, L., Pottern, L.M., Gomez, M., Kardaun, J.W.P.F., Hoover, R.N., O'Connell, K.J., Sutsman, R.E. and Nasser, J., 1990: Occupational and Risk for Testicular Cancer: A Case Control Study. *International Journal of Epidemiology*, 19, No.4, pp 825-831.

Heller, J.H., and Teixeira-Pinto, A.A., 1959: "A new physical method of creating chromosome aberrations". *Nature*, Vol 183, No. 4665, March 28, 1959, pp 905-906.

Hladky, A, Musil, J, Roth, Z, Urban, P, Blazkova, V, 1999: Acute effects of using a mobile phone on CNS functions. *Cent Eur J Public Health* 7(4):165-167.

Hocking, B., Gordon, I.R., Grain, H.L., and Hatfield, G.E., 1996: "Cancer incidence and mortality and proximity to TV towers". *Medical Journal of Australia*, Vol 165, 2/16 December, pp 601-605.

Hocking, B, 1998: Preliminary report: symptoms associated with mobile phone use. *Occup Med (Lond)*;48(6):357-360.

Hofgartner F, Muller T, Sigel H, 1996: "Could C- and D-network mobile phones endanger patients with pacemakers?". *Dtsch Med Wochenschr* 121(20): 646-652, [Article in German]

Ivaschuk, O.I., Jones, R.A., Ishida-Jones, T., Haggren, Q., Adey, W.R. and Phillips, J.L., 1997: "Exposure of nerve growth factor-treated PC12 rat pheochromocytoma cells to a modulated radiofrequency field at 836.55 MHz: effects on c-jun and c-fos expression". *Bioelectromagnetics* 18(3): 223-229.

Jacobson, C.B., 1969: Progress report on SCC 31732, (Cytogenetic analysis of blood from the staff at the U.S. Embassy in Moscow), George Washington University, Reproductive Genetics Unit, Dept. of Obstetrics and Gynecology, February 4, 1969.

Johnson-Liakouris, A.J.. 1998: "Radiofrequency (RF) Sickness in the Lilienfeld Study: an effect of modulated microwaves". *Arch Environ Health* 53(3):236-238.

Jones, L.F., 1933: "A study of the propagation of wavelengths between three and eight meters. *Proc. of the Institute of Radio Engineers* 21(3): 349-386.

Jordan, E.C., (Ed), 1985: "Reference data for engineers: Radio, Electronics, Computer and Communications, 7th Edition". Publ. Howard W. Sams & CO., Indianapolis.

Juutilainen, J., Stevens, R.G., Anderson, L.E., Hansen, N.H., Kilpelainen, M., Laitinen, J.T., Sobel, E. and Wilson, B.W., 2000: "Nocturnal 6-hydroxymelatonin sulphate excretion in female workers exposed to magnetic fields". *J Pineal Res* 28(2): 97-104.

Kallen, B., Malmquist, G., and Moritz, U., 1982: "Delivery Outcome among Physiotherapists in Sweden: is Non-ionizing Radiation a Fetal Hazard? Archives of Environmental Health, 37(2): 81-84.

Karasek, M., Woldanska-Okonska, M., Czernicki, J., Zylinska, K. and Swietoslowski, J., 1998: "Chronic exposure to 2.9 mT, 40 Hz magnetic field reduces melatonin concentrations in humans". J Pineal Research 25(4): 240-244.

Kellenyi, L., Thuroczy, G, Faludy, B, Lenard, L, 1999: Effects of mobile GSM radiotelephone exposure on the auditory brainstem response (ABR). Neurobiology 7:79-81.

Khudnitskii, SS, Moshkarev, EA, Fomenko, TV, 1999: [On the evaluation of the influence of cellular phones on their users]. [Article in Russian] Med Tr Prom Ekol (9):20-24.

Kolomytkin, O., Kuznetsov, V., Yurinska, M, Zharikova, A., and Zharikov, S., 1994: "Response of brain receptor systems to microwave energy exposure". pp 195-206 in "On the nature of electromagnetic field interactions with biological systems", Ed Frey, A.H., Publ. R.G. Landes Co.

Koivisto, M, Revonsuo, A, Krause, C, Haarala, C, Sillanmaki, L, Laine, M, Hamalainen, H, 2000: Effects of 902 MHz electromagnetic field emitted by cellular telephones on response times in humans. Neuroreport 11(2):413-415.

Kolodynski, A.A. and Kolodynska, V.V., 1996: "Motor and psychological functions of school children living in the area of the Skrunda Radio Location Station in Latvia". The Science of the Total Environment, Vol 180, pp 87-93.

König HL. 1974, Behavioural changes in human subjects associated with ELF electric fields. In Persinger MA, editor. ELF and VLF electromagnetic field effects. New York, Plenum Press.

Krause, C.M., Sillanmaki, L., Koivisto, M., Haggqvist, A., Saarela, C., Revonsuo, A., Laine, M. and Hamalainen H., 2000: "Effects of electromagnetic field emitted by cellular phones on the EEG during a memory task". Neuroreport 11(4): 761-764.

Kwee, S, Raskmark, P, 1997: Radiofrequency electromagnetic fields and cell proliferation. Presented at the Second World Congress for Electricity and Magnetism in Biology and Medicine, Bologna, Italy, June.

Lai, H. and Singh, N.P., 1995: "Acute low-intensity microwave exposure increases DNA single-strand breaks in rat brain cells". Bioelectromagnetics, Vol 16, pp 207-210, 1995.

Lai, H. and Singh, N.P., 1996: "Single- and double-strand DNA breaks in rat brain cells after acute exposure to radiofrequency electromagnetic radiation". Int. J. Radiation Biology, 69 (4): 513-521.

Lai, H., and Singh, N.P., 1997: "Melatonin and Spin-Trap compound Block Radiofrequency Electromagnetic Radiation-induced DNA Strands Breaks in Rat Brain Cells." Bioelectromagnetics, 18:446-454.

Lamble D, Kauranen T, Laakso M, Summala H, 1999: "Cognitive load and detection thresholds in car following situations: safety implications for using mobile (cellular) telephones while driving". Accid Anal Pre ;31(6):617-623.

Larsen, A.I., Olsen, J., and Svane, O., 1991: "Gender specific reproductive outcome

and exposure to high frequency electromagnetic radiation among physiotherapists". *Scand. J. Work Environ. Health*, Vol.17, pp 324-329.

Lilienfeld, A.M., Tonascia, J., and Tonascia S., Libauer, C.A., and Cauthen, G.M., 1978: "Foreign Service health status study - evaluation of health status of foreign service and other employees from selected eastern European posts". Final Report (Contract number 6025-619073) to the U.S. Dept of State, July 31, 1978.

Lilienfeld, A.M., 1983: "Practical limitations of epidemiologic method". *Environmental Health Perspectives*, 52:3-8.

Lindbohm, M-L., Hietanen, M., Kyyronen, P., Sallmen, M., von Nandelstadh, P., Taskinen, H., Pekkarinen, M., Ylikoski, M. and Hemminki, K., 1992: "Magnetic fields of video display terminals and spontaneous abortion". *Am J Epidemiol* 136:1041-1051.

Litovitz, T.A., Krause, D., Penafiel, M., Elson, E.C. and Mullins, J.M., 1993: "The role of coherence time in the effect of microwaves on ornithine decarboxylase activity". *Bioelectromagnetics* 14(5): 395-403.

Maes, A., Verschaeve, L., Arroyo, A., De Wagter, C. and Vercruyssen, L., 1993: "In vitro effects of 2454 MHz waves on human peripheral blood lymphocytes". *Bioelectromagnetics* 14: 495-501.

Maes, A., Collier, M., Slaets, D., and Verschaeve, L., 1996: "954 MHz Microwaves enhance the mutagenic properties of Mitomycin C". *Environmental and Molecular Mutagenesis*, 28: 26-30.

Maes A, Collier M, Van Gorp U, Vandoninck S, Verschaeve L, 1997: Cytogenetic effects of 935.2-MHz (GSM) microwaves alone and in combination with mitomycin C. *Mutat Res* 393(1-2): 151-156.

