

SANGAMO WESTON
Schlumberger

SANGAMO WESTON, INC
DATA SYSTEMS DIVISION
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SARASOTA, FLORIDA 33578

NEWS ABOUT SANGAMO WESTON, SARASOTA

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SECOND RDAPS VAN READY FOR SHIPMENT

A second RDAPS van is now being prepared for shipment to the U.S. Army Aviation Engineering Flight Activity at Edwards Air Force Base, Calif. RDAPS stands for Real-Time Data Acquisition and Processing System. Sangamo Weston was awarded a contract in October, 1979, to provide two of these new, sophisticated aircraft flight test systems to replace the EMR 6135 computer/telemetry systems supplied by EMR in 1969. The earlier RDAPS van was shipped in August, 1981.

The two RDAPS system contracts are valued at over \$3.8 million.

RDAPS will be used for helicopter flight test engineering support and analysis at Edwards Air Force Base and at remote sites. RDAPS had a number of technical "firsts" for Sangamo Weston's Data Systems Division:

- Use of a VAX 11/780 computer as a host processor
- Use of the EMR Model 715 Multiplex Processor as a preprocessor, performing the functions of Engineering Unit Conversion, standard deviation calculations, and array building outside the host computer.
- Use of Megatek stroke-type CRT display system.
- Use of rasterizer for the printer/plotter.
- All menu-driven software.
- Automatic synchronization of time code equipment to time words embedded in the PCM stream.

The Sangamo Weston RDAPS team expresses appreciation

TWO BUILDING PROJECTS

Two major building projects are currently underway at the Sangamo Weston Sarasota plant.

That new building at the West end of the Production area, near Shipping, is a 2500-square foot chemical storage area designed for safer storage and handling of the chemicals and solutions used in our manufacturing processes. The structure was built by our own Maintenance and Plant Engineering personnel.

The new walls you now see going up in the Engineering (S-2) south section of our building will provide 6000 square feet of additional space for the Fairchild Weston Systems group. Again, the major portion of the work is being done by our busy Maintenance and Plant Engineering Department. This building project should be complete in about six weeks, according to Dutch Fonteine.

for the support provided by many employees in the various departments. On the RDAPS team are: Jon Brown, Frank Bost, Mike Hutchinson, Dick Haase, Vic Boucher, Graham Hildebrand, Chuck Miller, Joe Lehmann, Greg Parks, Ron McDeed, John Belt, Ron Spadoni, with support from a number of others.



Pictured with the second RDAPS van are: (foreground) Bob Moore, Joe Lehmann, Chuck Miller, Dick Haase, Vic Boucher, Mike Hutchinson. Second row: George Phillips, John Belt, Ron McDeed. Top row: Ron Spadoni, Greg Parks, Frank Bost.

CREDIT UNION STUDIES IRA PLAN FOR MEMBERS

Assets of \$562,000 and a 1981 annual dividend rate of 7% were reported at the annual meeting of the EMR Sarasota Employees Credit Union on January 27 by the Credit Union's Treasurer Ed Annaratone. The Credit Union currently has 636 members.

President Don Parker's report disclosed that the Credit Union is investigating the possibility of offering an I.R.A. (Independent Retirement Account) program for members. If the Credit Union study finds that an IRA program is feasible, it may be offered as early as March, 1982. Results of the election of Credit Union Board members and new Officers for 1982 will be reported in the next issue of PULSE.

An Equal Opportunity Employer M/F/H/V

OUR OWN EXPERTS TEACH SOME IN-HOUSE COURSES

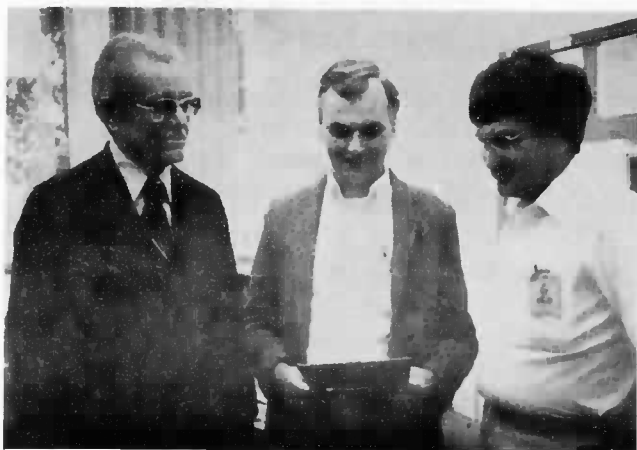
When Sangamo Weston employees in Sarasota attend in-house classes, there's a good chance that the Professor is one of our own experts. Currently, several courses are being taught by some of our technical staff, in addition to courses taught by faculty members from Manatee Junior College.

