

Gas Leak Technician

Pocket Field Guide



GRADE 2+:

- **BF:** Any leak located within a school zone- MA only
- **BZ:** Judgement: Warrants action in a few days

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Grade 2 Leaks:

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Survey Steps:

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GRADE 2:

- **CA:** \geq 2% gas under sidewalk in a wall-to-wall paved area that does not qualify as GR 1
- **CB:** \geq 5% under the street in a wall-to-wall paved area that does not qualify as GR 1
- **CC:** Leakage on both sides of paved driveway and/or indicates migration along driveway to building
- **CD:** Sustained readings on both sides of a street or corners of an intersection
- **CE:** $<$ 4% gas in a small non-gas substructure with likely migration and probable future hazard

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<div>2</div> <div><u>SURVEY STEPS:</u></div> <ul style="list-style-type: none"> • Verify type of pipeline • Locate main • Verify address/meter number • Locate curb valve • Walk service line to meter set • Check utilities • Check meter: <ul style="list-style-type: none"> ○ Four corners ○ Joints ○ Regulator ○ Meter set ○ Shut off valve • AOCs • Create survey 	<div>17</div> <div><u>GRADE 2:</u></div> <ul style="list-style-type: none"> • CF: <4% gas in a large subsurface structure that can accommodate a person and accumulate gas • CG: >4% gas in a small gas associated substructures (e.g. curb box, valve box) • CH: Judgement: Justifies scheduled repair • CI: Above ground leak: Judgement: Justifies scheduled repair • CJ: Any corrosion leak on an exposed faulty within 100 feet of a building
<div>3</div> <div><u>SURVEY AOCs:</u></div> <ul style="list-style-type: none"> • Atmospheric Corrosion • Meter protection • Meter support • Buried meter (6 inches off ground) • Buried meter valve • Buried meter inlet riser • Improper Regulator Vent Termination • Improper Vent • Exposed service line • Encroachment • Theft or vandalism • Prone to fail risers • Paint meter set • Damaged coating 	<div>18</div> <div><u>GRADE 2:</u></div> <ul style="list-style-type: none"> • CK: Leak hisses or blows slightly in a rural area and accidental ignition is unlikely
<div>4</div> <div>Abbreviations:</div>	<div>19</div> <div>Grade 3 leaks:</div>

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ABBREVIATIONS:

- **BKBKB:** Back of back building
- **BS:** Bare steal
- **CB:** Curb box
- **Comp. SL:** From curb valve to main
- **Cust. SL:** From meter set to curve valve
- **CV:** Curve valve
- **EFV:** Efficient flow valve
- **FFB:** Front of front building
- **HP:** High pressure
- **IP:** Intermediate pressure
- **ML:** Main line
- **MP:** Medium pressure

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GRADE 3:

- **DA:** Any sustained reading of less than 4% gas in small gas associated substructure
- **DB:** Under street area without wall-to-wall paving , unlikely migration to outside building wall
- **DC:** Above ground leak, not caused by corrosion. Judgement- expected to remain non-hazard

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ABBREVIATIONS CONTINUED:

- **MS:** Meter set
- **MV:** Meter valve
- **NCV:** No curb valve
- **LP:** Low pressure
- **LRB:** Left of right building
- **LRG:** Left of right garage
- **RLB:** Right of left building
- **SCU:** South of curb
- **SL:** Service line
- **Tap:** Where service lines goes into main line
- **WB:** Water box

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Conversions:

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ABBREVIATIONS CONTINUED:

Materials:

- **CI:** Cast iron
- **PI:** Plastic Insert
- **UN:** Unknown
- **CO:** Copper
- **S:** Steel
- **OT:** Other
- **ST:** Steel treated
- **P:** Plastic
- **WI:** Wrought iron

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CONVERSIONS:

Gas in Air

LEL%

PPM

- 0.05%1%500
- 0.10%2%1000
- 0.17%3%1650
- 0.24%4%2400
- 0.25%5%2500
- 0.30%6%3000
- 0.35%7%3500
- 0.40%8%4000
- 0.45%9%4500
- 0.50%10%5000

Grading Leaks:

CONVERSIONS:

