



DIVISION OF INSPECTIONS
AND ENFORCEMENT

'89 JAN 11 PM 4:14

CUSTOMER SERVICE DEPARTMENT • P.O. BOX 1475 • BALTIMORE, MARYLAND 21203

January 5, 1989

Mr. Thomas T. Douney
Chief Plumbing Inspector
Howard County
Public Work Annex
Inspections & Enforcement Division
11226 Route 216
Laurel, MD 20707

Dear Mr. Douney,

As you know, the Customer Service Department of the Baltimore Gas and Electric Company performed repairs to the furnaces of a number of units at Abbot House Apartments in Columbia. Our department has performed carbon monoxide (CO) tests of the affected units following completion of repairs. The purpose of this letter is to inform you that CO tests performed on furnaces in apartments 209, 407, 503 and 912 indicate satisfactory and safe operation at this time.

If you have questions I may be reached at 301-455-9004.

Yours truly,

A handwritten signature in black ink that reads "GK Wetzell". The signature is written in a cursive, somewhat stylized script.

G. K. Wetzell, Jr.
General Supervisor



HOWARD COUNTY GOVERNMENT
ROUTING SLIP

Date 1/19/89

THE ATTACHED PAPERS ARE REFERRED

To Burt Nyson

From Clyde Shippo

Ref. Abbett House

FOR THE PURPOSE INDICATED BY THE CHECK

- Please note and file
- Please note and return to me
- Please note and see me about this
- Please answer sending me copy of your letter
- Please prepare reply for my signature
- To be signed
- For your information
- Immediate action desired
- Your comments, please
- For your appropriate action
- For your approval
- Per your request
- For distribution

REMARKS: Burt this
conclude CO problem
all OK -



HOWARD COUNTY GOVERNMENT
ROUTING SLIP

Date 12/19/88

THE ATTACHED PAPERS ARE REFERRED

To Burt Nixon

From C. Shupe

Ref. Albert Home

FOR THE PURPOSE INDICATED BY THE CHECK

- Please note and file
- Please note and return to me
- Please note and see me about this
- Please answer sending me copy of your letter
- Please prepare reply for my signature
- To be signed
- For your information
- Immediate action desired
- Your comments, please
- For your appropriate action
- For your approval
- Per your request
- For distribution

REMARKS:

Columbia Residential Management

Abbot House Apartments

"Carbon Monoxide Readings Log by BG&E"

A Reading of 10 ppm or less in air in furnace room was suggested by Dept. of Health