Pascal, a computer programming language, is being taught Wednesday evenings for 16 weeks by Mike Kelly, whose current assignment is in Software Development for new telemetry products. Mike's 40 students are benefitting from his background in Language Theory and Compiler Design. Previously, Mike had classroom experience teaching Pascal and Structured Programming concepts at Harris Corp., and Digital Electronics at Sperry Univac.

A 15-week Gate Array course is being given for Engineers and Technicians several hours a week by Bill Waggener, Martin Belkin and Wayne Lockwood. The course includes segments on Integrated Circuit Design, MOS Circuits, TEGAS, and CADDs (Computer-Aided Design & Drafting System). In addition to our in-house instructors, the Gate Array course will include a three-day seminar given by an Instructor from CDC on TEGAS Logic Simulation in late January. (For a description of Gate Arrays, please see a separate story in this issue of PULSE.)

Bill Waggener is the Gate Array course organizer and principal instructor. He is currently a Senior Staff Engineer, reporting to General Manager Kent Morgan. Bill has taught several in-house courses in the past and several technical seminars at ISA and IEEE meetings.

Martin Belkin, currently Acting Manager of Data Recorder Development, has recently been deeply involved in circuit layout and interconnect design of gate arrays for a new, advanced instrumentation data recorder, and is familiar with the CADDs 2 System which produces the pattern generator tape for the gate array mask required by our vendor. Martin has attended a CDC workshop on the logic simulation system available on the CDC computer time-shared network.



Martin Belkin, Bill Waggener, Wayne Lockwood



Mike Kelly



Ray Paul



Jud Strock

As part of the Gate Array course, Technician Wayne Lockwood will be assisting as CADDs 2 lab instructor, teaching the students how to enter Gate Array designs into the CADDs 2 system and how to convert the design data into the form required by the Gate Array chip manufacturer. This involves fracturing the data into rectangles and recording on magnetic tape.

Ray Paul, of our Industrial Systems group, is another of our experts who is teaching an in-house course as part of our educational offerings in cooperation with Manatee Junior College. Ray's Algebra class runs Tuesdays and Thursdays, from 5 to 7 p.m. Ray also taught a FORTRAN programming class last year.

Ray Paul's background includes degrees in mathematics and law, plus graduate work in math and computer science. He has taught algebra and geometry classes, plus an industrial seminar on process control. Ray is in System Software Engineering in Industrial Systems, and has been working as a programmer, mathematician and system analyst for about 20 years.

A new non-technical seminar on telemetry and our company's participation in telemetry technical developments over the years will soon be taught for interested employees by Jud Strock, of Applications Engineering. Jud has taught technical classes at various locations, starting as an Assistant Instructor at Auburn University while he was studying electronics engineering. Jud is a frequent speaker to local civic groups concerning our company and products.

In addition to the current educational offerings in-house, there have been other courses presented at our facility by our own employees. For example, Jon Altenbernd taught an in-house course on Programming for Non-Programmers. Don Roberts gave several seminars on Analog and Digital Logic, and Logic and Troubleshooting for Technicians. Gary Bowers taught several sessions of a Purchasing Management seminar, and Greg Purdom taught a series of CADDs courses.

Employees interested in new courses, and individuals who have teaching abilities, are invited to discuss our educational opportunities program with Garry Gierlicz, in Personnel.

WHAT IS A GATE ARRAY?

By W.N. Waggener

A "Gate Array" is a large scale integrated (LSI) circuit. It contains a large number of transistors arranged in rows and columns like houses in a subdivision. The integrated circuit is processed by the manufacturer up to the final stage which interconnects the individual devices. Using the subdivision analogy, the houses are built, but the water, sewer and utilities aren't installed.

By using the gate array, a user such as Sangamo Weston can specify the way in which individual transistors are connected to form a unique integrated circuit which performs some electronic function.

The term "gate" is used to signify that the devices are normally interconnected as digital logic gates which either open or close to pass electrical signals.

