

2006 AFG Modification to Facilities

Who we are:

Lexington, Kentucky, the "Horse Capital of the World," is located in the heart of the Bluegrass. It is the second largest city in Kentucky, and has a merged City/County Government with Fayette County. We have seen 20 years of steady growth with no slow down predicted. The Division of Fire and Emergency Services provides a week day population of almost 300,000 people with Fire Prevention, Fire, EMS, Hazardous Materials, and Specialized Rescue services. We also serve as a hub for the Bluegrass Emergency Response Team (BERT), an 11 county Emergency Management Area.

Project:

The purpose of this application is to request grant funding to place diesel exhaust extraction systems in 15 of our fire stations. This impacts 545 firefighters staffing 23 fire stations with crews 24/7, 365 days a year. Our open door policy at all of our fire stations has yielded close relationships with our neighbors. We encourage station visits by appointment, just dropping in, and many fire fighters, families drop by daily. Every station conducts Project Safe Seat, infant/child car seat safety; Safe Place, a temporary safe haven for distressed children/youth; Vial of Life, a senior citizens safety program; and free blood pressure checks on a daily basis. Citizens Fire Academy recruits and graduates visit us regularly and enjoy ride alongs. Birthday parties for children are permitted at our stations, and some fire stations serve as polling places during the year.

We are also asking to replace the 23 year old breathing air compressor on our cascade system. Our Cascade Room technicians service 600 department air cylinders. We average filling about 20 air cylinders a month for such agencies as the Bluegrass Emergency Response Team (BERT), the Kentucky Department of Fish and Wildlife, the University of Kentucky Environmental Health and Safety Office; UK Radiation Safety Office; the UK Police department; the Metro Police Emergency Response Unit and Bomb Squad, and the Lexmark Fire Brigade. We fill air reservoirs on ARFF CAFS systems several times a month for Bluegrass Station, a DOD installation.

Problem:

Most of our fire stations have two or more diesel units assigned to them with a combined average of 136 runs daily. Our efforts to deal with the toxicity of diesel exhaust resulted in a variety of insufficient air dilution/exhausting systems in our facilities. Efforts to seal the public and living areas from diesel exhaust have also been unsatisfactory. Some crews run box fans 24 hours a day to positively pressurize living areas. The morning routine at some non-retrofitted stations includes wiping down furniture to remove exhaust soot from the previous shift. Because of their design we have 10 stations with physical fitness equipment located in the bays, and most remaining stations have open air PPE lockers in the apparatus bays. In August 1988 the National Institute for Occupational Safety and Health (NIOSH) issued Current Intelligence Bulletin 50, CARCINOGENIC EFFECTS OF EXPOSURE TO DIESEL EXHAUST, in which six major toxic components were identified, as well as 31 other harmful components in smaller quantities. Since then, agencies such as OSHA's Air Resource Board, the Department of Labor, the CDC, state universities, and private companies have studied and presented the health risks associated

with diesel exhaust.

Our breathing air compressor was purchased in 1983 from an Austrian manufacturer. Its supplier, American Bristol, went out of business in 1994. Scott Health and Safety, a Division of Tyco Inc. bought the company and recently informed us they were unsuccessful in finding needed compressor parts for the unit after a six month worldwide search.

Solution:

The exhaust extraction project is an important part of our respiratory protection program. We wear SCBA's until the Incident Commander decides the air is safe. We have annual respiratory fitness testing, and encourage overall physical fitness through our wellness program. Two years ago we found it was less expensive for us to install exhaust extraction systems than to remodel stations in order to separate apparatus bays from inhabited areas. In response to the Fire Chief and Urban County Government Division of Risk Management, our city council authorized, but not completely funded, a diesel exhaust extraction system retrofit for all fire stations.

This is where the project stands. Two new stations were completed with extraction systems. Working with local historic preservation and regulatory agencies, we already retrofitted our two fire stations with historical impact and one additional non historic fire station. In the current budget year we will complete retrofitting three more stations. Although this is a good start, that leaves 15 fire stations without historic considerations to retrofit without funding.

