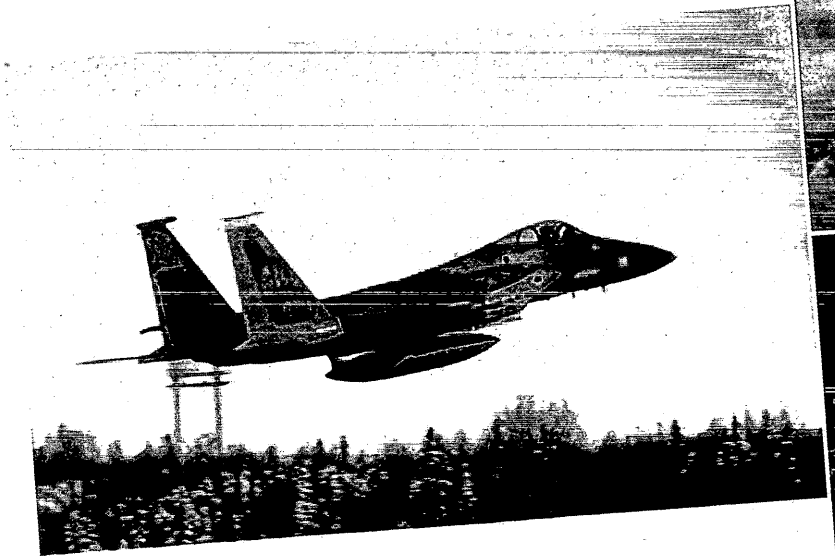
Alaskan NORAD Region

AN R/DO

Col Gene O'Nale

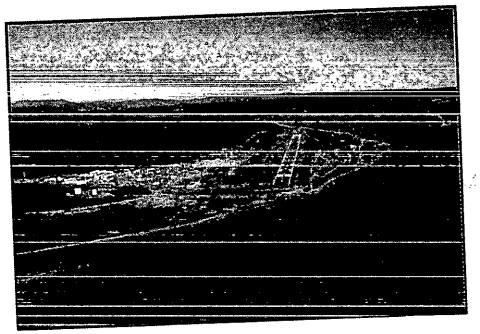
AIR BREATHING SYSTEMS

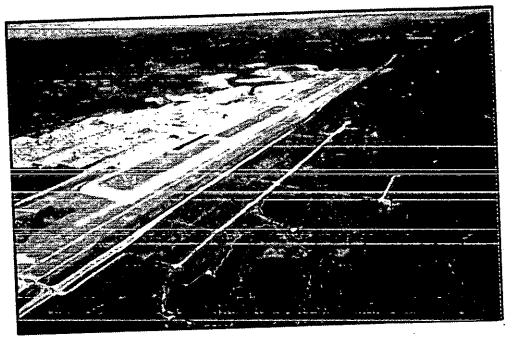


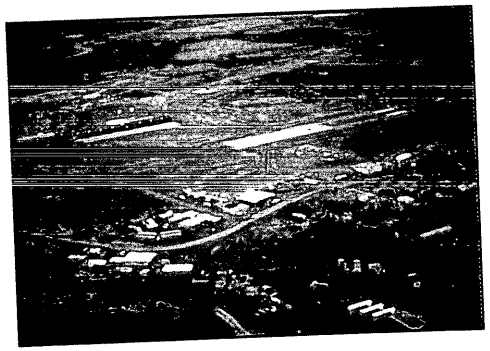
POSTURE

- 2 x F-15
- 2 x F-15
- 1 x KC-135
- 1 x E-3

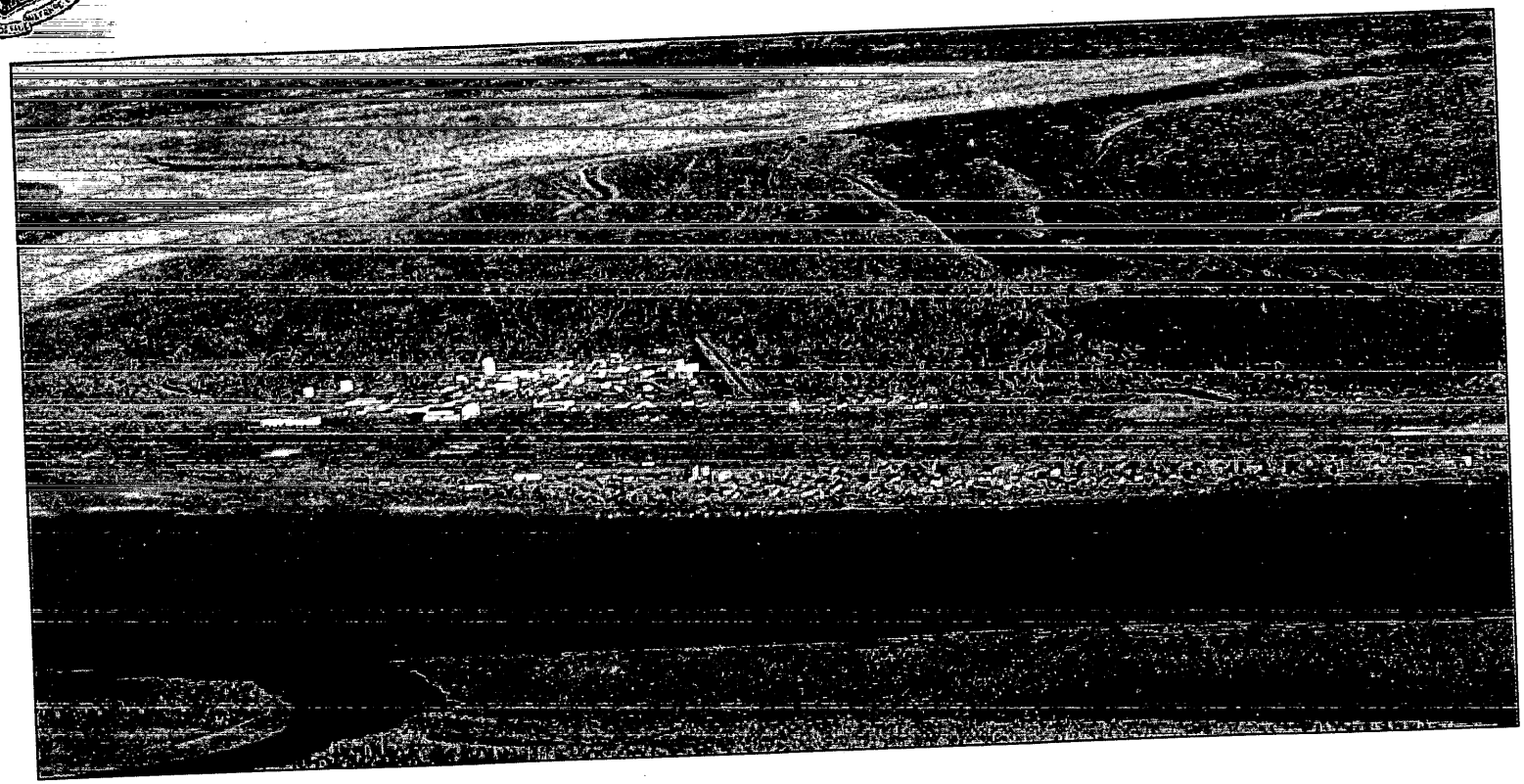
ALASKAN AIRFIELD OPERATING LOCATIONS







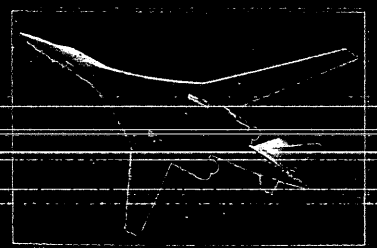
GALENA FOL

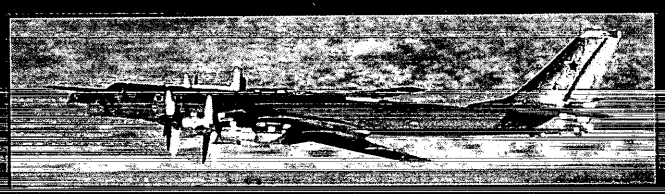


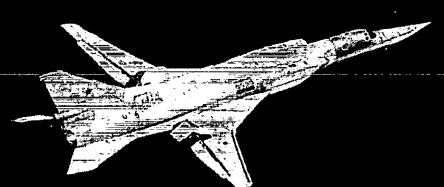
- 40 PERSONNEL ON SITE
- 7200' RUNWAY
  - 3 BARRIERS
  - VORTAC, ILS, NDB
- 2 FUEL STORAGE TANKS
  - CAPACITY 2.2M GAL (JP8)

