The Battalion

Damp and cloudy

Thursday and Friday — Partly cloudy to occasionally cloudy. Afternoon thundershowers, southerly winds 10 to 15 mph. High 92°, low 74°.

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A&M will study Texas superport

The socio-economic impact of deep-water terminal in the Gulf of Mexico off the Texas Coast is being investigated by A&M's Industrial Economics Research Division under a joint project funded by the Texas Superport Study Corporation and the TAMU Sea Grant Program.

Part of a broad feasibility investigation into establishment of an offshore port to handle future superships," the study is directed by James R. Bradley, IERD head. Working with him are Dan Bragg, assistant research engineer, and several graduate students. Total funding for the study is $45,000, with $20,000 provided by the Texas Superport Study Corporation and $25,000 in Sea Grant funds.

"As Texas depends more and more on raw materials brought into its coastal zone, one of the key factors will be the ability to handle the vessels transporting them," Bradley said. "A new technology is developing in ocean transportation with the use of supertankers and larger cargo vessels."

He said that evidence indicates these gigantic vessels can reduce transportation costs of raw materials to one-fourth of what they are now.

"But no port in the U. S. can now accommodate these huge ships, and it is impractical to deepen existing channels enough to provide sufficient water for them," he continued.

"Industries located in the Gulf Coast area of Texas cannot remain in a competitive market position unless we take advantage of these new developments in transportation," Bradley emphasized. "Not only is it vital to know how a superport could affect the state's economy, but it is also important to determine how not building it could affect Texas."

First phase of the socio-economic investigation will identify the economic criteria to be used in evaluating various terminal designs and site locations, Bradley said.

Cost-benefit studies will be undertaken in the latter part of the study to determine the dollars-and-cents benefits that an offshore terminal could bring to the state and to compare those benefits with the costs of construction and operation.

The researchers will use existing data, studies and projections when possible to determine volumes of commodities such as crude oil, refined petroleum products, petrochemicals and natural gas that will move to or from the major industrial centers along the Texas coast for the years 1980 and 1985. Where data exist, extrapolation will be made to the year 2000. The degree to which such volumes will grow in response to national energy demands will be estimated.

Also examined will be probable sources of commodities, average voyage lengths, approximate vessel operating costs and projected vessel availability.

Additionally, the environmental impact of construction and operation of an offshore terminal will be considered. An economic rationale will be established for incorporating anti-pollution features into the design of an offshore terminal.

"After this initial phase of the socio-economic study is completed," Bradley noted, "more in-depth studies will be needed, particularly in the areas of new technology and the "new town" concept. The new town idea—going into a relatively undeveloped area and creating a community from the ground up—is being widely discussed as a possible answer to overcrowded urban areas."

"Planning and building an offshore port could be the vehicle to encourage such long-range planning in Texas," Bradley said.

Studies needed to determine the feasibility of an offshore terminal were identified in a work plan prepared by IERD in June, 1971. In addition to the top priority socio-economic studies, other areas to be investigated include legal implications of an offshore terminal, engineering, site location factors and port management. The legal studies are slated to begin in the near future, Bradley said.

The Texas Superport Study Corporation is a non-profit organization formed by businessmen in the Texas Gulf Coast to aid in accomplishment of the five investigations identified by the IERD team. Ray R. Brimble is president of the organization.

TAMU's Sea Grant Program is part of the National Sea Grant Program within the National Oceanic and Atmospheric Administration, U. S. Department of Commerce.

LEARNING TO FIGHT FIRES more effectively are some 2,000 municipal firemen here this week for one of the three Firemen's Training Schools held annually at A&M. Next week, the industrial firemen will be here, followed by the Spanish-speaking fire fighters. A demonstration will be held tonight at 7:30. (Photo by John Curylo)

W. A. Porter named director of Solid State Electronics

Dr. W. A. Porter has been named director of A&M's Institute of Solid State Electronics, which is being expanded to include a series of short courses in the electrical engineering and related professions.

Announcement of Dr. Porter's appointment was made by Dr. W. R. Jones Jr., head of TAMU's Electrical Engineering Department. The institute was established as part of the department three years ago.

Dr. Porter succeeds Dr. C. R. Haden, who has accepted a position as chairman of the University of Oklahoma Electrical Engineering Department.

The new director of the Institute of Solid State Electronics joined the TAMU faculty in 1968. He earned his Ph.D. at A&M in 1970 after having received B.S. and M.S. degrees at North Texas State University.

While the institute will continue to emphasize research and graduate study, Dr. Porter said its programs will be expanded to include a series of short courses and conferences. Such meetings, he noted, will help disseminate results of the institute's research activities and enhance relationships between the institute and allied professional societies, industry and outside agencies.

Dr. Porter said the institute's major research interest involves materials and device fabrication technology, particularly in the area of material defects produced in the fabrication process of integrated circuits.