Mann, K, Roschke, J, 1996: Effects of pulsed high-frequency electromagnetic fields on human sleep. *Neuropsychobiology* 33(1):41-47.

Maskarinec, G. Cooper, J. and Swygert, L., 1994: "Investigation of increased incidence in childhood leukemia near radio towers in Hawaii: Preliminary observations". *J. Environ Pathol Toxicol and Oncol* 13(1): 33-37.

McKenzie, D.R., Yin, Y. and Morrell, S., 1998: "Childhood incidence of acute lymphoblastic leukaemia and exposure to broadcast radiation in Sydney - a second look". *Aust NZ J Pub Health* 22 (3): 360-367.

Michelozzi, P., Ancona, C., Fusco, D., Forastiere, F. and Perucci, C.A., 1998: "Risk of leukemia and residence near a radio transmitter in Italy". *ISEE/ISEA 1998 Conference, Boston Mass. Paper 354 P., Abstract in Epidemiology* 9(4):S111.

Mild, K.H., Oftedal, G., Sandstrom, M., Wilen, J., Tynes, T., Haugsdal, B. and Hauger E., 1998: "Comparison of symptoms by users of analogue and digital mobile phones - A Swedish-Norwegian epidemiological study". *National Institute for working life*, 1998:23, Umea, Sweden, 84pp.

Milham, S., 1982: "Mortality from leukemia in workers exposed to electric and magnetic fields". *New England J. of Med.*, 307: 249-250.

Milham, S., 1985: "Silent Keys", *Lancet* 1, 815, 1985.

Milham S., 1985: "Mortality in workers exposed to electromagnetic fields. *Environ Health Perspectives* 62:297-300.

Milham, S., 1988: "Increased mortality in amateur radio operators due to lymphatic

and hematopoietic malignancies". *Am. J. Epidemiology*, Vol 127, No.1, pp 50-54.

Milham, S., 1996: "Increased incidence of cancer in a cohort of office workers exposed to strong magnetic fields". *Am. J. Ind. Med.* 30(6): 702-704.

Moscovici, B., Lavyel, A. and Ben Itzhac, D., 1974: "Exposure to electromagnetic radiation among workers". *Family Physician* 3(3): 121.

Moszczynski, P., Lisiewicz, J., Dmoch, A., Zabinski, Z., Bergier, L., Rucinska, M. and Sasiadek, U., 1999: "The effect of various occupational exposures to microwave radiation on the concentrations of immunoglobulins and T lymphocyte subsets". *Wiad Lek* 52(1-2):30-34.

Nakamura, H., Seto, T., Nagase, H., Yoshida, M., Dan, S. and Ogina, K., 1997: "Effects of exposure to microwaves on cellular immunity and placental steroids in pregnant rats. *Occup Environ Med* 54(9):676-680.

Naegeli B, Osswald S, Deola M, Burkart F, 1996: "Intermittent pacemaker dysfunction caused by digital mobile telephones". *J Am Coll Cardiol* 27(6):1471-1477.

Occhetta E, Plebani L, Bortnik M, Sacchetti G, Trevi G, 1999: "Implantable cardioverter defibrillators and cellular telephones: is there any interference?". *Pacing Clin Electrophysiol* 22(7): 983-989.

Oscar, K.J. and Hawkins, T.D., 1997: "Microwaves alteration of the blood-brain barrier system of rats". *Brain Research* 126: 281-293.

Ouellet-Hellstrom, R. and Stewart, W.F., 1993: "Miscarriages among Female Physical Therapists who report using radio- and microwave- frequency electromagnetic radiation." *American J. of Epidemiology*, 138 (10): 775-86.

Persson, B.R.R., Salford, L.G. and Brun, A., 1997: "Blood-brain barrier permeability in rats exposed to electromagnetic fields used in wireless communication". *Wireless Network* 3: 455-461.

Penafiel, L.M., Litovitz, T., Krause, D., Desta, A. and Mullins, J.M., 1997: "Role of modulation on the effect of microwaves on ornithine decarboxylase activity in L929 cells". *Bioelectromagnetics* 18(2): 132-141.

Perry, F.S., Reichmanis, M., Marino, A. and Becker, R.O., 1981: "Environmental power-frequency magnetic fields and suicide". *Health Phys* 41(2): 267-277.

Pfluger, D.M. and Minder, C.E., 1996: "Effects of 16.7 Hz magnetic fields on urinary 6-hydroxymelatonin sulfate excretion of Swiss railway workers". *J Pineal Research* 21(2): 91-100.

Phelan, A.M., Lange, D.G., Kues, H.A, and Lutty, G.A., 1992: "Modification of membrane fluidity in Melanin-containing cells by low-level microwave radiation". *Bioelectromagnetics* 13: 131-146.

Philips, J.L., Haggren, W., Thomas, W.J., Ishida-Jones, T. and Adey, W.R., 1992: "Magnetic field-induced changes in specific gene transcription". *Biochem Biophys Acta* 1132(2): 140-144.

Philips, J.L., Haggren, W., Thomas, W.J., Ishida-Jones, T. and Adey, W.R., 1993: "Effect of 72 Hz pulsed magnetic field exposure on ras p21 expression in CCRF-CEM cells". *Cancer Biochem Biophys* 13(3): 187-193.

Phillips, J.L., Ivaschuk, O., Ishida-Jones, T., Jones, R.A., Campbell-Beachler, M. and Haggren, W., 1998: "DNA damage in molt-4 T-lymphoblastoid cells exposed to

cellular telephone radiofrequency fields in vitro". *Bioelectrochem Bioenerg* 45: 103-110.

Pollack, H., 1979: "Epidemiologic data on American personnel in the Moscow Embassy", *Bull. N.Y. Acad. Med*, 55(11): 1182-1186.

Pollack, H., 1979a: "The microwave syndrome", *Bull. N.Y. Acad. Med*, 55(11): 1240-1243.

Preece, AW, Iwi, G, Davies-Smith, A, Wesnes, K, Butler, S, Lim, E, Varey, A, 1999: Effect of a 915-MHz simulated mobile phone signal on cognitive function in man. *Int J Radiat Biol* 75(4):447-456.

Quan, R., Yang, C., Rubinstein, S., Lewiston, N.J., Sunshine, P., Stevenson, D.K. and Kerner, J.A., 1992: "Effects of microwave radiation on anti-infective factors in human milk". *Pediatrics* 89(4):667-669.

Reiter, R.J., 1994: "Melatonin suppression by static and extremely low frequency electromagnetic fields: relationship to the reported increased incidence of cancer". *Reviews on Environmental Health*. 10(3-4): 171-86, 1994.

Reiter, R.J. and Robinson, J, 1995: "Melatonin: Your body's natural wonder drug". *Publ. Bantam Books, New York*.

Repacholi, MH, Basten, A, Gebiski, V, Noonan, D, Finnie, J, Harris, AW, 1997: Lymphomas in E mu-Pim1 transgenic mice exposed to pulsed 900 MHz electromagnetic fields. *Radiat Res* 147(5):631-640.

Robinette, C.D., Silverman, C. and Jablon, S., 1980: "Effects upon health of occupational exposure to microwave radiation (radar)". *American Journal of Epidemiology*, 112(1):39-53, 1980.

Rosen, L.A., Barber, I. and Lyle D.B., 1998: "A 0.5 G, 60 HZ magnetic field suppresses melatonin production in pinealocytes". *Bioelectromagnetics* 19: 123-127.

Rothman KJ, Loughlin JE, Funch DP, Dreyer NA., 1996: Overall mortality of cellular telephone customers. *Epidemiology* 7:303-305.

Sagripani, J. and Swicord, M.L., 1976: DNA structural changes caused by microwave radiation. *Int. J. of Rad. Bio.*, 50(1), pp 47-50, 1986.

Salford, L.G., Brun, A., Sturesson, K., Eberhardt, J.L. and Persson, B.R.R., 1994: Permeability of the Blood-Brain Barrier induced by 915 MHz electromagnetic radiation, continuous wave and modulated at 8, 16, 50 and 200 Hz.