GALENA CAC

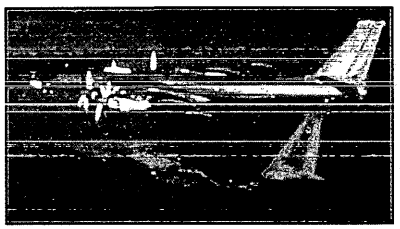
RUSSIAN STRATEGIC AVIATION

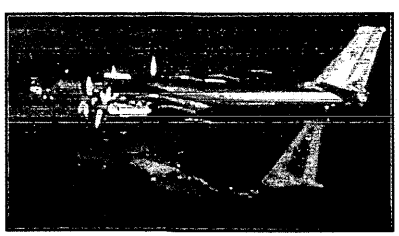


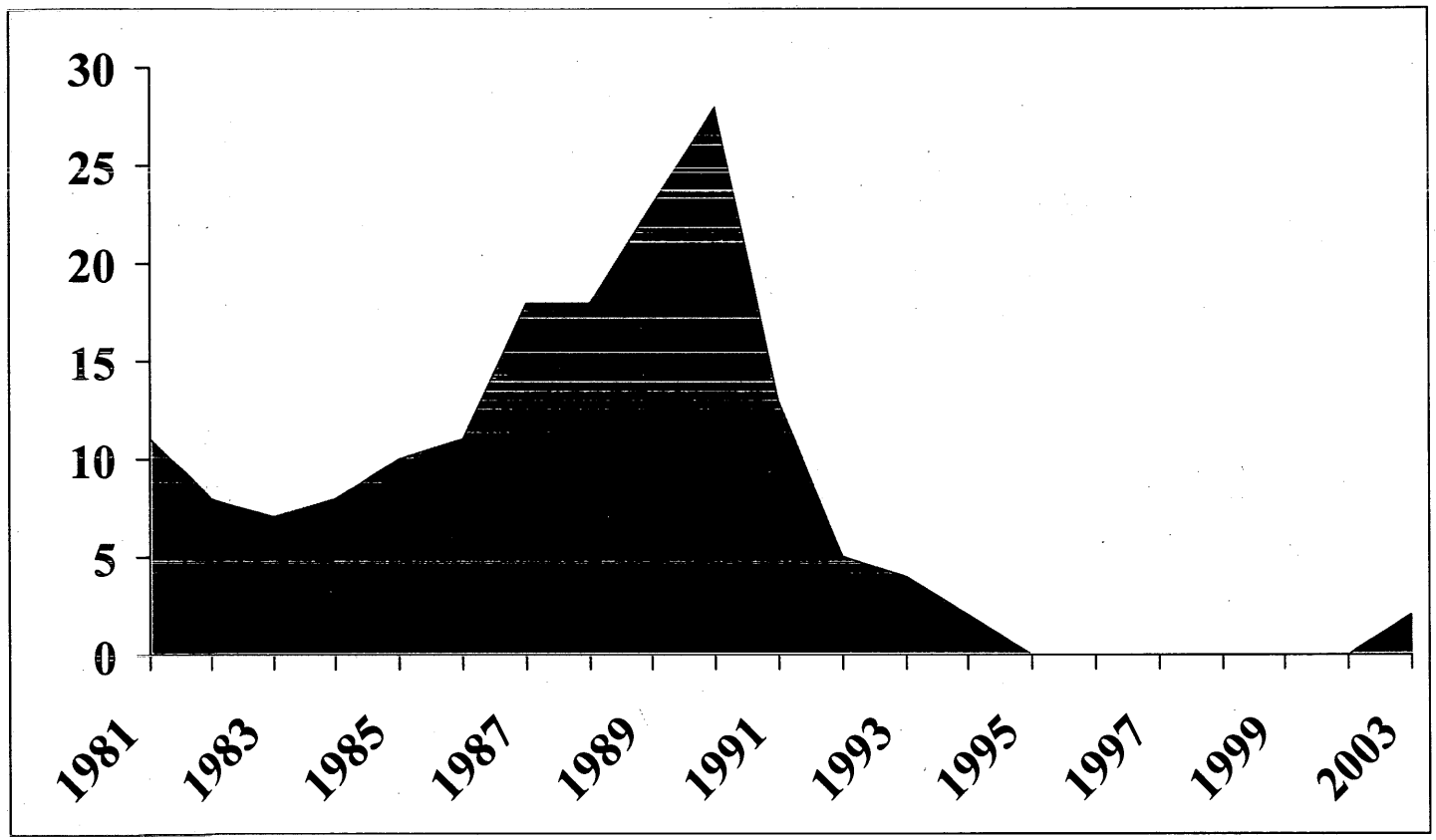




ANR AIR SOVEREIGNTY INTERCEPTS