*NOTE: Readings taken by BGE are actual furnace flue readings
12-15-88

B8
DEC
AND
1988

Date	Year	Unit #	Vacant / Occupied	Initial Reading	App\Dis	Repair	New Reading	App / Dis	Date	Comments
12-1	88	107	0	0 ppm	A	yes	0	A	12-1	D
12-1	88	108	0	under 25 ppm	A	yes	under 25	A	12-1	C
12-1	88	109	0	under 25 ppm	A	yes	under 25	A	12-1	A,C
12-1	88	110	0	0 ppm	A	yes	0	A	12-1	A,C
12-1	88	111	0	under 25 ppm	A	yes	under 25	A	12-1	A,C
12-1	88	201	0	500 ppm	D	yes	under 25	A	12-1	A,C
12-1	88	202	0	500 ppm	D	yes	under 25	A	12-1	A,B,C
12-1	88	203	V	50 ppm	D	yes	under 25	A	12-1	A
12-1	88	204	0	500 ppm	D	yes	under 25	A	12-1	A,C
12-1	88	205	0	50 ppm	D	yes	under 25	A	12-1	A,C
12-1	88	206	0	under 25 ppm	A	yes	0	A	12-1	A,B,C
12-1	88	207	0	under 25 ppm	A	yes	under 25	A	12-1	C
12-1	88	208	0	under 25 ppm	A	yes	under 25	A	12-1	D
12-1	88	209	V	500 ppm	D	yes	under 25	A	12-1	A,C
12-1	88	210	0	50 ppm	D	yes	under 25	A	12-1	A
12-1	88	211	0	100 ppm	D	yes	under 25	A	12-1	A
12-1	88	212	0	500 ppm	D	yes	under 25	A	12-1	A
12-2	88	301	0	under 25 ppm	A	yes	under 25	A	12-2	A,B,C
12-2	88	302	0	100 ppm	D	yes	under 25	A	12-1	A,B,C
12-2	88	303	0	100 ppm	D	yes	under 25	A	12-2	A,C
12-1	88	304	0	25 ppm	A	yes	under 25	A	12-1	A,C
12-2	88	305	0	500 ppm	D	yes	under 25	A	12-2	A,C
12-2	88	306	0	400 ppm	D	yes	under 25	A	12-2	A,C,D
12-2	88	307	0	300 ppm	D	yes	under 25	A	12-2	A,C,D
12-2	88	308	0	300 ppm	D	yes	under 25	A	12-2	A,C
12-2	88	309	0	300 ppm	D	yes	under 25	A	12-2	A,C
12-2	88	310	0	500 ppm	D	yes	under 25	A	12-2	A,B,C
12-2	88	311	0	100 ppm	D	yes	under 25	A	12-2	A,C
12-2	88	312	0	400 ppm	D	yes	under 25	A	12-2	A,C
12-3	88	401	0	50 ppm	D	yes	under 25	A	12-3	A,C
12-3	88	402	0	500 ppm	D	yes	under 25	A	12-3	A,C
12-1	88	403	0	under 25 ppm	A	yes	under 25	A	12-1	A,C
12-1	88	404	0	under 25 ppm	A	yes	under 25	A	12-1	A,C
12-1	88	405	0	300 ppm	D	yes	under 25	A	12-1	A,B,C
12-2	88	406	0	200 ppm	D	yes	under 25	A	12-2	A,C
11-29	88	407	V	500 ppm	D	yes	under 25	A	11-30	A,B,C
12-2	88	408	0	0 ppm	A	yes	0	A	12-2	C
12-3	88	409	0	50 ppm	D	yes	under 25	A	12-3	A,C
12-2	88	410	0	50 ppm	D	yes	under 25	A	12-2	A,C
12-3	88	411	0	200 ppm	D	yes	under 25	A	12-3	A,B,C
12-3	88	412	0	500 ppm	D	yes	under 25	A	12-3	A,C
12-3	88	501	0	500 ppm	D	yes	under 25	A	12-3	A,C
12-2	88	502	0	100 ppm	D	yes	under 25	A	12-2	A,C
11-29	88	503	V	25 ppm	A	yes	0	A	12-1	A,B,C
11-29	88	504	0	0 ppm	A	yes	0	A	11-29	E
12-2	88	505	0	0 ppm	A	yes	0	A	12-2	C
12-3	88	506	0	500 ppm	D	yes	under 25	A	12-3	A,C
12-2	88	507	0	300 ppm	D	yes	under 25	A	12-2	A,C

Date	Time	Unit #	Vacant / Occupied	Initial Reading	App\Dis	Repair	New Reading	App / Dis	Date	Comments
12-3	88	508	0	100 ppm	D	yes	under 25	A	12-3	A,B,C
12-3	88	509	0	300 ppm	D	yes	under 25	A	12-3	A,C
