

# Safer Atmosphere Needed For Apollo

By LAWRENCE LEE  
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SPACE CENTER, Houston (AP)  
—Faced with a rapidly approaching deadline for a firesafe Apollo spacecraft, NASA indicated Monday its intention to consider "enriched air" rather than flame-feeding pure oxygen for breathing by astronauts in rockets on the launch pad.

The pure oxygen atmosphere had been stoutly defended by the agency following the first Jan. 27, 1967, in which three astronauts died inside their Apollo command module atop a rocket at Cape Kennedy.

The air they breathed was 95 per cent pure oxygen, at a pressure a little greater than that of the air outside their ship, and the oxygen helped turn their craft into a crematorium.

The fire touched off a major redesign effort by the agency and the company which build the Apollo craft, the space division of North American Rockwell Corp.

Intests ending Jan. 7, engineers at the Manned Spacecraft Center tried 38 times to set fires deliberately within the improved spacecraft. Five attempts resulted in blazes termed "unacceptable" by agency engineers.

The agency said Monday that a mixture of 60 per cent oxygen

and 40 per cent nitrogen would be used within the dummy ship in a new round of tests beginning Wednesday.

The decision was made by a flammability review board headed by Dr. Robert R. Gilruth, director of the Manned Spacecraft Center.

"Based on medical, operation and engineering data, the 60-40 mixture of oxygen and nitrogen is one we definitely want to investigate," said George Low, manager of the Apollo spacecraft program. "This is not to say that we will suspend investigation of other mixtures at various pressures."

It is the first time the agency has said publicly it is willing to consider a closer-to-air mixture for spacecraft breathing. Air is a mixture of 21 per cent oxygen, 78 per cent nitrogen and traces of other gases.

Pure oxygen, which was used for the Gemini and Mercury flights, was selected because it requires less "plumbing" — and thus, weight — than a mixture of gases. It also protects astronauts from the dangers of nitrogen pressure sickness, such as the "bends" suffered by deep-sea divers.

Spacemen venturing outside their craft for space walks, or extravehicular activities, use pressure suits designed to operate with pure oxygen. A mixed-gas atmosphere would complicate the design of the suits and make them heavier.

Gilruth said in Monday's terse announcement that NASA now retains three options: launching with the regular air that everyone breathes, launching with enriched air, such as that to be used in the new tests, or launching with pure oxygen, as originally planned.

In any case, the spacecraft's environment system would replace the air or enriched air with oxygen, once the Apollo command module is in space.

A 1965 agreement transferred to Jordan 2,300 square miles of virtually uninhabited territory in exchange for 2,700 square miles of equally desolate land which went to Saudi Arabia. But Jordan acquired 11 new miles of shoreline along the Gulf of Aqaba, crucial for future development of the nation's only port, Aqaba.



SAVVY ENGINEERS

Texas Maritime Academy students at Galveston went to Union Carbide's Texas City plant to examine a disassembled heat exchanger and observe industrial shop practice in fabrication and assembly of component parts. Left to right, the group includes Dick Laughter, Chip Harris, Dallas Johnson, Buddy Fredrickson, Joe Abschneider, heat transfer instructor John Moore, Bill Ferguson, Hershel Michael and Bob Wise.

## House Rep. To Be Speaker

Rex Braun, member of the House of Representatives, will be the featured speaker at the regular business meeting of the A&M Hillel Club at the B'nai B'rith Hillel Foundation at 7:30 p.m. Wednesday.

Representative Braun will speak on some of the issues confronting Texas State Government.

Born in Kenner, Louisiana, Representative Braun graduated from Southwestern Louisiana University. He served in the U. S. Marine Corps from 1942-1946 in the Pacific and China Theatre. He now resides in Houston with his wife, Ruth and children, Mike, Lenny, and Debby.

Representative Braun presently is the president of Rex Tailors, Inc., vice president of the V.&R. Corp., and is a former chairman of the board of Gulfgate and Northline shopping centers. His civic activities include area chairmanship of the United Fund and he is a former president and coach of Spring Branch Little League

football. He served as state representative in the Texas Legislature in the 60th Session, 1966-1968. His committees include Public Health, Constitutional Amend-

ments, Examination of comptroller's and Treasurer's accounts, Military and Veteran's Affairs and Representation before the Legislature.

## 34 Game Wardens Complete Training With Rescue Work

Thirty-four game warden trainees at Texas A&M will receive 40 hours of light duty rescue training here Jan. 29-Feb. 2.

Taught by the Firemen's Training Division of A&M's Engineering Extension Service, the course represents the final segment of 20 weeks' work at Aggieland by the trainees.

John R. Rauch, a firemen's training school instructor, will direct the school which emphasizes rescue squad operations.