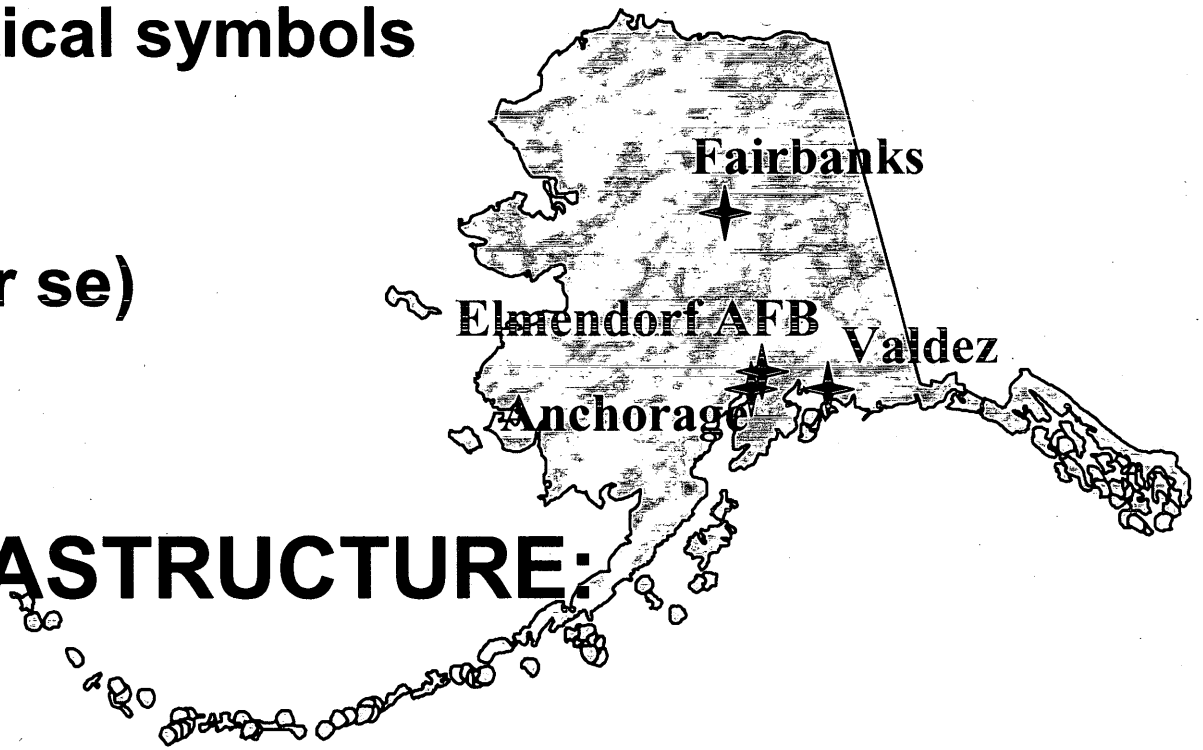

HOMELAND DEFENSE
AND
EVOLVING THREATS

POSSIBLE ALASKA TARGETS

TYPES OF TARGETS:

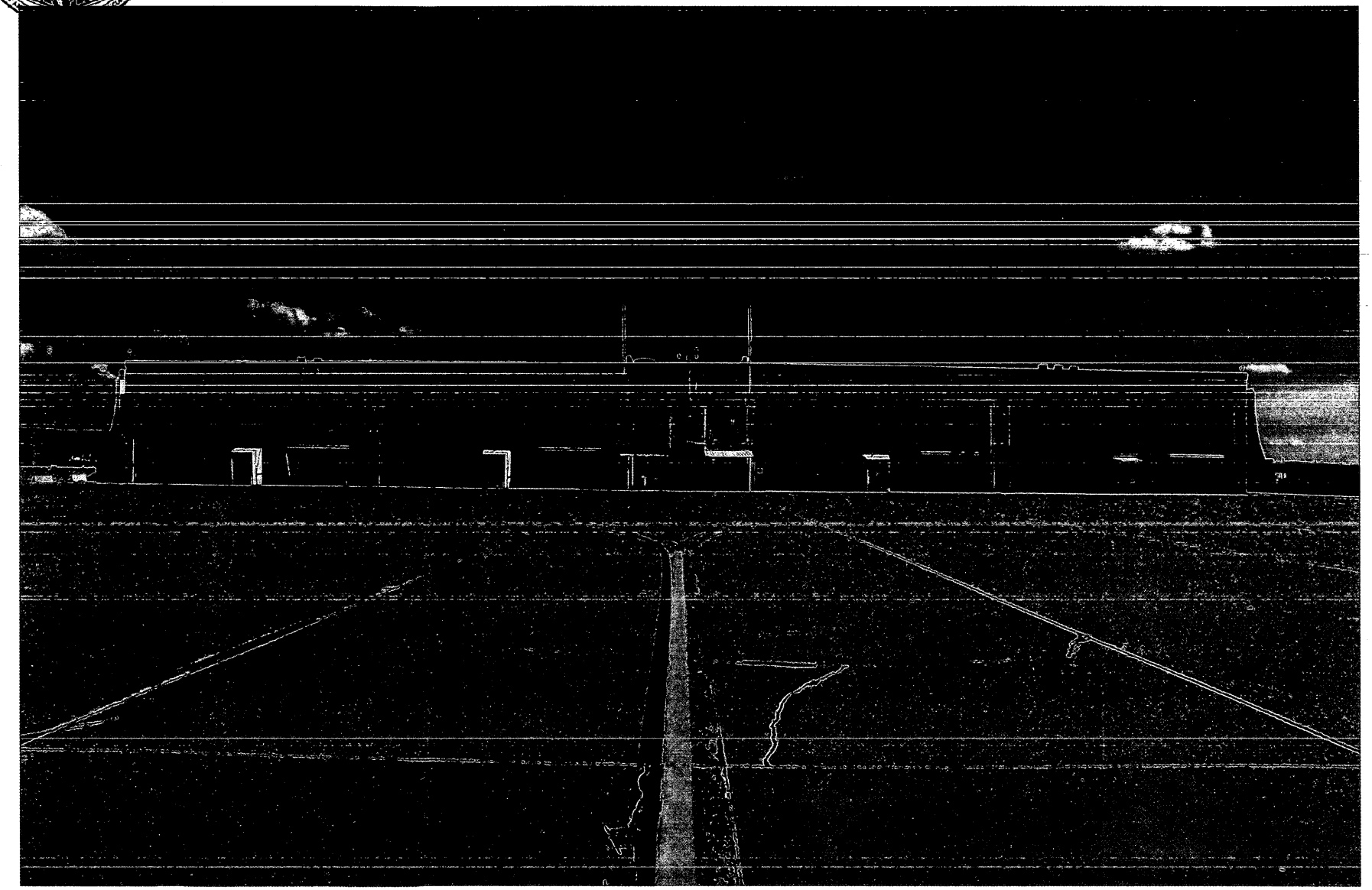
- Economic and political symbols
- Military presence