12-3	88	510	0	under 25 ppm	A	yes	under 25	A	12-3	C
12-3	88	511	0	400 ppm	D	yes	under 25	A	12-3	A,C
12-3	88	512	0	200 ppm	D	yes	under 25	A	12-3	A,C
12-5	88	601	0	500 ppm	D	yes	under 25	A	12-5	A,C,E
12-5	88	602	0	200 ppm	D	yes	under 25	A	12-5	A,C
12-3	88	603	0	500 ppm	D	yes	under 25	A	12-3	A,C
12-3	88	604	0	50 ppm	D	yes	under 25	A	12-3	A
12-5	88	605	0	400 ppm	D	yes	under 25	A	12-5	A,C
11-29	88	606	V	500 ppm	D	yes	under 25	A	12-1	A,C
12-5	88	607	0	500 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	608	0	100 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	609	0	50 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	610	0	100 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	611	0	100 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	612	0	500 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	701	0	500 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	702	0	500 ppm	D	yes	under 25	A	12-5	A,B,C
11-29	88	703	0	200 ppm	D	yes	under 25	A	11-30	A,C
12-5	88	704	0	100 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	705	0	200 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	706	0	500 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	707	0	25 ppm	A	yes	under 25	A	12-5	A,C
11-29	88	708	0	50 ppm	D	yes	under 25	A	11-30	A,C
12-5	88	709	0	500 ppm	D	yes	under 25	A	12-6	A,C,D
12-5	88	710	0	25 ppm	A	yes	under 25	A	12-5	A,B,C
12-5	88	711	0	400 ppm	D	yes	under 25	A	12-5	A,B,C
12-6	88	712	0	400 ppm	D	yes	under 25	A	12-5	A,B,C
12-6	88	801	0	400 ppm	D	yes	under 25	A	12-6	A,B,C
12-6	88	802	0	200 ppm	D	yes	under 25	A	12-6	A,C
12-6	88	803	0	400 ppm	D	yes	under 25	A	12-6	A,C
12-6	88	804	0	200 ppm	D	yes	under 25	A	12-6	A,C
12-1	88	805	0	0 ppm	A	yes	0	A	12-1	C
12-6	88	806	0	100 ppm	D	yes	under 25	A	12-6	A,B,C
12-6	88	807	0	400 ppm	D	yes	under 25	A	12-6	A,C
12-6	88	808	0	400 ppm	D	yes	under 25	A	12-6	A,D
12-6	88	809	0	500 ppm	D	yes	under 25	A	12-6	A,B
12-1	88	810	0	400 ppm	D	yes	under 25	A	12-1	A,B,C
12-6	88	811	0	100 ppm	D	yes	under 25	A	12-6	A,C,D
12-6	88	812	0	50 ppm	D	yes	under 25	A	12-6	A,C,D
12-7	88	901	0	500 ppm	D	yes	under 25	A	12-7	A,B,C
11-30	88	902	0	300 ppm	D	yes	under 25	A	12-7	A,C,D
11-30	88	903	0	300 ppm	D	yes	under 25	A	11-30	A,B,C
12-7	88	904	0	500 ppm	D	yes	under 25	A	11-30	A,B,C
11-29	88	905	V	50 ppm	D	yes	under 25	A	12-7	A,B,C
12-7	88	906	0	500 ppm	D	yes	under 25	A	11-30	A,C,D
12-7	88	907	0	100 ppm	D	yes	under 25	A	12-7	A,C,D
12-7	88	908	0	500 ppm	D	yes	under 25	A	12-7	A,C
12-7	88	909	0	500 ppm	D	yes	under 25	A	12-7	A,B,C
12-7	88	910	0	500 ppm	D	yes	under 25	A	12-7	A,C
11-29	88	911	0	100 ppm	D	yes	under 25	A	12-7	A,C,D
12-7	88	912	V	500 ppm	D	yes	under 25	A	11-30	A,B,C
12-7	88	Boilers		under 25 ppm	A	no	under 25	A	12-7	

