

The Coyotelog

AF Outstanding Unit - 2000, 1985, 1979

The Monthly Newsletter of the 190th Air Refueling Wing

Vol. 46, No. 2 November 2003

History of aerial refueling: The later years

By Senior Master Sgt. Keith Fulton
190th Operations Group

In the United States after the success of the "Question Mark" the fad to break a previous endurance or distance record using air-to-air refueling only lasted a short time until all research and development was shelved. However, other countries especially Great Britain jumped at the chance to increase the capabilities and advancements of aircraft.

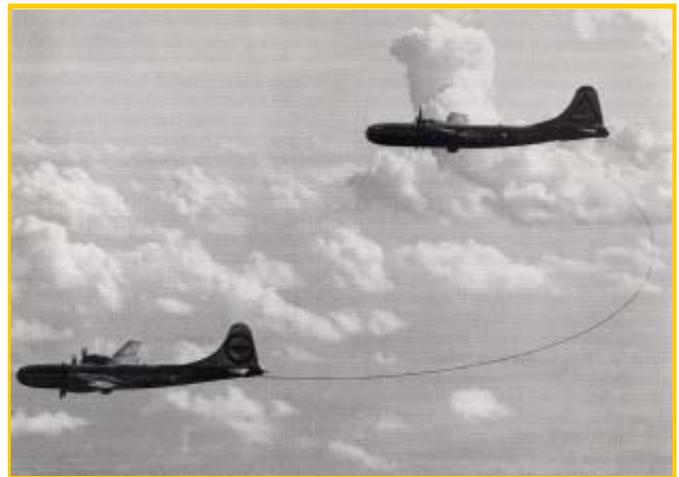
In 1930 Squadron Leader Richard Atcherley of Great Britain's Royal Air Force came to the U.S. to witness air-refueling demonstrations. The refueling procedure he later devised was considered safer but much more complicated. The receiver aircraft trailed a 300-foot line with a grapnel hook on the end. The tanker also trailing a weighted line would approach from behind the receiver and cross over so that the two lines would cross and become entangled. The receiver would pull in the line from the tanker with the refueling hose attached. Later to be known as the Ejector method, it was still being used as late as the 1950's by Boeing B-29 airframes.

Another Brit Alan Cobham, later knighted for his achievements in the field of in-flight refueling, is said to be the father of modern day air refueling. His initial goal was to remove

the hazard of a heavy takeoff, and when comfortably in the air it would receive its load of fuel. This would allow the aircraft with a greatly extended range and an increased payload. In 1934 Alan Cobham founded the British company Flight Refueling Limited for in-flight refueling experimental and development work.

As the British continued their research another type of refueling was adapted and identified as the "Take Off In Contact" method. The two aircraft, tanker and receiver, would take off simultaneously already connected by a light line from the wing tip of the tanker to the reception coupling of the receiver. When in the air the line is used to pull the main hauling line across from the receiver to the tanker then the tanker would unreel the hose to the receiver.

Early in 1942 was the only time the U.S. Army Air Corps considered air-to-air refueling during World War II. Looking for a way to retaliate against the Japanese and also considering the possibility of Great Britain being occupied by German forces;



External Tank

A pair of B-29s make an early effort to perfect aerial refueling.

the U.S. asked the British company Flight Refueling Ltd. (FRL) for assistance. FRL fitted their already developed air refueling system into a B-24 Liberator tanker and a B-17 Flying Fortress receiver aircraft. Testing was accomplished at Eglin AFB, FL, but the project was dropped after it was concluded that the system is not adaptable. Instead of refueling heavy bombers for the raid against Japan Jimmy Doolittle convinced his superiors to use medium bombers, launching them from an aircraft carrier. Also the threat of a German invasion had subsided and land bases were available from British soil to launch bombing strikes.

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190th ARW ~ All one big team

By Lt. Col Jeff Zillinger

117th Air Refueling Sq Commander

Commanders from across our base have filled this column over the past few years. All have had good words to say. Some talked about the quality and caliber of people we have at the 190th. They're right! ... we've got great people with great talents. Other Commanders talked about our resources; our airplanes, tools and buildings and how we've been blessed with good equipment. Hey, they're right, too.

These are all good things that need discussion...but I feel what it all really comes down to is this...our mission. We're all one big team that supports one product...defense of our Country. How do we do that? Well, here at the 190th, we do that by providing air refueling to our nation's and allies' air fleet. Our Maintainers keep our planes ready, our Security Police protect us and the airplanes, our Engineers keep our taxiways and runways operable, the Medical staff keeps us all healthy, Logisticians keep us supplied with all the 'stuff' we need to operate, Finance keeps us paid, the folks at Personnel and Support keep our professional records, Comm keeps us talking with each other and everyone else, Services keeps us fed and is the keeper of our morale...and Operation's Life Support, Crew Comm and others keep the Aircrews alive and in the air. Finally, the Aircrew flies the plane for air transport and the Boom Operator delivers the product-jet fuel.