  (NOT capability per se)
- Infrastructure

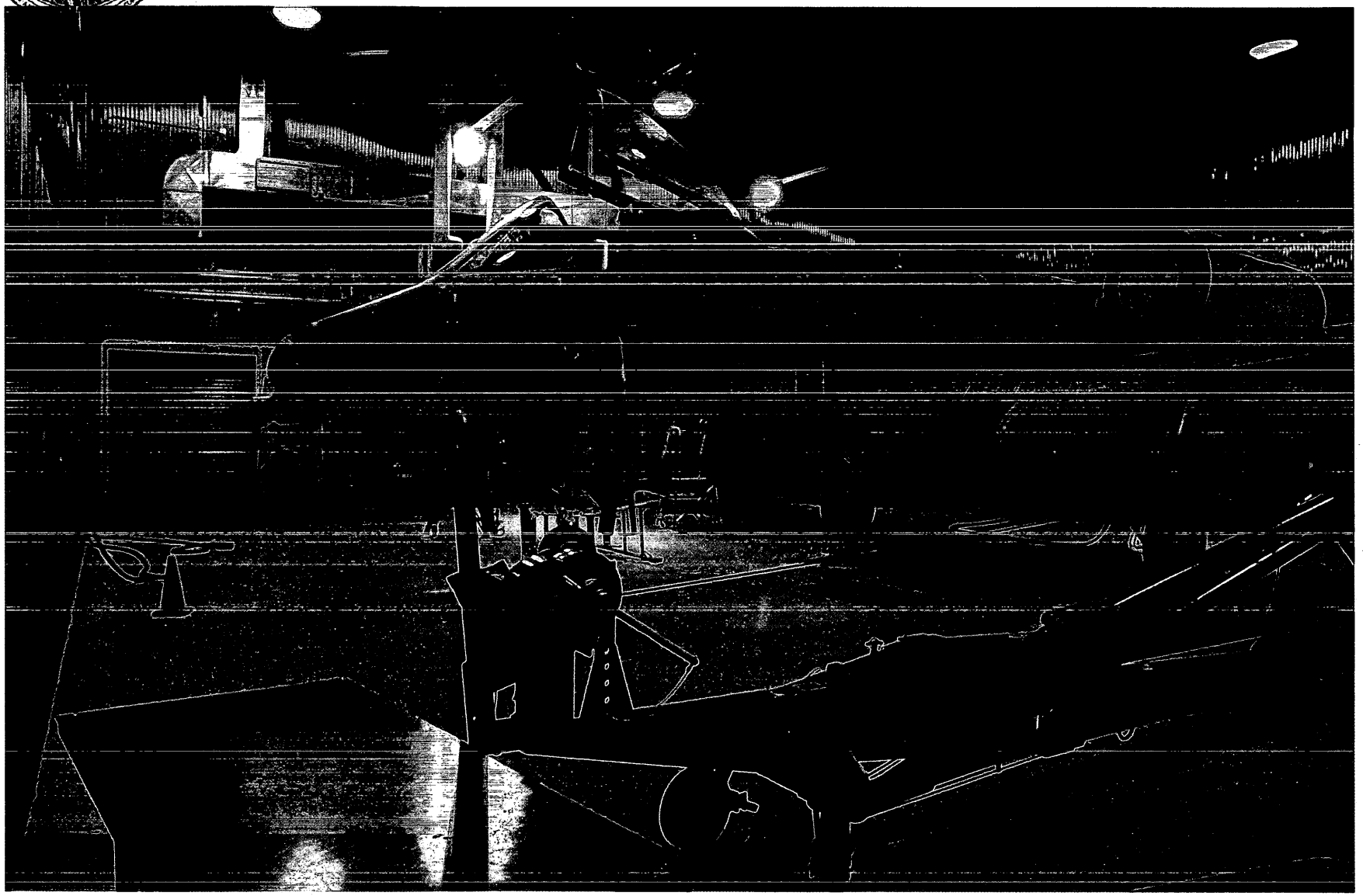


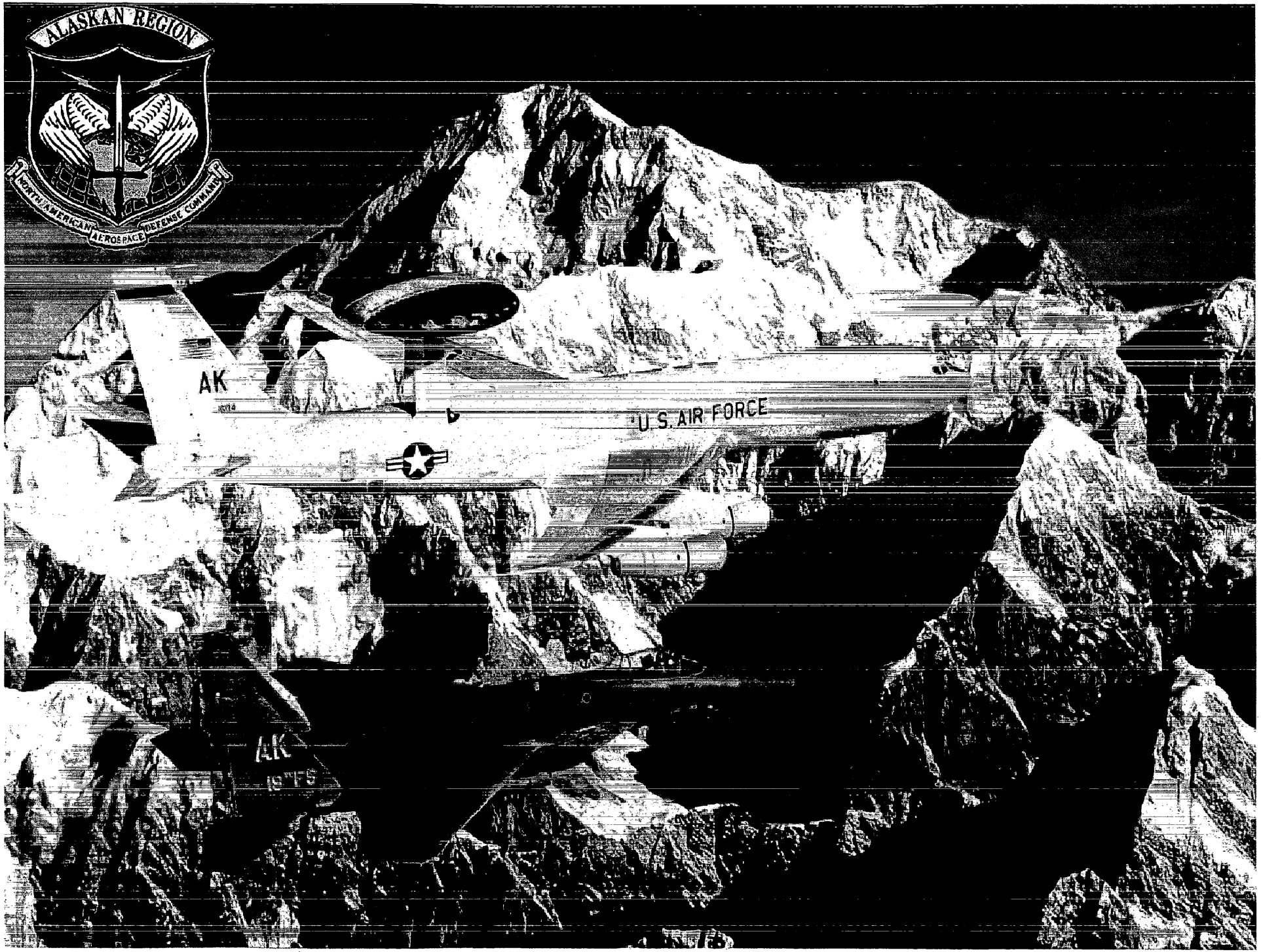
- **CRITICAL INFRASTRUCTURE:**
- Anchorage
- Valdez
- Greely

