Background Statement: Major problems exist in agricultural safety education because there is no agricultural safety center in the United States whose primary scope is the training and distributing of educational materials in farm safety. The majority of information available is outdated. What is available does not address safety problems unique to the California agricultural environment.

Agriculture is the most hazardous area of employment in the state of California. Although accidents in the industry cost employers and insurance carriers millions of dollars yearly in premiums and claims, the public is largely unaware of the seriousness of the problem.

California law SB 198 requires all employers, including the agricultural industry and California Colleges and Universities, to have a safety program in effect by July 1, 1991. Information in safety training necessary to establish the required safety programs and train agricultural employees, 4H personnel, agriculture teachers and others in farm safety is largely unavailable.

Industry has encouraged the School of Agriculture to expand its activities in agricultural safety education. The creation of the Agricultural Safety Institute will fill both a state and national need as a source of information and training in agricultural safety.

AS-362-91
RESOLUTION ON PROPOSAL TO ESTABLISH THE AGRICULTURAL SAFETY INSTITUTE

WHEREAS, Agriculture is the most hazardous industry in California; and

WHEREAS, Injuries, illnesses, and fatalities result in untold pain and suffering for workers, their families, and employers; and

WHEREAS, Injuries, illnesses, and fatalities cost agricultural employers and employees millions of dollars annually; and
RESOLUTION ON PROPOSAL TO ESTABLISH THE AGRICULTURAL SAFETY INSTITUTE
AS-362-91

WHEREAS, These losses result in the increased cost of agricultural products to consumers; and

WHEREAS, Effective hands-on training in agricultural safety can reduce or eliminate injuries and fatalities; and

WHEREAS, The need for training and up-to-date training materials exists; therefore, be it

RESOLVED: That a privately funded Agricultural Safety Institute be established at California Polytechnic State University.

Proposed by: Paul Dilger, Associate Professor Agricultural Engineering April 16, 1991
PROPOSAL  
TO ESTABLISH THE  

Agricultural Safety Institute at California Polytechnic State University, San Luis Obispo

Submitted By

Paul Dilger, Lecturer  
Agricultural Engineering  
California Polytechnic State University  
San Luis Obispo, CA 93407  
Telephone (805) 756-2378/2384
AGRICULTURAL ENGINEERING DEPARTMENT, CAL POLY:

1990 - 1991
AE Curriculum / ABET Committee
AE Computer Committee
AE Facilities & Planning Committee
AE Public Relations Committee
AE Faculty/Student Welcome BBQ, Chairman
FFA Power & Machinery Contest, Chairman

1989 - 1990
AE Curriculum / ABET Committee
AE Computer Committee
AE Facilities & Planning Committee
AE Public Relations Committee
AE Faculty/Student Welcome BBQ, Chairman
FFA Power & Machinery Contest, Chairman

1988 - 1989
AE Curriculum / ABET Committee
AE Computer Committee
AE Facilities & Planning Committee
AE Faculty/Student Welcome BBQ, Chairman
FFA Power & Machinery Contest, Chairman

1987 - 1988
AE Curriculum / ABET Committee
AE Computer Committee
AE Facilities & Planning Committee
AE Safety Committee, Chairman
AE Faculty/Student Welcome BBQ, Chairman
FFA Power & Machinery Contest, Chairman

1986 - 1987
AE Curriculum / ABET Committee
AE Computer Committee
AE Facilities and Planning Committee
AE Safety Committee, Chairman
FFA Power & Machinery Contest, Contest Co-chairman

1985 - 1986
AE Curriculum Committee
AE Computer Committee
AE Facilities and Planning Committee
AE Safety Committee
FFA Power & Machinery Contest:
  Advisor for Identification & General Information contest
Advisor - National ASAE Student Journal, Robert Item (editor)
  Published by CAL POLY ASAE Student Branch

1986 ASAE Summer Meeting at CAL POLY
  Chairman - Annual ASAE Awards Banquet
  Member - Registration committee (name tags, tickets, registration)

1984 - 1985
AE Curriculum Committee
AE Computer Committee
AE Safety Committee
FFA Surveying Contest, Advisor
APPENDIX A - LETTERS
May 2, 1991

Dr. James Murphy, Chair
Academic Senate

Dear Dr. Murphy,

I am pleased to give the endorsement and support of my office to the proposal which would create an Agricultural Safety Institute on our campus. As the proposal indicates, this is one area of our industry which is receiving considerably greater attention at all levels due to increased awareness and need for safety education.

This institute or center will be a significant complement to our current activities in areas such as agricultural chemical safety and machine operation safety. The continued and strengthened financial support from our industry for this institute is testimony to the success which our recent workshops and programs have enjoyed.

I encourage the Senate to endorse and approve the establishment of the Agriculture Safety Institute.

Thank you!

Sincerely,

Lark P. Carter, Dean
School of Agriculture
February 1, 1991

Paul Dilger  
Agricultural Engineering  
California Polytechnic State University  
San Luis Obispo, CA 93407

Dear Paul:

Even though it has been close to 2 months since you and other Cal-Poly staff conducted the hands on Ag Safety Program for us, positive comments are still being made by the trainees. This feed back has been so positive we felt it appropriate to let you know just how well received your efforts were.

The overwhelming consensus is that the program was "one of the best, most informative and useful training programs they have ever attended".

Be assured that these are not just hollow comments as our consultants are some of the best trained in the industry. All have attended programs conducted by some of the best training people in the country and are very critical of programs that don't fulfill objectives. Such a response from all 20 of the trainees is a real indication of a job well done.

Were looking forward to putting our second wave of 20 consultants through the basic program and to working with you, and other Cal-Poly Staff, on developing programs dealing with specific Ag Safety subjects.

Dick
Richard J. Williams  
Manager, Safety and Health Services

RJW/hc

cc: Warren J. Baker  
Lark P. Carter  
Alfred Amaral

295li
July 23, 1990

A.W. Amaral, Executive Director
California Polytechnic State University Foundation
San Luis Obispo, California 93407

Dear Al:

I just wanted to drop a note and let you know how pleased we were with the recently conducted Farm Safety Seminars at Cal Poly. Paul Dilger, Jim Bermann, Steve Kaminaka and Les Ferreira did an outstanding job of helping our staff understand the farming exposures we reviewed. Comments back from our staff were universally positive.

