Heating System

DESCRIPTION OF HEATING SYSTEM

Heating System Type:	•Forced Air
Heating System Location:	• In the Basement
Primary Energy Source:	•Gas
Heat Distribution Methods:	•Ductwork

HEATING SYSTEM OBSERVATIONS

GENERAL COMMENTS

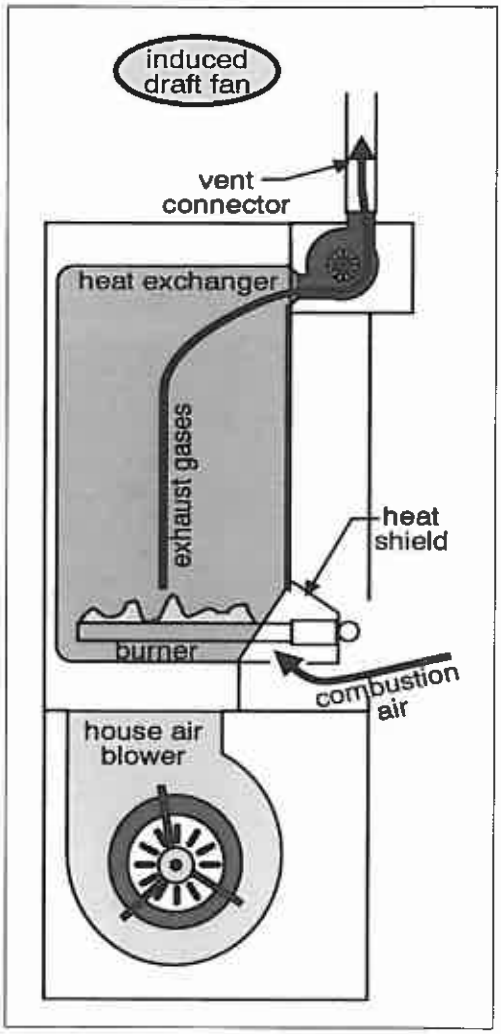
The heating system is in generally good condition, when compared to systems of a similar age and configuration. Heating a home with this type of heating system should be relatively economical. Heat distribution within the home is adequate.

RECOMMENDATIONS / OBSERVATIONS

Forced Air Furnace

An induced draft fan, gas fired, forced air furnace is in use in this home. An electronic ignition source, a tuned and metered burner in the combustion chamber as well as a motorized draft fan at the exhaust pipe have been provided thereby increasing the seasonal efficiency of this type of furnace. During operation, the heat exchanger is utilized to transfer the heat energy from the burner to the air stream for distribution within the home. A gas shut off valve as well as an electrical disconnect have been provided at the unit. The flame pattern observed while the system was in full operation appeared normal. The furnace responded to operator controls and functioned as intended.

- ☑ **Monitor:** The heating system appeared to be properly installed and operational at the time of the inspection. The interior view of the heat exchanger was limited. We suggest contacting PG&E for a furnace check-up to provide additional information and to verify the proper operation of this furnace. Contacting their local office can make arrangements. Adjustments or repairs by a licensed HVAC specialist if needed, may be an additional expense and should be undertaken as required.



Supply Air Ductwork

Where visible the supply-air ductwork for the heating system appeared to be in generally good condition. The following observations were noted.

- ☑ **Improve:** Several supply air ducts in the crawl space were observed to be laying in the dirt. This can cause rapid deterioration from moisture contact. The duct should be raised and strapped to maintain clearance from the dirt.

Return Air Ductwork

The return air ductwork where visible appeared to be adequately installed and in good working order.

Air Filter

The air filter for the heating system is located in the return register. The filter was inspected and appeared to be in adequate condition and functioning as intended. Regular replacement of the air filter is required to maintain the proper efficiency and operation of the furnace.

Combustion / Vent Air

An adequate supply of combustion air / vent air is needed in the area of the furnace for the heating system to function as intended. A sufficient supply of combustion / vent air has been provided.

Flue Vent

A metal exhaust vent pipe has been provided for the heating system to vent to the exterior. During the inspection of this system, the following conditions were noted.

- ☑ **Repair:** The slope of the exhaust flue pipe does not appear to be sufficient to allow the safe flow of exhaust gases to the exterior. A qualified licensed heating technician should evaluate this condition. Improvements are recommended.

Thermostat Control

The thermostat control engaged the furnace when activated and appeared to function as intended.