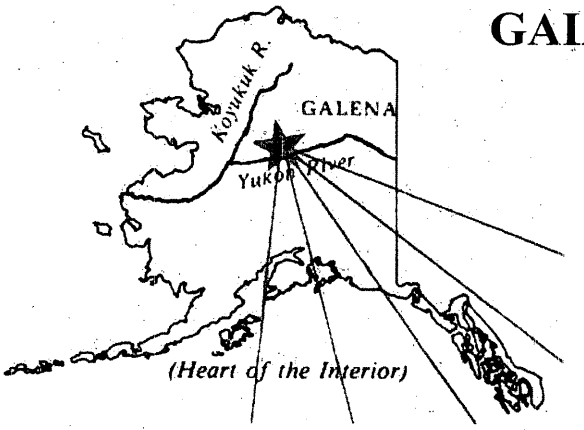
EIELSON CAC



EIELSON CAC




ALASKAN REGION
NORTH AMERICAN AEROSPACE DEFENSE COMMAND
AK
U.S. AIR FORCE
AK



GALENA CITY SCHOOL DISTRICT

GALENA, ALASKA 99741
PHONE (907) 656-1205
FAX (907) 656-2238

SUPERINTENDENT
Jim Smith

Galena City School District Demographics

2004-2005 Count

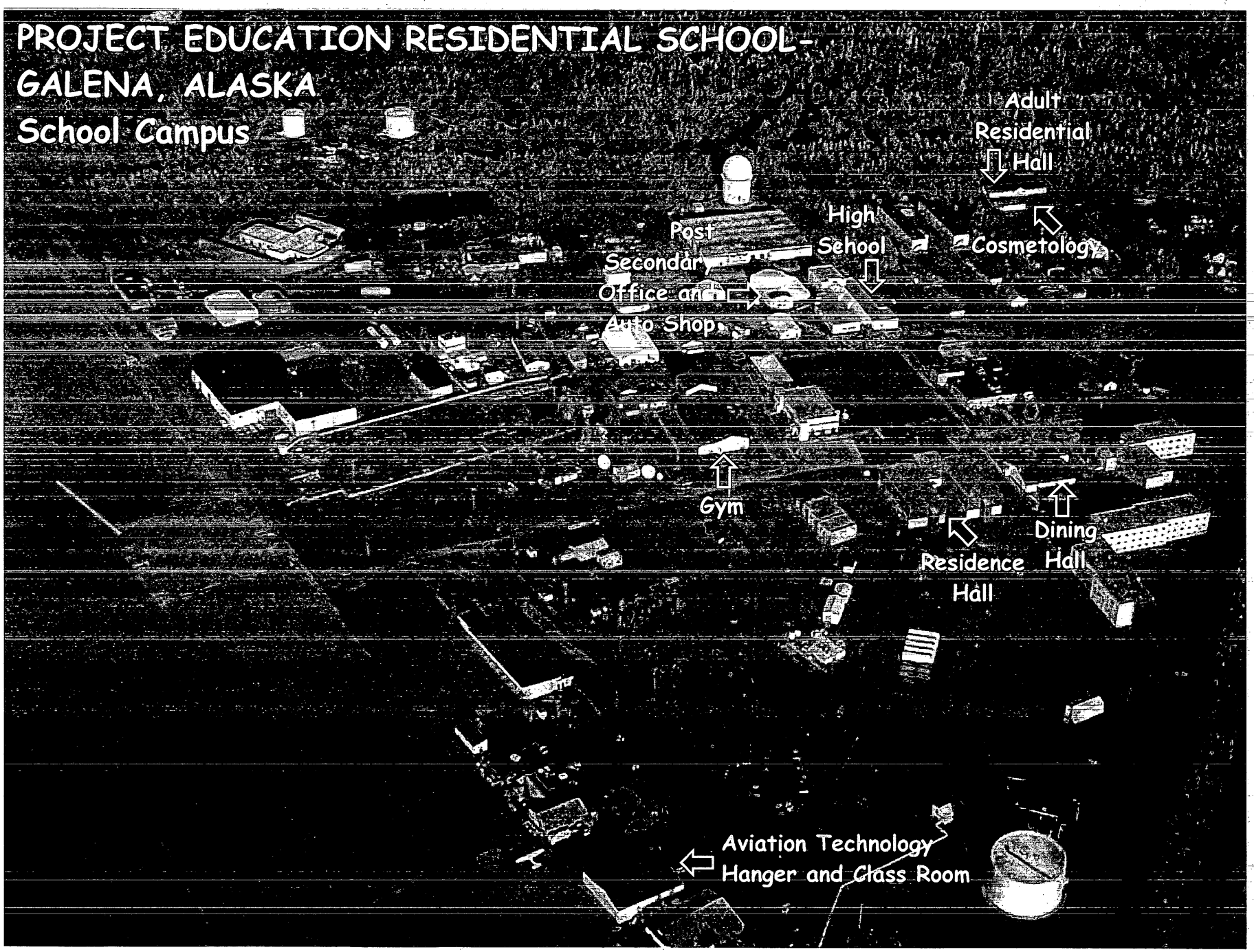
Village School Grades Pre-school – 12.....125 Students
Galena Residential Vocational High School..... 85 Students
(Galena Interior Learning Academy)
Galena Distance Education Program (IDEA).....3474 Students
Galena Post-Secondary and Adult Training..... 65 Students

Focus: Galena Interior Learning Academy (Formally PERS)