NKAWTG...Nobody Kicks A** Without Tanker Gas. All of us...WE enable other airplanes...the fighters, bombers and transports to get their job done. From the aircrew on down...ALL of us play a part in getting our KC-135E into the sky.

All these things are our mission. That's what we do. We're enablers. We

ENABLE the job to get done. Doing this job enables our military to protect our community, our stateour country!! That's our mission! And it's more important than ever.

As the 117th ARS Commander, I'm in a unique position and it gives me a unique perspective. I get to see the entire operation...the entire mission...of the 190th ARW unfold before me. I see who we are, what we have and what we do. Why are we here? We don't come out here for our health. It's not a club or knitting society...it's not even just our jobs...but doing our jobs...doing the mission...our service to our country...that's what keeps us coming back. I've been all over this world with the airmen of the 190th ARW. Every time I get to put on a flight suit and place that American flag on my shoulder...that's a good day! This flag of ours is the symbol of all that is good about this country. America is an idea. It is an idea lived and fought for by people. We are America and this is our symbol. We are imperfect in many ways, but we continue to strive toward the ideal our forefathers laid down for us over 225 years ago. I could never imagine desecrating that symbol and I'm sure you feel that way, too.

There are many people in this nation who have never been abroad or in harms way. Many people have never seen our flag upon their return. Those poor souls can never know the deep pride and honor one feels to see it wave, to know that there is still a good ol' USA awaiting them. Some of these folk never get to show the qualities that our members continue to demonstrate...qualities of courage, determination, discipline, loyalty, passion for your beliefs, and the willingness to lay it all on the line because of a concept of honor and responsibility. With all our warts we are still the greatest nation on earth and the flag is the



Lt. Col Jeff Zillinger
117th Air Refueling Squadron
Commander

most powerful symbol of that greatness. Patriotism...service before self, honesty, integrity, excellence in all we do...that's not just what we do...it's what we are. That, too, becomes part of our mission. Every time I've come home to this airfield I see our flag flying on that Headquarter's mast and I'm reminded that Topeka is my home, but more important...that flag is my home. Whether it's flying from an Operations Staff Tent in the middle of the desert, flying on the tails of our airplanes or flying over the Wing's Headquarters...that flag is home...anywhere it is in the world. And what it stands for is home, too. We protect that flag...we protect our state and country. That's our mission.

So take pride in what you do here at the 190th. Take pride in our flag, take pride in being an American, and take pride in being part of a Military Organization that protects our families, friends and the rest of the world. Take pride in our mission and that we get the job done. We do the mission...we hack the mission. Yeah, we're mission hackers....190th mission hackers. I can live with that. And so can you.

REFUELING - from page 1

In 1944 the British Air Ministry also called upon FRL, this time to convert a large number of Lancaster bombers as receivers and Lincoln bombers as tankers for long distance bombing of Japan. This bomber force was to be termed "Very Long Range Bomber Force", or more favorably "Tiger Force". However, it was discontinued as the war progressed; the need for this type of long-range bomber aircraft was not needed.

After WWII tests were conducted to determine the feasibility of using radar for conducting aircraft rendezvous under any and all weather conditions. Again Flight Refueling Ltd. (FRL) conducted the tests and found that a rendezvous could be successfully accomplished using both radar and radio aids.

In 1948 U.S. Air Force General Curtis LeMay became head of the Strategic Air Command (SAC) and made aerial refueling a major goal for his new command. LeMay realized that the jet-powered bombers then entering service consumed far more fuel and also needed to fly longer distances. Existing aerial refueling sys-

tems had severe drawbacks, in particular the hoses connecting the B-29 bombers could not transfer large amounts of fuel and could not operate at higher air speeds.

In an attempt to demonstrate intercontinental reach a B-50 bomber (an upgraded B-29) named Lucky Lady II departed Carswell AFB, TX on March 2, 1949. This was the first around the world non-stop attempt. The aircraft refueled 4 times flying for a total of 94 hours and 1 minute. The flight successfully proved that air refueling could extend the range of existing bombers for use in a global war.