Sarkar, S., Ali S, and Behari, J., 1994: "Effect of low power microwave on the mouse genome: A direct DNA analysis". *Mutation Research*, 320: 141-147.

Savitz, D.A., Checkoway, H. and Loomis, D.P., 1998a: "Magnetic field exposure and neurodegenerative disease mortality among electric utility workers". *Epidemiology* 9(4):398-404.

Savitz, D.A., Loomis, D.P. and Tse, C.K., 1998b: "Electrical occupations and neurodegenerative disease: analysis of U.S. mortality data". *Arch Environ Health* 53(1): 71-74.

Savitz, D.A., Liao, D., Sastre, A., Klecjuner, R.C., and Kavet, R., 1999: "Magnetic field exposure and cardiovascular disease mortality among electric utility workers". *Am. J. Epidemiology*, 149(2): 135-142.

- Schlegel RE, Grant FH, Raman S, Reynolds D 1998: "Electromagnetic compatibility study of the in-vitro interaction of wireless phones with cardiac pacemakers". *Biomed Instrum Technol* 32(6): 645-655.
- Schwartz, J.L., House, D.E., and Mealing, A.R., 1990: "Exposure of frog hearts to CW or amplitude modulated VHF fields: selective efflux of calcium ions at 16 Hz." *Bioelectromagnetics*, 11: 349-358.
- Selvin, S., Schulman, J. and Merrill, D.W., 1992: "Distance and risk measures for the analysis of spatial data: a study of childhood cancers". *Soc. Sci. Med.*, 34(7):769-777.
- Shandala, M.G., Dumanskii, U.D., Rudnev, M.I., Ershova, L.K., and Los I.P., 1979: "Study of Non-ionising Microwave Radiation Effects on the Central Nervous System and Behavior Reactions". *Environmental Health Perspectives*, 30:115-121.
- Sobel, E., Davanipour, Z., Sulkava, R., Erkinjuntti, T., Wikstrom, J., Henderson, V.W., Bucjwalter, G., Bowman, D. and Lee, P-J., 1995: "Occupations with exposure to electromagnetic fields: a possible risk factor for Alzheimer's Disease". *Am J Epidemiol* 142(5): 515-524.
- Sobel, E., Dunn, M., Davanipour, D.V.M., Qian, M.S. and Chui, M.D., 1996: "Elevated risk of Alzheimer's disease among workers with likely electromagnetic field exposure. *Neurology* 47(12): 1477-1481.
- Schirmacher, A, Bahr, A, Kullnick, U, Stoegbauer, F, 1999: Electromagnetic fields (1.75 GHz) influence the permeability of the blood-brain barrier in cell culture model. Presented at the Twentieth Annual Meeting of the Bioelectromagnetics Society, St. Pete Beach, FL, June.
- Stark, K.D.C., Krebs, T., Altpeter, E., Manz, B., Griol, C. and Abelin, T., 1997: "Absence of chronic effect of exposure to short-wave radio broadcast signal on salivary melatonin concentrations in dairy cattle". *J Pineal Research* 22: 171-176.
- Szmigielski, S., 1996: "Cancer morbidity in subjects occupationally exposed to high frequency (radiofrequency and microwave) electromagnetic radiation". *Science of the Total Environment*, Vol 180, 1996, pp 9-17.
- Szmigielski, S., Bortkiewicz, A., Gadzicka, E., Zmyslony, M. and Kubacki, R., 1998: "Alteration of diurnal rhythms of blood pressure and heart rate to workers exposed to radiofrequency electromagnetic fields". *Blood Press. Monit*, 3(6): 323-330.
- Thomas, T.L., Stolley, P.D., Stemhagen, A., Fontham, E.T.H., Bleecker, M.L., Stewart, P.A., and Hoover, R.N., 1987: "Brain tumor mortality risk among men with electrical and electronic jobs: A case-control study". *J. Nat. Canc. Inst.*, Vol 79, No.2, pp 233-238., August 1987.
- Tice R, Hook G, McRee DI., 1999: "Chromosome aberrations from exposure to cell phone radiation". *Microwave News*, Jul/Aug (1999) p7.
- Timchenko, O.I., and Ianchevskaia, N.V., 1995: "The cytogenetic action of electromagnetic fields in the short-wave range". *Psychopharmacology Series*, Jul-Aug;(7-8):37-9.
- Trigano AJ, Azoulay A, Rochdi M, Campillo, A., 1999: "Electromagnetic interference of external pacemakers by walkie-talkies and digital cellular phones: experimental study. *Pacing Clin Electrophysiol* 22(4 Pt 1): 588-593.
- Tonascia, J.A. and Tonascia, S., 1969: "Hematological Study: progress report on SCC

31732", George Washington University, Department of Obstetrics and Gynecology, February 4, 1969.

Tynes, T., Hannevik, M., Anderson, A., Vistnes, A.I. and Haldorsen, T., 1996: "Incidence of breast cancer in Norwegian female radio and telegraph operators". *Cancer causes Control.*, 7(2): 197-204.

Van Wijngaarden, E., Savitz, D.A., Kleckner, R.C., Dai, J. and Loomis, D., 2000: "Exposure to electromagnetic fields and suicide among electric utility workers: a nested case-control study". *Occupational and Environ Medicine*, 57: 258-263.

Vaneeck, J., 1998: "Cellular Mechanisms of Melatonin Action". *Physiol. Rev.* 78: 687-721.

Velizarov, S, Raskmark, P, Kwee, S, 1999: The effects of radiofrequency fields on cell proliferation are non-thermal. *Bioelectrochem Bioenerg* 48(1):177-180.

Verschaeve, L., Slaets, D., Van Gorp, U., Maes, A. and Vanderkom, J., 1994: "In vitro and in vivo genetic effects of microwaves from mobile phone frequencies in human and rat peripheral blood lymphocytes". *Proceedings of Cost 244 Meetings on Mobile Communication and Extremely Low Frequency field: Instrumentation and measurements in Bioelectromagnetics Research.* Ed. D, Simunic, pp 74-83.

Vijayalaxmi, B.Z., Frei, M.R., Dusch, S.J., Guel, V., Meltz, M.L. and Jauchem, J.R., 1997: "Frequency of micronuclei in the peripheral blood and bone marrow of cancer-prone mice chronically exposed to 2450 MHz radiofrequency radiation". *Radiation Research*, 147: 495-500.

Violanti, J.M., 1998: "Cellular phones and fatal traffic collisions". *Accid Anal Prev* 30(4): 519-524.

Violanti, J.M. and Marshall, J.R., 1996: "Cellular phones and traffic accidents: an epidemiological approach". *Accid Anal Prev* 28(2): 265-270.

Von Klitzing, L, 1995: Low-frequency pulsed electromagnetic fields influence EG of man. *Phys. Medica* 11:77-80.

Youbicier-Simo, BJ, Lebecq, JC, Bastide, M, 1998: Mortality of chicken embryos exposed to EMFs from mobile phones. Presented at the Twentieth Annual Meeting of the Bioelectromagnetics Society, St. Pete Beach, FL, June.

Walleczek, J., 1992: "Electromagnetic field effects on cells of the immune system: the role of calcium signaling". *FASEB J.*, 6: 3176-3185.

Wang, S.G. 1989: "5-HT contents change in peripheral blood of workers exposed to microwave and high frequency radiation". *Chung Hua Yu Fang I Hsueh Tsa Chih* 23(4): 207-210.

Wever R. 1974, ELF-effects on Human Circadian Rhythms. In: Persinger MA editor. *ELF and VLF Electromagnetic Field Effects.* New York, Plenum Press. p 101-144.

Weyandt, T.B., Schrader, S.M., Turner, T.W. and Simon, S.D., 1996: "Semen analysis of military personnel associated with military duty assignments". *Reprod Toxicol* 10(6):521-528.

Wilson, B.W., Wright, C.W., Morris, J.E., Buschbom, R.L., Brown, D.P., Miller, D.L., Sommers-Flannigan, R. and Anderson, L.E., 1990: "Evidence of an effect of ELF electromagnetic fields on human pineal gland function". *J Pineal Research* 9(4): 259-

269.

