# PORTSMOUTH FIRE DEPARTMENT

## FIRE PREVENTION BUREAU

# Garage Ventilation Testing Procedure and Inspector's Checklist

1. Inspector to verify prior to beginning :

   ☐ List of all sensors and their exact locations permanently identified, adjacent to the main gas system controller

   ☐ Sign at *all* yellow strobes stating not enter the space when flashing at each interior and exterior door to the garage

   ☐ A 24 hour number for service of the gas system is posted adjacent to the main gas system controller

   ☐ City mechanical and electrical inspectors have signed off on the generator. Written/email proof is required

   ☐ Documentation that all test gas has NIST traceability. No other test gases shall be permitted

   ☐ An exhaust fan is constantly running at low speed prior to proceeding to step 2

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2. Contractor to release 25-50 PPM CO testing gas at sensor(s). Inspector to verify:

   ☐ Louver(s) open and fan(s) speed increase or turn on at *25PPM CO (1st stage/set/trip point)*

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3. Contractor to release 100-140 PPM CO testing gas at sensor(s). Inspector to verify:

   ☐ Louver(s) still open and fan on maximum at *100PPM CO (2nd stage/set/trip point)*

   ☐ Gas strobe circuit of FACP energizes at 100PPM CO and does not silence until CO is below 100 PPM. A self-resetting supervisory condition is generated at the FACP (to allow strobe syncing, the fire alarm must control strobes)

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4. Contractor to release 200-250PPM CO testing gas at sensor(s), inspector to verify:

   ☐ Fire alarm system activation at *200 PPM CO (alarm level/point)*, fire alarm to sound general evacuation signal, gas alarm transmitted

   ☐ Fans to run for 15 minute after alarm condition clear (Only for the test: fans shall run for 1 minute after)

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5. Contractor to de-energize utility power to the emergency power panelboard and demonstrate to inspector:

   ☐ ATS has successfully transfer load to generator, prior to proceeding to step 6.

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6. Contractor to return gas system to normal condition, then: Release 1-10PPM NO2 test gas at sensor(s). Inspector to verify: *(continued on page 2)*

☐ Louver(s) open and fan(s) speed increase or turn on at *0.7 – 1.5PPM NO2 (1st stage/set/trip point)* This step is performed under generator power.

7. **Contractor to return gas system to normal condition, then: Release 1-10PPM NO2 test gas at sensor(s). Inspector to verify:

   ☐ Louver(s) open and fan(s) on maximum at *1.6 – 3.0PPM NO2 (2nd stage/set/trip point)*. This step is performed under generator power. *(**This step is optional if the controller does not have a 2nd stage/set/trip point for NO2)*

8. Contractor to release 5-10PPM NO2 test gas at sensor(s). Inspector to verify:

   ☐ Louver(s) still open and fan(s) on maximum, under generator power
   ☐ Gas strobe circuit of FACP energizes at *5PPM NO2 (alarm level/point)*, fire alarm to sound general evacuation signal, gas alarm transmitted
   ☐ Fans to run for 15 minute after 5 PPM NO2 alarm condition clears…. Only for the test: fans shall run for 1 minute after

9. Contractor to re-energize utility power to the emergency power panelboard and, demonstrate to inspector:

   ☐ ATS has successfully transferred load to utility power, prior to proceeding to step 9

10. Contractor to return gas system to normal condition, then place it in trouble, inspector to verify:

    ☐ FACP indicates a trouble condition (fire alarm shall monitor gas system for troubles)

11. Contractor to identify to the inspector a breaker lock is secured to the branch circuit overcurrent protection device and disconnect(s) are locked on for:

    ☐ Gas system controller(s) ☐ Fan motor controller(s) ☐ Louver controller(s)

*Inspection shall be coordinated to have the mechanical inspector present, as required. The fire alarm contractor shall be present and the fire alarm shall have been successfully inspected prior. A minimum of 7 days advanced notice is required to schedule this type of inspection, no exceptions. Any deviations from this procedure shall be requested in writing prior to scheduling the inspection.*

*Any failure shall result in a $300 re-inspection fee.*