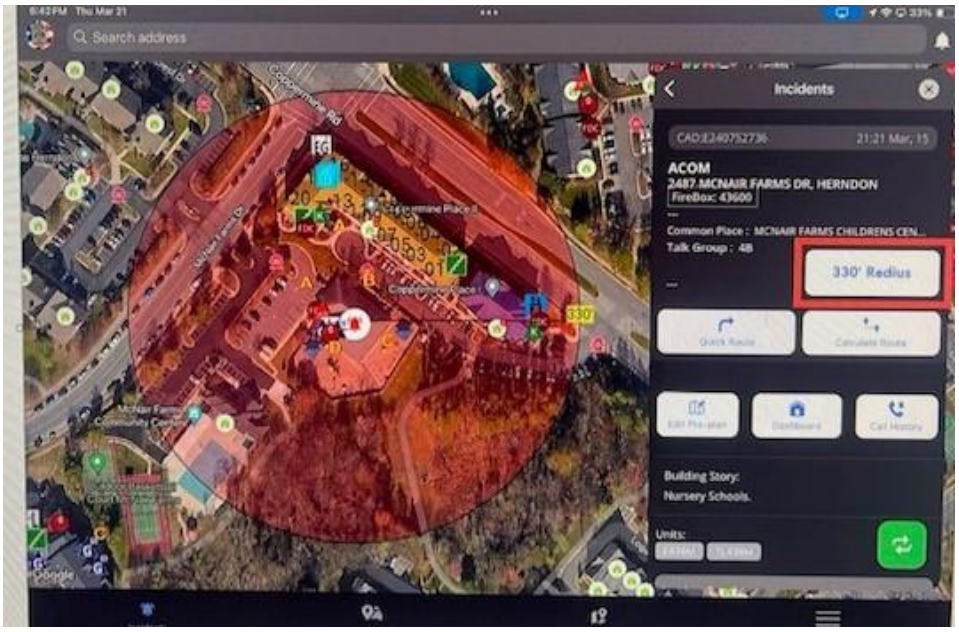
2024 Firefighter Safety Standdown Training Content

Day 4: Back to Basics, Gas Leaks



The NOVA Utility Emergencies Manual provides detailed guidance in response to inside and outside gas leaks. To further enhance this response, the FRD has requested First Due Size Up (FDSU) to build a 330-foot radius as a "RECON ZONE" identification tool in the FDSU application. **Please note that this photo is a mock-up requested by the FRD for FDSU to develop. This feature will soon allow users to select a button that places a 330-foot radius over the structure. Currently, this functionality is still in production and is not available on the iPads. An Informational Bulletin will be published once this functionality is live.** This feature will enhance responder safety and provides a visual investigation starting point for all responding units to reports of gas leaks or hazardous materials (HazMat) emergency event types. This added feature supports the expected practices of initial arriving units, as outlined in the NOVA Utility Emergencies Manual (pp. 12 and 16). FDSU will display a 330-foot radius, consistent with initial action guidance for any HazMat event outlined in the United States Department of Transportation Emergency Response Guidebook and shall be utilized to establish the action zone where personnel will begin to recon and investigate.

The purpose of this training bulletin is to inform personnel of an upcoming general order and video that will guide personnel to the following:

RESPONSE ACTIONS

1. All initial suppression unit responders shall dress and don full personal protective equipment (PPE), including self-contained breathing apparatus (SCBA).

2. The first due/first arriving unit should identify a RECON ZONE by approximating a 330-foot area centered on a reported incident address. Until this functionality is available on the FDSU app, the first due/first arriving unit shall verbalize the RECON ZONE over the radio.

   "All units responding from E410, the RECON ZONE will begin at the intersection of Columbia Pike and Lakeview Drive."

3. Exterior recon and assessment considerations conducted while approaching the dispatched building entry point should include dispatch information, reported hazard type, wind direction,

4. and lowest levels of impact, including assessing storm sewers and manhole covers upon approach to an incident scene.