About this time Boeing began testing the "flying boom" system. This consisted of a large-diameter pipe connected to the rear of a B-29 (re-designated KB-29) and fitted with small wings, called ruddevators, at the end. The ruddevators functioned as both rudder and elevator for control of the boom in azimuth and elevation. The boom was lowered to a position where the operator actually flew it just above the receiver aircraft as it approached before slowly extending the nozzle into the receiver's receptacle. The flying boom system allowed fuel to transfer at higher rates, up to six

times as much fuel per minute. The newly assigned operator for this system, known as the "boom operator" was a specially trained enlisted crewmember taking the place of the tail gunner. Initially there was some discussion whether this new position should be filled by an enlisted member,

some felt that an officer was necessary for this position, the protocol involved telling an officer receiver pilot what to do while positioning the receiver aircraft for the contact. Initially there were some officers assigned as boom operators but the position finally fell to the enlisted ranks. Additional equipment on the newly designed tanker included a series of lights installed on the underside of the tanker. These lights, controlled by the boom operator as the receiver approached and then automatically controlled by the boom movement once contact was established, aided the receiver pilot to the proper refueling position. Fuel tanks were added to the KB-29, installed in the bomb bay. In 1949 the USAF ordered 40 of these KB-29 tankers.

While Boeing was developing the flying boom, FRL was continuing its work in Britain developing a system that would enable a single-seat "fighter" aircraft to refuel from a tanker. Flight Refueling Ltd. engineers developed the "probe and drogue" system equipping the receiver with a probe that could be plugged into a drogue (a basket looking device) mounted at the end of a refueling hose trailing the tanker. FRL conducted its first test on April 4, 1949, and soon the U.S. Air Force expressed interest in this technology as well. The Tactical Air Command (TAC) converted several B-29 and B-50 aircraft for fighter refuelings. These were equipped with three hose/drogue systems capable of refueling up to 3 fighters at once, one from the center fuselage position and one from each of the two wing tip pods. Some of these KB-50s even had 2 jet engines installed in place of the external fuel tanks increasing speed while refueling.



From B-57 to KC-135

A KB-50 with a 3 hose arrangement refuels 3 F-100s simultaneously.

Editor's note: This is the second of a three part series. It will be concluded in the Dec. 2003 Coyote Log.

Information for this article was obtained from the book "Passing Gas: The History of Inflight Refueling" by Major Vernon B. Byrd, a retired KC-135 pilot; and an Internet site U.S. Centennial of Flight Commission by Dwayne A. Day.

Coyotes raise funds to support Junior Achievement

By Tech. Sgt. Greg Burnetta

190th Public Affairs

Members of the 190 Air Refueling Wing raised \$2000 in support of a local charity in October.

Capt. Karl Freundt answered Lt. Col. Chris Stratmann's request to be the committee chairperson for the 190th's participation in a Bowl-a-thon designed to raise funds for Northeast Kansas Junior Achievement.

Staff Sgt. Leona Dennis volunteered to help. Via email she organized teams and coordinated the bowling party.

"From a single email, we had enough 190th members to fill six teams consisting of five members each," she said.

Each team member spent several days asking people to donate to Junior Achievement. After individually raising funds, the members all got together and enjoyed their night out bowling.

"We didn't really bowl against each other like in a league," said Dennis, "but

rather just all got together and enjoyed bowling."

"The bowling was Junior Achievement's way of saying thanks," she said.

This was Dennis' second year participating in this fundraiser. Anyone who raises \$100 qualifies to receive a prize from Junior Achievement.

Junior Achievement is the world's largest and fastest growing non-profit economic education organization. It's programs are taught by volunteers from the community in both the United States and more than 100 countries worldwide.

Its purpose is to educate and inspire young people to value free enterprise, business and economics to improve the quality of their lives.

It began in 1919 as part of an after school program.

Junior Achievement was founded in Topeka in 1968 and reaches over 15 thousand

northeast Kansas students. Junior Achievement reaches more than 2.8 million students worldwide.

If it's up to Dennis, Northeast Kansas Junior Achievement can continue to count on support from the 190th.

"It was a lot of fun. I think everyone had a good time," said Dennis



Bowlers of Achievement

From left to right, Vicki Miller, TSgt Sherry Hertlein, CMSgt Howard Steanson, TSgt Chad Bellquist, Clint Miller

Dining Hall turns 25

25 years of Coyote Cooking

By 1st Lt. Chris Hill

190th Community Manager

The same month the first refueling mission occurred at the 190th the unit, also, hosted the grand opening of the newly built dining facility.

"There were no real problems, except for not having enough personnel to run both serving lines on Saturday," said Master Sgt. Matt Dillon, the then NCOIC of Food Services.

Now one of the older facilities at the 190th, building 780 was then considered the "jewel" of the base. "I think we've got a beautiful facility and a lot of nice equipment," said Staff Sgt. Larry Smith. Smith later went on to become the NCOIC of Services and retired as a Master Sgt.