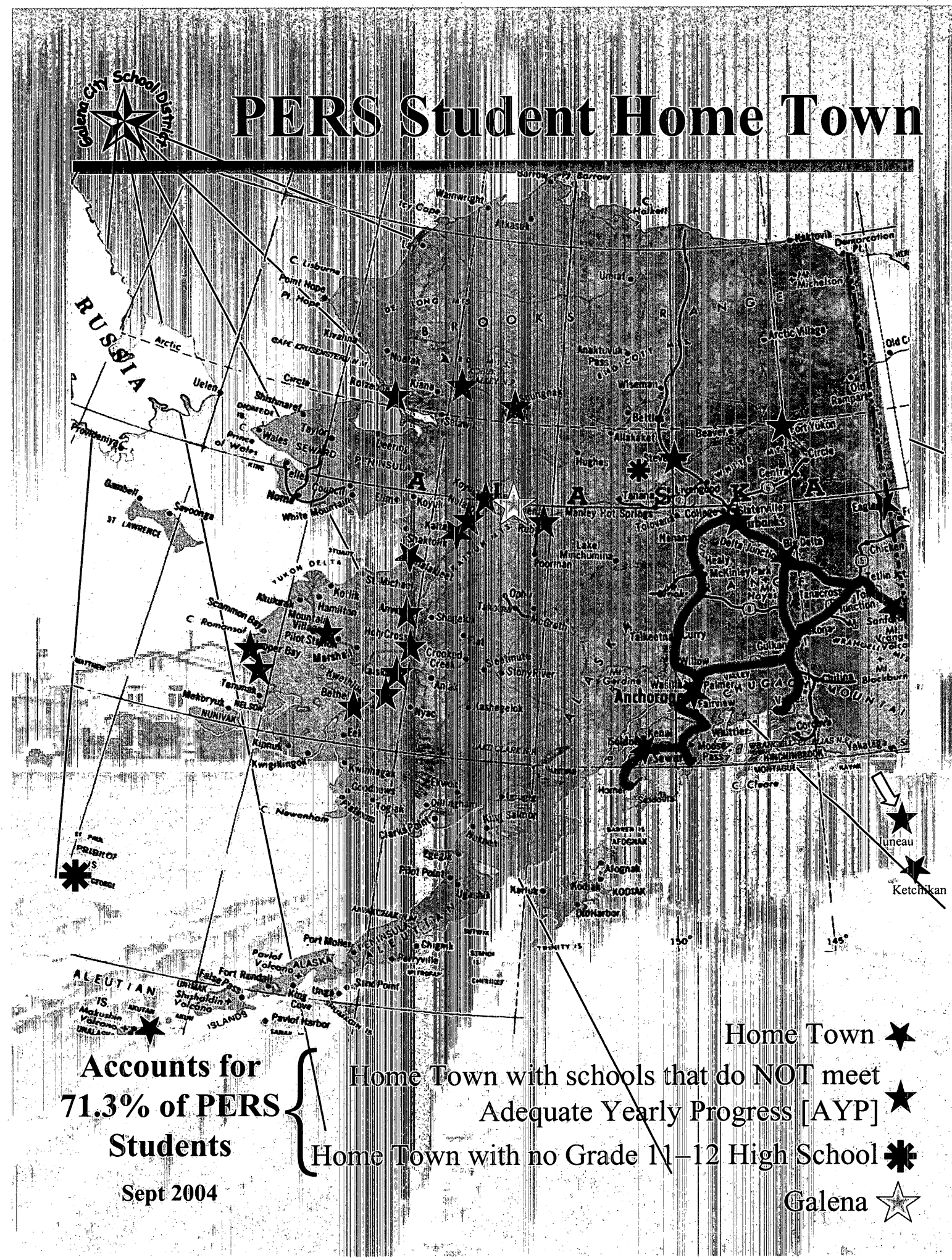
Partnerships: United States Air Force, General Motors, Suzuki Motors, Frontier Flying, City of Galena, Louden Tribal Counsel, University of Alaska, State of Alaska Departments of Labor, Post-Secondary Education, Transportation, Denali Commission,

*Years in Operation: 8 Years
*Current Student Count Served Yearly: 85
*Air Force Facilities Used: Composite Building, One Dorm, Gymnasium, and Auto Mechanics Shop
*Adult Training Programs: Culinary Arts, Aviation Ground School, Aviation Dispatcher Training, Auto Technology, Cosmetology, Allied Health/CAN, Health Aid Practitioner, Construction, Aviation Line Service Tech

*Adult Program Finishers: 65
* Full-time Jobs:
Food Service.....5
Residential Life.....17
Instruction.....17
Support.....8
Total.....47 positions
(Salaries & Benefits exceed $2,000,000)


PROJECT EDUCATION RESIDENTIAL SCHOOL-
GALENA, ALASKA
School Campus
Adult
Residential
Hall
Cosmetology
High
School
Post
Secondary
Office and
Auto Shop
Gym
Residence
Hall
Dining
Hall
Aviation Technology
Hanger and Class Room

PERS Student Home Town



Accounts for 71.3% of PERS Students

Sept 2004

Home Town ★

Home Town with schools that do NOT meet Adequate Yearly Progress [AYP] ★

Home Town with no Grade 11–12 High School ✱

Galena ☆

July 29, 2005

To the BRAC Commission:

There are several issues I would like to address and some misconceptions that need to be clarified.

- The importance of the Galena airbase has always been measured by the level of hostility with Russia. During the cold war Galena was vital. Air space incursions were common and intercepts were the order of the day.
- The last documented intercept of Russian aircraft in US territory was August of 2003.
- If there is a need to intercept Russian military aircraft Galena is still essential. Because of the distances involved, intercepting Russian aircraft in American territory is nearly impossible from either Elmendorf or Eielson.
- The range of the F-22's is about 400 miles, with auxiliary tanks. That is 200 miles short of the Russian border for either of the large bases. Galena is the ONLY Airport capable of sending fighters to the Russian border and back without in-the-air refueling.
- Regardless of whether the speed is Mach 1.5 or 500 miles an hour it only takes half as much time to reach the coast from Galena then either Eielson or Elmendorf.
- Galena is a non-certified airport. Without Air Force funds it may be hard packed snow for much of the winter! (John McKinnon, ADOT)
- For an area the size of 5 midwestern states, Galena is the ONLY available landing strip for military jets. What happens to aircraft and the pilots with emergencies or mechanical problems that are 400+ miles from Elmendorf?
- Galena could serve as an alternative landing site in case of a natural disaster such as an earthquake or a terrorist act that disrupted activity at the other bases.
- Has the cost of maintaining Galena been measured against the cost of saving one fighter jet every 10 years?
- Galena is considering installing a small Nuclear Power Plant. With the waste heat from that, the lower cost of electricity and possible privatization of utilities, the Air Force cost for heat, lights and utilities would be reduced by half.

We are aware that many decisions are based on intelligence that is not known by the general public. So I realize the possibility that someone in Washington DC has declared that "all is quiet on the western front". In which case all the fine logic that went into this presentation is for naught.

However, the very stark realities of the economic impacts relayed to you by Chief Captain are true. Those impacts could be mitigated by other action. We have a vocational school with post secondary certification and a high school with accommodation for boarding students. (as noted by Superintendent Smith) These programs provide 40 to 50 jobs and education for up to 200 students. We would like to maintain and expand these programs.

This can only be done with financial assistance during the transition period and with another agency picking up at least a portion of the operation and maintenance costs. The City will be working with the Tribal Government and the School to prepare a redevelopment scenario. It is imperative that we find a way to mitigate the extreme economic impacts that will happen if this base is closed with no alternatives in place.

A redevelopment plan will include the local needs of federal agencies which already have a lease hold interest and/or a presence at the Galena air base including; USF&WS, FAA, BLM, US Army COE, the US Coast Guard and US Department of Commerce. The state agencies are the Alaska State Troopers, ADOT/PF and Alaska Fish and Game.

Another issue which must be addressed is the environmental clean-up which is currently underway. I serve as a member of the Technical Project Team for the base clean-up. For the past 18 months we have met with the Air Force Environmental Consultants, Air Force personnel and the Alaska Department of Environmental Conservation to review historical and current data. I believe that of the dozen or so contaminated sites more than half will have Decision Documents which recommend natural attenuation. The rest will require some activity ranging from monitoring to active mitigation. At his point I suggest this work may take more than 3 years.