Wood, A.W., Armstrong, S.M., Sait, M.L., Devine, L. and Martin, M.J., 1998: "Changes in human plasma melatonin profiles in response to 50 Hz magnetic field exposure". J Pineal Research 25(2): 116-127.

Zaret, M.M., 1977: "Potential hazards of hertzian radiation and tumors. NY State J Med, 146-147.

(B) is available to consumers at a cost which is comparable to the cost of technology that allows parents to block programming based on common ratings, and

(C) will allow parents to block a broad range of programs on a multichannel system as effectively and as easily as technology that allows parents to block programming based on common ratings,

the Commission shall amend the rules prescribed pursuant to section 303(x) [47 USCS § 303(x)] to require that the apparatus described in such section be equipped with either the blocking technology described in such section or the alternative blocking technology described in this paragraph.

(d) For the purposes of this section, and sections 303(s), 303(u), and 303(x) [47 USCS § 303(s), (u), and (x)]—

(1) The term "interstate commerce" means (A) commerce between any State, the District of Columbia, the Commonwealth of Puerto Rico, or any possession of the United States and any place outside thereof which is within the United States, (B) commerce between points in the same State, the District of Columbia, the Commonwealth of Puerto Rico, or possession of the United States but through any place outside thereof, or (C) commerce wholly within the District of Columbia or any possession of the United States.

(2) The term "United States" means the several States, the District of Columbia, the Commonwealth of Puerto Rico, and the possessions of the United States, but does not include the Canal Zone.

(As amended Feb. 8, 1996, P. L. 104-104, Title V, Subtitle B, § 551(d), 110 Stat. 141.)

HISTORY; ANCILLARY LAWS AND DIRECTIVES

Amendments:

1996. Act Feb. 8, 1996, redesignated subsec. (c) as subsec. (d) and added a new subsec. (c); and, in subsec. (d) as redesignated, substituted "and sections 303(s), 303(u), and 303(x)" for "section 303(s), and section 303(u)".

§ 332. Mobile services

1996 Telecommunications Act

(a), (b) [Unchanged]

(c) Common carrier treatment of commercial and private mobile services; state preemption; regulatory treatment of communications satellite corporation; space segment capacity; foreign ownership. (1)–(6) [Unchanged]

(7) Preservation of local zoning authority. (A) General authority. Except as provided in this paragraph, nothing in this Act [47 USCS §§ 151 et seq.] shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless service facilities.

(B) Limitations. (i) The regulation of the placement, construction, and modification of personal wireless service facilities by any State or local government or instrumentality thereof—

(I) shall not unreasonably discriminate among providers of functionally equivalent services; and

(II) shall not prohibit or have the effect of prohibiting the provision of personal wireless services.

(ii) A State or local government or instrumentality thereof shall act on any request for authorization to place, construct, or modify personal wireless service facilities within a reasonable period of time after the request is duly filed with such government or instrumentality, taking into account the nature and scope of such request.

(iii) Any decision by a State or local government or instrumentality thereof to deny a request to place, construct, or modify personal wireless service facilities shall be in writing and supported by substantial evidence contained in a written record.

(iv) No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions.

(v) Any person adversely affected by any final action or failure to act by a State or local government or any instrumentality thereof that is inconsistent with this subparagraph may, within 30 days after such action or failure to act, commence an action in any court of competent jurisdiction. The court shall hear and decide such action on an expedited basis. Any person adversely affected by an act or failure to act by a State or local government or any instrumentality thereof that is inconsistent with clause (iv) may petition the Commission for relief.

(C) Definitions. For purposes of this paragraph—

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ANCILLARY LAWS AND DIRECTIVES

subsec. (c) as subsec. (d) and added a new subsec. (c);
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- (i) the term "personal wireless services" means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services;
- (ii) the term "personal wireless service facilities" means facilities for the provision of personal wireless services; and
- (iii) the term "unlicensed wireless service" means the offering of telecommunications services using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services (as defined in section 303(v) [47 USCS § 303(v)]).

(8) Mobile services access. A person engaged in the provision of commercial mobile services, insofar as such person is so engaged, shall not be required to provide equal access to common carriers for the provision of telephone toll services. If the Commission determines that subscribers to such services are denied access to the provider of telephone toll services of the subscribers' choice, and that such denial is contrary to the public interest, convenience, and necessity, then the Commission shall prescribe regulations to afford subscribers unblocked access to the provider of telephone toll services of the subscribers' choice through the use of a carrier identification code assigned to such provider or other mechanism. The requirements for unblocking shall not apply to mobile satellite services unless the Commission finds it to be in the public interest to apply such requirements to such services.

(d) Definitions. For purposes of this section—

(1) the term "commercial mobile service" means any mobile service (as defined in section 3 [47 USCS § 153]) that is provided for profit and makes interconnected service available (A) to the public or (B) to such classes of eligible users as to be effectively available to a substantial portion of the public, as specified by regulation by the Commission;

(2) [Unchanged]

(3) the term "private mobile service" means any mobile service (as defined in section 3 [47 USCS § 153]) that is not a commercial mobile service or the functional equivalent of a commercial mobile service, as specified by regulation by the Commission.

(As amended Feb. 8, 1996, P. L. 104-104, § 3(d)(2), Title VII, §§ 704(a), 705, 110 Stat. 61, 151; 153.)

HISTORY; ANCILLARY LAWS AND DIRECTIVES

Amendments:

1996. Act Feb. 8, 1996, in subsec. (c), added paras. (7) and (8); and, in subsec. (d), in paras. (1) and (3), substituted "section 3" for "section 3(n)".

Other provisions:

Availability of property. Act Feb. 8, 1996, P. L. 104-104, Title VII, § 704(c), 110 Stat. 152, provides: "Within 180 days of the enactment of this Act, the President or his designee shall prescribe procedures by which Federal departments and agencies may make available on a fair, reasonable, and nondiscriminatory basis, property, rights-of-way, and easements under their control for the placement of new telecommunications services that are dependent, in whole or in part, upon the utilization of Federal spectrum rights for the transmission or reception of such services. These procedures may establish a presumption that requests for the use of property, rights-of-way, and easements by duly authorized providers should be granted absent unavoidable direct conflict with the department or agency's mission, or the current or planned use of the property, rights-of-way, and easements in question. Reasonable fees may be charged to providers of such telecommunications services for use of property, rights-of-way, and easements. The Commission shall provide technical support to States to encourage them to make property, rights-of-way, and easements under their jurisdiction available for such purposes."

CODE OF FEDERAL REGULATIONS

Add:
47 CFR Parts 20, 24, 26.

INTERPRETIVE NOTES AND DECISIONS

1. Generally

Citizens' generalized expressions of concern about aesthetics and potential decreases in property values, particularly in light of plaintiff's contradictory expert testimony, cannot serve as substantial evidence for purposes of 47 USCS § 332(c)(7)(B)(iii), and therefore, district court properly ruled that zoning board's denial of exception violated Telecommunications Act (47 USCS § 332). *Omnipoint Corp. v Zoning Hearing Bd.* (1999, CA3 Pa) 181 F3d 403.

City must issue building permit for wireless communications provider's proposed tower, where provider demonstrated compliance with all valid require-

ments necessary to receive construction permit, and court's review of record reveals that city's sole basis for denying permit was little more than that numerous people opposed it, because denial was not supported by substantial evidence as required under 47 USCS § 332(c)(7)(B)(iii). *AT&T Wireless PCS v City of Chamblee* (1997, ND. Ga) 10 F Supp 2d 1326.

Local zoning authority is ordered by writ of mandamus to approve telecommunications company's special exception to mount antenna array to water tank, because 47 USCS § 332(c)(7) was violated by authority's (1) failure to issue written denial of application, (2) unreasonable discrimination among pro-

47 USCS § 332, n 1

viders of functionally equivalent services, and (3) decision having effect of prohibiting provision of new digital technology. *Western PCS II Corp. v Extraterritorial Zoning Auth.* (1997, DC NM) 957 F Supp 1230.