The following is the code for the Comment column:

- (A)- Furnace Cleaning
- (B)- Replacement of flue exhaust fan due to mechanical mal-function of motor or centrifugal switch
- (C)- Seal exhaust duct
- (D)- Exhaust fan scheduled for replacement due sail switch assembly
- (E)- Replaced Furnace

Columbia Residential Management

Abbot House Apartments

"Carbon Monoxide Readings Log by BG&E"

A Reading of 10 ppm or less in air in furnace room
was suggested by Dept. of Health

*NOTE: Readings taken by BGE are actual furnace flue
readings
12-15-88

Date	Year	Unit #	Vacant / Occupied	Initial Reading	App\Dis	Repair	New Reading	App / Dis	Date	Comments
12-1	88	107	0	0 ppm	A	yes	0	A	12-1	D
12-1	88	108	0	under 25 ppm	A	yes	under 25	A	12-1	C
12-1	88	109	0	under 25 ppm	A	yes	under 25	A	12-1	A,C
12-1	88	110	0	0 ppm	A	yes	0	A	12-1	A,C
12-1	88	111	0	under 25 ppm	A	yes	under 25	A	12-1	A,C
12-1	88	201	0	500 ppm	D	yes	under 25	A	12-1	A,C
12-1	88	202	0	500 ppm	D	yes	under 25	A	12-1	A,B,C
12-1	88	203	V	50 ppm	D	yes	under 25	A	12-1	A
12-1	88	204	0	500 ppm	D	yes	under 25	A	12-1	A,C
12-1	88	205	0	50 ppm	D	yes	under 25	A	12-1	A,C
12-1	88	206	0	under 25 ppm	A	yes	0	A	12-1	A,B,C
12-1	88	207	0	under 25 ppm	A	yes	under 25	A	12-1	C
12-1	88	208	0	under 25 ppm	A	yes	under 25	A	12-1	D
12-1	88	209	V	500 ppm	D	yes	under 25	A	12-1	A,C
12-1	88	210	0	50 ppm	D	yes	under 25	A	12-1	A
12-1	88	211	0	100 ppm	D	yes	under 25	A	12-1	A
12-1	88	212	0	500 ppm	D	yes	under 25	A	12-1	A
12-2	88	301	0	under 25 ppm	A	yes	under 25	A	12-2	A,B,C
12-2	88	302	0	100 ppm	D	yes	under 25	A	12-1	A,B,C
12-2	88	303	0	100 ppm	D	yes	under 25	A	12-2	A,C
12-1	88	304	0	25 ppm	A	yes	under 25	A	12-1	A,C
12-2	88	305	0	500 ppm	D	yes	under 25	A	12-2	A,C
12-2	88	306	0	400 ppm	D	yes	under 25	A	12-2	A,C,D
12-2	88	307	0	300 ppm	D	yes	under 25	A	12-2	A,C,D
12-2	88	308	0	300 ppm	D	yes	under 25	A	12-2	A,C
12-2	88	309	0	300 ppm	D	yes	under 25	A	12-2	A,C
12-2	88	310	0	500 ppm	D	yes	under 25	A	12-2	A,B,C
12-2	88	311	0	100 ppm	D	yes	under 25	A	12-2	A,C
12-2	88	312	0	400 ppm	D	yes	under 25	A	12-2	A,C
12-3	88	401	0	50 ppm	D	yes	under 25	A	12-3	A,C
12-3	88	402	0	500 ppm	D	yes	under 25	A	12-3	A,C
12-1	88	403	0	under 25 ppm	A	yes	under 25	A	12-1	A,C
12-1	88	404	0	under 25 ppm	A	yes	under 25	A	12-1	A,C
12-1	88	405	0	300 ppm	D	yes	under 25	A	12-1	A,B,C
12-2	88	406	0	200 ppm	D	yes	under 25	A	12-2	A,C
11-29	88	407	V	500 ppm	D	yes	under 25	A	11-30	A,B,C
12-2	88	408	0	0 ppm	A	yes	0	A	12-2	C
12-3	88	409	0	50 ppm	D	yes	under 25	A	12-3	A,C
12-2	88	410	0	50 ppm	D	yes	under 25	A	12-2	A,C
12-3	88	411	0	200 ppm	D	yes	under 25	A	12-3	A,B,C
12-3	88	412	0	500 ppm	D	yes	under 25	A	12-3	A,C
12-3	88	501	0	500 ppm	D	yes	under 25	A	12-3	A,C
12-2	88	502	0	100 ppm	D	yes	under 25	A	12-2	A,C
11-29	88	503	V	25 ppm	A	yes	0	A	12-1	A,B,C
11-29	88	504	0	0 ppm	A	yes	0	A	11-29	E
12-2	88	505	0	0 ppm	A	yes	0	A	12-2	C
12-3	88	506	0	500 ppm	D	yes	under 25	A	12-3	A,C
12-2	88	507	0	300 ppm	D	yes	under 25	A	12-2	A,C