LIMITATIONS OF HEATING SYSTEM INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- The adequacy of heat supply or distribution balance is not inspected.
- The interiors of flues or chimneys which are not readily accessible are not inspected.
- The furnace heat exchanger is not fully accessible and therefore considered to be beyond the scope of the inspection.
- Air handling equipment (ie, humidifiers, dehumidifiers and electronic air filters) is beyond the scope of the inspection and not evaluated.
- Solar space heating equipment/systems are not inspected.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Insulation / Ventilation

DESCRIPTION OF INSULATION / VENTILATION

Attic Insulation:	•Non Observed
Exterior Wall Insulation:	•Not Verified
Floor Cavity Insulation:	•Non-Observed
Roof Ventilation:	•Gable Vents
Crawl Space Ventilation:	•Exterior Wall Vents
Exhaust Fan/vent Locations:	•Dryer Vent

INSULATION / VENTILATION OBSERVATIONS

GENERAL COMMENTS

As is commonly found in homes of this type and age no insulation appears to be installed. Upgrading insulation levels in a home is considered an improvement rather than a necessary repair. Most older homes have relatively low levels of insulation if insulated at all. The down side, of course, is that heating and/or cooling costs are higher. The up side is that these homes tend to be fairly well ventilated. Their natural ability to allow infiltration of outside air actually improves indoor air quality. Improving insulation levels will reduce energy costs; however, the potential benefit should we carefully weighed against the cost of improvements. During any planned re-roofing, overhead insulation and ventilation levels should be investigated and improved where necessary. Caulking and weather-stripping around doors, windows and other exterior wall openings will help to maintain weather tightness and reduce energy costs.

RECOMMENDATIONS / OBSERVATIONS

Attic/Roof Insulation
As is commonly found in homes of this age and type, insulation has not been provided in the attic/roof area. Upgrades to insulate the attic/roof area may be desirable. Improvements are discretionary.

Wall Insulation
The presence of wall insulation is generally not verified during the inspection process. While insulation may be present within the wall cavity, low wall insulation levels are typical for homes of this age and type.

Floors Insulation
Floor insulation was not observed in the floor cavity during the evaluation of the crawl space. This is typical for homes of this age and type.

Attic Ventilation
Attic vents have been installed to provide ventilation to the attic area. Where visible the vents and their coverings are in good condition and appear to provide adequate ventilation as intended.

Crawlspace Wall Vents
The screen vents located at the base of the exterior walls around the perimeter of the home provide ventilation to the crawl space below. The vents were found to be fully screened and in good condition.

Dryer Vent

The dryer has been provided with an exhaust ducting system to vent the moisture from the operation of this appliance. The following observations were noted.

- ☑ **Improve:** The dryer duct hood on the exterior wall is damaged. Repairs should be undertaken as needed to provide a functional self closing and adequately sealed duct hood.
- ☑ **Repair:** The soft style of ducting in the crawlspace can leak with out warning. That can cause possible moisture related damage. Repair to correct this condition per the local building authorities guidelines are recommended.

LIMITATIONS OF INSULATION / VENTILATION INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Insulation/ventilation type and levels in concealed areas are not inspected. Insulation and vapor barriers are not disturbed and no destructive tests (such as cutting openings in walls to look for insulation) are performed.
- Potentially hazardous materials such as Asbestos and Urea Formaldehyde Foam Insulation (UFFI) cannot be positively identified without a detailed inspection and laboratory analysis. This is beyond the scope of the inspection.
- An analysis of indoor air quality is not part of our inspection unless explicitly contracted-for and discussed in this or a separate report.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Plumbing System

DESCRIPTION OF PLUMBING SYSTEM

Main Valve Location: •Front Wall of the Home
Supply Piping: •Steel
Waste Piping: •Steel

PLUMBING SYSTEM OBSERVATIONS

GENERAL COMMENTS

The plumbing system is showing signs of age. Updating the system will be required over time.

RECOMMENDATIONS / OBSERVATIONS

Gas Meter & Piping
The main gas meter is located on the exterior of the home at the south side. The gas meter, connections and piping where visible appear to be in adequate condition and functioning as intended with the following observations noted.

- ☑ **Improve:** A wrench for the gas meter shut off valve was not located in the vicinity of the gas meter as recommended in seismically active zones. Securing a properly sized wrench to the gas meter or nearby piping to provide a convenient means of shutoff in an emergency is suggested. The valve at the base of the meter pipe can be turned 90 degrees in either direction to shut the gas supply off.

Supply Plumbing
The supply piping, where visible was found to be adequately installed and in good condition overall. The following observations pertaining to the supply piping were noted.

- ☑ **Improve:** Significant corrosion on the exterior of the supply piping with leakage was observed in the crawl space. The level of damage indicates the need for immediate repairs. Evaluation and repair by a qualified plumbing contractor is recommended.