The diesel exhaust extraction system we have already installed guarantees capturing 100% of vehicle exhaust from the point of origin. This system meets or exceeds OSHA, NIOSH, KYOSHA, NFPA 1500-2002, Section A.9.1.6, Underwriter's Laboratories, ISO-9001, and Air Movement and Control Association (AMCA) standards and requirements. The system reduces the exhaust to outside air levels before it is expelled. Actual visual inspection of all stations to be retrofitted under this grant resulted in an accurate cost estimate of \$355,622, which is guaranteed through the performance period.

Three quotes indicated the cost for a breathing air compressor would be around \$30,000. This includes the compressor, installation, training, and maintenance for one year. The total cost for both requests is \$385,622. The Federal share is \$308,498. We are prepared to pay the 20% Local share match of \$77,124. We have been assured by everyone involved that these projects can be completed in the one year grant award period.

Financial Need:

In the late 1990's funds for salaries, vehicle replacement, and station upkeep were at a standstill. From 2001 to 2006 health care and other fringe benefit costs rose approximately 62% and apparatus replacement issues demanded a higher percentage of annual budgets. While costs have risen, the city council has had to work with a tax revenue base that has risen about 25% during this same period. Meeting salary, benefit, and increased utility and fuel costs has left smaller allotments for discretionary spending.

Our current fiscal year budget is broken down as follows: salaries account for 70%, health care and other fringe benefits 22%, utilities and hydrant fees 6%, operational expenses such as vehicle and station maintenance and repair, and vehicle fuel receive 2% of the budget. Unforeseen extra overtime and national factors this fiscal year have already exhausted budgeted funds for overtime and fuel costs. Only \$96,000 was able to be earmarked for discretionary spending. With a total of 23 fire stations, a vehicle maintenance facility, a large training center, and our own 911 Call Center to maintain and equip, there is no money left to complete these projects.

We have a strong tradition of providing mutual aid, leadership, and training regionally and statewide. Our fire service involvement at the national level is growing under our current chief. Although this mostly comes at our own expense, the benefits are obvious. It is an enjoyable privilege serving our fellow firefighters and their communities.

Cost/Benefit:

If awarded funding for the air compressor we can continue to provide quality air bottle servicing for our 600 SCBA cylinders and the other federal, state, and local agencies depending on us. If not funded, we may have to temporarily operate off of our mobile cascade system, which is a 1984 system but not as highly used and is American made.

Within one month of a diesel exhaust extraction system retrofit, firefighters claim less headaches, improved breathing, and less upper torso muscular tension. The American Federation of State, County, and Municipal Employees studies verify these results. We also expect to see the same long term pulmonary health benefits of exhaust extraction that several studies have shown. Installing diesel exhaust extraction systems will also eliminate the problem of almost half of our firefighters exercising in a toxic environment. It will also allow our PPE to air out more effectively.

If the diesel exhaust extraction system helps keep well seasoned firefighters on the line until they decide to retire, the return on investment is obvious. Compare the cost of helping keep 545 Firefighter/EMT's healthy against personnel replacement costs. Installing diesel exhaust extraction systems is a cost effective measure. Recently two of our firefighters retired early due to failing their annual pulmonary function test. Sadly, one other firefighter contracted cancer while still on line, retired, and died within several months. We are able to identify 14 retirees who have contracted cancer. Although we cannot say for certain exhaust pollutants caused the cancer, it might be a contributor. Who would not want to give retiring firefighters a better chance of beating the current life span for fire service retirees? Clean station air is healthier for firefighters.

Clean station air provides a healthier environment for the visiting public and our own families. It is another way to serve our citizens the best we can.

The men and women of the Lexington-Fayette Urban County Government Division of Fire and Emergency Services thank you for your careful consideration of our requests. We appreciate your service to your communities and the national fire service family.