The institute, one of approximately six of its type in the nation, has an annual research budget of approximately $100,000. It conducts several projects sponsored by NASA, along with others funded by Army and Navy research programs.

Sen. Bill Moore says

Higher education feeling tight budget

Higher education in Texas has run afoul of a belt-tightening period brought on by a variety of factors, State Senator William T. (Bill) Moore said Friday at A&M.

The cinching is the result of growth of higher education which tends to dilute the tax dollar available to colleges and universities, campus activities and the taxpayer, Moore said.

The veteran lawmaker indicated the situation is even more pressing to institutions because of the bounty education enjoyed during the post-Sputnik period.

"Education was high-priority business on the heels of Sputnik," Moore emphasized. "For a while it was given almost anything it wanted."

"The fellow that pays the bill is no longer in sympathy with you," the senior senator told participants of an academic administrators seminar, which concluded a week at TAMU and went to Baylor Sunday for its final week.

"You are going to have to show the legislature effective results, even though yours is a non-production line operation in which it is more difficult to portray results," warned the speaker introduced by A&M President Jack K. Williams, who joined in the discussion after Moore's talk.

Another problem Moore discussed with the college and university administrators from throughout Texas is the earmarked nature of most of the funds in the recently passed $4.1 billion state budget.

"A lot of the money in this budget was spent before we appropriated it," he said, pointing to the highway fund, $80 million in welfare and medicaid and the available school fund for secondary education.

"Medicaid is very popular with taxpayers. It relieves the conscience of the wage-earner," Senator Moore reasoned. "This is a cost that is going to escalate."

Campus unrest has contributed to the economic pinch, he indicated.

"The taxpayer is fuming about paying for buildings for students to burn down," he said. Students who cause problems are being egged on and abetted by a few faculty members, under the guise of academic freedom, the legislator stated.

"But the public is not concerned about academic freedom," Moore contended. "The taxpayer doesn't have any academic freedom."

Growth in higher education resulting in new institutions has "diluted the educational dollar further. Much of this dividing of available funds is to satisfy chambers of commerce, which want two-year colleges to become four-year institutions," Moore went on.

He said the only source of new funds is a personal income tax, and predicted the sales tax will not go beyond five per cent. Inflation caused by unions as well as the federal government is also causing discontent, Moore evaluated.

He said the legislature is not without fault in the education funding situation.

"We have some members who vote for all appropriations and then vote against tax bills," the senator indicated. "Then the conservatives have to shouler the load. As a conservative, I'm getting tired of it."

"I went into the legislature as a liberal and still am," he reported. "What I supported 25 years ago as a liberal, I still support. But they have run off and left me."

New electron microscope installed here

A&M's Electron Microscopy Center has installed a scanning electron microscope to make the center one of the most versatile research facilities in the nation.

Dr. E. Laurence Thurston, center coordinator, reported the $100,000 addition includes a JEOL JSM-U3 scanning electron microscope equipped with a transmitted electron detector and non-dispersive X-ray spectrometer.

This scanning electron microscope is the only one equipped in this fashion located in the South and Southwest, and one of the few university-owned in the nation.

TAMU's new equipment joins three transmission electron microscopes, complete light microscopy facilities and various research and photographic laboratories in the center. It is the best equipped microscopy center in Texas, Dr. Thurston pointed out.

Electron microscopes extend the resolution and magnification range of the light microscope, enabling scientists to view sub-cellular components, molecules and atoms, he explained. The TAMU center serves as the nucleus for ultrastructure research.

Dr. Thurston said the scanning electron microscope fills the gap between the light microscope and the powerful transmission electron microscope.

The scanning electron microscope is primarily used to measure surface topography of specimens. A few of the possible research areas are taxonomy of insects, rock samples, metal surfaces, pollen studies and identification of fossil plants in oil.

Magnification with the new equipment is from 100X to 500,000X, with very high resolution, Dr. Thurston noted. Samples are viewed on a television screen and the instrument has a number of photographic attachments.