Going forward, we will be conducting several one to two day seminars within the next 12 months dealing with some specific areas of agricultural operations that are of interest to us. Paul and I are working out the details on those seminars at this time. I am very pleased with the progress that has been made on the tractor safety video with VEP and expect that project to be completed by September 1st. We are committed to doing one other video this year with VEP which will deal with dairy operations. I hope to have this video completed by December 1st.

Our relationship with Cal Poly has been stimulating and productive in these projects. Paul has some ideas for additional cooperation which are very promising and deserve the support of the faculty and administration. In particular, the idea of a permanent, "Agricultural Safety Institute" is an idea whose time may have come. Perhaps we can discuss some of these projects during my future visits to the campus.

Once again please accept the appreciation of our staff for the efforts of your outstanding faculty in these recent seminars.

Sincerely,

Dan M. Hair, CSP
Vice President

DMH:ls
Memorandum

To : Lark Carter, Dean
     CAGR

From: E. J. Carnegie, Head
      Agricultural Engineering Department

Subject: Support for Farm Safety Institute

Agriculture has become the most dangerous profession in the U.S. Therefore safety is an issue that won't go away. Only by facing up to safety problems and developing strategies and programs to address safety issues can we hope to improve our performance. A Farm Safety Institute is a vehicle that can focus attention and develop solutions to safety issues.

The faculty of the Agricultural Engineering Department have been very positive and supportive of forming a Farm Safety Institute. Many of the departmental faculty members have been involved and see the Farm Safety Institute as a means of encouraging and fostering interdepartmental activities. The activities to date have added knowledge to existing courses and have already led to the development of a new course.

The Farm Safety Institute can also serve the College of Agriculture as the primary source of College safety programs for our faculty, staff and students.
To: Dr. Robert Lucas
    via Dr. Lark Carter
    via Ed Carnegie

Subject: Proposed Farm Safety Facility

Last summer we had our first formal meeting with you to develop guidelines for the School of Ag. that would allow us to examine the potential of establishing a Farm Safety Institute and Learning Center. With many successful workshops and conferences behind us (please see attached letter from State Fund), we have drafted an initial proposal to establish an Ag Safety Institute, a copy of which is attached, and we feel now is the correct time to move forward in hosting a formal meeting with the Ag industry to develop programs and services that they need and will support. We have shown that other departments in the School of Ag are just as enthusiastic as we are. Please see the attached memo from Ed Carnegie. George Dennis of PG & E will be carrying our message personally to the Ag industry in California. He will be getting their commitment of time and money. The money will be used to budget the operation and their time will be used to guide and direct our programs.

In the past couple of months I have been asked to join statewide coalitions for Ag safety and have met with UC Davis personnel, extension people and other state and private agencies in the field of Ag safety. Our consensus is that our farm safety programs neither duplicate nor compete with their activities; rather we are all developing programs which will complement each other in providing safer agriculture for California and the nation.

As we have no facility in which to conduct our activities, it was suggested we move forward in selecting a physical location that would be central to all ag enterprises in order to foster the greatest cooperation with all the departments in the School of Ag. We are suggesting the area out at the old Parker Barn. This facility is presently being partially used for hay storage. We feel this is the location that would provide the greatest potential for industry support. Attached is a plot plan of our proposed location with a preliminary building proposal. The aesthetic value of this location will provide great potential in attracting funding from the Ag industry.

There are several possible sources of funding. One would be membership in the Farm Safety Institute, another might be the Zenith Insurance Co. The Zenith's greatest reservation in providing funding is the lack of a formal commitment thus far by the University to provide either a facility or a facility location to insure a long-term relationship in farm safety. My personal feeling is that they will consider a request to build the facility if we are able to expedite the approval of this project before their management cools off and moves on to other projects.

As the barns in our country get older they become a great safety risk. The old Parker Barn could be a perfect structure to teach methods of structural and electrical remodeling. Our plans would leave one side of the barn weathered and unrepai red to study structural failure. The other side of the barn would be totally restored using four different methods to study design variations. It would also provide a facility to lock up our machinery that is brought onto campus for safety instruction. The old silo will provide an excellent structure to study poison gases and structure failure and repairs.

I have kept Dr. Rathbun up to date with all these details. He suggests it is time to bring our plans and request to Doug Gerard. I will be happy to meet you at your earliest convenience.
APPENDIX B

SUGGESTED LOCATION AND PRELIMINARY DRAWING

OF

CAL POLY FARM SAFETY INSTITUTE
ABSTRACT

Agriculture consistently ranks in the top three (3) industries with the highest number of injuries (National Safety Council). While other industries have made progress in reducing injuries and fatalities, agriculture has not done as well. The nature of the agricultural industry, with its many independent and self-sufficient family operated farms makes it difficult to reach those who need help the most.

Education is a vital link in the process to reduce the number of injuries and fatalities in the workplace. Federal and State funded agencies have very limited resources to use in supporting agricultural safety efforts. The agricultural industry supports safety in a limited way through organizations like Farm Bureau and Grange. Most efforts have been reactionary, not preventative.

The primary goal of the Cal Poly Agricultural Safety Institute is to further education in farm safety through the development of safety programs, training materials and workshops for the agricultural industry. These activities will be carried out by University faculty and staff in close cooperation with and funded by the agricultural industry.

Through effective hands-on training, risks can be reduced or eliminated making agriculture a safer place to work. The agricultural industry has encouraged the School of Agriculture to expand its activities in safety education. The Agricultural Safety Institute will provide a permanent facility for teaching agricultural safety training to a variety of groups from the local to the national level.

The Agricultural Safety Institute will provide a privately funded facility dedicated to developing agricultural safety materials and conducting training in all areas of agricultural safety. Workshops and programs developed by Institute staff will be offered to students, faculty and individuals involved in the agricultural industry. A resource center will be included as part of the Institute. Written, audio and visual agricultural safety training materials developed at Cal Poly will be available for interested individuals. Through Vocational Educational Productions (VEP) audio-video materials will be marketed to the industry.
Background

Agriculture is the largest industry in the United States and California. The work force is composed of individuals with diverse backgrounds, skills and abilities. Farm workers may be uneducated migrant labors, farm owners, or highly skilled and trained individuals. One thing they face in common is the risks associated with agriculture. Agriculture consistently ranks in the top three (3) with mining and construction as the most dangerous workplace (National Safety Council). While many industries have reduced their injury and fatality rates, agriculture lags behind.

