June 18, 2009

Mansfield Independent School District
Transportation Department
1910 North Main Street
Mansfield, Texas 76063

Pre-Proposal Submission (Priority 1)

Sue Pope Fund
North Texas Pollution Reduction Program

PO Box 763844
Dallas, Texas 75376

Charles Stone
Director of Transportation

817-299-6066

Downwinders at risk
reducing toxic air pollution in north texas

Applicant Information Form
Sue Pope North Texas Pollution Reduction Program

Organization:	Mansfield Independent School District (MISD)
Organization type	School District
Organization Street Address:	605 East Broad Street
City, State, Zip	Mansfield, TX 76063

Project Officer (Title, First, MI, Last, Suffix):			Mr. Charles Stone		
Phone—extension	817-299-6066	Fax	817-473-5639	Email	stonch@mansfieldisd.org
Project Name		Mansfield ISD			
Location of Project		Mansfield ISD attendance zones			
Project Start Date (MM/DD/YYYY)		11/01/2009			
Project End Date (MM/DD/YYYY)		8/31/2010			

BUDGET: Please summarize your budget request in the space provided. You should also provide a more detailed budget in your preproposal.

Line Item	**Requested Funds**	**Matching Funds**
Salaries and Benefits	$3,000	$17,500
Equipment	$132,000	$15,000
Other:	None	None
Total:	**$135,000**	**$32,500**

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The Mansfield Independent School District is the leader within the Dallas Fort Worth Non-Attainment Area in efforts to provide clean burning school buses for the community. We have thirty-two school buses powered by Compressed Natural Gas. These reduce the emissions and NOx from the tailpipes to below 2010 standards, improving the air quality of the area.

- Mansfield ISD is located on both sides of the US HWY 287 corridor between Ellis County and the City of Fort Worth. Residents of MISD live in the communities of Mansfield, south Arlington, Burleson, Rendon, Grand Prairie as well as northern Johnson County and southeastern Tarrant County.

- There are approximately 32,000 students in MISD, of which about 11,000 ride school buses twice each school day to and from their homes. Others ride school buses between campuses during the day. The air quality produced by aged school buses ranks 10.6 on the NOx scale compared to the .02 NOx of 2010 engines. Obviously, 2010 engines are significantly cleaner than the old technology diesel engines in use.

- MISD has installed particulate traps on sixty-two diesel school buses. Particulate traps prevent soot or particulate matter emissions from exiting the tailpipe. We have thus already positively affected the local atmosphere throughout the communities we serve along the Hwy 287 corridor. Every engine that will function with particulate trap technology has been addressed.

The Sue Pope North Texas Pollution Reduction Program goal is to provide funds to enhance, in a dramatic manner, the air we breathe by cleaning engine exhaust systems. MISD desires to continue our programs in partnership to provide clean burning school buses and other vehicles. These are two very compatible goals and there is no more dramatic means for citizens to see the effects of a clean air program than with school buses and local taxpayer funded entities. Sue Pope and MISD Public Relations efforts will amply inform local residents of our joint effort, creating the best for both organizations.

Our efforts have been developing in two independent areas:

1. Using our existing CNG Compressor and twenty time-fill stations, we continue our efforts to convert or replace diesel engines with CNG. This is most easily done by replacing the entire school bus, although we have also replaced six diesel engines. The presence of a new, clean burning CNG powered school bus is impressive to citizens. Doing so with financial help reduces the taxpayer contribution per bus, which is desirable.

2. Since our CNG Compressor Station is limited to time-fill, meaning that the vehicle must be parked with the hose attached for several hours, we cannot expand to other types of vehicles that cannot park overnight at the station. For those vehicles needing traditional drive-up gas station services, we must add a "fast fill" dispensing unit. Installation of this dispensing capability will allow two entities, MISD and the City of Mansfield, to expand with future purchases of CNG powered vehicles (or replacement of engines) in all departments of each entity. Each CNG engine reduces our dependence on imported fossil fuel products while clearly benefiting air quality.

Looking at the long term picture, MISD wants to be an important tool to meet Federal Air Quality Standards, a quest shared by the Sue Pope Foundation. We will continue the CNG fuel option with buses stationed at our Main Street facility where we have a compressor station installed. We are also developing a CNG site at our alternative bus yard, pending DOE funding assistance.

However, our real need is for a "fast fill" operation. With this, we could expand to other vehicles in the two fleets that refuel currently at these facilities.

- We already have a cooperative agreement with the City of Mansfield to provide refueling infrastructure for their diesel and gasoline powered vehicles on a drive-up basis. They purchase fuel with delivery to our tanks and we dispense the fuel to their vehicles. The City has expressed their desire to use our CNG facilities when fast-fill becomes a reality.

- Unfortunately, neither the City of Mansfield nor the MISD will purchase CNG "white fleet" vehicles until there is a local source of drive-up refueling. There are no commercial establishments available within our jurisdictions that can accomplish this.