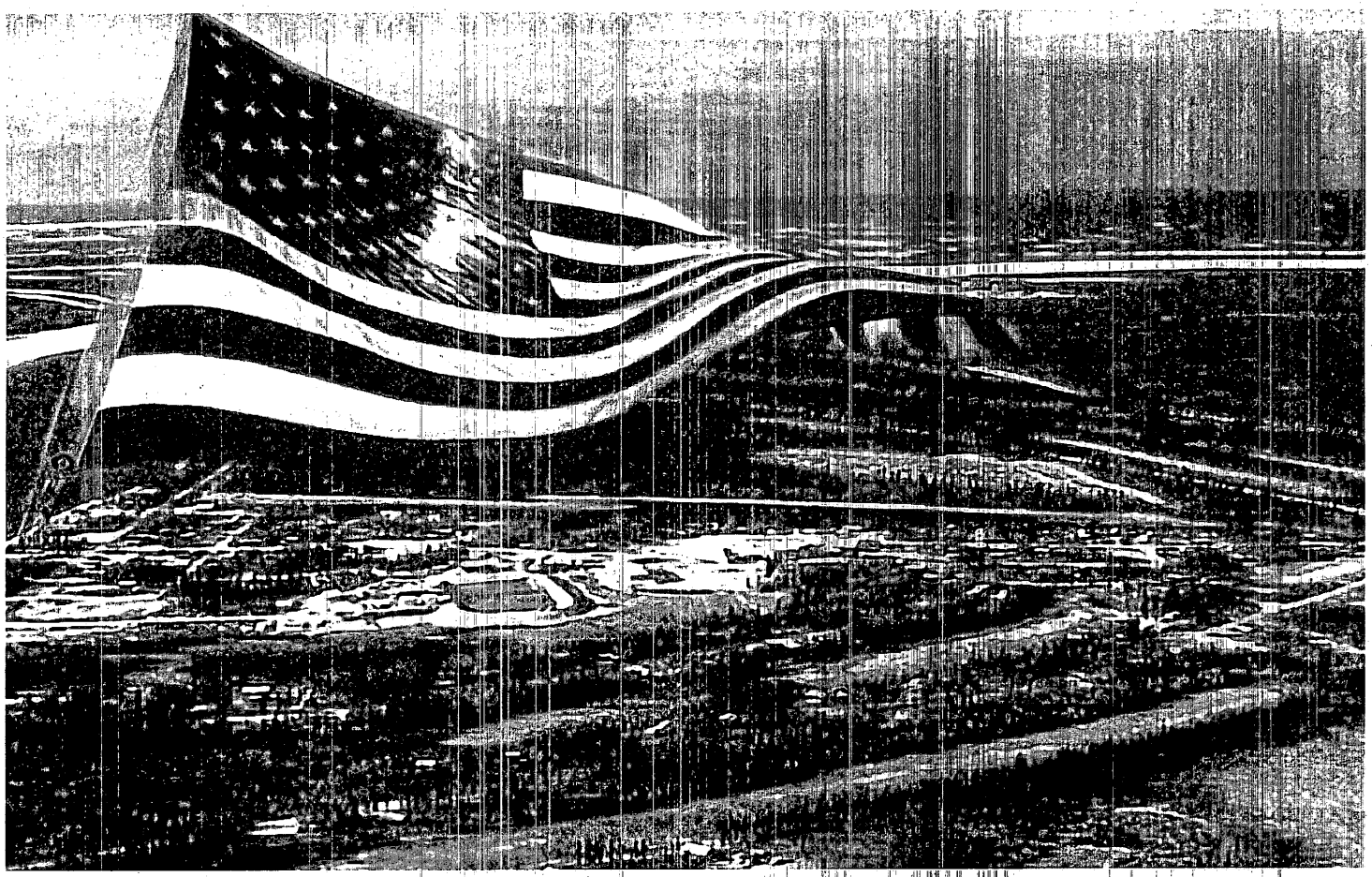
One last consideration. All the land is owned by the State of Alaska. The Air Force and the other Federal agencies lease land for their improvements. While this may not impact the BRAC decision it may very heavily impact the redevelopment process. All of this raises several questions.

- Given the number of entities with leasehold interest at the base, can the Air Force "deed" the improvements to different entities, rather than transferring the entire facility wholesale to a single entity?

- To date we have not heard any comments about the length of the transition if the base is included in the final list. Given the environmental issues what time frame do you envision the process would take?

- If it turns out to be a 3 to 5 year process to close the base, can building transfers begin in the early part of the process so that the redevelopment can take place in stages?

Marvin L Yoder
City Manager
City of Galena



Safe Clean Secure

City of Galena, Alaska

The need to deploy small modular nuclear reactors has never been more apparent. Consequently, the City of Galena, Alaska, along with an industrial consortium, is organizing the effort to license, engineer, and construct a small reactor project in interior Alaska.

In 2004, the Department of Energy (DOE) undertook a study entitled, "Galena Electric Power - A Situational Analysis" (prepared under contract DE-AM26-99FT40575 by the National Energy Technical Laboratory), specifically for Galena, which determined:

- Thermal and electric load profiles for Galena
- Technologies and resources available to meet or exceed those loads
- Uses for any extra power produced by these options
- Environmental and permitting issues
- The overall economics of each of the primary energy options

The DOE study concludes that the 10 megawatt 4S reactor is both the best economic and the best environmental choice for Galena. To view this study, see http://www.iser.uaa.alaska.edu/Publications/Galena_power_final.pdf.

With this as background, the Galena City Council passed a resolution in late 2004 to evaluate the development of a 4S reactor for the community.

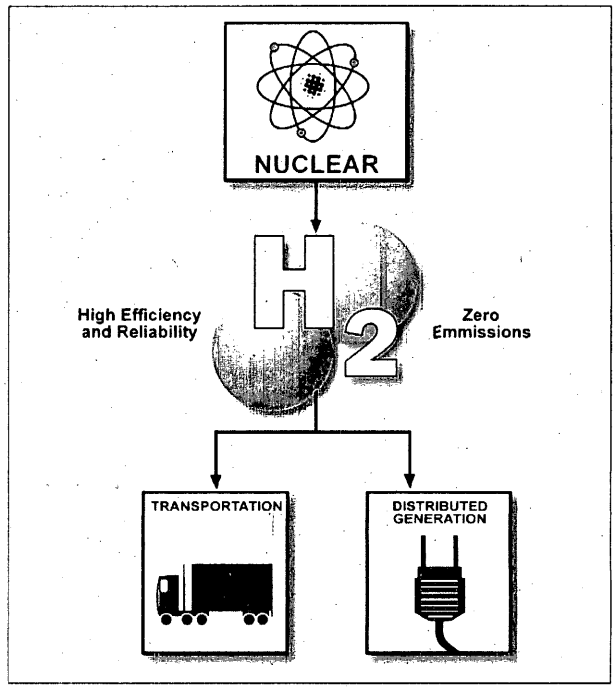
Galena officials met with the Nuclear Regulatory Commission (NRC) and several members of the U.S. legislature in early February 2005 to discuss the small reactor in Galena. Galena has formally applied for funding from the Alaskan state budget and the federal budget for licensing work. Once funded, Burns and Roe and Pillsbury Winthrop Shaw Pittman will prepare "white papers" and an Early Site Permit (ESP) application.