Many of the injuries and fatalities in agriculture go unnoticed by the general public because they happen one at a time in small communities, unlike the multiple injuries/fatalities of mining accidents or urban construction accidents. Governmental agencies keep vigilant watch over most industries through inspections and training programs. Agriculture as done its best to keep the government out.

Economics are now reaching many in the agricultural industry where government programs were unable. Unemployment insurance costs have risen dramatically. The difference in insurance premiums paid for safe operations ($10.00 per $100.00 pay role) verses unsafe operations ($25.00 per $100.00 pay role) make it uneconomical to ignore safety. Coupled to this, a new California law mandates that employers provide safety training for everyone. Agriculture is not exempt from this requirement. Large fines can be levied against all who do not comply with the new safety training regulation. Many in the industry are now sensitized to the safety issue.

Traditionally, the source of safety information and training has come from farm organizations, governmental agencies and manufacturers of equipment and supplies. The increased demand for information and training has created a vacuum. Much of the information being used needs to be updated and methods of instructing individuals improved.

California Polytechnic State University, San Luis Obispo (Cal Poly) has a reputation in the agricultural industry for up-to-date information and excellence in teaching programs. Because of this reputation, the industry has come to Cal Poly asking for help in obtaining up-to-date instructional materials and training for individuals that could go out and train others. The Agricultural Engineering Dept. has the largest faculty of Agricultural Engineers in the United States experienced in agricultural safety and human factors education.

The agricultural safety faculty at Cal Poly has organized and conducted training seminars and workshops for industry. Insurance carriers of workman’s compensation insurance have stated that the Cal Poly program is the most
informative and useful program available (Appendix A). Cal Poly was approached by private industry in January 1991 regarding the establishment and funding of an Agricultural Safety Institute at Cal Poly. To guarantee this funding, campus approval must be in progress by June 1, 1991. Additional financial backing from industry is expected to be extended to Cal Poly at a meeting of Agricultural Industry members to be held May 17.

Objectives

The establishment of an Agricultural Safety Institute at Cal Poly will provide educational safety awareness and accident prevention programs through a variety of resources. The Institute will enable the following objectives:

- Prepare written learning materials for classroom distribution and available for loan or purchase from the Institute resource center.
- Prepare audio/visual training materials in all aspects of agricultural safety in English, Spanish and other languages based on need and available funding.
- Conduct training workshops for off-campus groups such as agricultural safety consultants, 4-H leaders, farm and ranch foremen, high school agricultural teachers and their classes and farm families.
- Provide health and safety consultants and trainers hands-on workshops, conferences and short courses tailored to meet specific needs.
- Train agriculture consultants how to conduct comprehensive safety evaluations to reduce job risks and provide information to assist in the removal of risk factors in agricultural jobs.
- Develop mobile resource units especially designed and equipped for field training.
- Provide assistance in the design and development of health and safety decals and posters.
- Write and distribute articles for publication in agricultural journals.
- Serve as a national clearinghouse of educational materials on agricultural safety for agricultural safety professionals and industry.
- Provide a facility for Cal Poly faculty, staff and student training.
Benefits

The Benefits to Cal Poly

- Students will receive an additional competitive edge by possessing a high level of safety information and resources.

- Cal Poly faculty and staff will be provided with a facility to develop lessons and teaching aids in safety and methods to integrate these lessons into their existing classes. Resource information developed will be available for all agricultural disciplines.

- A mechanism to train Cal Poly faculty, staff, and students in safe agricultural practices will exist. This will help create a safer workplace.

The Benefits to the State and Industry

- Farmers, ranchers and agriculturalists will receive help to reduce injuries and fatalities.

- Programs will be available to meet state compliance standards.

- An up-to-date study library for teachers, students, safety specialists and other individuals containing a collection of safety materials generated both locally and nationally will be established.

- International computer databases of safety materials will be accessible to specialists and researchers working to solve agricultural safety problems.

- A resource center will be available for senior project development and other student study activities involving health and human factors.
Institute Activities

Current Activities -

• Workshops and training materials completed in the last year.

  Machinery/Dairy Safety Workshops $120,000 4 courses completed
  Orchard Safety $10,000 1 course completed
  Irrigation Safety $10,000 1 course completed
  Tractor Safety Video Tape $25,000 Completed

• In progress for the coming year.

  Machinery/Dairy Safety Workshops $30,000 1 courses funded
  Harvest Safety $20,000 2 courses funded
  Dairy Safety Video Tape $25,000 Funded
  All-Terrain Vehicle Safety Video Tape $25,000 Funded
  Orchard and Ladder Safety Video Tape $18,000 Under negotiation

Possible Future Activities

The following centers and activities would be an outcome of the proposed Institute.

• Resource Center - The center would collect and make available safety resources developed at Cal Poly or obtained from manufacturers, equipment suppliers, governmental agencies, etc.

• Learning Center - Individuals will be able to come in and educate themselves through tutorials, computer aided instruction and audio-video materials.

• Workshops - the topics currently covered would expand to reach all aspects of agriculture.
## Budget

### Income

<table>
<thead>
<tr>
<th>Membership Type</th>
<th>First Year</th>
<th>Subsequent Years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institute Membership (Corporate)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial 50 companies @ $5,000</td>
<td>$250,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Yearly contributions 50 companies @ $2000</td>
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<td></td>
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<tr>
<td><strong>Institute Membership (Individual)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial 100 individuals @ $1,000</td>
<td>$100,000</td>
<td></td>
</tr>
<tr>
<td>Yearly contributions 100 individuals @ $250</td>
<td></td>
<td>$25,000</td>
</tr>
<tr>
<td>Overhead from workshops and training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>material development (15% of $300,000)</td>
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**Total Income**