Personal wireless services facilities providers are not entitled to relief under 47 USCS § 332, where local board of zoning appeals noted that alternative site for cellular communications monopole was available on property adjacent to proposed site that it would not approve, because record does not support finding that denial prohibits provision of personal wireless services. *Gearon & Co. v Fulton County* (1998, ND Ga) 5 F Supp 2d 1351.

Communications company lacks standing to sue city under 47 USCS § 332, even though it claims city council wrongfully denied it special permit to construct "cell site" for its PCS network, where company never actually held property right to use city-owned water tanks upon which it proposed to build, because company's claims lack redressability since court could not enter judgment that would fully remedy company's alleged injury. *Sprint Spectrum, L.P. v City of Woburn* (1998, DC Mass) 8 F Supp 2d 118.

County board of supervisors must approve conditional-use permit for wireless personal communications services tower, where no member of board explicitly premised opposition to permit on potential safety hazards to aviators or adjacent landowners, because opposition to tower, although undoubtedly sincere, was not based in fact and cannot legally support reasonable judgment denying permit in accordance with 47 USCS § 332(c). *Petersburg Cellular Pshp. v Board of Supervisors* (1998, ED Va) 29 F Supp 2d 701.

City must grant provider of wireless personal communications services special-use permit to build proposed digital tower, even though city denied request after meeting by 5 to 3 vote and supplied written reasons therefore, because court finds that generalized comments of 3 citizens who speculate that fourth tower will impair aesthetic quality of area do not amount to "substantial evidence" within meaning of 47 USCS § 332(c)(7)(B)(iii). *Iowa Wireless Servs., L.P. v City of Moline* (1998, CD Ill) 29 F Supp 2d 915.

County board must submit written findings of fact supporting its decision to deny variance for construction of wireless communications service's cellular antenna and equipment station, even though board asserts it relied on board of zoning adjustment's recommendations that proposed tower did not meet county code requirements and that service did not show unnecessary hardship on land, because board violated 47 USCS § 332(c)(7)(B)(iii) by failing to set forth written, reviewable findings of fact. *AT&T Wireless Servs. v Orange County* (1997, MD Fla) 982 F Supp 856.

Challenge to revocation of building permit for 100-foot telecommunications monopole under 47 USCS § 332 is not yet ripe, where zoning hearing board determined that township zoning ordinance did not permit pole in R-1 district, and that service provider would have to obtain approval of planning commission, because this is classic example of unripe land use claim since provider has not taken matter before planning commission. *Omnipoint Commun. v Zoning Hearing Bd.* (1998, MD Pa) 4 F Supp 2d 366.

Where city zoning board denied application for special use permit to allow wireless telephone company to construct antenna tower, denial was required

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to be in writing, but was not required to include written rationale with factual findings and legal conclusions; further, proper standard of review for decision of such municipal board acting in quasi-judicial capacity was whether substantial evidence in written record supported board's determination. *AT&T Wireless PCS, Inc. v Winston-Salem Zoning Bd. of Adjustment* (1999, CA4 NC) 172 F3d 307.

Telecommunications company is entitled to relief under 47 USCS § 332(c)(7), where board of county commissioners denied it conditional use permit to build telecommunications tower, because board adopted inconsistent findings of fact and conclusions of law, and denial was not supported by substantial evidence contained in written record. *OPM-USA v Board of County Comm'rs* (1997, MD Fla) 7 F Supp 2d 1316.

2. Relationship with other laws

Provisions of 47 USCS § 332 do not present facially conclusive challenge to preempt Commission from adjudicating complaint alleging violations of state law and Commission's orders concerning practices by cellular telephone service providers. *GTE Mobilnet v Johnson* (1997, CA6 Ohio) 111 F3d 469, 1997 FED App 137P, reh. en banc. den (1997, CA6) 1997 US App LEXIS 13659.

Class action on behalf of U.S. residents who contracted with defendant for cellular telephone services, challenging liquidated damages collected for early termination of service, is remanded to state court, where suit invoked state common law protecting consumers against excessive liquidated damages and FCC has never passed upon amount of liquidated damages in defendant's tariff, because it is not clear that claims are preempted by 47 USCS § 332(c)(3)(A), and even if preemption applied, nothing was presented to justify extraordinary doctrine of complete preemption. *Esquivel v Southwestern Bell Mobile Sys.* (1996, SD Tex) 920 F Supp 713.

Town board's ruling—that public interest is not served by construction of proposed 150-foot tower to enable marketing of wireless communications services that are already available to public—is overruled, where board determined, in effect, that existing cellular service in town is all that is necessary and that no further competition from new type of digital or other technology requiring site in town will be permitted, because that action specifically violates 47 USCS § 332(c)(7)(B), and frustrates primary purpose of Telecommunications Act of 1996 (47 USCS §§ 1 et seq.) which is to increase competition in telecommunications industry. *Sprint Spectrum L.P. v Town of Easton* (1997, DC Mass) 982 F Supp 47.

It cannot be said as matter of law that zoning officials failed to act "within reasonable time" as required by 47 USCS § 332(c)(7)(B)(ii), even though telecommunications tower owners applied on November 26, 1996 for both special permit and variance to allow them continued use of tower to its full height and local zoning authority did not issue decisions on applications within certain prescribed time periods under Massachusetts law, because town asked regional planning and land-use commission to accept discretionary referral of matter and Massachusetts courts would interpret state law to require tolling for discretionary, as well as mandatory, referrals. *Flynn v Burman* (1998, DC Mass) 30 F Supp 2d 68.

Township zoning hearing board shall forthwith approve wireless communications provider's permitted use application for proposed base station consisting of unmanned 150-foot tower with antennae and utility lines on it and several refrigerator-size cabinets at

47 USCS § 332, n 3

TELEGRAPHS, TELEPHONES, ETC

state environmental quality review law in order to stop erection of telecommunications tower is misplaced, where 47 USCS § 332(c)(7)(B) forbids localities from prohibiting or unreasonably delaying provision of personal wireless services, because environmental review procedures, invoked here in attempt to tie up wireless providers in hearing process, are preempted. *Lucas v Planning Bd.* (1998, SD NY) 7 F Supp 2d 310.

Zoning authority's denial of special permit for 150-foot monopole at proposed personal communication services cell site did not constitute prohibition of personal wireless service in violation of 47 USCS § 332(c)(7)(B)(i)(II), where authority had approved special permit for modification of existing tower by same company, and city was amenable to locating cell site at alternate location. *Sprint Spectrum L.P. v Town of N. Stonington* (1998, DC Conn) 12 F Supp 2d 247.

Because stipulation in applicant's conditional use permit adversely affected its ability to operate its wireless telecommunications network, under 47 USCS § 332(c)(7)(B)(v) court had jurisdiction over applicant's suit seeking to invalidate certain zoning regulations involving communication towers and antennae. *Southwestern Bell Wireless v Board of County Comm'rs* (1998, DC Kan) 17 F Supp 2d 1221.

Generalized concerns and conclusive statements within record about aesthetic and visual impacts on neighborhood do not amount to substantial evidence required by 47 USCS § 332(c)(7)(B)(iii) to support decision of zoning authority with respect to personal wireless services. *Omnipoint Corp. v Zoning Hearing Bd.* (1998, ED Pa) 20 F Supp 2d 875.

Under 47 USCS § 332(c)(7)(B)(3), as long as borough zoning board of adjustment's decision denying conditional use variance to construct wireless communication monopole in residential zone was not attempt to prohibit wireless service altogether, to discriminate among providers, or to impermissibly base its denial on environmental effects of radio frequency emissions, local land law was controlling. *Cellular Tel. Co. v Zoning Bd. of Adjustment of Ho-Ho-Kus* (1998, DC NJ) 24 F Supp 2d 359.

Village's zoning record did not contain substantial evidence, as required by 47 USCS § 332(c)(7)(B)(iii), to support village's contention that wireless communications tower proposed by special use permit applicant would not benefit village, where village residents would receive cellular telephone service, which, at least at time of hearing on permit application, appeared to have been marginal, and emergency service providers could "piggyback" on state-of-the-art equipment. *PrimeCo Personal Communs., L.P. v Village of Fox Lake* (1998, ND Ill) 26 F Supp 2d 1052, reconsideration den, motion den, vacated, dismd (1999, ND Ill) 35 F Supp 2d 643.