Date	Time	Unit #	Vacant / Occupied	Initial Reading	App\Dis	Repair	New Reading	App / Dis	Date	Comments
12-3	88	508	0	100 ppm	D	yes	under 25	A	12-3	A,B,C
12-3	88	509	0	300 ppm	D	yes	under 25	A	12-3	A,C
12-3	88	510	0	under 25 ppm	A	yes	under 25	A	12-3	C
12-3	88	511	0	400 ppm	D	yes	under 25	A	12-3	A,C
12-3	88	512	0	200 ppm	D	yes	under 25	A	12-3	A,C
12-5	88	601	0	500 ppm	D	yes	under 25	A	12-5	A,C,E
12-5	88	602	0	200 ppm	D	yes	under 25	A	12-5	A,C
12-3	88	603	0	500 ppm	D	yes	under 25	A	12-3	A,C
12-3	88	604	0	50 ppm	D	yes	under 25	A	12-3	A
12-5	88	605	0	400 ppm	D	yes	under 25	A	12-5	A,C
11-29	88	606	V	500 ppm	D	yes	under 25	A	12-1	A,C
12-5	88	607	0	500 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	608	0	100 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	609	0	50 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	610	0	100 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	611	0	100 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	612	0	500 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	701	0	500 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	702	0	500 ppm	D	yes	under 25	A	12-5	A,B,C
11-29	88	703	0	200 ppm	D	yes	under 25	A	11-30	A,C
12-5	88	704	0	100 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	705	0	200 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	706	0	500 ppm	D	yes	under 25	A	12-5	A,C
12-5	88	707	0	25 ppm	A	yes	under 25	A	12-5	A,C
11-29	88	708	0	50 ppm	D	yes	under 25	A	11-30	A,C
12-5	88	709	0	500 ppm	D	yes	under 25	A	12-6	A,C,D
12-5	88	710	0	25 ppm	A	yes	under 25	A	12-5	A,B,C
12-5	88	711	0	400 ppm	D	yes	under 25	A	12-5	A,B,C
12-6	88	712	0	400 ppm	D	yes	under 25	A	12-5	A,B,C
12-6	88	801	0	400 ppm	D	yes	under 25	A	12-6	A,B,C
12-6	88	802	0	200 ppm	D	yes	under 25	A	12-6	A,C
12-6	88	803	0	400 ppm	D	yes	under 25	A	12-6	A,C
12-6	88	804	0	200 ppm	D	yes	under 25	A	12-6	A,C
12-1	88	805	0	0 ppm	A	yes	0	A	12-1	C
12-6	88	806	0	100 ppm	D	yes	under 25	A	12-6	A,B,C
12-6	88	807	0	400 ppm	D	yes	under 25	A	12-6	A,C
12-6	88	808	0	400 ppm	D	yes	under 25	A	12-6	A,D
12-6	88	809	0	500 ppm	D	yes	under 25	A	12-6	A,B
12-1	88	810	0	400 ppm	D	yes	under 25	A	12-1	A,B,C
12-6	88	811	0	100 ppm	D	yes	under 25	A	12-6	A,C,D
12-6	88	812	0	50 ppm	D	yes	under 25	A	12-6	A,C,D
12-7	88	901	0	500 ppm	D	yes	under 25	A	12-7	A,B,C
11-30	88	902	0	300 ppm	D	yes	under 25	A	12-7	A,C,D
11-30	88	903	0	300 ppm	D	yes	under 25	A	11-30	A,B,C
12-7	88	904	0	500 ppm	D	yes	under 25	A	11-30	A,B,C
11-29	88	905	V	50 ppm	D	yes	under 25	A	12-7	A,B,C
12-7	88	906	0	500 ppm	D	yes	under 25	A	11-30	A,C,D
12-7	88	907	0	100 ppm	D	yes	under 25	A	12-7	A,C,D
12-7	88	908	0	500 ppm	D	yes	under 25	A	12-7	A,C
12-7	88	909	0	500 ppm	D	yes	under 25	A	12-7	A,B,C
12-7	88	910	0	500 ppm	D	yes	under 25	A	12-7	A,C
11-29	88	911	0	100 ppm	D	yes	under 25	A	12-7	A,C,D
12-7	88	912	V	500 ppm	D	yes	under 25	A	11-30	A,B,C
12-7	88	Boilers		under 25 ppm	A	no	under 25	A	12-7	

The following is the code for the Comment column:

- (A)- Furnace Cleaning
- (B)- Replacement of flue exhaust fan due to mechanical mal-function of motor or centrifugal switch
- (C)- Seal exhaust duct
- (D)- Exhaust fan scheduled for replacement due sail switch assembly
- (E)- Replaced Furnace

file copy

HOWARD COUNTY HEALTH DEPARTMENT

JOYCE M. BOYD, M.D., M.P.H.
COUNTY HEALTH OFFICER



Bureau of Environmental Health
3525 Ellicott Mills Drive
Ellicott City, Maryland 21043

Director - 461-9956
Water & Sewerage, Permits - 461-9933
Community Environmental Health - 461-9944
Technical Services - 461-9955

December 13, 1988

Mr. Clyde Shippe
Bureau of Inspections, Licenses & Permits
Public Works Annex
11226 Route 216
Laurel, MD 20707

RE: Carbon Monoxide Resampling Results

Dear Clyde:

Representative resampling of selected units for Carbon Monoxide (CO) levels was conducted December 9, 1988 following repairs and cleaning of all one hundred (100) gas furnace units by Baltimore Gas & Electric Company (B.G.&E.) in Abbott House. Resampling was conducted with the assistance of the Howard County Fire Department (using their Industrial Scientific meter (Model CMX271) for CO levels), and in the presence of B.G.&E. service representatives, Howard County Bureau of Inspections, Licenses and Permits and Abbott House maintenance personnel.

A total of ten (10) units were reinspected for CO levels. Most of these units had been found (from our initial inspection or subsequent testing by B.G.&E.) to contain unacceptable CO levels. The remaining units comprised those whose tenants had registered complaints of "fumes" at the onset of the investigation. Units retested included 201, 310, 406, 504, 505, 606, 607, 612, 903 and 904. Tenants from units 504 and 505 had previously registered complaints. A targeted ceiling level of 10 ppm (in furnace closet) had been established prior to all repairs and retesting. This level was derived in part from a September 1988 published report by the Environmental Protection Agency (EPA) referencing guidelines to indoor air pollutants. Levels of 5-15 ppm (for gas stoves) were reported as properly functioning. This range also was adopted for the gas furnaces.