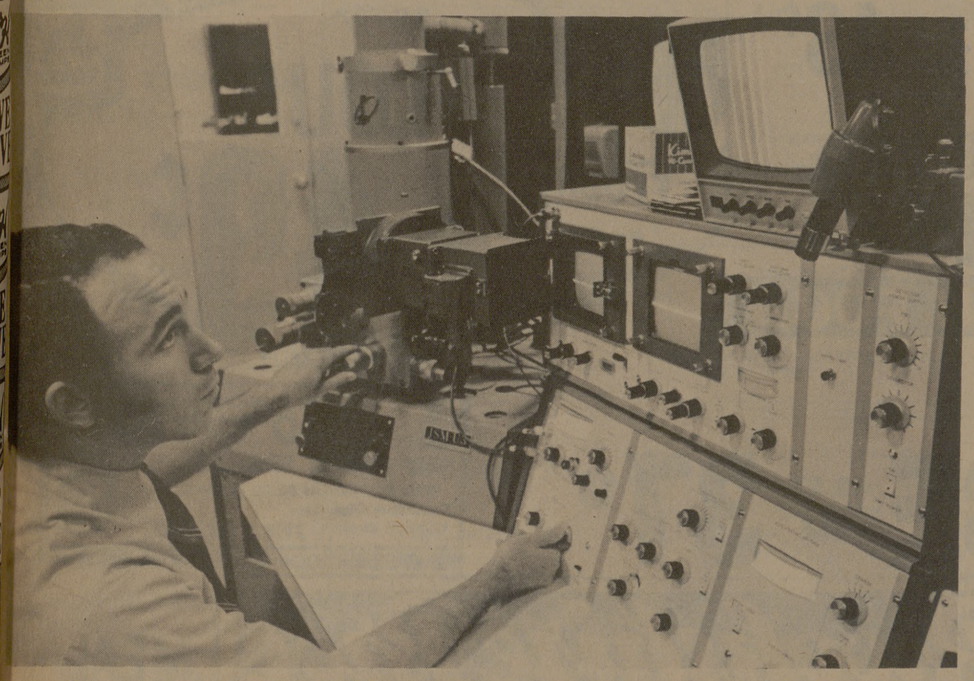
The non-dispersive X-ray spectrometer allows analysis of a sample for its elemental composition and enables the investigator to determine where a chemical element is in the sample.

A mini-computer will be put on-line in the near future to print out research information within minutes.

Dr. Thurston said the scanning electron microscope is very versatile and will accomodate "almost any type of research in any discipline."

Cooperating in this purchase were the Colleges of Geoscience, Science and Agriculture, the Texas Agricultural Experiment Station and the Texas Engineering Experiment Station.

Dr. Thurston will offer a graduate level course, Biology 628, during the spring semester for students and faculty-staff seeking a working knowledge of the scanning electron microscope.



Dr. E. Laurence Thurston adjusts the scanning electron microscope recently added at the A&M Electron Microscopy Center. The equipment has a magnification range from 100X to 500,000X.

Ticket refunds announced for Wofford Cain Pool

All A&M students will be admitted to the Wofford Cain Swimming Pool free of charge under a new policy effective immediately, Dr. Carl Landiss announced today.

Dr. Landiss, head of TAMU's Health and Physical Education Department, said the elimination of the fee is part of a program initiated by President Jack K. Williams to improve recreational opportunities for all students.

Students who purchased season or second-term summer session pool tickets will receive refunds for the second term, Dr. Landiss noted. He said students should apply for their refunds at Room 214 in G. Rollie White Coliseum, bringing with them their identification cards and pool tickets.

Firemen's School has record attendance

A&M has attracted a record 2,019 student firemen, instructors and sales representatives to the opening here Monday of the 42nd annual Texas Firemen's Training School.

Chief Instructor Henry D. Smith said first-day totals include 1,283 volunteer and paid municipal fire-fighters attending 15 different courses ranging from basic fire operations to scientific arson investigation and department management.

The enrollment includes representatives from 10 states and Libya, North Africa.

Smith pointed out the enrollment figures do not include late Monday registration.

Temperatures in the mid-80s were a contrast from last year's first day, when the municipal firemen faced near 100 degree weather.

The five-day program ends Friday afternoon with examinations. Next week approximately 1,025 industrial firemen are expected, followed by a third week for Spanish-speaking firemen from Mexico, Central and South America.

Various TAMU classrooms and laboratories are utilized in the training, in addition to the$750,000 Brayton Firemen Training Field south of Easterwood Airport.

This evening instructors for the school present their annual demonstration at Brayton Firemen Training Field south of Easterwood Airport. It includes something for young and old — plenty of fire engines and a number of fire-fighting demonstrations.

Smith promises a good show starting at 7:30 p.m. He emphasized the demonstrations are open to the public and expects approximately 3,000 persons will attend.

Visitors are urged to come early, as parking is limited to along the road south of the airport.

A display of rescue equipment and fire truck pumpers will be on display at the entrance to the 26-acre fire training field. Some equipment companies will demonstrate their products.

TAMU's experimental pumper, which uses six-inch hoses, will be shown during the field exercises.

Among the new products to be shown are "wet" and "dry" chemicals. One is "Monnax," a dry chemical from Great Britain which Chief Smith said is far ahead of anything on the market today.

The traditional crowd pleaser is the jet aircraft fire. The demonstration includes use of foam to fight a simulated crash and rescue operation.

Other demonstrations on the program include use of breathing compressors, rescue operations, fighting a house fire, hand extinguisher capabilities and limitations, liquified petroleum gas fires and a petroleum loading dock fire.

The program will take approximately 90 minutes, Chief Smith said.