Although 47 USCS § 332(c)(7)(B)(ii) requires local governments to act on applications for personal wireless service facilities within reasonable time, statute was not intended to give preferential treatment to personal wireless service industry in processing requests or to subject their requests to any but generally applicable time frames for zoning decision. *National Telcomm. Advisors v Board of Selectmen* (1998, DC Mass) 27 F Supp 2d 284.

Township was not entitled to discovery period before District Court's decision as to whether denial of variance for erection of personal wireless service facility violated 47 USCS § 332(c)(7), even though record was not made before township zoning hearing

board on applicant's claim under statute, where permitting additional period of discovery would not aid court in discharging its duties, any newly discovered evidence could not have possibly formed basis for denial of requested relief, and affording period of discovery would simply have permitted township to retroactively justify its decision or lack thereof. *APT Pittsburgh Ltd. Pshp. v Penn Twp.* (1998, WD Pa) 32 F Supp 2d 793, judgment entered (1998, WD Pa) 1998 US Dist LEXIS 21726.

Parish council, which had approved applications by same cellular communications provider to build 3 other cellular phone towers, did not violate 47 USCS § 332(c)(7)(B)(i) by denying zoning request to build 2 additional towers at particular locations. *Bellsouth Mobility, Inc. v Parish of Plaquemines* (1999, ED La) 40 F Supp 2d 372.

State public service commission is ordered to issue certificate authorizing construction of 199-foot cellular communications tower, where only opposition to tower in mostly undeveloped wooded area was personal opinion of one neighbor, because commission's decision to require further investigation fails to meet substantial evidence requirement. *Telespectrum, Inc. v PSC* (1999, ED Ky) 43 F Supp 2d 755.

One-word, rubber-stamped denial by local zoning board of request to construct wireless communications facility did not satisfy requirement of 47 USCS § 332(c)(7)(B)(iii) that local government decision denying request to construct personal wireless service facilities must be in writing and supported by substantial evidence in record. *AT&T Wireless PCS v Winston-Salem Zoning Bd. of Adjustment* (1998, MD NC) 11 F Supp 2d 760.

4. Frequency assignment coordination

FCC did not improperly deny petitioners finder's preference requests regarding certain private mobile land radio stations by concluding that petitioners had failed to prove that target licensees were not in substantial accordance with their authorized coordinates, since broadcast station in question was within 1.6 kilometers (one mile) of its authorized coordinates. *Cassell v FCC* (1998, App DC) 154 F3d 478.

5. Regulation of mobile service

Town's denials of cellular telephone service provider's requests for special permits were not supported by substantial evidence, and therefore, town violated Telecommunications Act of 1996 (47 USCS § 332) by denying permits to build cell sites; further, injunction ordering town to issue permits was appropriate remedy. *Cellular Tel. Co. v Town of Oyster Bay* (1999, CA2 NY) 166 F3d 490.

Local governments may reasonably take location of telecommunications tower into consideration when deciding whether to require more probing inquiry and whether to approve application for construction of wireless telecommunications facilities, even though this may result in discrimination between providers of functionally equivalent services; additionally, provider of wireless telecommunication services does not have right to construct any and all towers that it, in its business judgment, deems necessary to compete effectively with other providers. *Sprint Spectrum, L.P. v Willoth* (1999, CA2 NY) 176 F3d 630.

County complied with 47 USCS § 332(c)(7)(B)(ii) by issuing final decision on cellular telecommunications service provider's petition for special-use permit to build cellular communications tower approximately 6 months after provider filed petition, despite fact that county had rendered final decisions on 9 similar requests within 3 months, where nothing in record

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board on applicant's claim under statute, where permitting additional period of discovery would not aid court in discharging its duties, any newly discovered evidence could not have possibly formed basis for denial of requested relief, and affording period of discovery would simply have permitted township to retroactively justify its decision or lack thereof. *APT Pittsburgh Ltd. Pshp. v Penn Twp.* (1998, WD Pa) 32 F Supp 2d 793, judgment entered (1998, WD Pa) 1998 US Dist LEXIS 21726.

Parish council, which had approved applications by same cellular communications provider to build 3 other cellular phone towers, did not violate 47 USCS § 332(c)(7)(B)(i) by denying zoning request to build 2 additional towers at particular locations. *Bellsouth Mobility, Inc. v Parish of Plaquemines* (1999, ED La) 40 F Supp 2d 372.

State public service commission is ordered to issue certificate authorizing construction of 199-foot cellular communications tower, where only opposition to tower in mostly undeveloped wooded area was personal opinion of one neighbor, because commission's decision to require further investigation fails to meet substantial evidence requirement. *Telespectrum, Inc. v PSC* (1999, ED Ky) 43 F Supp 2d 755.

One-word, rubber-stamped denial by local zoning board of request to construct wireless communications facility did not satisfy requirement of 47 USCS § 332(c)(7)(B)(iii) that local government decision denying request to construct personal wireless service facilities must be in writing and supported by substantial evidence in record. *AT&T Wireless PCS v Winston-Salem Zoning Bd. of Adjustment* (1998, MD) 11 F Supp 2d 760.

Frequency assignment coordination

FCC did not improperly deny petitioners finder's reference requests regarding certain private mobile and radio stations by concluding that petitioners had failed to prove that target licensees were not in substantial accordance with their authorized coordinates, since broadcast station in question was within 5 kilometers (one mile) of its authorized coordinates. *Cassell v FCC* (1998, App DC) 154 F3d 478.

Regulation of mobile service

Town's denials of cellular telephone service provider's requests for special permits were not supported by substantial evidence, and therefore, town violated Telecommunications Act of 1996 (47 USCS § 332) by denying permits to build cell sites; further, action ordering town to issue permits was appropriate remedy. *Cellular Tel. Co. v Town of Oyster Bay* (1999, CA2 NY) 166 F3d 490.

Local governments may reasonably take location of communications tower into consideration when deciding whether to require more probing inquiry and whether to approve application for construction of wireless telecommunication facilities, even though such action may result in discrimination between providers of telecommunication services; additionally, provision of wireless telecommunication services does not require right to construct any and all towers that it, in business judgment, deems necessary to compete effectively with other providers. *Sprint Spectrum, Inc. v Willoth* (1999, CA2 NY) 176 F3d 630.

Town complied with 47 USCS § 332(c)(7)(B)(ii) by making final decision on cellular telecommunication service provider's petition for special-use permit to build cellular communications tower approximately 18 months after provider filed petition, despite fact that town had rendered final decisions on 9 similar petitions within 3 months, where nothing in record

suggested that county simply ignored or refused to process provider's request, county's planning and zoning department issued its first report slightly more than one month after provider filed petition, and provider did not object to several continuances and generally took permissive approach to scheduling. *Illinois RSA No. 3 v County of Peoria* (1997, CD Ill) 963 F Supp 732.

Town zoning commission violated 47 USCS

§ 333. Willful or malicious interference

INTERPRETIVE NOTES AND DECISIONS

For purposes of 47 USCS § 333, burden of proof of establishing licensee's intent to deliberately cause

§ 332(c)(7)(B)(i)(II) by generally disfavoring approval of personal wireless service facilities in all residential zones instead of adhering to policy of considering each petition on case-by-case basis, because commission's policy had effect of prohibiting provision of personal wireless services in northern portion of town. *Smart SMR v Zoning Comm'n* (1998, DC Conn) 995 F Supp 52.

malicious interference rests on FCC. *Re Capitol Radiotelephone, Inc.*, FCC FCC96R-1 (adopted 2/9/96).

§ 335. Direct broadcast satellite service obligations

RESEARCH GUIDE

Law Review Articles:

Hops, Red Lion [Red Lion Broadcasting Co v. FCC, 89 S. Ct. 1794 (1969) in winter: first amendment and equal protection concerns in the allocation of direct broadcast satellite public interest channels, 6 *CommLaw Conspect* 185, Summer 1998.

