



HOTLINE

PRINCETON PLASMA PHYSICS LABORATORY

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Safety Concerns

Satellite Data Link

Several employees have expressed concerns over potential microwave radiation hazards from the soon to be installed antenna dish next to the LOB described in a recent article in the PPL Digest. The Occupational Safety and Health Act (OSHA) of 1970 defines the maximum power density of non-ionizing radiation for continuous exposure of personnel as 10 milliwatts per square centimeter (mW/cm^2) averaged over any six minute period. All areas subjected to radiation densities above this level must be prominently posted with appropriate warnings. As an additional safety precaution, the Federal Communications Commission (FCC) requires all earth station licensees to measure the levels of the radio-frequency radiation in and around their stations to confirm that safety levels are not violated.

Health and Safety's initial hazard analysis, based on information supplied by American Satellite, the installing company, indicates that power density levels should be less than $0.1 \text{ mW}/\text{cm}^2$ in any area outside the immediate antenna site. This is a factor of 100 below current safe occupational standards.

In addition to American Satellite's survey for conformance with existing Federal regulations, Health and Safety will be conducting an independent survey to ensure safety. Any employee having any further questions on this topic may contact Joe Stencil at ext. 2529.

DOE Health Hazard Alert

Recent reports from the Chicago Operations Regional Office of the DOE have labeled 2-nitro-

propane (2-NP) and di-sec octyl phthalate (DOP) as carcinogenic substances.

2-NP is used in many coatings, printing inks and adhesives. DOP is used as a plasticizer in polymers, as well as in quality assurance programs testing high efficiency particulate air filters, respirator cartridges and assembled respiratory protective equipment.

If you have any knowledge of the use of either substance or their compounds at PPL, please contact Ken Semel at Health and Safety, ext. 2531.

Hotel Fire Safety

In light of the recent rash of hotel fires, PPL Fire Chief Jack Anderson offers the following tips to employees staying in hotels while traveling:

- Find two exits nearest your room; be sure they are unlocked and unblocked. Count doors between your room and the exits so you'll have a reference point in the event of a smoky fire.
- When you hear an alarm, act — don't investigate.
- If the fire is in your room, get out and close the door. Report the fire once out of the room.
- If the fire is not in your room, leave if you can. Feel your door; if it's cool, open it slowly and go to the nearest exit. Take your room key so you can go back if you can't use your exits. If it's smoky, crawl at floor level; that's where the fresh air is.

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- If your room door is hot, don't open it; your room may be the safest place to be. Seal all cracks with wet towels, and shut off fans and air conditioners. Signal at your window. Call the fire department and wait to be rescued.
- NEVER use elevators during a fire; they could stop at the fire floor.

Plan what to do in case of fire when you check into your hotel or motel. You won't have time to plan during a fire, and your advance planning could save your life.

Military Leave Credit

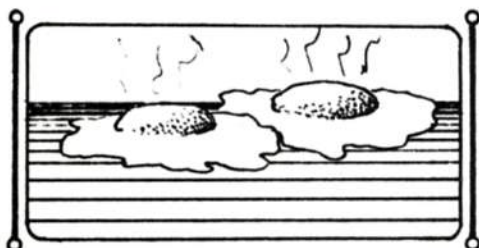
The main campus Personnel Office is concerned that some employees who left for military service may not be receiving credit for the leave period. If you left the university to enter the military service and returned to work within 90 days of discharge, please inform Roberta Gernhardt, Clio Hall, in writing as soon as possible. If you have any questions, you may contact her at 452-3315.

TIAA Claim Change

Effective immediately, TIAA, the University's Major Medical carrier, will not accept xerox copies of medical bills. TIAA will only accept original and carbon copies of such bills; xerox copies will only be accepted if the bill has first been submitted for payment to another company.

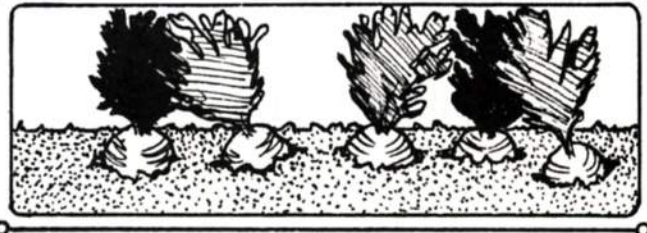
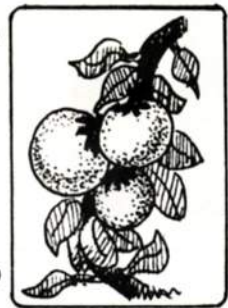
If you need assistance in filing a claim, contact Eleanor Schmitt at ext. 2046.

B-Site Breakfast



Effective immediately, the B-Site cafeteria will be serving breakfast from 7:30 to 10:30 a.m.

Plot Preparation



Plowing of PPL's garden plots in preparation for another season of growing is scheduled for the near future. Before plowing can be done, however, past gardeners must clean out their plots.

Employees who used a garden plot last year are asked to remove all stakes, sticks, screening or fencing from their plots as soon as possible. Details on this year's garden plot program will be published in upcoming editions of the HOTLINE.

Cafeteria Returns

If any china, silverware, trays or salt and pepper shakers "borrowed" from the B-Site cafeteria have taken up residence in your office, please return them to the cafeteria. In the future, carry-out meals will be served on disposable paper products.

Art Auction Slated

The Princeton University League has scheduled its annual art auction for March 20 at Cottage Club, 51 Prospect Street. All proceeds from the auction benefit the University League Nursery School Scholarship Fund.

Previews will be held at 8 p.m., with the auction beginning at 9 p.m. Auction pieces will be presented by the Bruce Andrew Galleries of Fort Lee.