5. Until the RECON ZONE is cleared, all other responding apparatus should use judgment based on dispatch and supplemental information (i.e., structure type) along with the investigation findings of the first arriving suppression unit operating in the RECON ZONE before proceeding any closer.

    a. When the exterior of the RECON ZONE is cleared by the first arriving unit, apparatus should position a minimum of 100 feet from the entry point of the structure (NOVA Utility Emergencies Manual, p. 10). This location could vary based on type of structure (e.g., single-family dwelling, townhome, apartment, commercial building, high-rise, etc.)
    b. As part of the water supply plan for these event types, officers and apparatus operators should consider **not** utilizing the hydrants immediately adjacent to a structure or those within 100 feet due to the potential risk of damage should an unexpected explosive event occur.

6. Size ups for reported odors (i.e., smell of an unknown origin or gas) and reported gas leaks should include the following information:

    - Structure height.
    - Occupancy type.
    - Lowest level.
    - Basement entry.
        - Walk-up basement: monitor the basement steps and any exterior drain for lower explosive limits (LEL). Note: Propane heavier than air will lay in the drains or the basement step area.
    - Location of gas source and meter, if feasible (these generally contain exterior shut off valves).
        - Gas meter (natural gas).
            - Exterior
            - Interior meter indicated by a vent pipe

        - Inground tank (propane)

- Scan area (may be located a distance away from the structure)
- Obstructed from view

- Above Ground (propane)
  - Outside tank against the structure
  - May be located a distance away from structure
  - Obstructed from view

7. Interview the occupant and verify the information:

   a. Is the home or business supplied by natural gas or propane?
   b. Confirm gas type – natural or propane?
   c. If propane gas:

      i. Is the tank located above ground or below ground?
      ii. When was the last time the tank was filled up?
      iii. How much gas was delivered?
      iv. What is the tank capacity (gallons)?
      v. Who is the service provider? Do you have a contact number?

   Once the interview is complete, occupants should be directed to seek a safe location outside of the 330-foot RECON ZONE if readings outside of normal ranges are discovered.

8. Size up/situation report should be delivered at the doorway/entry to a structure, ensuring metering occurs both low and high prior to entry. Consider the meters' reflex time and allow sufficient time for the meter to sample the environment. Report initial readings, any odors, and occupant status to the Incident Commander (IC).

> "*Battalion 406 from Engine 409, lap completed, two front, three rear single-family, walkout basement Side Charlie, gas meter Side Delta. Label floors basement, one and two. The occupant reports an odor of gas in the basement, confirms natural gas service to residence. All occupants are accounted for and located at/a safe distance. Normal readings at the front door, LEL reading at basement door is three percent.*"

9. If no hazard (e.g., all meter readings normal, no presence of odors, etc.) is met within the exterior RECON ZONE, up to the front door, the officer should communicate by radio to IC or, if the initial unit officer has not transferred Command, communicate the RECON ZONE is clear.

10. Typical tasks to be accomplished on incident scene:

    a. Recon – RECON ZONE investigation, approach metering and size up.
    b. Water supply – safe distance, consider risk of explosion and/or potential of damage/water loss when selectin hydrants immediately adjacent to the building address.
    c. Metering – All units should operate with active meters. Fairfax County rescue squad or HazMat Unit (HMU) should conduct comprehensive interior metering, when all other meters may read normal, to further assist in investigation of suspected gas leak due to the sensitivity of their meters. Roof recon should also include metering.
    d. Ventilation – Ventilation actions should only occur with adjacent/concurrent metering and only upon direction of Command.
    e. Handline Deployment – Handlines should generally be deployed once a hazardous reading or situation is confirmed, and needs are identified. It is important to identify rich or lean environments to properly place protective lines.
    f. Utility Control – Building utilities commonly can be rapidly identified, exterior units should look for buried or in-ground exterior shut off valves.
    g. Medical group – Should be established for FRD personnel or occupants, outside of RECON ZONE.
    h. Incident Command.

The FRD has added a Fairfax County rescue squad or the HMU to all Inside Gas Leak (GASIN) responses. These units were added for the availability of gas meters that offer enhanced detection and monitoring capability than meters on frontline engines and truck companies. These meters can detect the potential presence of gas inside a structure that may not alert or alarm action levels for FRD personnel.

A general order will be published later this month further defining this information.