$350,000

### Expenses

**Labor:**

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<tr>
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<th>Subsequent Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director and Assistant Director (1/2 time)</td>
<td>$88,000</td>
<td>$88,000</td>
</tr>
<tr>
<td>Staff</td>
<td>$40,000</td>
<td>$40,000</td>
</tr>
<tr>
<td>Technicians</td>
<td>$30,000</td>
<td>$15,000</td>
</tr>
<tr>
<td>Student Assistants</td>
<td>$10,000</td>
<td>$5,000</td>
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</tbody>
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Subtotal

$168,000

**Materials, Equipment, Supplies:**

<table>
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<th>Category</th>
<th>First Year</th>
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<tr>
<td>Coursework Development</td>
<td>$15,000</td>
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<tr>
<td>Resource Library Development</td>
<td>$30,000</td>
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<tr>
<td>Travel</td>
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<td>$5,000</td>
</tr>
<tr>
<td>Office</td>
<td>$15,000</td>
<td>$5,000</td>
</tr>
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</table>

Subtotal

$75,000

Total expenses

$243,000

**Facilities**

Industry has indicated a willingness to fund the construction of a permanent facility to house the Institute. A possible site near Parker Barn has been identified (Appendix B).

**Building Cost (materials and labor)**

$150,000

**Furnishings**

$10,000
Organization

The organizational chart as proposed for the Agricultural Safety Institute (ASI) is presented below and reflects communication channels within the organization.

Agricultural Safety Institute

Organizational Chart

A.E. Dept. Head

ASI Executive Board

A.E. Faculty (3)
Faculty from SAG(2)

ASI Director

ASI Advisory Board

Chairman
Industry Reps (20)
State Agencies (3)

Facilities
Workshops/Projects
Support Personnel

The proposed Institute will function within the Agricultural Engineering Department at Cal Poly, San Luis Obispo under the direction of the Institute Director and Executive Board Members. The Director will be responsible for soliciting and generating outside funds, and providing direction for workshops, course development and training. The Director will relieve faculty of most of the burden of administrative effort required in the implementation of Institute related training material development and training projects so their efforts may best be utilized for technical support in their areas of expertise. The Director's appointment will be based on a twelve month position at a ranking level equivalent from Associate Professor to a Full Professor, depending upon qualifications.
Executive Board members for the Institute are those persons recommended by the faculty of the Agricultural Engineering Department, via the Vice President of Academic Affairs, to be recommended to the President for appointment. The Executive Board will include three Agricultural Engineering faculty members, as well as two other faculty members from the School of Agriculture, but outside the Department of Agricultural Engineering.

Advisory Board members and the Chairman of the Advisory Board for the Agricultural Safety Institute are individuals recommended for membership by the Executive Board, via the Vice President of Academic Affairs, to be recommended to the President for appointment.

The Advisory Board will provide advice and comment on Institute programs, engage in public relations and fund raising for Institute programs, and provide recommendations for direction to the Institute. Members on the Advisory Board may provide expertise on Institute activities.

Advisory Board members may consist of experts from various disciplines with interest in agricultural safety activities. Other candidates for membership on the proposed Institute's Advisory Board may include individuals from agencies such as the California Department of Food and Agriculture, the USDA Extension Service, National Safety Council, and the National Institute for Farm Safety.

Agricultural safety development projects many times requires interdisciplinary expertise from disciplines outside the School of Agriculture, such as civil, mechanical and electronic engineering, and the social, economic and political sciences. The vast pool of knowledge resources available at Cal Poly in these various disciplines will be sought, organized and utilized by the Institute Director. The Director will manage and direct all support personnel for Institute activities and will operate within University guidelines.
ARTICLE I - NAME

The name of this organization shall be Agricultural Safety Institute (ASI), referred to in these bylaws as the Institute.

ARTICLE II - PURPOSE AND POLICIES

Section 1 - Purpose

The primary purpose of the Institute will be to support the multidisciplinary needs for supporting training and development of training materials as related to agricultural safety education. The Institute will foster interaction between the University and industry, consistent with the overall goals of Cal Poly.

Institute members are faculty and students who have a declared interest in agricultural safety technology, training and research programs as related to activities at Cal Poly.

The Institute will serve as a vehicle for securing industry and state sponsorship and support to sustain agricultural safety training projects at Cal Poly.

The Institute will be financed primarily by industry memberships and grants. It is intended that funds will be secured to support the Institute's administrative cost for an indefinite period.

Section 2 - Policies

The policies of the Institute shall be in harmony with the policies of the California State University, the California Polytechnic State University, San Luis Obispo, and the California Polytechnic State University Foundation.
Section 3 - Dissolution

In the event the Institute is dissolved, its assets remaining after payment of or provision of, all debts and liabilities shall be distributed to the California Polytechnic State University Foundation in trust for Cal Poly.

ARTICLE III - MEMBERSHIP

Section 1 - Class of Membership

Membership in the Institute will be composed of industry members (corporate and individual) and University members (faculty, staff, and students of the California Polytechnic State University, San Luis Obispo). The membership is defined as follows:

a. - Industry - Corporate

Corporate members are companies that have an interest in supporting agricultural safety education.

b. - Industry - Individual

Individual members are those persons interested in the support of agricultural safety education.

c. - University Members

University members are faculty, staff, and students who have an interest in promoting agricultural safety education.

Section 2 - Admission to Membership

a. - Eligibility

Is contingent upon the approval of the Institute's Advisory Board.

b. - Proposal of Members

Any faculty member engaged in a Institute program may propose candidates for membership.

c. - Acknowledgement of Membership
The Director of the Institute shall acknowledge members.

Section 3 - Terms

Terms of members shall be determined by the Director.

Section 4 - Fees and Dues

Industry members (corporate and individual) will pay an initial membership fee and yearly dues. The amount of these fees and dues will be determined by the Advisory Board. No fees or dues will be required of University members.

Section 5 - Role of Members

Members are encouraged to participate in the activities of the Institute. They may propose programs to be implemented by the Institute. If approved, these programs will receive Institute support as necessary and possible. The membership will have priority consideration in Institute activities and interaction with industry.

Members are expected to provide support to the programs of the Institute and assist the Director in program development.

ARTICLE IV - ADMINISTRATION

Section 1 - Director

The Institute will be administered by a Director, recommended by the Institute's Executive Board and approved by of the Vice President for Academic Affairs, on recommendations of the Agricultural Engineering Department Head and the Dean of the School of Agriculture.