Results from CO resampling ranged from a low 1 part per million (ppm) in unit 504 to a high of 7ppm in unit 201. Most units were found to contain between 4 and 6ppm CO in the furnace closet, and less in the living areas tested. In addition, units 505 and 606 were tested for CO levels resulting

Mr. Clyde Shippe
Page 2
December 13, 1988

from gas stove burning. Readings of 2-3 ppm and 6-12 ppm were found for units 505 and 606 respectively.

Based upon these findings, plus CO levels registered by B.G.&E. following repairs, and apparent compliance to suggested guidelines reported by EPA, all 100 units should be considered safe for habitation. However, continued proper performance in the future is not implied. Therefore, it is strongly recommended that a regular maintenance check/cleaning program be adopted to minimize future furnace related (including excessive CO generation) problems. This would seem especially prudent since many of the furnaces have been in use for many years (up to 17) and are nearing the projected life expectancy for this model furnace.

If there are any further questions, please contact me at 461-9955 between 8:30 a.m. and 4:30 p.m.

Very truly yours,



Bert Nixon
Technical Services Program

BN:vf

cc: Phillip Glover
Rita Benton

(CO meter used)
Industrial scientific CMX271

Room 504 - 4 ppm (~~10~~ ppm CO)
tested - has been reoccupied (tenant not present at time of reading)
Replaced Tuesday after Thanksgiving

Room 503 - shut down (bad fan) vacant
out of service - to be replaced

Room 505 - originally tested OK
also w/ new furnace (occupant still concerned about results) (~~10~~ 3 ppm)
also checked stove area similar reading
(.02 - .03 ppm CO)

unit 606 (vacant) initially 10-12 ppm / but w/in 1 minutes levels dropped to 1 ppm & held.
4 ppm (discharge vent area) in living room

unit 904 (occupied) - ~~old~~ ^{new} style blower
(~~may~~ ^{should} have better seal)
levels of 5 ppm CO

unit 903 (occupied) had bad vent
levels of 5-6 ppm off flue/vent area

unit 607 (occupied) old blower (seals not as tight)
≈ 5 ppm
~~tenant not present~~ at time of reading

mark Waste

Unit 612 Occupied - tenant not present at

time of reading

4-5 pm in furnace/flu area

checked stove area (6-12 pm

2/2 furnace out

Unit 300 (new vent meter)

occupied and demand not present

4 pm reading in flu/vent area

Unit 406 - possible leaking conditions / several
sensors should be notified
several

several 2 to 3 pm - tenant not present

Unit 201 occupied - tenant not present
penetrating levels 3-7 pm

12/8/88

Call from Mark H. plus previous calls during the week from P. Glover & Clyde Shippe kept the H. Dept well informed of progress.

Work completed on all 100 units 12/8/88 (1 day ahead of proposed schedule).

12/9/88 To meet w/ C. Shippe, Abbott house & Fire Dept for spot check of units. Will use F.D.'s meter to confirm that levels are w/in agreed ranges.

Carbon monoxide Incidents
Abbott House

11/28/88

Received call @ suspected carbon monoxide (CO) inhalation from resident (room 505) Abbott House. It was later learned that Central Comm. had received a call on Thurs 11/23/88 at 4:06 am. Victims were taken to Howard County General where later were diagnosed with carbon monoxide exposure (see enclosed news article for details).

Later that day Clyde Shippe (Housing), Mike Rzepiennik (General American Real Estate), Mark Hudson (Abbott House) Lt. Baker (?) (F.D. Truck 7) and Bert Wilson (Health Dept.) 9en units were inspected (rooms and results described below) to determine operating conditions of the exhaust fan / heating systems. The initial victim (room 504) was found to have a malfunctioning vent fan.

Using the F. Dept's multigas explosimeter to test for CO, the following was found during the initial 10 unit survey-

~~Room~~ ^{unit} 203 (resident had suffered stroke the day before)
Vent systems, rooms & furnace area checked
No CO levels detected

~~Room~~ ^{unit} 209

Slight levels ($\approx 3ppm$) detected in living room area
Levels of 18-19ppm found in furnace room indicating some leakage / malfunctioning of exhaust system.

(2)

~~Room~~ ^{unit} 407 (presently vacant)

Noticeable exhaust odors upon entry.

Levels of 6-7 ppm CO found in living areas

Levels as high as 136 ppm registered in furnace room near fan/vent areas. Unit clearly malfunctioning - repairs/replacement required

~~Room~~ ^{unit} 503 (adjacent to 2nd victim/complaint)

Low levels of total gas (from our CG Tracer) found 5-6 ppm of CO detected at furnace. Joints in exhaust system/venting had been taped.