Waste / Vent
The waste and vent pipe, where visible, was found to be adequately installed and in good condition overall. The following conditions pertain to the waste and vents system.

- ☑ **Monitor:** The waste and drainpipe has signs of past leakage in the crawlspace. While no active leakage was detected, monitoring of this area is suggested. Consulting with the seller or current occupant for additional information on this matter is suggested.

Kitchen Sink
The sink, faucet and the plumbing under the kitchen sink appeared to be adequately connected and functioning as intended.

LIMITATIONS OF PLUMBING SYSTEM INSPECTION

Any estimates of insulation R values or depths are rough average values. As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Portions of the plumbing system concealed by finishes and/or storage (below sinks, etc.), below the structure, or beneath the ground surfaces are not inspected.
- Water quantity and water quality are not tested unless explicitly contracted-for and discussed in this or a separate report.
- Clothes washing machine connections are not inspected.
- Interiors of flues or chimneys which are not readily accessible are not inspected.
- Water conditioning systems, solar water heaters, fire and lawn sprinkler systems, and private waste disposal systems are not inspected unless explicitly contracted-for and discussed in this or a separate report.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Water Heater Unit

DESCRIPTION OF WATER HEATER UNIT

Water Heater: •Located in the basement •Gas •Approximate Capacity: 40 gallon

WATER HEATER OBSERVATIONS

GENERAL COMMENTS

The water heater was in generally good condition and functioning as intended at the time of the inspection. Some repairs or improvements are needed. Please look to the observations below for specific information.

RECOMMENDATIONS / OBSERVATIONS

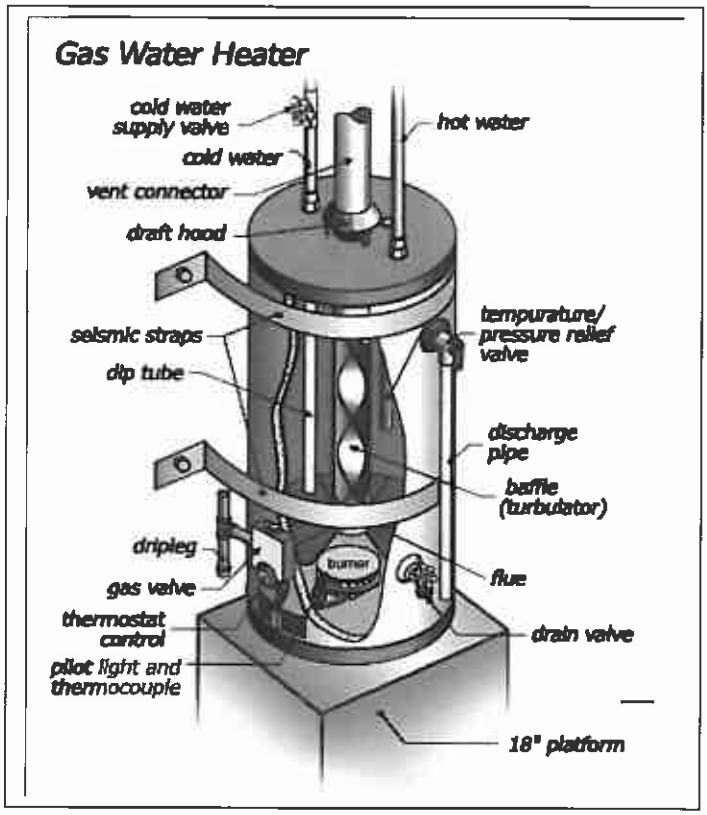
Water Heater

The water heater appeared to be middle aged, and functioning as intended. This unit is likely to have several years of useful life remaining, however, one cannot predict with certainty when replacement will become necessary.

Seismic Strapping

Per local and state guidelines, water heaters in seismic zones are required to be anchored or strapped to a fixed surface to resist lateral movement during seismic activity. During the review of the seismic strapping, the following observations were noted.

- ☑ **Repair:** The installation and configuration of the seismic straps at this water heater do not meet the current standards and require repair. As a general rule, two metal straps fully encircling the water heater, one in the upper 1/3rd and one in the lower 1/3rd positioned 4" above the controls, with ¼" lag bolts to wall framing studs are required. Consulting with the local building department for additional information on this matter is suggested. Improvements are recommended.



Exhaust Vent

A metal exhaust vent pipe is provided at the top of the water heater to vent the exhaust to the exterior. During the inspection the following observations were noted.

- ☑ **Safety Issue:** The slope of the exhaust vent pipe for the water heater does not appear to be sufficient to allow for the safe flow of exhaust gases to the exterior. ***A poorly sloped vent pipe can leak exhaust gasses and is considered a safety issue. This condition requires immediate action.*** Repairs are strongly recommended.