Hydrogen Production

Current hydrogen production methods are fossil fuel based and most produce pollutants. The Galena reactor project would also include a stand-alone High Temperature Electrolysis (HTE) process to produce hydrogen.

The Galena reactor project would be on the forefront of new hydrogen production research with several advantages, including:

- Nuclear energy will be abundant and does not depend on fossil fuels
- It is environmentally friendly, with virtually no pollution emissions
- Hydrogen production technology can be highly efficient



Hydrogen production and use – courtesy Burns and Roe

Conclusion

Nuclear-based electricity and hydrogen production technologies are mature and ready to be economically deployed in specific remote areas. Galena is pursuing a reactor technology and the licensing of a site for the benefit of the residents of their community. Once the Galena project has completed licensing, similar projects will benefit and can be economically completed on an accelerated schedule.

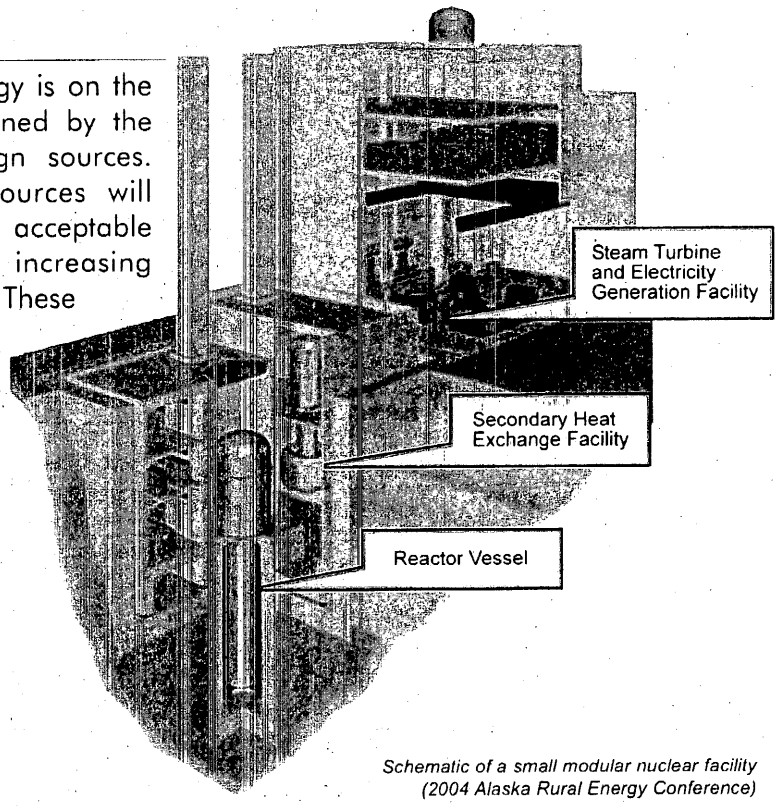
The worldwide market for small electricity and ancillary service production facilities (i.e., district heating, desalination, hydrogen production, refrigeration) is projected to be in the hundreds of reactors. The first facilities will have government support primarily for licensing.

The future looks bright and the technology is readily available for development.

Background

A major shift in the way the world obtains energy is on the horizon. The reliance on fossil fuels is threatened by the dwindling supply and the instability of foreign sources. Increasing competition for these scarce resources will accelerate the development of environmentally acceptable substitutes, which will subsequently capture increasing portions of the traditional petrochemical market. These energy supply issues are only amplified for the policy makers in remote locations trying to balance economic and environmental considerations in their energy supply planning.

The current Bush Administration has recently stressed the importance of safe nuclear power and hydrogen to the future of our country. The development of new energy sources, driven by sound Government policy and a clear vision, will position the U.S. to reap huge rewards in the 21st century. As energy sources continue to evolve, we find ourselves at the dawn of a new age in power production.



Schematic of a small modular nuclear facility (2004 Alaska Rural Energy Conference)

Galena Nuclear Facility

The City of Galena, Alaska, is a progressive community situated on the north shore of the Yukon River in the interior of Alaska, approximately 270 air miles from Fairbanks. Galena experiences a cold continental climate with extreme temperature differences (from -64 to 92°F). Galena is isolated from the rest of Alaska with no electrical grid or roadway connection. Galena's links to the world are its large year-round airport and the Yukon River in the summer.

Galena is the commercial center of the area. It has developed into a strong educational center for the region, providing schools and classes for local residents to learn skills and trades both on-site and via the Internet. These educational programs have received support from several large corporations, including General Motors and Suzuki.

The City of Galena provides utilities for the community. Electrical power and waste heat are produced to serve the community and the nearby U.S. Air Force Base. The annual electrical output is approximately 10 million kilowatt-hours.

The City Manager, Marvin Yoder, and the City Council recently looked at future energy needs for the next 20 years. Currently, the City's reliance on diesel generators is marked by high maintenance costs, volatile fuel prices, fuel shipment and storage concerns, and air and noise pollution. The City wants to reduce or eliminate these concerns. The cost of electricity has a dampening effect on the community's economic development. Lowering the cost of electricity will increase the economic opportunities for the citizens of Galena. There have been statewide studies that evaluated the various energy alternatives to diesel power. To assure that all possible energy sources were included in the evaluation, Galena added the 4S small reactor to their list of possible alternatives. Galena identified this potential power source through networking and several discussions. Technical information on the 4S was presented at a rural energy conference held in Alaska in April 2004. For details of this conference, see http://www.uaf.edu/aetdl/Presentations.htm.

Galena saw several 4S features as attractive for its needs, including:

- Passive safety features
- Small components that can be modularized for easy transport to the site
- No refueling for 30 years
- The cost of power is projected to be less than the 30 cents/kilowatt for diesel-generated power with less environmental impact
- The regional use of co-generated hydrogen
- Small amounts of nuclear waste that will be shipped off site to Yucca Mountain or elsewhere by mid-century
- Secure underground installation, providing mischief and proliferation resistance.

Galena, Alaska

Data at a Glance

Reactor	
• Reactor Type	Liquid Metal-Cooled Reactor
• Safety Systems	Below grade with passive safety systems
• Electrical Output	10 megawatts
• Refueling Cycle	None – the reactor is replaced with a new, fueled reactor after 30 years
• Spent Fuel Disposal	Yucca Mountain
• Galena Project	15-25 cents/KWh (excludes first-of-a-kind licensing) 2005 $

Schedule	
• Site Permit	2005 - 2007
• Application and NRC review	2006 - 2010
• Construction	2011 - 2013
• Operations	2014 -

Contact Information

Galena	Burns and Roe	Pillsbury Winthrop Shaw Pittman
Marvin Yoder marviny@arctic.net (907) 656-1301	Rich Lupi rlupi@roe.com (201) 986-4600	Douglas Rosinski douglas.rosinski@pillsburylaw.com (202) 663-9097