Then, as now, the dining facility relied on civilian KPs to support the food service mission. "I think the civilian KPs working with us did a tremendous job as far as overall work. I thought it was excellent," said Staff Sgt. Roy Corber. Corber later went on to become the NCOIC of Services and recently retired from the unit as a Master Sgt. Corber was the last of the "original" Coyotes who were present to open the dining facility.



How's the food?

190th members enjoy lunch at the newly opened dining facility during the May 1978 UTA.

Photo provided by 190th Audio Visual

How is my organization doing?

RANDOLPH AIR FORCE BASE, Texas (AFPN) — Air Force leaders at all levels want to know, “How is my organization doing?”

The 2003 Air Force Climate Survey began Oct. 1 and seeks to answer this question with the help of all Air Force people. Their participation in the survey is critical, said senior leaders.

“Leadership must be made aware of what’s really going on out there,” said Secretary of the Air Force Dr. James G. Roche. “By taking a few brief moments to fill out this survey, you can help your leaders understand your concerns and, ultimately, better serve you and our nation’s interests.”

Previous surveys included active-duty airmen and appropriated-fund civilians. This year, the survey also will include Guard and Reserve.

“We want to make sure all members of the Air Force team have an opportunity to participate,” said Lori Marcum, the

survey’s team leader. “Leaders at all levels use the Air Force Climate Survey to target areas for improvement. In order to create positive changes within an organization, (leaders) must know where to begin. This survey provides everyone an opportunity to speak out about strengths and areas for improvement in their organization.”

The survey runs through Nov. 23 and can be completed online at <http://afclimatesurvey.af.mil> anytime during the survey period. The Web address is not dot-mil restricted so you can gain access from any computer (home, work, school, library, etc) that is connected to the web.

Because Air Force leaders ask for direct and candid feedback, the survey team has taken extraordinary measures to ensure privacy by using advanced information-masking software. Anonymity continues to be a key factor of the survey, officials said.

Results will be released early in

2004, said Gen. John P. Jumper, Air Force chief of staff.

“The U.S. Air Force is the finest in the world, a great place to serve and raise our families. We share a commitment to make it better,” he said.

The 2003 survey will cover 13 factors that measure work experience: job, resources, core values, leadership, supervision, training and development, teamwork, participation and involvement, recognition, unit flexibility, general satisfaction, unit performance outcomes and job enhancement.

Survey participation has climbed from 39 percent in 1997 and 36 percent in 1999 to more than 65 percent of active-duty airmen and civilians in the 2002 survey.

Members at the 190th ARW can contact Major Kevin Remy at 861-4134 or SMSgt Mike Horton at 861-4137 with questions or requests for assistance on the survey, which is open until 23 November.

Kansas STARBASE

Go Shopping ~ for Kansas STARBASE

By Kim Mittermeier
Kansas STARBASE

Buy your ticket and mark your calendars for the Kansas STARBASE-West Ridge Mall “Evening of Giving.” The event will take place on Sunday, Nov. 23 from 6:00 p.m. to 10:00 p.m.

All West Ridge Mall retailers will offer special values to our guests during this exclusive after-hours shopping event.

Don’t miss the entertainment and special offers! Over 100 prizes from West Ridge Mall stores and

community sponsors will be given away during the event at the Prize Zone. And to top it off, you could win your choice of one of three brand new 2004 vehicles!

Join Kansas STARBASE Inc. and our friends at the West Ridge Mall as we bring you a night like no other.

The Simon Evening of Giving promises you a full holiday shopping experience you will not forget! This is your chance to help support your Kansas STARBASE program.

Tickets for the event are \$8 with \$6 going to STARBASE and \$2 to the Simon Youth Foundation. Children 6 and under do not require a ticket. Tickets sold at the door the evening of the event will be \$10.

For more information or to purchase tickets contact Kim Mittermeier at 861-4196 or Karen LaValle at 861-4592.



Senior Airman Brenda Wockenfuss



Organization: 190th Maintenance Operations Flight

Job title: Maintenance Ops Specialist (Traditional Guardsman)

Main Responsibilities: Maintenance Production Controller

Civilian Job: FACS Teacher at Lyndon High School

Education: Bachelor of Science, Human Ecology and Secondary Education

Military Experience: Joined the Kansas Air National Guard as a flight line crew chief.

Goals and Ambitions: To enable all students to reach their full potential and be an expert in Maintenance Operations.

Hobbies and Activities: Boating, riding motorcycles and playing with my grandson.

Most Memorable 190th moment: Riding in the jump seat on my first ride in a tanker with Col. O'Toole in the pilot's seat.