Temperature & Pressure Relief Valve / Pipe

A temperature & pressure relief (TPR) valve and discharge pipe has been provided. TPR valves are intended to relieve excessive pressure within the water heater tank should a malfunction occur. The valve and discharge pipe appear to be adequately configured and in good condition overall. It should be noted that the TPR valve is not tested during the inspection of the water heater.

Supply Pipes

The incoming and out going water supply pipes appear to be adequately configured and in good condition. A shut-off valve on the incoming supply pipe has been provided.

Gas Connection
The gas supply line to the water heater and the gas shut-off valve are fully accessible and where visible in good condition.

Combustion Air Supply
The combustion air supply for the water heater closet appears sufficient.

LIMITATIONS OF WATER HEATER INSPECTION

As prescribed in the pre-inspection contract, this is a visual inspection only. The inspection was limited by (but not restricted to) the following conditions:

- Components concealed behind finished surfaces could not be inspected.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Bathroom Components

DESCRIPTION OF BATHROOM COMPONENTS

Bathrooms Inspected:	•Hall Bathroom
Floor Covering:	•Tile
Ventilation Provided:	•Window
Electrical Outlet Type:	•Un-Grounded

BATHROOM COMPONENTS OBSERVATIONS

GENERAL COMMENTS

The bathrooms were found to be well vented and in generally good condition. Some repairs are needed. Please look to the observations below for specific information.

RECOMMENDATIONS / OBSERVATIONS

Hall Bathroom

Floor Covering
The tile floor covering in this bathroom was found to be in good condition and well sealed.

Bathroom Ventilation
A window has been provided for ventilation of this bathroom. The window appeared to be in good condition and functioning as intended when operated.

Outlet
The electrical outlet was found to be in serviceable condition and responded correctly to testing.

- ☑ **Improve:** Upgrading this outlet to a GFCI protected type is recommended as a safety improvement. Installation is discretionary.

Pedestal Sink
The sink, faucet and the plumbing connections appear to be in serviceable condition and adequately installed. The sink, when filled to the overflow, drained freely and functioned as intended.

Toilet
The toilet appeared to be adequately secured to the floor and drained adequately when flushed.

Bathtub/Shower Combo
The bathtub/shower combo was partially filled with water and tested for functional flow at the supply and drainage systems. The following observations and recommendations pertain to this bathtub/shower combo.

- ☑ **Improve:** Several voids where noted in the tile grout of the enclosure. Voids in the tile grout can allow moisture to seep into the walls and cause moisture damage to the surrounding areas. Cracked, deteriorated and/or missing enclosure grout should be replaced as needed.

Shower Curtain
A shower curtain is currently in use. The curtain appears to be performing as intended as well as providing a reasonable level of moisture retention.

LIMITATIONS OF BATHROOM COMPONENTS INSPECTION

As prescribed in the pre-inspection contract, this is a visual inspection only. The inspection was limited by (but not restricted to) the following conditions:

- Components concealed behind finished surfaces could not be inspected.
- Showers are not fill tested as part of an industry standard home inspection.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Interior Components

DESCRIPTION OF INTERIOR COMPONENTS

Wall and Ceiling Finishes:	•Drywall/Plaster
Floor Surfaces:	•Tile •Wood •Vinyl/Resilient
Windows Style and Glazing:	•Wooden Double Hung, Single Glazed
Doors:	•Wood •French

INTERIOR COMPONENTS OBSERVATIONS

GENERAL COMMENTS

See the comments below.

RECOMMENDATIONS / OBSERVATIONS

Wall / Ceiling Finishes
The interior wall and ceiling finishes were found to be in generally good condition. Some repairs are need, as noted below.

- ☑ **Improve:** Cosmetic cracking of the interior wall and/or ceiling finish was noted. This condition is not uncommon and is often the result of some settlement of the home or shrinkage of the framing lumber. Repairs are discretionary and should be undertaken in the course of routine maintenance.

Floor Covering
The floor covering where visible appeared to be in generally good condition with the following observations noted.

- ☑ **Monitor:** Some floor sloping is apparent. This is not uncommon in older homes. Improvements can be undertaken to level the floors but usually this condition is lived with.
- ☑ **Monitor:** The floor in various areas appears to be sloped. No damage to the flooring was located. This condition not uncommon in homes of this type and age. Improvements can be made but usually this type of condition is lived with.
- ☑ **Monitor:** Moisture staining and general ware patterns were noted in the wood flooring at various locations. Alterations are discretionary.

Windows
A sampling of the windows was tested in each room. While the majority functioned as intended the following observations were noted.