The gate array course is being taught to Engineers, Technicians and others at Sangamo Weston who will use this up-to-date technology to reduce the cost and size of products as well as increase their performance. Because of the complexity of the gate arrays (arrays can contain from 300 to over 3000 gates), the designer must rely heavily on the use of computer-aided design (CAD) tools.

JANUARY ANNIVERSARIES

Congratulations to those employees who are observing their major service anniversaries during January.



Seated, three employees, each marking a quarter of a century with the company this month: Dan Toler, Dorothy Bennett, Irma Jones. Standing, and observing 20 years with the company, are: Bob Huguen, Bill Zoerner, Ellis Speicher.



More January anniversaries: Phil Potts (15 years) and Scott Zeiner (5 years).

ADIEU, GOOD FRIEND

Hank Franz, our most senior employee in terms of length of service, elected early retirement this month and bid farewell to the Data Recorders Head Room operation he knew so well.



Hank Franz, early retiree

Hank joined Sangamo Electric in Springfield, Ill., back in November, 1939, and selected early retirement this month, after more than 42 years of service.

"When I was hired by Sangamo, they told me they could only guarantee about three months of work," Hank recalls. "Actually, they were looking for a basketball player for the Company team. The Sangamo team became City champions three years in a row in Springfield."

Over the years at Sangamo, Hank worked with meters, time switches, sales, drafting, and finally Supervision. In his many years in the Head Department, Hank saw data recorders go from 7 track to 98 track tapes, and he helped produce over 25,000 recorder heads.

Hank and his wife Pat moved to Florida in January, 1978, when the Sangamo Data Recorders product line was transferred to Sarasota. Starting up a new Head Room in our Sarasota facility was hectic, with new employees to be trained in very close tolerance work, while the building renovations were under construction.

Hank looks forward to fishing and some loafing for a change. For many hundreds of employees who worked with him over the years, we say "Well done, Hank, and all the best to you!"

HELP YOUR NEIGHBOR VIA THE UNITED WAY

Your contribution to the 26 Sarasota area United Way Agencies will provide health and social services to many individuals and families in our community. It's the traditional American way -- helping those in need. Please give to our United Way campaign to help our neighbors.

CELEBRATING 25 YEARS IN SARASOTA -- AND SALUTING OL

It was just 25 years ago that an electronics company called Electro-Mechanical Research (EMR) moved from Ridgefield, Conn., to Sarasota, Fla. With our celebration of 25 years in Sarasota, PULSE salutes the group of Sarasota Pioneers who are also observing 25 years of service with our company during 1982.

EMR's history actually goes back to 1941, when Schlumberger established a small EMR research and development group in Houston. Subsequently, EMR moved to Ridgefield, Conn., in 1947.

Preparing to move to Florida in 1957 meant acquiring 90 acres of land in Fruitville, five miles east of downtown Sarasota. A new building had to be constructed, and new employees needed to be hired and trained during that year of 1957.

Some employees moved from Ridgefield to Sarasota in 1957. Others were hired in Sarasota and traveled to Ridgefield for training. Still others were hired and trained in the EMR temporary quarters-- store fronts in the Sun Haven Shopping Center, Clark Road -- while our first Production Building was being built.

We are proud of the fact that there are 35 EMPLOYEES who were hired in Sarasota 25 years ago, back in 1957, who are still with us -- and going strong! In fact, our employee rolls show we have 47 employees who have been with our company for 25 YEARS OR MORE, in Sarasota or in other locations.

As 1982 progresses, PULSE will feature some historical and "remember when" stories about our company, our employees, and our products.

Here's a pictorial salute to those individuals who will be marking their Silver Anniversaries of employment with our company during 1982. CONGRATULATIONS TO OUR SILVER ANNIVERSARY EMPLOYEES!



Among our "Sarasota Pioneers" celebrating 25 years with the company are: Seated, Irma Jones (1/21/57) and Dorothy Bennett(1/7/57). Standing: Helen James(2/4/57); Pat Prince (2/4/57); Hester Spann (2/4/57); Dan Toler (1/20/57) and Dorothy Richey (2/18/57).



Completing 25 years of service in 1982 are: (seated) Mable Altman (3/4/57); Eddie McDonald (3/4/57); Opal Black (3/4/57); (standing) Tracey Hardy (3/4/57); Betty Drymon (5/4/57); Hazel Taylor (4/1/57) and Betty Cobb (3/4/57).