Coyote Comments

What are your plans for Halloween?



MSgt Suzette Baumgardner
Communications

"We plan to give a Halloween Bash and make caramel apples for the kids."



SrA Lucretia Branch
TMO

"My kids are going to dress up as biblical characters instead of the traditional Halloween demons & goblins and take part in church sponsored activities."



MSgt Martin Tennison
Logistics

"Taking kids to town to let them trick or treat and at the end of the night, take them to their grandparents house."



MSgt Don Coash
Weather Flight

"Taking my kids (who will dress up as Batman & Spiderman) trick or treating for Halloween."

Promotions

A1C

Thomas Grace Jr., Maint.
David G. Torrez, Maint



SrA

Emanuel J. Arnold, Maint.
Joshuan G. Bayless, Maint.
Erin E. Burden, MSF
Jesse L. Fuller, Maint.
Robert E. Jurgensmeier, Maint.
David J. Peavler, CES
Stephen F. Runyan, CES



SSgt

Andrew W. Piper, Logistics
Patrick A. Sampson, Comm



TSgt

James M. Robbins, Maint
Richard A. Smith, ARW



MSgt

Daniel L. Fox, ARW



SMSgt

Jeanne L. Bunting, 190 ARW
Thomas J. Doviak, 117th ARS
James S. Steele, SFS
Robert A. Wesp, MSF



CMSgt

Gary D. Wadley, SFS



1stLt

Julia L. Burns, Kansas ANG HQ
Ryan D. Strong, 117th ARS



LTC

Andrew R. Baden, CES
Thomas L. Ballou, 117th ARS
David E. Olsen, ARW



190th Christmas Ornaments



\$15.00 each
("25th Anniversary Edition")
Contact *Tonya VanSickle* in
Family Readiness to purchase

Reenlistments, Retirements

Retirements

MG Gregory B. Gardner, HQ KSANG
Col Charles W. Lippelgoos, HQ KSANG
CMSgt Roger K. Wilson, HQ KSANG
MSgt Roy F. Good, 190th CES
MSgt Edward L. Holm, 190 SFS
MSgt Amy A. McGonigle, 190th MOF
MSgt Timothy L. Wing, 190th SFS
TSgt Stephen P. Gill, 190th CES
TSgt Theodore R. Page, 190th Comm
TSgt Dennis J. Sniff, 190th SFS

Wing Commander's Call

There will be a Wing
Commander's Call on Satur-
day, December 6th at 1100 in
Hanger 662. Family members
are invited to attend.

Attention Student Loan Repayment Program Participants

Please stop by the Retention Of-
fice to review all qualifying student
loans 30-60 days prior to your enlist-
ment month. Participants need to sign
paperwork in the Retention Office al-
lowing us to request loan information
on your loans with the lending insti-
tutes.

This process must be accom-
plished every year before the Unit can
make payment on your qualifying
loans.

Our student Loan Repayment
Program budget is set up on a Fiscal
Year (1 Oct-30 Sep). If you miss com-
ing over on or about your anniversary
and the end of the fiscal year passes
there is no way to recover a payment
for that fiscal year.

This is a program designed to
help assist you in paying for your edu-
cation. If you are entitled to it, please
take the time to visit your Retention
Office Manager for an annual review.

Coyote Cafe Menu

Saturday November 15

Roast turkey, round of beef, baked
ham, rice pilaf, glazed sweet
potatoes, green beans, glazed
carrots, pumpkin & pecan pie.

Sunday November 16

Baked chicken, beef stroganoff,
mashed potatoes, asparagus,
pumpkin & pecan pie.

Hotel for November

Holidome

Chapel Hours

Protestant: 0800 - 0830
Latter Day Saints: 1100-1130
Catholic: 1345 - 1415

The Chaplains Office is
located on the 3rd floor
of Hangar 662.

Holiday Party, 6 Dec 2003

11:00am-6:00pm

11:00am:
Commanders Call
for Wing and Family Members

Lunch immediately follows Commanders Call

Family Events -- 1:00-6:00pm:

Open House tours
KC-135 on display
Games for adults & kids
Arts & crafts
Decorate Parade Truck
2-4 visit Santa
Snacks, drinks and fun
for everyone of all ages.

Volunteers are needed to help assemble
holiday bags for children on November 16
at 1:00 pm in the 190th HQ Building.

On November 16, a representative from
United Concordia Company (Tricare
Dental) will be at the 190th to speak and
answer questions about the Tricare Dental
Program. The briefing is scheduled to
begin at 2:30. The location will be
announced that day.

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www.kansascoyotes.com



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