CITY OF DURHAM

FIRE DEPARTMENT DURHAM N.C. 1872

December 31, 2019

Mr. Anthony Scott
Chief Executive Officer
Durham Housing Authority
330 East Main Street
Durham, NC 27701

Dear Mr. Scott:

As you may know, Durham County Emergency Medical Services (DCEMS) determined the presence of a trend of Carbon Monoxide (CO) related EMS calls in the McDougald Terrace community. Assistant Chief Lee Van Vleet of DCEMS notified first responder stakeholders on December 25 of his concerns including a list of several EMS incidents where CO was or could have been a factor.

On December 26, the City of Durham Fire Department (DFD) called together a teleconference of all stakeholders including representatives from the Durham Housing Authority, City of Durham Neighborhood Improvement Services, City of Durham Community Development, DFD, Durham County Emergency Management, and DCEMS. During that teleconference, we discussed Chief Van Vleet's findings, possible scope of problem, enforcement powers, and we developed a Task Force concept for a CO canvas.

The CO Task Force, which would include a representative of the DFD, a representative of the DCEMS, representatives from DHA, and representatives of NIS, would visit every home to inspect for obvious hazards, fix or replace CO alarms, and educate residents on the dangers of and how to protect themselves from CO. The CO Task Force was agreed upon with a deployment at 8:30AM on Friday, December 27.

The CO Task Force was split into four teams and started to engage in the community early Friday morning. Due to the number of teams, NIS stood by at the management office and received referrals for serious cases from the four teams. After the first complete day of engagement, it was clear that at least one and most likely two more days were needed for completion of this mission. Teams were setup for Saturday, December 28 and Monday, December 30. The following are the findings from those 3 days of canvassing the homes:

- Friday
  - 150 units.
  - Over 200 smoke or CO alarms installed.
  - 1 pediatric patient was assessed by EMS staff and found to have elevated readings. This patient was found in one of the above homes.
  - 1 adult female transported, treated and released (Duke hospital) who presented with elevated Carbon Monoxide hemoglobin saturation (SpCO) levels. Patient was a smoker but DHA employees found that her water heater was emitting CO.
  - 3 apartments had very low levels of CO (far below any action threshold).
  - 3 additional apartments were referred to NIS for a full inspection.
- Saturday
  - 100 units
  - 131 smoke detectors installed
  - 54 CO detectors installed
  - 54 residents monitored
  - 1 elevated SpCO level (19) in resident.
    - Resident was a smoker and did not want to be transported.
  - 2 elevated readings in apartment
    - 15ppm at a heater
    - 28ppm at a stove
- Monday
  - 46 units
  - 47 smoke detectors installed
  - 21 CO detectors installed
  - 28 residents monitored
  - 1 elevated SpCO level (25) in resident, unknown if was a smoker, patient transported to Duke Regional Hospital.
  - 4 elevated readings in apartments at stove or hot water heater – DHA were aware of these findings and most repairs were made and area metered again by DFD and no CO detected at that point.

While we found no or low CO readings during the canvas (the highest reading noted was 28ppm-DFD meters alarm for CO at 35ppm), I would caution against accepting that as evidence that no CO problem exists as our readings were taken in what we would consider a somewhat open environment of the homes (due to many people coming in and out during our visit and good weather) and the varying levels of appliance use. The DFD/DCEMS meters used during a quick canvas were to help us determine if there was a need to immediately evacuate residents or if there is a systemic problem at the complex. The abnormally warm weather reduced the need for home-heating which further reduced our chance of finding the worst-case scenario during our canvas.

I believe it imperative to reiterate the importance of CO alarms in the homes of McDougald Terrace. A properly installed and operating CO alarm provides for constant monitoring of the space and can be that extremely important early warning for a slow developing CO issue. Furthermore, after being on-site all morning Friday hearing resident concerns and seeing first-hand the number of units which were most likely using their stoves to heat their homes, I would recommend a more thorough inspection of all units. This would include operation of all fuel-burning appliances with sufficient time in each unit to allow for the creation and buildup of CO would provide the best safety and peace of mind for residents. This inspection would best be achieved during cold weather when the homes are more likely to be sealed and the heaters are certain to be in use.

The DFD will continue to stand ready to assist you with the education of residents and to provide technical assistance to the DHA. Please feel free to contact me with any questions you may have.

Sincerely,

Robert J. Zoldos II
Fire Chief

cc: Tom Bonfield, City Manager
Bo Ferguson, Deputy City Manager
Jim Groves, Emergency Management Director