INTERPRETIVE NOTES AND DECISIONS

Section 25 of 1992 Act (47 USCS § 335) is reasonable means of promoting public interest in diversified mass communications and therefore does not violate

First Amendment rights of direct broadcast satellite providers. *Time Warner Entertainment Co., L.P. v FCC* (1996, App DC) 93 F3d 957.

§ 336. Broadcast spectrum flexibility

(a) Commission action. If the Commission determines to issue additional licenses for advanced television services, the Commission—

- (1) should limit the initial eligibility for such licenses to persons that, as of the date of such issuance, are licensed to operate a television broadcast station or hold a permit to construct such a station (or both); and
- (2) shall adopt regulations that allow the holders of such licenses to offer such ancillary or supplementary services on designated frequencies as may be consistent with the public interest, convenience, and necessity.

(b) Contents of regulations. In prescribing the regulations required by subsection (a), the Commission shall—

- (1) only permit such licensee or permittee to offer ancillary or supplementary services if the use of a designated frequency for such services is consistent with the technology or method designated by the Commission for the provision of advanced television services;
- (2) limit the broadcasting of ancillary or supplementary services on designated frequencies so as to avoid derogation of any advanced television services, including high definition television broadcasts, that the Commission may require using such frequencies;
- (3) apply to any other ancillary or supplementary service such of the Commission's regulations as are applicable to the offering of analogous services by any other person, except that no ancillary or supplementary service shall have any rights to carriage under section 614 or 615 [47 USCS § 614 or 615] or be deemed a multichannel video programming distributor for purposes of section 628 [47 USCS § 628];
- (4) adopt such technical and other requirements as may be necessary or appropriate to assure the quality of the signal used to provide advanced television services, and may adopt regulations that stipulate the minimum number of hours per day that such signal must be transmitted; and
- (5) prescribe such other regulations as may be necessary for the protection of the public interest, convenience, and necessity.

(c) Recovery of license. If the Commission grants a license for advanced television services to a person that, as of the date of such issuance, is licensed to operate a television broadcast station or holds a permit to construct such a station (or both), the Commission shall, as a condition of such license, require that either the additional license or the original license held by the licensee be surrendered to the Commission for reallocation or reassignment (or both) pursuant to Commission regulation.

(d) Public interest requirement. Nothing in this section shall be construed as relieving a televi-

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WIRE OR RADIO COMMUNICATION

47 USCS § 332

conduct comparative hearing to determine which of 2 competing license applicants would best serve public interest; § 331 has displaced normal procedures for channel reallocation as well as normal procedures for issuing licenses, including requirement of comparative hearing; no due process violations occur when Commission applies § 331 to deprive applicant of comparative hearing. *Multi-State Communications, Inc. v FCC* (1984) 234 US App DC 285, 728 F2d 1519, cert den (1984) 469 US 1017, 83 L Ed 2d 358, 105 S Ct 431.

Res judicata bars television station license applicant's action to have 47 USCS § 331 declared unconstitutional, where challenged provision became law in midst of and mooted applicant's compara-

tive hearing proceeding before Federal Communications Commission (FCC), by which it might have acquired license to operate New York station, and allowed New York station owner to move station to New Jersey and acquire new license without opposition because New Jersey had no television service, because circuit court previously ruled on provision's effect and FCC's application of provision to preclude applicant's efforts to obtain New York station license did not unlawfully deprive applicant of due process rights in applicant's former suit against FCC. *Multi-State Communications, Inc. v United States* (1986, SD NY) 648 F Supp 1203.

§ 332. Mobile services / FCC

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(a) Factors which Commission must consider. In taking actions to manage the spectrum to be made available for use by the private mobile services, the Commission shall consider, consistent with section 1 of this Act [47 USCS § 151], whether such actions will—

- (1) promote the safety of life and property;
- (2) improve the efficiency of spectrum use and reduce the regulatory burden upon spectrum users, based upon sound engineering principles, user operational requirements, and market-place demands;
- (3) encourage competition and provide services to the largest feasible number of users; or
- (4) increase interservice sharing opportunities between private mobile services and other services.

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(b) Advisory coordinating committees. (1) The Commission, in coordinating the assignment of frequencies to stations in the private mobile services and in the fixed services (as defined by the Commission by rule), shall have authority to utilize assistance furnished by advisory coordinating committees consisting of individuals who are not officers or employees of the Federal Government.

(2) The authority of the Commission established in this subsection shall not be subject to or affected by the provisions of part III of title 5, United States Code [5 USCS §§ 2101 et seq.], or section 3679(b) of the Revised Statutes (31 U.S.C. 665(b)).

(3) Any person who provides assistance to the Commission under this subsection shall not be considered, by reason of having provided such assistance, a Federal employee.

(4) Any advisory coordinating committee which furnishes assistance to the Commission under this subsection shall not be subject to the provisions of the Federal Advisory Committee Act [5 USCS Appx].

(c) Common carrier treatment of commercial and private mobile services; state preemption; regulatory treatment of communications satellite corporation; space segment capacity; foreign ownership. (1) Common carrier treatment of commercial mobile services. (A) A person engaged



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in the provision of a service that is a commercial mobile service shall, insofar as such person is so engaged, be treated as a common carrier for purposes of this Act [47 USCS §§ 151 et seq.], except for such provisions of title II [47 USCS §§ 201 et seq.] as the Commission may specify by regulation as inapplicable to that service or person. In prescribing or amending any such regulation, the Commission may not specify any provision of section 201, 202, or 208 [47 USCS § 201, 202, or 208], and may specify any other provision only if the Commission determines that—

(i) enforcement of such provision is not necessary in order to ensure that the charges, practices, classifications, or regulations for or in connection with that service are just and reasonable and are not unjustly or unreasonably discriminatory;

(ii) enforcement of such provision is not necessary for the protection of consumers; and

(iii) specifying such provision is consistent with the public interest.

(B) Upon reasonable request of any person providing commercial mobile service, the Commission shall order a common carrier to establish physical connections with such service pursuant to the provisions of section 201 of this Act [47 USCS § 201]. Except to the extent that the Commission is required to respond to such a request, this subparagraph shall not be construed as a limitation or expansion of the Commission's authority to order interconnection pursuant to this Act [47 USCS §§ 151 et seq.].

(C) The Commission shall review competitive market conditions with respect to commercial mobile services and shall include in its annual report an analysis of those conditions. Such analysis shall include an identification of the number of competitors in various commercial mobile services, an analysis of whether or not there is effective competition, an analysis of whether any of such competitors have a dominant share of the market for such services, and a statement of whether additional providers or classes of providers in those services would be likely to enhance competition. As a part of making a determination with respect to the public interest under subparagraph (A)(iii), the Commission shall consider whether the proposed regulation (or amendment thereof) will promote competitive market conditions, including the extent to which such regulation (or amendment) will enhance competition among providers of commercial mobile services. If the Commission determines that such regulation (or amendment) will promote competition among providers of commercial mobile services, such determination may be the basis for a Commission finding that such regulation (or amendment) is in the public interest.

(D) The Commission shall, not later than 180 days after the date of enactment of this subparagraph [Aug. 10, 1993], complete a rulemaking required to implement this paragraph with respect to the licensing of personal communications services, including making any determinations required by subparagraph (C).

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(2) Non-common carrier treatment of private mobile services. A person engaged in the provision of a service that is a private mobile service shall not, insofar as such person is so engaged, be treated as a common carrier for any purpose under this Act [47 USCS §§ 151 et seq.]. A common carrier (other than a person that was treated as a provider of a private land mobile service prior to the enactment of the Omnibus Budget Reconciliation Act of 1993 [Aug. 10, 1993]) shall not provide any dispatch service on any frequency allocated for common carrier service, except to the extent such dispatch service is provided on stations licensed in the domestic public land mobile radio service before January 1, 1982. The Commission may by regulation terminate, in whole or in part, the prohibition contained in the preceding sentence if the Commission determines that such termination will serve the public interest.