Rounding out 25 years with the company in 1982: Tom Toler (10/9/57), Bud Thurmond (3/11/57), and George Prozzo (6/18/57 - transferred to Sarasota in 1978 from Sangamo Electric, Springfield, Ill.).



**CELEBRATING ...
... TWENTY-FIVE YEARS
IN SARASOTA IN 1982.**



OUR SARASOTA PIONEERS WITH 25 YEARS OF SERVICE

REMEMBER WHEN?

Do you have some "remember when" recollections or pictures? Please share them with us through PULSE and our bulletin boards during this big anniversary year of 25 years in Sarasota.



Dorothy Bennett, currently Manager of Board and Cable Assembly in Manufacturing, was in the first Assemblers Training Class at the Sun Haven EMR temporary quarters, Clark Road. She celebrated her official 25th service anniversary on January 7, 1982.

"There were 11 women in that first Assemblers Training Class," Dorothy recalls. "We had a Vocational School instructor who gave us two weeks of training before we could begin to work as Assemblers. Our first class was graduated on January 4, 1957, and we were ready to go on payroll. Other classes followed, and we gradually grew from one store front to several -- cutting holes in walls as necessary to allow for practical access."

Meantime, in Fruitville, the first Production Building was going up. The move from Clark Road to the bright, new 45,000-sq. ft. airconditioned building was to take place in late June, 1957.

"Assemblers began at \$1.00 an hour, and most received a nickel or a dime increase at the time of their first review," Dorothy remembers. "Summer was approaching and the days became very warm. One lunch time in late June we got approval to move ourselves to the new plant -- so we packed our work, tools and ourselves into our own vehicles and drove over to the building. We unloaded our work and began assembly in the new air-conditioned facility.

"Gradually, we watched the offices go up and the offices come down. It sometimes seemed that we could never decide where we wanted anything to go or stay. We called it growing pains-- and we continue to have the same type of pains to this day!

"To have been here these 25 years and to see us grow and change has been a fascinating experience," Dorothy says. "I've loved every minute of it"



Missing from these photos are Bob Sayre, of our Wheaton, Md., Sales Office, and Ola Mink, of Receiving. Bob Sayre will observe his silver anniversary of service with the company on February 18, and Ola completes 25 years of service on September 30, 1982.



Quarter Century Employees: Ida Pape (7/1/57); Don Roberts (3/11/57); Nevel Christie (4/1/57 -- Nevel transferred to Sarasota in 1978 from Sangamo Electric, Springfield, Ill.); Lela Kallio (4/1/57); Bill Gibson (5/20/57); Joe Smith (5/15/57).



Approaching their 25th service anniversaries are: (seated) Evelyn Sweeting (9/30/57); Randy Mitchell (4/15/57); Margaret Dill (10/28/57); and standing, George Strait (7/8/57) and Ruth LaCroix (11/26/57).



Quarter Century anniversaries are nearing for: (seated) Don Norris (11/4/57); Betty Darr (12/30/57); Fred Stiefel (12/30/57); (standing) Bill Miller (12/9/57); George Zimmerman (11/11/57); Martin Belkin (12/12/57); Art Kelley (12/30/57).

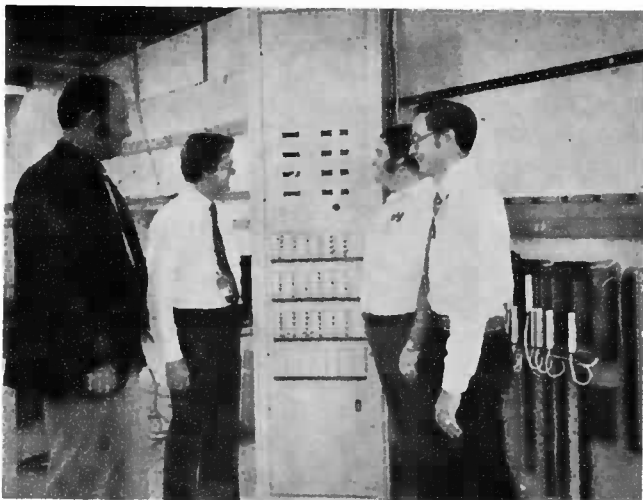
INDIAN RESERVATION DAMS GET SUPERVISORY SYSTEM

A Supervisory Control system from our Industrial Systems Group will soon be part of a power dam system on the Deschutes River in Oregon, on land owned by the Confederated Tribes of the Warm Springs Reservation of Oregon.