- ☑ **Monitor:** The wood window(s) in various areas is painted shut and inoperable. This is a common condition in older home. Improvements are discretionary.

- ☑ **Safety Issue:** The window glass at the window was found to be cracked. Damaged glass is considered a safety issue and requires immediate attention. Consulting with a qualified glazier (window repairman) for repairs is strongly recommended.

Kitchen Counters

The tile countertop is in generally good condition and shows typical wear and tear, not unusual for this high traffic area. The following observations were noted.

- ☑ **Improve:** Areas of cracking and / or ware were observed on the counter surface. Improvement is discretionary.

Kitchen Cabinets

The kitchen cabinets show typical wear and tear, not unusual for this high traffic area.

Stairway - Basement

The stairway in the home has been observed to be in relatively good condition. The railing has been well secured and is in good overall condition. The following observations were noted regarding the stairwell.

- ☑ **Safety Issue:** As is commonly found in older homes the stairway to the basement is not provided with a handrail. While not required at the time of construction in older homes, current standards mandate the use of a hand rail on all stairways. For improved safety, it is recommended that a handrail be provided for this stairway.

LIMITATIONS OF INTERIOR COMPONENTS INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions

- Furniture, storage, appliances and/or wall hangings are not moved to permit inspection and may block defects.
- Carpeting, window treatments, seals on dual pane windows, central vacuum systems, household appliances, recreational facilities, paint, wallpaper, and other finish treatments are not inspected.
- Storage in closet and cabinets prevent the inspector from offering opinions in these areas. Further evaluation once better access is achieved is recommended.
- Some of the windows were blocked by personal belongings and not operated during the inspection process. While every effort is made to inspect all available windows for integrity and operation, personal items such as furnishings and stored belongings are not moved or handled under the guidelines of our profession.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Fireplace / Chimney

DESCRIPTION OF FIREPLACE / CHIMNEY

Fireplace Location: • In the Living Room
Chimney Type: • Masonry/Stucco
Fireplace Type: • Masonry Firebox

FIREPLACE / CHIMNEY OBSERVATIONS

GENERAL COMMENTS

On the whole, the fireplace and it's components were found to be in average condition. Typical flaws were observed in some areas with some repairs indicated. Please look to the observations below for specific information.

RECOMMENDATIONS / OBSERVATIONS

Masonry Chimney
The masonry chimney was examined at the base, above the shoulder and a pressure test (Pushing on the chimney from the roof) was performed. The following observations pertain to the chimney.

- ☑ **Improve:** The mortar cap at the top of the masonry chimney has several minor cracks. While this damage is considered to be minor, and commonly found, the cracks should be sealed to prevent moisture intrusion into the brick and mortar. Repairs by a masonry contractor or other qualified trades person is recommended.

Spark Screen / Rain Cap
The spark screen / rain cap provided on this chimney has been adequately installed and meets current requirements. The spark screen serves to reduce the potential outflow of hot embers. The rain cap prevents moisture penetration into the chimney flue and thereby reduces corrosion at the steel damper assembly.

Masonry Fireplace
The masonry fireplace has been constructed with a brick and mortar firebox. During the evaluation of the firebox the following observations were noted.

- ☑ **Improve:** The fireplace firebox was found to have cracks. Consulting with a qualified masonry contractor for additional information is suggested.

Fireplace Damper
A metal damper door has been provided above the firebox. The damper door was inspected and tested for proper operation with the following conditions noted.

- ☑ **Improve:** The fireplace damper door was found to be missing. This device to close the flue when not in use is typically found on all fireplaces. The damper door should be repaired as needed. Further evaluation and repair as needed by a qualified masonry contractor is recommended.

Fireplace Hearth
A non-combustible hearth has been provided directly in front of the fireplace. The non-combustible materials used for the hearth serves a valuable purpose in reducing the chance of accidental fire from hot embers falling out of the fireplace. Upon evaluation the following observations were noted.

- ☑ **Improve:** The hearth outside the fireplace is not large enough to reduce the risk of fire, should hot embers manage to escape from the fireplace. At least 17 inches is recommended. This situation should be altered for improved safety.

Fireplace Enclosure

- ☑ **Monitor:** No spark screen is in place at firebox. A spark screen is recommended to prevent embers from popping out onto flammable surfaces and causing an eventual fire.