The three dollar admission fee includes an assortment of desserts and wine punch served during the auction.

Exceeding Design Specifications

When the Lord designed us eons ago, He doubled up on certain organs with the provision that each time we could manage with one unit missing. He kept the heart single, presumably because He did not want the complexity of synchronizing two variable frequency pumps. Instead the heart, like the liver and other one-of-a-kind organs, received spare capacity for infrequent occasions when the load exceeded design specifications (such as when running after a hare or before a bear). And, if there was plenty to eat, the body could store the excess as fat for use during lean days.

In the beginning, life was harsh and the average life expectancy at birth hovered in the low thirties at most. Gradually conditions improved and the life expectancy went up dramatically. In the USA, it increased from 50 years in 1900 to 70 in 1950 and could reasonably have gone to the high seventies in 1980. Instead it stopped at 72, while in the same 30 years since 1950 medical costs went up ten times. This mismatch between small increases in average benefits and large increases in costs has led many people to ask what has gone wrong.

I think the answer is simple. We are not living by the Lord's specifications anymore. Storage of extra food was meant as a *temporary* expediency for Cro-Magnon Man. But Supermarket Man has made that extra weight a *permanent* part of his anatomy. That makes no sense, least of all at PPL, where pulsed operation is an established fact of life.

PLT, PDX and TFTR are specified to operate a few seconds every few minutes. If we ran them continuously at full power, none of the three would last out the day. That would be irresponsible, to say the least. It is equally bad to take a fine instrument like the human heart and subject it to permanent overload from overweight, as if every day is the last day for Shop Rite and Foodtown.

It is unrealistic to expect that the Lord will change His design at short notice. We have to make the change and lose weight. Ten pounds should be good for starters.

E. deHaas

Dodging The Draft



The high cost of the home heating season is again upon us. What can be done to reduce those costs? Perhaps the simplest and least expensive solution is control of air leakage through infiltration.

Look at your windows, doors and sliding glass doors. Can you see daylight around the frames and at the seals? That's where drafts are sneaking in, robbing you of precious heating dollars. Settling of your home over the years may also have opened cracks which are difficult to detect — especially behind paneling or where walls and foundations meet.

To find leaks, turn off all lights inside your home. Send one person outside with a flashlight, while a second remains indoors. Any light visible inside when the flashlight shines on the house outside indicates a crack. Note its location and repair it with weatherstripping or caulking material.

Use cigarette smoke to detect the airflows indicating leaks. Wait for a windy day, turn off equipment that would distort air movement, and direct smoke into suspect areas around walls, windows, doors and foundations. Air currents will quickly point to problem leaks.

Repair of these leaks will result in improved comfort and lower heating costs through the remainder of the winter.

Human Behavior

In almost any operation, unsafe conditions and mechanical failures are the easiest to control. Unsafe physical conditions can be seen and positive action can be taken to correct them. Eliminating or controlling unsafe conditions also helps to control unsafe work practices or unsafe acts by

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making workers increase their awareness of personal work habits that could cause injury.

Human behavior is complex. Ten principal factors which contribute to unsafe work practices or acts by an individual are:

1. *Did Not Know Hazard Existed:* This may be from lack of experience, inability to recognize a hazardous condition, a temporary hazard created by a fellow employee, a chain of circumstances or a lack of job training.
2. *Indifference:* The individual may know the safe method but may not care. This can be a temporary or a continuing attitude. It is necessary that supervisors insist that certain standards be met by employees under their supervision.
3. *Daring:* This type of behavior blinds an individual to hazards that exist. Such an individual might also be classified as a clown, and there are enough problems on a job without clowns!
4. *Poor Work Habits:* Poor work habits are often formed from doing the same job day after day. Some may be formed early in the job; others may develop later. This is best illustrated when an individual works many years and suddenly becomes an accident victim. He may have had poor work habits all along and the law of averages finally caught up with him.
5. *Poor Example Set:* A new employee may follow the example of an older employee who has unsafe work practices or habits.
6. *Laziness:* All persons are lazy in some way; it's the degree that becomes critical.
7. *Haste:* The desire to get something done fast can cause an injury or an unrealistic speed-up on the job.
8. *Temper:* This can also be classified as impatience or lack of emotional control, which can lead to an unsafe act.
9. *Physical Failure and Fatigue:* The individual may have physical limitations, or be on a job they cannot handle properly.
10. *Lack of On-the-Job-Training:* This can be the most glaring cause of accidents. Supervisors should be certain that employees know their jobs. If they do not, supervisors are failing in their jobs.

Lack of job training is a handicap. A supervisor has a responsibility to the employee as well as to the company in carrying out necessary job training.

Many unsafe practices or acts cause damage to materials, products and equipment but cause no injury. If an employee is injured, it is a safety problem; if not, it is a production problem. Basically, though, it is the same problem: an unsafe work practice or act.

These problems are production problems whether you ruin the machine, the product or the person. Eliminate the unsafe work practices or acts from the production process, and there will be an improvement in production and a reduction in costs and injuries.

As a supervisor or a new worker, you should:

- Have a system or procedure for instructing each new worker about the work.
- Point out the pride your crew has in their ability to do a job right.
- Emphasize the point that there is always time to do the job safely.
- Point out that an accident or injury is a result of someone's failure.
- Do your best to make the new worker feel that you want them to make good.
- Encourage them to ask questions about the job and about safe procedures.

If you are the new worker:

- Ask questions when in doubt. The only stupid question is the question that is not asked.
- Do your part and more to show you want to be a good, safe-working employee.
- Be willing to take the lead in the on-the-job safety meetings.
- Observe and learn from others.
- Remember the supervisor's instructions and always follow safe working procedures.