The system provides monitoring and control service for a hydroelectric facility near Madras, Oregon. The Supervisory Control master station and the remote units will be installed at Pelton Re-regulating Dam and at another dam about two miles away.


The system has a variety of capabilities: control of the gates at the Pelton Re-Regulating Dam; control and indication of power circuits breakers status; telemetering of other functions such as watts, reactive power, volts, amps, gate position alarms and test check for the telemetering transmitter.

Our Industrial Systems team includes Project Engineer Hal Roberts, and Project Technician Dick Van Deusen.



Pictured with our Pelton Dam Supervisory Control system and remote units are: Ralph Hood, of Charles T. Main, Inc.; Bill Thompson of Engineering & Design Associates; Dick Van Deusen, and Project Engineer Hal Roberts.

**Thanks to you...
it works...
for ALL OF US**



United Way

EARLY RETIREES



Wilma Baldwin (left) and Betty Darr planning early retirement.

After 24 years of service in the Inspection Department, Betty Darr plans to start her early retirement with a trip to California and Hawaii in February with her daughter. Next year Betty and her husband expect to move to the Ocala National Forest, near Silver Springs, Fla., to enjoy mobile home living and some fishing.

"I plan to swing a hammock between two trees and drink mint juleps," Betty jokes. She will also enjoy having time to read and work with her ceramics hobby. Betty recalls some of the changes made in our products.

"Years ago we were inspecting big units with large power supplies and condensers and tubes. Later I inspected the first printed circuit boards made here," Betty said. "The units are all so much smaller now."

Wilma Baldwin's 19-year career with our company began in 1962 in the Weld Room, where welding was done under microscope. She moved to the Gemini program assembly area for a number of years and subsequently to p.c. board assembly. Wilma was in the Microelectronics Clean Room for about five years and also worked on the Telescope project. For the past four years she has been working in the Schlumberger Well Services assembly area.

Wilma expects to take life easy, do a little traveling, and she has plans to move to a new home in the Bradenton area soon.

Betty and Wilma are checking out on January 29, to the good wishes of their many friends and colleagues. We will miss you, ladies.



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UPDATED VAN-MOUNTED SYSTEM TESTING NEW TANKS

The Field Service group of Fairchild Weston Systems, Sarasota, has recently updated and refurbished a van-mounted instrumentation system which is being used in connection with testing a new High Stability Light Weight Tank for the U.S. Armed Services.

The "Armored Combat Vehicle Technology" van has served for the past several years to collect and analyze data for the Government and other supporting contractors in this tank testing program.

"In the van we have a complete telemetry system, including two Sangamo Sabre VI Tape Recorders, and a DEC PDP11-34 Computer, plus peripherals and a closed circuit video camera," reports Russ Tatman. Russ has traveled with the van to various sites over the past three years. "Our customer is TACOM (Tank Automotive Command). As part of the update and refurbishing of the system, we have added more hardware and interfacing software."

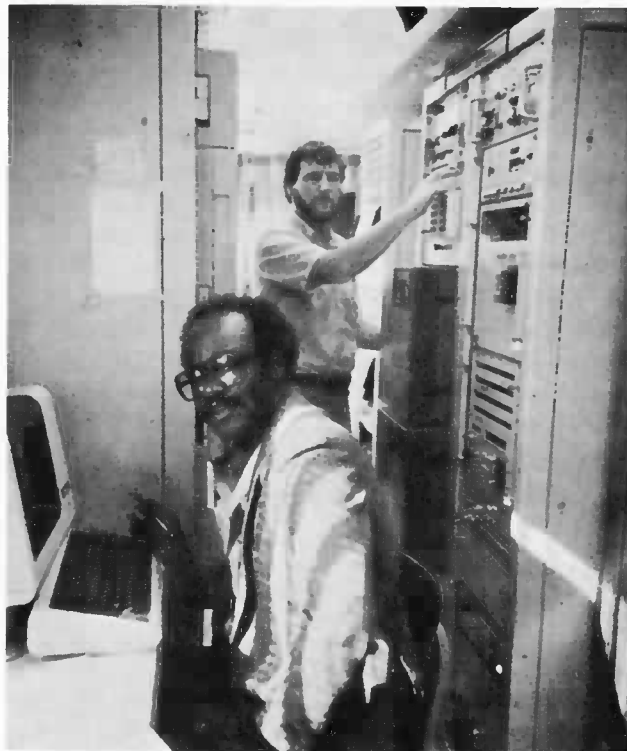
Russ Tatman was also responsible for rewiring the data acquisition system on the HSTV-L tank itself.