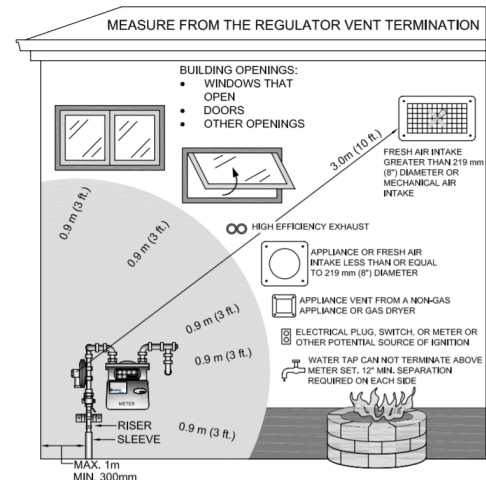
Gas in Air	LEL%	PPM
• 1.00%	20%	10000
• 1.25%	25%	12500
• 1.50%	30%	15000
• 2.00%	40%	20000
• 2.50%	50%	25000
• 3.00%	60%	30000
• 3.50%	70%	35000
• 4.00%	80%	40000
• 4.50%	90%	45000
• 5.00%	100%	50000

Grade 1 Leaks:

Diagrams:

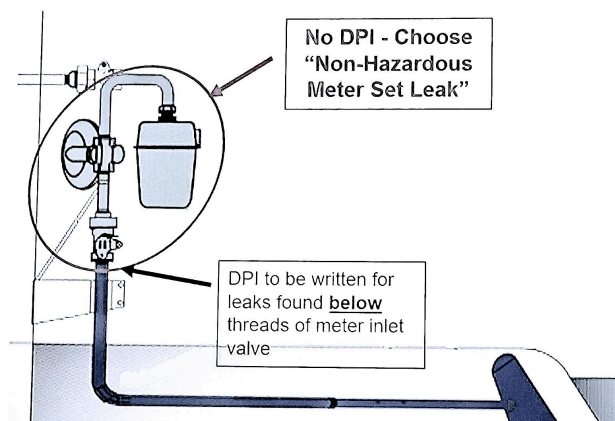
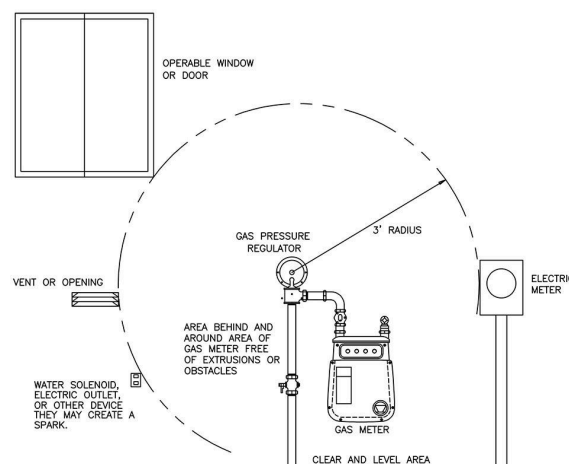
GRADE 1:

- **AA:** Blowing gas with possibility of ignition or has ignited
- **AB:** Any indication of gas which has migrated into or under building
- **AC:** Likely or existing migration to outside wall of building
- **AD:** \geq 4% gas in a large subsurface structure that can accommodate a person or accumulate gas
- **AE:** \geq 4% gas in small non-gas substructure with likely migration to building wall/source of ignition
- **AZ:** Judgement: Immediate hazards



GRADE 1:

- **AF:** Seen, heard and felt in a location that may endanger general public or property
- **AG:** Sustained reading in consecutive manholes, catch basin or substructures- not MA
- **AH:** Above ground leak: with blowing or hissing close to a building. Judgement: Immediate hazard
- **AI:** Inside leak that requires a component replacement
- **AJ:** Inside leak => 2% LEL cleared by lubrication, adjustment or tightening

**Grade 2+ Leaks:****GRADE 2+:**

- **BA:** A leakage area close to but not against a foundation or building wall
- **BB:** Leakage on service line under continuous paving from leak area to building wall
- **BC:** Likely migration to the outside building wall under existing or imminent frost
- **BD:** <4% gas in a manhole, conduit, catch basin or tunnel in a wall to wall pavement
- **BE:** Above ground leak. Judgement: Requires accelerated repair