The Director will serve at least on a half time basis, duration depending on available funding obtained. The Director will report to the ASI's Executive Board.

The Director will submit an annual report to the Vice President for Academic Affairs, the Dean of the School of Agriculture, the Associate Vice President for Graduate Studies, Research, and Faculty Development, and members of the Institute's Advisory Board. The report will include a summary of:

(a) what was done

(b) who did it
(c) how it was financed
(d) future plans

The Director will be responsible for soliciting and generating outside funds, and providing direction for workshops, training material development and training projects. The Director will manage and direct all support personnel for Institute activities and will operate within University guidelines.

Section 2 - Administrative Support

Administrative support will initially be provided incident to the Institute needs by part-time personnel. As Institute activities increase and additional financial support is obtained, administrative support will become a full-time responsibility.

ARTICLE V - EXECUTIVE BOARD

Section 1 - Executive Board

Executive Board members for the ASI are those persons recommended by the faculty of the Agricultural Engineering Department, via the Vice President of Academic Affairs, to be recommended to the President for appointment. The Executive Board will include three Agricultural Engineering faculty members. In addition, two faculty members from outside of the Agricultural Engineering Department, but from within the School of Agriculture will also be on the Executive Board.

Section 2 - Powers and Duties

The Executive Board shall provide advice and comment on Institute programs, shall engage in public relations and fund raising for Institute programs, and shall provide overall guidance and direction to the Institute. The Executive Board will assist in establishing policies for the operation of the Institute. School of Agriculture faculty and members on the Advisory Board may provide expertise on Institute activities.

Section 3 - Meetings

The Executive Board will meet at least once a year to review Institute programs and to provide general recommendations to the Institute. The Executive Board
may elect to meet for special purposes at any other times upon agreement of a majority of Board members.

Section 4 - Number Constituting a Quorum

A majority of members shall constitute a quorum.

ARTICLE VI - ADVISORY BOARD

Section 1 - Advisory Board

Advisory Board members and the Chairman of the Advisory Board for the Agricultural Safety Institute are individuals recommended for membership by the Executive Board, via the Vice President of Academic Affairs, to be recommended to the President for appointment.

The Advisory Board will include at least twenty members from outside the University that represents the agricultural industry, a state agency and/or a national agency.

Section 2 - Powers and Duties

The Advisory Board shall provide advice and comment on Institute programs, shall engage in public relations and fund raising for Institute programs, and shall provide recommendations for guidance and direction to the Institute. The Advisory Board will recommend policies for the operation of the Institute. Members on the Advisory Board may provide expertise on Institute activities.

Section 3 - Meetings

The Advisory Board will meet at least once a year to review Institute programs and to provide general recommendations to the Institute. The Advisory Board may elect to meet for special purposes at any other times upon agreement of a majority of Board members, the Institute Director, and the Executive Board.

Section 4 - Number Constituting a Quorum

A majority of members shall constitute a quorum.
ARTICLE VII - FISCAL POLICIES

Section 1 - Fiscal Year

The fiscal year shall correspond to that of the Cal Poly Foundation.

Section 2 - Accounts and Audit

The books and accounts of the Institute shall be kept by the Cal Poly Foundation in accordance with sound accounting practices, and shall be audited annually in accordance with Foundation policies.

Section 3 - Funding

Funding for the Institute shall come from private solicited sources, gifts, and fees from Institute generated short courses, conferences and publications, and from the State.

ARTICLE VIII - AMENDMENTS

The bylaws may be amended by a two thirds vote of the Advisory Board voting at any meeting of the Institute, provided that each member had received an advance notification of the proposed amendment. They may also be amended on recommendations of the Director and approved by the Advisory Board.
APPENDIX A & B HAVE NOT BEEN INCLUDED IN THIS AGENDA. They are available in the Academic Senate Office and Graduate Studies Office.

APPENDIX A - Letters of Support

- Lark Carter, Dean, School of Agriculture
- Ed Carnegie, Head, Agricultural Engineering Department
- Richard J. Williams, Manager, Safety and Health Services State Compensation Insurance Fund
- Dan M. Hair, Vice President, The Zenith, Zenith Insurance Company

APPENDIX B - Suggested Location and Preliminary Drawing of Cal Poly Agricultural Safety Institute.

APPENDIX C - Resumes

- Paul Dilger H.
- James Bermann
- M. Stephen Kaminaka
- Richard A. Cavaletto
1. PROPOSER'S NAME
Gerald Sullivan

2. PROPOSER'S DEPT.
English

3. SUBMITTED FOR AREA (include section, and subsection if applicable)
A.4 (change to existing GE&B course)

4. COURSE PREFIX, NUMBER, TITLE, UNITS, DESCRIPTION, ETC. (use catalog format)
ENGL 218 Professional Writing: Argumentation and Reports (4)
Argumentation in writing, including extensive writing practice in professional situations: reports, proposals, letters, memoranda; composing and conveying technical methods of research; analysis of writing situations; analysis and criticism of student and professional reports. This class is not open to students with credit in ENGL 215. Prerequisites: ENGL 114 and ENGL 125 or SPC 125

5. SUBCOMMITTEE RECOMMENDATION AND REMARKS
Recommend approval (5-0-0)
The primary focus of the course will continue to be argumentation, as required by EO 338 and K+S 1B.

6. GE&B COMMITTEE RECOMMENDATION AND REMARKS
Recommend approval (8-0-0)
The primary focus of the course will be argumentation, as required by EO 338 and K+S 1B.

7. ACADEMIC SENATE RECOMMENDATION
PAUL DILGER

Work Experience:

1984-Present
Associate Professor and Lecturer
Agricultural Engineering
Department, California Polytechnic
State University, San Luis Obispo.

Director Farm Safety conferences,
seminars and video productions.

Teaches classes in farm machinery
operations, farm power and
computers.

1971-1989
Professor, College of the Desert
Taught agricultural engineering and
agricultural mechanics,
horticulture, forestry and
computers.

1968-1971
Teacher, Cuyama Valley High School,
Taught animal and plant sciences,
agricultural mechanics and welding

EDUCATION:

B. S. Soil Science, University of California,
Davis.

Secondary Teaching Credential
Vocational Agriculture, University
of California, Davis.