LIMITATIONS OF FIREPLACE / CHIMNEY INSPECTION

As prescribed in the pre-inspection contract, this is a visual inspection only. The inspection was limited by (but not restricted to) the following conditions:

- Components concealed behind finished surfaces could not be inspected.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Appliances

DESCRIPTION OF APPLIANCES

Appliances Tested:	•Gas Range
Laundry Facility:	• Located in the laundry room •240 Volt Circuit for Dryer •Gas Piping for Dryer •120 Volt Circuit for Washer •Dryer Vented to Building Exterior •Hot and Cold Water Supply for Washer •Drain for Washer
Other Components Tested:	•Door Bell •Smoke Detectors

APPLIANCES OBSERVATIONS

GENERAL COMMENTS

The appliances are older units that are approaching the end of their serviceable life. While replacement is not needed right away, it would be wise to budget for new appliances. In the interim, a higher level of maintenance can be expected.

RECOMMENDATIONS / OBSERVATIONS

Gas Range

The gas range was tested using normal operating controls. During testing the following observations were noted.

- ☑ **Safety Issue:** The slope of the exhaust vent pipe for the gas range does not appear to be sufficient to allow for the safe flow of exhaust gases to the exterior. ***A poorly sloped vent pipe can leak exhaust gasses and is considered a safety issue. This condition requires immediate action.*** Repairs are strongly recommended.

Exhaust Fan

- ☑ **Monitor:** With a gas appliance installed within the kitchen it is recommended that a hood or exhaust fan be considered, not only to ventilate kitchen odors to the exterior of the home but to also eliminate the build up of dangerous exhaust gases. Up grades are recommended.
- ☑ **Safety Issue:** The slope of the exhaust vent pipe for the gas oven does not appear to be sufficient to allow for the safe flow of exhaust gases to the exterior. ***A poorly sloped vent pipe can leak exhaust gasses and is considered a safety issue. This condition requires immediate action.*** Repairs are strongly recommended.
- ☑ **Safety Issue:** The gas exhaust flue is disconnected and leaks dangerous exhaust fumes. This is a safety issue. Repairs to correct this condition per the local building authorities guidelines are strongly recommended.

Doorbell
The doorbell chime responded to the push button when pressed and could be heard within the home.

Smoke Detectors
Smoke detectors, which are an excellent safety device, provide an early warning in the event of a fire. A planned escape route should be put into play upon hearing the detectors siren. The location of smoke detectors has varied over time. Refer to the comments below for further details regarding the placement and condition of the smoke detectors installed within the home.

- ☑ **Safety Issue:** Smoke detectors are now recommended in all bedrooms/sleeping areas and should be installed as needed. This regulation was not in affect at the time of initial construction. Improvements to provide smoke detectors in the bedrooms/sleeping areas that are not currently protected are recommended. Upgrades are discretionary.

Carbon Monoxide Detectors

- ☑ **Safety Issue:** The State of California now requires (effective for all homes 07-01-2011) all homes to have carbon monoxide detectors installed. A carbon monoxide detector was not noted in the home. It is recommended to have at least one detector on each level/floor. Also reviewing the manufactures guidelines for maintenance, installation is recommended. See the information towards the end of the report for more information. Testing and battery replacement should be performed regularly to insure proper operation.

LIMITATIONS OF APPLIANCES INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions

- Thermostats, timers and other specialized features and controls are not tested.
- The temperature calibration, functionality of timers, effectiveness, efficiency and overall performance of appliances is outside the scope of this inspection.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Maintenance Advice

UPON TAKING OWNERSHIP

After taking possession of a new home, there are some maintenance and safety issues that should be addressed immediately. The following checklist should help you undertake these improvements:

- ❑ Change the locks on all exterior entrances, for improved security.
- ❑ Check that all windows and doors are secure. Improve window hardware as necessary. Security rods can be added to sliding windows and doors. Consideration could also be given to a security system.
- ❑ Install smoke detectors on each level of the home. Ensure that there is a smoke detector outside all sleeping areas. Replace batteries on any existing smoke detectors and test them. Make a note to replace batteries again in one year.
- ❑ Create a plan of action in the event of a fire in your home. Ensure that there is an operable window or door in every room of the house. Consult with your local fire department regarding fire safety issues and what to do in the event of fire.
- ❑ Examine driveways and walkways for trip hazards. Undertake repairs where necessary.
- ❑ Examine the interior of the home for trip hazards. Loose or torn carpeting and flooring should be repaired.
- ❑ Undertake improvements to all stairways, decks, porches and landings where there is a risk of falling or stumbling.
- ❑ Review your home inspection report for any items that require immediate improvement or further investigation. Address these areas as required.
- ❑ Install rain caps and vermin screens on all chimney flues, as necessary.
- ❑ Investigate the location of the main shut-offs for the plumbing, heating and electrical systems. If you attended the home inspection, these items would have been pointed out to you.