- With the help of the Sue Pope Fund, we will purchase the tool needed. A "fast fill" dispensing unit will allow both entities to convert or replace non-school bus vehicles with CNG power sources. Each entity has expressed interest in the purchase (or conversion from diesel or gasoline) of smaller vehicles such as sedans, police vehicles, pickup trucks, delivery vans and medium duty delivery trucks.

- The physical space necessary for the addition of this dispenser was planned for in the design of our existing compressor station. The dispensing unit will have some tank storage of CNG that will be dispensed into drive-up vehicles for rapid refueling. The compressor station will sense the demand and provide additional compressed gas to the storage tank for future activity. Nice, neat, self contained with a metering and card reader system that allows us to control access to the area only by authorized users.

The Projects proposed for MISD have the following considerations on the Sue Pope North Texas Pollution Reduction Program review criteria:

1. **Achieving Key Reductions**. Replacement of an engine with compressed natural gas (CNG) power immediately reduces NOx as well as particulates that impact human health. The degree of cleanliness of the tailpipe emissions already exceeds the air quality standards soon to be required of each engine.

    a. The CNG engine already achieves 2010 emission standards (0.2 g/b-hp NOx and .01 particulates), which is substantially cleaner than existing diesel fueled engines. Diesel engine manufacturers intend to meet 2010 standards by using Selective Catalytic Reduction which includes the introduction of urea to the exhaust stream. While production costs of CNG systems is falling due to sales volume increases, the cost of diesel systems increases due to add-on techniques to meet 2010 standards.

b. The "fast fill" dispenser will provide the means for refueling drive-up vehicles from both the City of Mansfield and MISD.

c. While both entities have committed to invest capital funds to purchase CNG powered vehicles once the fast-fill dispenser unit is in place, neither is yet funded for the initial vehicle purchase. An American made (Greensburg, Indiana) Honda Civic GX driving 19,000 miles per year will displace 1000 gge (gasoline gallon equivalent) each year.

d. Replacing entire vehicles with CNG engine power will result in a significant reduction of pollutants for over many years. Each medium duty vehicle powered by CNG replaces over 2,000 dge (diesel gallon equivalent) per year.

e. Each CNG engine placed into operation reduces our dependence on imported fossil fuel products while clearly benefiting air quality. The fuel is locally produced and has a consistent buffer of supply in proven reserves with an abundant 120 year supply.

f. While diesel fuel has 14 carbon atoms, Natural Gas has only one. CNG combustion processes result in fewer carbon emissions resulting in 20+% fewer Green House Gases released into the atmosphere.

2. **Public Impact**. This series of projects provides a clear case of what is being done to improve air quality and energy security. The public relations potential of this school district's accomplishments are immeasurable. Considering the common belief that public school districts are under-funded, the accomplishments becomes even more of an example of what can be done when like-minded organizations match needs, desires, and funding together. The synergy is awesome.

   a. Making purchases of expensive CNG vehicles normally is limited due by the funding constraints of a public school district. The importance of working together on funding cannot be overstated, as this allows school district taxpayers to realize the clean air advantages within the existing tax rate. This bodes well for public relations.

   b. The public impact of any action that directly affects our school-aged children is always high. Providing the means to improve the air quality for those children with the right blend of technology, facilities, and policy is memorable and responsible government in action. The Sue Pope Fund becomes the catalyst in this effort.

   c. Students and their families will be exposed in practice to environmentally friendly school buses and department vehicles. This, combined with educational literature and events provided upon introduction of these vehicles into the fleet, will aide in the general public's understanding of clean air efforts and accomplishments.

   d. Moving to an alternatively fueled vehicle of any type is generally hindered by the need for infrastructure purchases. Since MISD already has the CNG infrastructure with excess compressor station capacity, the Sue Pope Fund has the unique opportunity to open the door for additional and future CNG vehicle purchases.

e. Each new CNG engine placed into use directly enhances air quality and reduces our dependence on foreign oil. Each part of the effort is important and necessary for success.

FUNDING REQUESTED (Two independent projects submitted):

PRIORITY ONE PROJECT: Construction and Use of Fast-Fill Dispenser.

1. INSTALLATION OF "FAST FILL" DISPENSER: $120,000.
   Purchase and installation of a "fast fill" dispenser to the existing CNG fueling station.

   - $120,000 for construction project: fully funded by Sue Pope Fund.

2. PURCHASE A CNG POWERED SEDAN.
   Funding assistance for the purchase of one CNG powered Honda Civix GX.

   - $27,000 TOTAL: $12,000 by Sue Pope Fund and $15,000 by MISD.

3. PERSONNEL COSTS: $20,500.
   Funding assistance for the personnel costs associated with enhanced CNG operations.

   - Construction of the infrastructure (200 man hours @ $50 = $10,000).
   - Instruction of students & families (10 mh per campus = 36 x 10 @ $25 = $9,000).
   - Conduct of public relations events (20 mh x 3 events @ $25= $1,500).

   - $20,500 TOTAL: $3,000 Sue Pope Fund and $17,500 MISD.