M. S. Agricultural Engineering
Technology, California Polytechnic
State University, San Luis Obispo.

Community College Teaching
Credential, Computer Science.

FARMING BACKGROUND:

1989-Present
87 Acres - Santa Margarita, CA. oat
hay, safflower, beans, peas, cattle
and sheep.

1975-1989
15 acres - Mountain Center, CA.
hay, Christmas trees, cattle and
sheep.

1952-1957 Work experience through high school. Walnuts, Citrus, hay and strawberries.

PROFESSIONAL ORGANIZATIONS:

California Agricultural Teachers Association (25 years)

National Institute for Farm Safety

American Association Agricultural Engineers

American Vocational Association
RICHARD A. CAVALETTO

PERSONAL DATA
Born: 26 September 1956
Raised: Somis, CA. Family citrus and avocado ranch.
Status: Married, 4 children.

EDUCATION
B.S., Agricultural Engineering, California Polytechnic State University, San Luis Obispo, June 1981.
M.S., Agricultural Engineering, University of California, Davis, June 1983.
Ph.D., Agricultural Engineering, University of California, Davis, January 1987.

EMPLOYMENT HISTORY
September 1990 - present  
Associate Professor, California Polytechnic State University, San Luis Obispo, Agricultural Engineering Department.

January 1987-August, 1990  
Assistant Professor, Oregon State University, Extension Power & Machinery and Farm Safety Specialist.

October 1985-January 1987  
Instructor, Oregon State University, Extension Power & Machinery and Farm Safety Specialist.

September 1981-September 1985  
Research Assistant, U.C. Davis, Agricultural Engineering Department.
PROFESSIONAL INTERESTS

Agricultural Safety
  Equipment Design and Operation
  Human Factors

Agricultural Equipment Design
  Chemical Application Technology
  Materials Handling and Physical Properties

Agricultural Structures Design

PROFESSIONAL REGISTRATION


PROFESSIONAL MEMBERSHIPS

National Institute of Farm Safety 1986 - Present
American Society of Agricultural Engineers 1980 - Present
National Safety Council 1987 - Present
Sigma Xi 1985 - Present

SAFETY COMMITTEES


OSU Safety Committee, Committee Member 1989-1990.

SAFETY RELATED PROFESSIONAL ACTIVITIES

ORAL PRESENTATIONS

More than 25 presentations at conferences and workshops on safety related topics such as: tractor and machinery safety, chemical safety, farm accident rescue, and youth safety in agriculture.
More than 30 presentations on the Oregon State University Extension Service radio program “Down to Earth.” Various safety topics were discussed.

RESEARCH PAPERS AND PUBLICATIONS


VIDEO TAPE PRODUCTIONS


GRANTS


$16,600, Western Region Pesticide Impact Assessment Program, "Biological Efficacy and Pesticide Drift from an Air-foil Shrouded Boom Sprayer", March '89-June '90. (with Arnold Appleby, Crop Science Department).

$9,960, NIOSH - "Farm Labor, Tractor Use, and Farm Work Injury in Oregon", July '88-June '89.


CONSULTING


INVENTION DISCLOSURES

M. STEPHEN KAMINAKA

BUSINESS ADDRESS:
Agricultural Engineering Department
California Polytechnic State University
San Luis Obispo, CA 93407
(805) 756-2658 / 756-2378 (messages)
FAX (805) 726-2626

RESIDENCE ADDRESS:
1615 Bee Canyon Road
Arroyo Grande, CA 93420
(805) 481-4586

PERSONAL DATA:
Raised: Nipomo, CA. Commercial Strawberry Farm.
Status: Married, no children, in excellent health.

EDUCATION:
1977 Ph.D. in Agricultural Engineering Cornell University
Ithaca, New York
Dissertation: "Visual Monitoring and the Operation of Agricultural Machinery"

1973 M.S. in Agricultural Engineering East-West Center, University of Hawaii
Honolulu, Hawaii
Thesis: "Capacitive Performance of a Japanese Rice Combine with Respect to
Field-crop Conditions and Operator Background"

1968 B.S. in Agricultural Engineering University of California
Davis, California

PROFESSIONAL INTERESTS:
Human Factors Engineering--Applications to Agriculture:

- Equipment workstations, controls, and display systems.
- Operator performance and skills.
- Handtools, manual materials handling.
- Visual inspection and monitoring.

Microprocessor Applications in Agriculture.

International Agricultural Development.

Agricultural Equipment Development and Appropriate Technology.
I. BACKGROUND

EMPLOYMENT HISTORY:

1988 - present  Professor of Agricultural Engineering.
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, California
Teaching graduate and undergraduate courses in the areas of
Agricultural Engineering and Mechanized Agriculture.

1984 - 1988  Associate Professor of Agricultural Engineering.
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, California
Taught graduate and undergraduate courses in the areas of Agricultural
Engineering and Mechanized Agriculture.

1978 - 1984  Assistant Professor of Agricultural Engineering.
UNIVERSITY OF CALIFORNIA AT DAVIS
Davis, California
Taught courses on Internal Combustion Engines, Microcomputer
Interfacing, and Human Factors Engineering.
Supervised graduate student research.
Advised undergraduate and graduate students in Agricultural
Engineering, Mechanical Engineering, and International Agricultural
Development.

1974 - 1977  Research Assistant and Teaching Assistant.
CORNELL UNIVERSITY
Ithaca, New York
Supervised laboratory classes in Farm Power and Farm Machinery.

UNIVERSITY OF HAWAII
Honolulu, Hawaii
Conducted experimental research on post-harvest treatment of papaya
fruit. Utilized Response Surface Methodology to determine optimum
time/temperature parameters for hot water spray treatment of papaya.