~~Room~~ ^{unit} 505 (unit of 11/28 complaint).

Mrs Hood was present during inspection.

Unit seemed clear of noticeable odors

Level of ~3 ppm CO was found next to vent area in furnace room.

This unit has a new furnace & appears to be functioning properly.

~~Room~~ ^{unit} 606 (presently vacant)

Upon entry immediate odors; levels of 10-11 ppm CO were detected

In furnace room, levels as high as 157 ppm CO were found. Immediate repairs required.

~~Room~~ ^{unit} 703 (vacant)

Some odors found/noticed upon entry. Low readings of 3 ppm CO were detected; general (total) gas odor found to be 9-10 ppm.

Furnace room levels of 3-5 ppm were found.

(3)

Unit 708 (vacant)

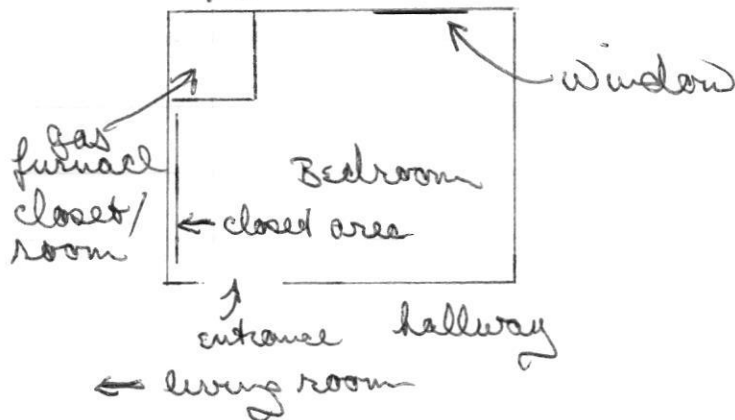
CO levels up to 77 ppm CO detected in furnace room. Repairs to system immediately required

Unit 912 (vacant; had been recent death approx ~~two~~ weeks prior (11/13-15); 32 yr old male; cause unknown to those present for this investigation).

Levels ranging from 3-6 ppm (total gas), 3 ppm CO were detected in living area.

In furnace room, levels as high as 100 ppm CO were found. Immediate repair/replacement req'd.

Furnace room found generally in 1st bedroom off the living room area. Typical schematic shown below:



Original furnaces - BE; apparently no longer made. Many units still w/ original furnaces (i.e. = 17 yrs old). Apparently no scheduled, regular maintenance checks unless repairs needed (this is my premise based upon the above findings).

(4)

Following 10 unit survey we met w/ Rita Benton (manager of Abbott House) & briefed her of findings. It was agreed that work should start on rooms 209, 407, 606, 708 & 912 ASAP. Gas had been shut off in interim.

Following that, every unit would be checked & repairs/replacement to furnace system completed as needed. This too was to be done ASAP.

We agreed on a level of 10 ppm as top acceptable level in furnace room. This is consistent w/ 9/88 article from EPA where properly adjust gas stoves/furnaces have 5-15 ppm levels CO.

All rooms (units) would have to be certified by mfg. rep. or technician prior to reoccupancy of any room. Clyde S. would supply letter stating findings etc. Rita contacted Environmental Systems & Assoc. & they agreed to take on task beginning 11/29/88.

11/29/88 ≈ 4pm

Received call from Phil Glover (VP for Columbia Management). He informed me that B&E would now do all the monitoring, testing & where needed, repairs - starting 11/30/88 w/ the known problem units. B&E gave a target date of 12/9/88 to have gone through all 100 units.