REGULAR MAINTENANCE

EVERY MONTH

- ❑ Check that fire extinguisher(s) are fully charged. Re-charge if necessary.
- ❑ Examine heating/cooling air filters and replace or clean as necessary.
- ❑ Inspect and clean humidifiers and electronic air cleaners.
- ❑ If the house has hot water heating, bleed radiator valves.
- ❑ Clean gutters and downspouts. Ensure that downspouts are secure, and that the discharge of the downspouts is appropriate. Remove debris from window wells.
- ❑ Carefully inspect the condition of shower enclosures. Repair or replace deteriorated grout and caulk. Ensure that water is not escaping the enclosure during showering. Check below all plumbing fixtures for evidence of leakage.
- ❑ Repair or replace leaking faucets or shower heads.
- ❑ Secure loose toilets, or repair flush mechanisms that become troublesome.

SPRING AND FALL

- ❑ Examine the roof for evidence of damage to roof coverings, flashings and chimneys.
- ❑ Look in the attic (if accessible) to ensure that roof vents are not obstructed. Check for evidence of leakage, condensation or vermin activity. Level out insulation if needed.
- ❑ Trim back tree branches and shrubs to ensure that they are not in contact with the house.
- ❑ Inspect the exterior walls and foundation for evidence of damage, cracking or movement. Watch for bird nests or other vermin or insect activity.
- ❑ Survey the basement and/or crawl space walls for evidence of moisture seepage.
- ❑ Look at overhead wires coming to the house. They should be secure and clear of trees or other obstructions.
- ❑ Ensure that the grade of the land around the house encourages water to flow away from the foundation.

- ❑ Inspect all driveways, walkways, decks, porches, and landscape components for evidence of deterioration, movement or safety hazards.
- ❑ Clean windows and test their operation. Improve caulking and weather-stripping as necessary. Watch for evidence of rot in wood window frames. Paint and repair window sills and frames as necessary.
- ❑ Test all ground fault circuit interrupter (GFCI) devices, as identified in the inspection report.
- ❑ Shut off isolating valves for exterior hose bibs in the fall, if below freezing temperatures are anticipated.
- ❑ Test the Temperature and Pressure Relief (TPR) Valve on water heaters.
- ❑ Inspect for evidence of wood boring insect activity. Eliminate any wood/soil contact around the perimeter of the home.
- ❑ Test the overhead garage door opener, to ensure that the auto-reverse mechanism is responding properly. Clean and lubricate hinges, rollers and tracks on overhead doors.
- ❑ Replace or clean exhaust hood filters.
- ❑ Clean, inspect and/or service all appliances as per the manufacturer's recommendations.

ANNUALLY

- ❑ Replace smoke detector batteries.
- ❑ Have the heating, cooling and water heater systems cleaned and serviced.
- ❑ Have chimneys inspected and cleaned. Ensure that rain caps and vermin screens are secure.
- ❑ Examine the electrical panels, wiring and electrical components for evidence of overheating. Ensure that all components are secure. Flip the breakers on and off to ensure that they are not sticky.
- ❑ If the house utilizes a well, check and service the pump and holding tank. Have the water quality tested. If the property has a septic system, have the tank inspected (and pumped as needed).
- ❑ If your home is in an area prone to wood destroying insects (termites, carpenter ants, etc.), have the home inspected by a licensed specialist. Preventative treatments may be recommended in some cases.

PREVENTION IS THE BEST APPROACH

Although we've heard it many times, nothing could be more true than the old cliché "an ounce of prevention is worth a pound of cure." Preventative maintenance is the best way to keep your house in great shape. It also reduces the risk of unexpected repairs and improves the odds of selling your house at fair market value, when the time comes.

Please feel free to contact our office should you have any questions regarding the operation or maintenance of your home. Enjoy your home!

Information About Carbon Monoxide

What is carbon monoxide (CO) and how is it produced in the home?

CO is a colorless, odorless, toxic gas. It is produced by the incomplete combustion of solid, liquid and gaseous fuels. Appliances fueled with gas, oil, kerosene, or wood may produce CO. If such appliances ar not installed, maintained, and used properly, CO may accumulate to dangerous levels.

What are the symptoms of CO poisoning and why are these symptoms particularly dangerous?

Breathing CO causes symptoms such as headaches, dizziness, and weakness in healthy people. CO also causes sleepiness, nausea, vomiting, confusion and disorientation. At very high levels, it causes loss of consciousness and death.

This is particularly dangerous because CO effects often are not recognized. CO is odorless and some of the symptoms of CO poisoning are similar to the flu or other common illnesses.

Are some people more affected by exposure to CO than others?

CO exposures especially affect unborn babies, infants, and people with anemia or a history of heart disease. Breathing low levels of the chemical can cause fatigue and increase chest pain in people with chronic heart disease.