1968-1970  Staff Sergeant (E-6), Infantry
U.S. ARMY
Served on active combat duty as infantry platoon sergeant with Americal
Division, Chu Lai, Viet Nam. Later rear area duty as Map Reading
Instructor, Chu Lai Combat Center, Viet Nam.
II. TEACHING RELATED ACTIVITIES

COURSES AND LABORATORIES TAUGHT:

Cal Poly State University, 1984 - present
Department of Agricultural Engineering

AE 121 Agricultural Mechanics
AE 141 Agric. Tractors & Equipment Skills
AE 234 Agricultural Power Transmission
AE 323 Agricultural Products Handling
AE 333 Properties of Agricultural Materials
AE 430 Finite Element Analysis
AE 461 Senior Project
AE 462 Senior Project
AE 471 Agricultural Engineering Computer Applications
AE 500 Individual Study
AE 521 Engineering of Agricultural Systems
AE 599 Thesis
AE X399 Basic Macintosh Applications
AE X401 Advanced Macintosh Applications

University of California at Davis, 1978 - 1984

Consumer Technology 101 Engines for Automotive, Agricultural, Residential, & Recreational Use.
Consumer Technology 157 Human Factors in the Design of Consumer Products
Agricultural Engineering 112 Engines for Agriculture, Industry, & Transportation.
Agricultural Engineering 157 Human Factors in Engineering and Design.
Agricultural Engineering 165 Microcomputer Applications in Agriculture.
Agricultural Engineering 298 Research Techniques in Human Factors Engineering.

NEW COURSE PREPARATIONS:

Cal Poly, 1984 - 1990:

1987 - 1988 AE 401X (1) Experimental Course: Advanced Applications of the Macintosh

Univ. of Calif. at Davis, 1978 - 1984:

AE 157 Human Factors in Engineering and Design
AE 165 Microcomputer Applications in Agriculture
CT 157 Human Factors in the Design of Consumer Products
MAJOR REVISIONS and INNOVATIONS in EXISTING COURSES:

1990
AE 333 (3) Finite Element Analysis. FEA software for this course has been changed from mainframe based software to microcomputer based software. This change has resulted in a more rapid learning pace for the students.

1986
AE 521 (4) Engineering of Agricultural Systems. The microcomputer was introduced as a tool to assist in the creative problem solving process and the use of Human Factors Engineering in the design process was given additional emphasis.

1985
AE 333 (3) Finite Element Analysis. Reorientation of this course from Physical Properties to Finite Element Analysis was effected.

CURRICULUM DEVELOPMENT:

1988 - 1991
As part of AE department curriculum committee, a major review of the AE curriculum has been undertaken. The effort includes a new Mission and Goals Statement for the Year 2000, a survey of recent AE graduates, and the development of a curriculum matrix to assist us in the design of a curriculum to meet the needs of our future AE graduates.

1989 - 1990

1984 - 1985
Agricultural Education Foundation grant for purchase of microcomputer software for AE 521 for "Creative Problem-Solving Programs". Funds were used to purchase Macintosh software that could be used as aids to creative problem solving. Funded: Dec. 5, 1984. Amount: $ 927.

INSTRUCTION RELATED PROJECTS:

1986 - 1991
Human Factors Teaching Modules:
The Human Factors committee (PM-61) of ASAE has identified the need for the development of Human Factors Engineering related teaching materials concerned specifically with problems in agriculture. I was asked by the committee to help develop one of the teaching modules: "Equipment Design: Controls and Displays" (co-authored by Dr. Jerry R. Duncan of the John Deere Technical Center). The final draft was completed in January, 1991.

1986 - 1988
Water Delivery Automation Facility:
Worked with Dr. Charles Burt of the Agricultural Engineering department who has instigated the development of a major teaching facility on the Cal Poly campus which is designed to illustrate the concepts of automated water delivery systems. My involvement was with the design, selection, and integration of the microcomputer controllers on the model canal system.
III. PROFESSIONAL GROWTH and DEVELOPMENT ACTIVITIES

PROFESSIONAL MEMBERSHIPS:

American Society of Agricultural Engineers:
  Human Factors Committee

Human Factors Society
  Consumer Products Group, Educators' Professional Group, Safety Group

Ergonomics Society

Sigma Xi

PROFESSIONAL ACTIVITIES -- EDITORIAL WORK:

1978 - 1991 Review papers on Human Factors research for refereed journals such as
  Transactions of the ASAE, Applied Engineering in Agriculture,
  and SAE Meeting Proceedings.

1978 - 1991 Review and ballot ASAE Standard proposals and changes as part of ASAE
  Human Factors committee.

RESEARCH PROJECTS & GRANTS:

1987 - 1991 Co-Investigator with Dr. D.W. Williams (Principal Investigator), Dr. M.A.
  Zohns, Mr. M. Andros, and E.L. Carnegie on "Controlled Traffic Farming
  Using Off-Peak Electrical Power ". Sponsored by Southern California
  Edison, PG&E, and Valmont Inc. Funding to date in excess of $200,000.
  Responsible for the interface design of microcomputer control systems for the
  project.

1986 - 1989 Co-Investigator with Dr. C.M. Burt (Principal Investigator) on "Water Delivery
  Automation Facility" project. Funded at various times by PG&E, Boswell
  Fund, USGS, Southern California Edison, et. al. in excess of $330,000.
  Responsible for the interface design of the microcomputer control systems
  used for each of the canal gates and for the supervisory computer system.

1985 - 1986 Grant from Faculty Development Travel Funds to support travel to ASAE Winter
  Amount: $ 664
CONSULTING:

1990 - 1991 Lectures on Human Factors in Agriculture given to insurance professionals at Farm Safety Workshops held at Cal Poly.

1987 - 1989 Agricultural Engineering consultant to private agricultural research firm on new equipment development. Set up design specifications for their first prototype Insect Vacuum (BugVac) machine to test a new concept for pest control which does not utilize pesticides.

1987 - 1989 Agricultural Engineering consultant to private agricultural firm to develop prototype fruit translucency detection device.

1984 - 1990 Occasional consulting work as Human Factors Engineering expert witness in product liability and injury cases.

INTERNATIONAL ACTIVITIES:

1982 Presented seminars to the Faculty of Engineering, University of Guanajuato, Salamanca, Mexico on (1) Human Factors Engineering and Its Relationship to Problems in Agriculture, and (2) Appropriate Technology: Microcomputers to Solar Powered Hot-Air Engines.

1980 - 1983 Cooperative research project conducted under the auspices of the Agricultural Development Systems / Egypt Project. In cooperation with the Agricultural Engineering department of the University of Alexandria, EGYPT, joint research was conducted on a low-technology approach to the local fabrication of a Stirling engine, parabolic solar collectors, and fluid piston pumps.