Ron VanderVliet headed up the van refurbishing, with Russ Tatman supplying hardware support, and McArthur Hallett providing software support. McArthur is a Systems Analyst, now stationed in Wheaton, Md., with our Fairchild Weston Field Service group. McArthur has relocated from Lancaster, California to head up Eastern area software service. Russ Tatman has been responsible for the operation and maintenance of the van and the instrumentation system on the HSTV-L program for the past three years. He has traveled to various testing sites, including Aberdeen Proving Ground, Md., Fort Knox, Ky., and is currently in Warren, Mich. Jim Matthews, of Wheaton, Md., is Program Manager for the TACOM project.

"The complete HSTV-L tank will be installed on a shaker table and put through simulated rugged terrain conditions," Russ reports. "At that time the tracker system will output



Russ Tatman, McArthur Hallett and Ron VanderVliet with instrumentation van used in tank testing.



Inside the Armored Combat Vehicle Technology van are McArthur Hallett (seated) and Russ Tatman with telemetry/computer system.

data such as azimuth and elevation errors in the HSTV-L fire control system and gun."

Scott Blair, Manager of Field Service, reports the Government is very pleased with the tank and van refurbishment and the new software capabilities.

WIND TURBINE PERSONNEL

In addition to the personnel pictured in our previous issue of PULSE, we are pleased to add photos of two more Wind Turbine project employees. Jim Matthews, at Wheaton, Md., is Contract Manager for the NASA Wind Turbine contract, and Bud Frew is at the Goodnoe Hills location with the three "wind farm" windmills, in the State of Washington. Jim and Bud are members of the Fairchild Weston Systems Service group.



Jim Matthews



Bud Frew

RECOVERING GOLD RESULTS IN SAVINGS

A procedure for salvaging gold from scrap materials and components has resulted in recovering about \$16,000 for the company during the past year.

"Our Materials & Processes Lab chemically strips the gold, which might otherwise be discarded, from scrap parts. The stripping solution is accumulated over a period of time. When a sufficient quantity is accumulated, the solution is carefully assayed, measured, sealed in drums, and shipped to a refinery which reclaims the gold. Sangamo Weston then receives payment from the refinery for the recovered gold," reports Fred Stiefel, Manufacturing Engineer.

"With the high price of gold and other valuable metals, we are trying to find more ways of conserving materials and recovering costs," he said.

All employees can participate by being alert to opportunities to salvage valuable scrap. Items containing gold which can be salvaged include: trimmings and flash from printed circuit production; obsolete printed circuit boards with "gold fingers"; pins and sockets, connectors, and exterior plated components.

Whenever parts containing gold become obsolete or defective, employees should forward them to the Materials & Processes Lab for stripping. If you have any questions, please call Bonnie Iler, M & P Lab Technician, on Ext. 477.



Bonnie Iler, of Materials & Processes Lab, is shown immersing a printed circuit board into gold-stripping solution for salvage.

CONGRATULATIONS!

Debbie Grantham (Procurement) and her husband Jim welcomed their new baby daughter, Christina Sunshine, on December 31. Christina weighed in at 8 lb. 13 oz.

1981 MEDICAL INSURANCE PREMIUMS FOR DEPENDENT COVERAGE Not including Long Term Disability (LTD)

Spouse only	\$2.58/wk	x	53 pay periods	=	\$136.74
Child(ren) only	\$1.56/wk	x	53 pay periods	=	\$82.68
Spouse & Children	\$4.15/wk	x	53 pay periods	=	\$219.95

Getting ready to itemize your deductions for income tax? The handy guide given above will help you calculate how much you spent on medical insurance premiums for your dependents' medical insurance through our group coverage.

REMEMBER:

- ★ The Company pays the premiums on the group insurance coverage on you the employee.
- ★ You pay only PART of the premiums for dependents' medical insurance coverage.
- ★ Costs for medical services have gone up drastically, and our medical insurance coverage has been improved, but the amount you pay for your dependents' medical insurance has been the same since 1974. Sangamo Weston has absorbed the increases.
- ★ Sangamo Weston paid about \$677,000 for group insurance on employees and their dependents in 1981. (This does not include LTD -- Long Term Disability -- coverage).