How many people die from CO poisoning each year?

In 1989, the most recent year for which statistics are available, thee were about 220 deaths from CO poisoning associated with gas-fired appliances, about 30 CO deaths associated with solid-fueled appliances (including charcoal grills), and about 45 CO deaths associated with liquid- fueled heaters.

How many people are poisoned from CO each year?

Nearly 5,000 people in the United States are treated in hospital emergency rooms for CO poisoning; this number is believed to be an underestimate because many people with CO symptoms mistake the symptoms for the flu or are misdiagnosed and never get treated.

How can production of dangerous levels of CO be prevented?

Dangerous levels of CO can be prevented by proper appliance maintenance, installation, and use:

Maintenance:

- A qualified service technician should check your home's central and room heating appliances (including water heaters and gas dryers) annually. The technician should look at the electrical and mechanical components of appliances, such as thermostat controls and automatic safety devices.
- Chimneys and flues should be checked for blockages, corrosion, and loose connections.
- Individual appliances should be serviced regularly. Kerosene and gas space heaters (vented and unvented) should be cleaned and inspected to insure proper operation.
- CPSC recommends finding a reputable service company in the phone book or asking your utility company to suggest a qualified service technician.

Installation:

- Proper installation is critical to the safe operation of combustion appliances. All new appliances have installation instructions that should be followed exactly. Local building codes should be followed as well.
- Vented appliances should be vented properly, according to manufacturer's instructions.
- Adequate combustion air should be provided to assure complete combustion.
- All combustion appliances should be installed by professionals.

Appliance Use:

Follow manufacturer's directions for safe operation.

- Make sure the room where an unvented gas or kerosene space heater is used is well ventilated; doors leading to another room should be open to insure proper ventilation.
- Never use an unvented combustion heater overnight or in a room where you are sleeping.

Are there signs that might indicate improper appliance operation?

Yes, these are:

- Decreasing hot water supply
- Furnace unable to heat house or runs constantly
- Sooting, especially on appliances
- Unfamiliar or burning odor
- Increased condensation inside windows

Are there visible signs that might indicate a CO problem?

Yes, these are:

- Improper connections on vents and chimneys
- Visible rust or stains on vents and chimneys
- An appliance that makes unusual sounds or emits an unusual smell
- An appliance that keeps shutting off (Many new appliances have safety components attached that prevent operation if an unsafe condition exists. If an appliance stops operating, it may be because a safety device is preventing a dangerous condition. Therefore, don't try to operate an appliance that keeps shutting off; call a service person instead.)

Are there other ways to prevent CO poisoning?

Yes, these are:

- Never use a range or oven to heat the living areas of the home
- Never use a charcoal grill or hibachi in the home
- Never keep a car running in an attached garage

Can CO be detected?

Yes, CO can be detected with CO detectors that meet the requirements of Underwriters Laboratories (UL) standard 2034.

Since the toxic effect of CO is dependent upon both CO concentration and length of exposure, long-term exposure to a low concentration can produce effects similar to short term exposure to a high concentration.

Detectors should measure both high CO concentrations over short periods of time and low CO concentrations over long periods of time - the effects of CO can be cumulative over time. The detectors also sound an alarm before the level of CO in a person's blood would become crippling. CO detectors that meet the UL 2034 standard currently cost between $35 and $80.

Where should the detector be installed?

CO gases distribute evenly and fairly quickly throughout the house; therefore, a CO detector should be installed on the wall or ceiling in sleeping area/s but outside individual bedrooms to alert occupants who are sleeping.

Aren't there safety devices already on some appliances? And if so, why is a CO detector needed?

Vent safety shutoff systems have been required on furnaces and vented heaters sine the late 1980s. They protect against blocked or disconnected vents or chimneys. Oxygen depletion sensors (ODS) have also been installed on unvented gas space heaters since the 1980s. ODS protect against the production of CO caused by insufficient oxygen for proper combustion. These devices (ODSs and vent safety shutoff systems) are not a substitute for regular professional servicing, and many older, potentially CO-producing appliances may not have such devices. Therefore, a CO detector is still important in any home as another line of defense.

Are there other CO detectors that are less expensive?

There are inexpensive cardboard or plastic detectors that change color and do not sound an alarm and have a limited useful life. They require the occupant to look at the device to determine if CO is present. CO concentrations can build up rapidly while occupants are asleep, and these devices would not sound an alarm to wake them.

For additional information, write to the U.S. Consumer Product Safety Commission, Washington, D.C., 20207, call the toll-free hotline at 1-800-638-2772, or visit the website http://www.cpsc.gov