1972 Conducted field research in Japan in cooperation with the YANMAR Agricultural Equipment Company of Osaka. Research was concerned with the efficiency of operation of the newly introduced (at that time) riding type rice combine.
PROFESSIONAL CONFERENCES and WORKSHOPS ATTENDED:

1990 - 1991
Workshop on Improvement of Competencies of Agricultural and Related Biological Engineers, Atlanta, GA.
Calif/Nevada Section Meeting of ASAE
San Luis Obispo, CA

1989 - 1990
Cosmos/M Finite Element Analysis Workshop.
Sunnyvale, CA
National Institute for Farm Safety Conference, panelist for keynote session,
Monterey, CA
Zenith Insurance Farm Safety Symposium, invited panelist.
Woodland Hills, CA
Mainstreaming Faculty Development, CSU workshop.
Long Beach, CA

1988 - 1989
Small Farm Conference & National Direct Marketing Conference.
Oakland, CA
Tulare Farm Show, Tulare, CA

1987 - 1988
Instrument Society of America, ISA/87 International Conference and Exhibit,
Anaheim, CA
Instrument Society of America, San Luis Obispo Section.
Dinner Meeting and Tour of Union Sugar Plant, Betteravia, CA
Small Farm Conference.
Santa Rosa, CA

1986 - 1987
American Society of Agricultural Engineers. 1986 Summer Meeting,
CAL POLY, San Luis Obispo, CA
Computer Aided Engineering (CAE) Technology Seminar. Presented by Structural Dynamics Research Corporation, CAL POLY, SLO, CA
Small Farm Conference.
Pomona, CA
Working with Wood Show and Conference.
Pasadena, CA
American Society for Engineering Education.
1987 Annual Conference, Reno, NV

1985 - 1986
ANSYS Finite Element Modelling Seminar. Swanson Analysis Systems, Inc.,
Los Angeles, CA
American Society of Agricultural Engineers. Human Factors Short Course,
Chicago, IL
American Society of Agricultural Engineers. 1985 Winter Meeting,
Chicago, IL
Jojoba Research Institute Meeting,
Riverside, CA

1984 - 1985
American Society of Agricultural Engineers.
1984 Winter Meeting, New Orleans, LA
INVENTION DISCLOSURES:


HONORS & AWARDS:

1982 - 1983 Outstanding Advisor Award, College of Engineering, University of California at Davis, CA

1979 Instructor of the Year 1979, ASAE Student Branch, University of California at Davis, CA

1970 Purple Heart, VietNam

1969 Outstanding NCO/OJT Fort Ord, CA
IV. SERVICE

CSU STATEWIDE SERVICE

1988 - 1989  Reviewer for 2+2+2 Articulated Career Education Programs Proposals for Chancellors, Office, California Community Colleges. Sacramento, CA Workshop panelist for API Proposal Workshop, Burlingame, CA


UNIVERSITY:

1990 - 1991  Academic Senate Research Committee.

1989 - 1990  Ad Hoc Committee to Recommend a Campus Faculty Development Plan

1987 - 1988  President's Cabinet: Resource Development Sub-committee on Computing Resources

1986 - 1987  President's Cabinet: Resource Development Sub-committee on Computing Resources

1985 - 1986  President's Cabinet: Resource Development Sub-committee on Computing Resources

SCHOOL OF AGRICULTURE, CAL POLY:

1990 - 1991  Research Committee, Chairman
            Ad Hoc Advisory Committee to the Dean
            Sustainable Agriculture (formerly LISA) Committee, Chairman
            SAGR Faculty/Staff Open Forum (unofficial, ad hoc) Task Force

1989 - 1990  Research Committee, Chairman
            Ad Hoc Advisory Committee to the Dean
            LISA (Low-Input Sustainable Agriculture) Committee, Interim Chairman
            Student Sustainable Farm Club, Advisor

1988 - 1989  Professional Development Committee, Chairman
            Ad Hoc Advisory Committee to the Dean
            Time Capsule Ceremony - Agricultural Sciences Building Open House, Chairman

1987 - 1988  Professional Development Committee, Chairman

1986 - 1987  Professional Development Committee, Chairman
In my response to James Murphy on May 30, I indicated that the three subject resolutions adopted by the Academic Senate at its May 14 meeting were being forwarded to the Vice President for Academic Affairs for review and recommendation. Based upon that review, I am pleased to endorse and approve these three resolutions:

- **AS-359-91/IC** Resolution on Academic Probation and Disqualification
- **AS-361-91** Resolution on U.S. Ethnic Pluralism Program
- **AS-362-91** Resolution on Proposal to Establish the Agricultural Safety Institute
Memorandum

To: Warren J. Baker
   President

From: Robert D. Koob
   Vice President for Academic Affairs

Subject: Senate Resolutions Adopted at its May 14, 1991 Meeting

Date: July 15, 1991

My staff and I have reviewed the Senate Resolutions, AS-359-91/IC (Academic Probation and Disqualification), AS-361-91 (U.S. Ethnic Pluralism Program), and AS-362 (Proposal to Establish an Agricultural Safety Institute), and recommend your endorsement of these resolutions.

Note: Both copies were given original copy of Resolution
This will acknowledge your memo of May 14 with which you forwarded the resolutions adopted by the Academic Senate at its May 14 meeting. Resolutions AS-357-91/IC, dealing with the Academic Calendar Processing, and AS-358-91/C&BC, dealing with the Distinguished Teaching Awards Committee, are resolutions dealing with the manner in which the Academic Senate operates and need no further action on my part.

Resolutions AS-359-91/IC, dealing with Academic Probation and Disqualification; AS-361-91, dealing with U.S. Ethnic Pluralism Program; and AS-362, dealing with a Proposal to Establish an Agricultural Safety Institute, have been forwarded to Vice President for Academic Affairs Robert Koob for his assessment and recommendation.

AS-360-91, regarding a Resolution on Job Announcement Recommendation, has been forwarded to Vice President Koob, Affirmative Action Director Anna McDonald and Director of Personnel and Employee Relations Jan Pieper for review and recommendation.

We will respond to the Academic Senate regarding these resolutions as soon as the review has been completed.