Topics include care and use of ropes, breathing apparatus, metal cutting and power rescue tools,

emergency methods of rescuing victims, use of devices for heavy lifting, and reconnaissance.

Ted Felds, director of the Houston-Harris County Civil Defense Rescue Service; Harold Sorensen of the Brazos County Civil Defense Rescue Service; E. F. Sevison, A&M fire marshal, and Richard Pulaski, plumbing and pipefitting apprenticeship coordinator for TEES, will assist.

Rauch said training includes a night exercise at Brayton Field, during which students will rescue "victims" from various emergency situations in "Disaster Village."

After completing the school, game warden trainees will move to Austin for tours of surrounding wildlife management areas and the state fish hatchery at San Marcos.

Bob Evins, conservation supervisor for the Texas Parks and Wildlife Department, said trainees will be commissioned as game wardens about Feb. 15 in Austin.

## 'Quakes Hit Sicily, 300 Known Deaths

PALERMO, Sicily (AP) — A shattering succession of earthquakes rumbled through the snowy and mountainous western tip of Sicily Monday. Police estimated nearly 300 persons were killed.

With many of the stricken communities still out of touch, officials feared the final death toll might go to 500 or even more. The injured were expected to exceed 1,000.

About 10,000 persons were left without homes and spent the night outdoors or under tents pitched by the Italian army.

The quakes toppled houses, hospitals, medieval castles and churches in the worst disaster to hit the island since 1908. A hospital at Montevago collapsed, burying 200 persons. Police said most were killed.

Spurred by police reports of almost 300 deaths in the rubble of half a dozen towns and villages, the Italian government mounted a massive rescue and relief operation.

Trucks, cars, ships and planes laden with tents, blankets, food and medicines, made their way through freezing weather to the disaster zone. Hundreds of homeless huddled in the cold. Many built bonfires.

The stricken area, considered a stronghold of the Mafia, is formed by a triangle of the towns of Salemi, Poggioreale and Santa Margherita di Belice.

Several thousand homeless, fearing new shocks through the

volcanic island—the Mediterranean's largest and most populous—fled urban areas.

Five tremors had shaken the region Sunday as it was digging out from one of the worst snowfalls of the century.

Seven more came Monday, starting at 2:34 a.m.

Some of the jolts recorded nine points on the 10-point Mercalli earthquake scale, strong enough to knock down buildings.

"It was like going on a ship and feeling dreadfully seasick," said a Palermo woman who joined the crowds fleeing the capital into the countryside.

Interior Minister Paolo Emilio Taviani flew from Rome. Pope Paul VI sent what the Vatican called a "conspicuous" sum to the victims.

The picture of the mountainous farming region at dusk was a scene of death and desolation.

In Montevago, where the hospital collapsed, volunteer rescue teams and firemen, reinforced by army troops, were still digging mangled bodies out of the ruins. Most of the town was destroyed.

Gibellina, a town of 7,000 inhabitants, was totally ruined. Sulphur fumes belched through several cracks in the mountainside. Also wrecked was Salaparuta, where 3,120 farmers lived.

More than half the buildings in Santa Margherita di Belice, a town of 9,000 were destroyed, leaving only piles of plaster and local stone.

Seventy per cent of Santa Ninfa, with 6,422 inhabitants, was wiped out.

No serious damage was recorded in the island's main western cities of Palermo, Trapani and Marsala, although panic stricken Sicilians wearing only pajamas and topcoats, scurried away from their homes at the first tremor.

For elder Sicilians, the quake evokes the bitter memory of the terrible earthquake of Messina in 1908. It destroyed the city with a loss of 75,000 lives.

It was Italy's second successive winter tragedy. Only 14 months ago, the north and central regions were ravaged by the worst floods in the nation's history.

Government officials gave this breakdown of the quake toll: More than 200 deaths in Montevago, about 40 deaths in Gibellina, about 10 deaths in Castelvetrano, about 10 deaths in Salemi and about 10 deaths in Santa Margherita di Belice. Another 20 persons were reported to have died in various villages and hamlets of the area.

## Officer Election Slated By Society

The College Station chapter of the American Meteorological Society will elect 1968 officers Thursday.

The 7:30 p.m. meeting will be held in Room 305 of Goodwin Hall, announced Dr. Dale F. Leipper, chapter president.

Dr. Aikra Kasahara will present the program, a discussion of weather systems origin, Dr. R. A. Clark, program chairman, announced.

A visiting professor, Dr. Kasahara is an affiliate professor from the National Center for Atmospheric Research in Boulder, Colo. He was previously on the A&M staff as a research associate. Kasahara joined NCAR in 1963 following work at the University of Chicago and New York University's Courant Institute of Mathematical Science.

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