(3) State preemption. (A) Notwithstanding sections 2(b) and 221(b) [47 USCS §§ 152(b) and 221(b)], no State or local government shall have any authority to regulate the entry of or the rates charged by any commercial mobile service or any private mobile service, except that this paragraph shall not prohibit a State from regulating the other terms and conditions of commercial mobile services. Nothing in this subparagraph shall exempt providers of commercial mobile services (where such services are a substitute for land line telephone exchange service for a substantial portion of the communications within such State) from requirements imposed by a State commission on all providers of telecommunications services necessary to ensure the universal availability of telecommunications service at affordable rates. Notwithstanding the first sentence of this subparagraph, a State may petition the Commission for authority to regulate the rates for any commercial mobile service and the Commission shall grant such petition if such State demonstrates that—

(i) market conditions with respect to such services fail to protect subscribers adequately from unjust and unreasonable rates or rates that are unjustly or unreasonably discriminatory; or

(ii) such market conditions exist and such service is a replacement for land line telephone exchange service for a substantial portion of the telephone land line exchange service within such State.

The Commission shall provide reasonable opportunity for public comment in response to such petition, and shall, within 9 months after the date of its submission, grant or deny such petition. If the Commission grants such petition, the Commission shall authorize the State to exercise under State law such authority over rates, for such periods of time, as the Commission deems necessary to ensure that such rates are just and reasonable and not unjustly or unreasonably discriminatory.

(B) If a State has in effect on June 1, 1993, any regulation concerning the rates for any commercial mobile service offered in such State on such date, such State may, no later than 1 year after the date of enactment of the Omnibus Budget Reconciliation Act of 1993 [Aug. 10, 1993], petition the Commission requesting that the State be autho-

rized to continue exercising authority over such rates. If a State files such a petition, the State's existing regulation shall, notwithstanding subparagraph (A), remain in effect until the Commission completes all action (including any reconsideration) on such petition. The Commission shall review such petition in accordance with the procedures established in such subparagraph, shall complete all action (including any reconsideration) within 12 months after such petition is filed, and shall grant such petition if the State satisfies the showing required under subparagraph (A)(i) or (A)(ii). If the Commission grants such petition, the Commission shall authorize the State to exercise under State law such authority over rates, for such period of time, as the Commission deems necessary to ensure that such rates are just and reasonable and not unjustly or unreasonably discriminatory. After a reasonable period of time, as determined by the Commission, has elapsed from the issuance of an order under subparagraph (A) or this subparagraph, any interested party may petition the Commission for an order that the exercise of authority by a State pursuant to such subparagraph is no longer necessary to ensure that the rates for commercial mobile services are just and reasonable and not unjustly or unreasonably discriminatory. The Commission shall provide reasonable opportunity for public comment in response to such petition, and shall, within 9 months after the date of its submission, grant or deny such petition in whole or in part.

(4) Regulatory treatment of communications satellite corporation. Nothing in this subsection shall be construed to alter or affect the regulatory treatment required by title IV of the Communications Satellite Act of 1962 [47 USCS §§ 741 et seq.] of the corporation authorized by title III of such Act [47 USCS §§ 731 et seq.].

(5) Space segment capacity. Nothing in this section shall prohibit the Commission from continuing to determine whether the provision of space segment capacity by satellite systems to providers of commercial mobile services shall be treated as common carriage.

(6) Foreign ownership. The Commission, upon a petition for waiver filed within 6 months after the date of enactment of the Omnibus Budget Reconciliation Act of 1993 [Aug. 10, 1993], may waive the application of section 310(b) [47 USCS § 310(b)] to any foreign ownership that lawfully existed before May 24, 1993, of any provider of a private land mobile service that will be treated as a common carrier as a result of the enactment of the Omnibus Budget Reconciliation Act of 1993, but only upon the following conditions:

(A) The extent of foreign ownership interest shall not be increased above the extent which existed on May 24, 1993.

(B) Such waiver shall not permit the subsequent transfer of ownership to any other person in violation of section 310(b) [47 USCS § 310(b)].

(d) Definitions. For purposes of this section—

(1) the term "commercial mobile service" means any mobile service (as

defined in section 3(n) [47 USCS § 153(n)] that is provided for profit and makes interconnected service available (A) to the public or (B) to such classes of eligible users as to be effectively available to a substantial portion of the public, as specified by regulation by the Commission;

(2) the term "interconnected service" means service that is interconnected with the public switched network (as such terms are defined by regulation by the Commission) or service for which a request for interconnection is pending pursuant to subsection (c)(1)(B); and

(3) the term "private mobile service" means any mobile service (as defined in section 3(n) [47 USCS § 153(n)]) that is not a commercial mobile service or the functional equivalent of a commercial mobile service, as specified by regulation by the Commission.

(June 19, 1934, ch 652, Title III, Part I, § 332 [331], as added Sept. 13, 1982, P. L. 97-259, Title I, § 120(a), 96 Stat. 1096; Oct. 5, 1992, P. L. 102-385, § 25(b), 106 Stat. 1502; Aug. 10, 1993, P. L. 103-66, Title VI, § 6002(b)(2)(A), 107 Stat. 393.)

HISTORY; ANCILLARY LAWS AND DIRECTIVES

References in text:

"Section 3679(b) of the Revised Statutes", referred to in subsec. (b)(2), which appeared as 31 USCS § 665(b), was repealed by Act Sept. 13, 1982, P. L. 97-258, § 5(b), 96 Stat. 1068, which Act enacted Title 31 as positive law. Similar provisions appear as 31 USCS § 1342.

The "Omnibus Budget Reconciliation Act of 1993", referred to in subsec. (c)(2), (3)(B), and (6), is Act Aug. 10, 1993, P. L. 103-66, 107 Stat. 312. For full classification of this Act, consult USCS Tables volumes.

Amendments:

1993. Act Aug. 10, 1993 (effective and applicable as provided by § 6002(c) of such Act, which appears as a note to this section), in the section heading, deleted "Private land" preceding "mobile services"; in subsec. (a), in the introductory matter and in para. (4), deleted "land" preceding "mobile services"; in subsec. (b)(1), deleted "land" preceding "mobile services"; and substituted subsecs. (c) and (d) for former subsec. (c) which read:

"(c)(1) For purposes of this section, private land mobile service shall include service provided by specialized mobile radio, multiple licensed radio dispatch systems, and all other radio dispatch systems, regardless of whether such service is provided in discriminately to eligible users on a commercial basis, except that a land station licensed in such service to multiple licensees or otherwise shared by authorized users (other than a nonprofit, cooperative station) shall not be interconnected with a telephone exchange or interexchange service or facility for any purpose, except to the extent that (A) each user obtains such interconnection directly from a duly authorized carrier; or (B) licensees jointly obtain such interconnection directly from a duly authorized carrier.

"(2) A person engaged in private land mobile service shall not, insofar

E. APPEAL OF STAFF APPROVAL APPLICATION NO. 2000-09 - PACIFIC BELL WIRELESS - OTT FARMS

Request to locate a 54' high monopole tower, two microwave dishes and two equipment cabinets on a portion of a 46-acre parcel. The property is located on 5243 Paradise Road, southwest of Modesto. The pole and facilities would be located near the northwest corner of Paradise Road and Stone Avenue.

APN: 017-06-10

Staff report: Bob Kachel Recommends **DENIAL**.

Public hearing opened.

OPPOSITION: Chuck Johnson, representing Pacific Bell; Alex Getzy, representing Pacific Bell, 8559 Summer Knoll Way, Elk Grove, California; and Tony Ott, property owner, 5243 Paradise Road, Modesto.

FAVOR: Jane Meily, 1816 Stone Road, Modesto; John Kidd, 4506 California Avenue, Modesto; Rosemary Ott, 2843 Bancroft Road, Modesto; Marika Morrison, 5461 Paradise Road, Modesto; Levoy Wright, 2612 Iowa Avenue, Modesto; Margaret Wright, 2612 Iowa Avenue, Modesto; Nick C. Blom, 2612 Illinois Avenue, Modesto; and Sharon McCarthy, 5236 California Avenue, Modesto.

Public hearing closed.

Wetherbee/McWilliams, Unanimously, **DENIED**.