CARBON MONOXIDE

CMO

<p>Common Synonyms Monoxide</p>	<p>Compressed gas or liquefied compressed gas Colorless Odorless</p> <p>Liquid floats and boils on water. Poisonous, flammable visible vapor cloud is produced.</p>
<p>AVOID CONTACT WITH LIQUID AND VAPOR. KEEP PEOPLE AWAY Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves) Shut off ignition sources. Call fire department. Stop discharge if possible Evacuate area in case of large discharge. Notify local health and pollution control agencies</p>	
<p style="text-align: center;">Fire</p>	<p>FLAMMABLE. Containers may explode in fire. Wear goggles and self-contained breathing apparatus. Let fire burn. Stop flow of gas if possible. Cool exposed containers and protect men effecting shutoff with water.</p>
<p style="text-align: center;">Exposure</p>	<p>CALL FOR MEDICAL AID. VAPOR POISONOUS IF INHALED. Move victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. LIQUID Will cause frostbite. Flush affected areas with plenty of water. DO NOT RUB AFFECTED AREAS.</p>
<p style="text-align: center;">Water Pollution</p>	<p>HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.</p>
<p style="text-align: center;">1. RESPONSE TO DISCHARGE (See Response Methods Handbook) Issue warning-poison, high flammability Restrict access Evacuate area</p>	<p style="text-align: center;">2. LABEL 2.1 Category: Flammable gas 2.2 Class: 2</p>
<p style="text-align: center;">3. CHEMICAL DESIGNATIONS 3.1 CG Compatibility Class: Not listed 3.2 Formula: CO 3.3 IMO/UN Designation: 2/1016 3.4 DOT ID No.: 1016 3.5 CAS Registry No.: 630-08-0</p>	<p style="text-align: center;">4. OBSERVABLE CHARACTERISTICS 4.1 Physical State (as shipped): Compressed gas or liquefied gas 4.2 Color: Colorless 4.3 Odor: None</p>
<p style="text-align: center;">5. HEALTH HAZARDS</p> <p>5.1 Personal Protective Equipment: Self-contained breathing apparatus; safety glasses and safety shoes; Type D or Type N canister mask. 5.2 Symptoms Following Exposure: Inhalation causes headache, dizziness, weakness of limbs, confusion, nausea, unconsciousness, and finally death. 0.04% conc., 2-3 hr. or .06% conc., 1 hr. - headache and discomfort; with moderate exercise, 0.1-0.2% will produce throbbing in the head in about 1/2 hr., a tendency to stagger in about 1 1/2 hr., and confusion of the mind, headache, and nausea in about 2 hrs. 0.20-25% usually produces unconsciousness in about 1/2 hr. Inhalation of a 0.4% conc. can prove fatal in less than 1 hr. Inhalation of high concentrations can cause sudden, unexpected collapse. Contact of liquid with skin will cause frostbite. 5.3 Treatment of Exposure: INHALATION: remove from exposure; give oxygen if available; support respiration; call a doctor. SKIN: if burned by liquid, treat as frostbite. 5.4 Threshold Limit Value: 50 ppm 5.5 Short Term Inhalation Limits: 400 ppm, 15 min. 5.6 Toxicity by Ingestion: Not pertinent (gas with low boiling point) 5.7 Late Toxicity: Toxicity from overexposure persists for many days. 5.8 Vapor (Gas) Irritant Characteristics: Data not available 5.9 Liquid or Solid Irritant Characteristics: Data not available 5.10 Odor Threshold: Not pertinent 5.11 IDLH Value: 1,500 ppm</p>	

<p style="text-align: center;">6. FIRE HAZARDS</p> <p>6.1 Flash Point: Not pertinent 6.2 Flammable Limits in Air: 12%-75% 6.3 Fire Extinguishing Agents: Let fire burn; shut off flow of gas and cool adjacent exposures with water. Extinguish (only if wearing self-contained breathing apparatus) with dry chemicals or carbon dioxide. 6.4 Fire Extinguishing Agents Not to be Used: Not pertinent 6.5 Special Hazards of Combustion Products: Asphyxiation due to carbon dioxide production may result. 6.6 Behavior in Fire: Flame has very little color. Containers may explode in fire. 6.7 Ignition Temperature: 1,128°F 6.8 Electrical Hazard: Data not available 6.9 Burning Rate: Not pertinent 6.10 Adiabatic Flame Temperature: 2701. (Est.) <i>(Continued)</i></p>	<p style="text-align: center;">10. HAZARD ASSESSMENT CODE (See Hazard Assessment Handbook) A-B-C-D-E-F-G</p>								
<p style="text-align: center;">7. CHEMICAL REACTIVITY</p> <p>7.1 Reactivity With Water: No reaction 7.2 Reactivity with Common Materials: No reaction 7.3 Stability During Transport: Stable 7.4 Neutralizing Agents for Acids and Caustics: Not pertinent 7.5 Polymerization: Not pertinent 7.6 Inhibitor of Polymerization: Not pertinent 7.7 Molar Ratio (Reactant to Product): Data not available 7.8 Reactivity Group: Data not available</p>	<p style="text-align: center;">11. HAZARD CLASSIFICATIONS</p> <p>11.1 Code of Federal Regulations: Flammable gas 11.2 NAS Hazard Rating for Bulk Water Transportation: Not listed 11.3 NFPA Hazard Classification:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Category</td> <td style="text-align: right;">Classification</td> </tr> <tr> <td>Health Hazard (Blue)</td> <td style="text-align: right;">2</td> </tr> <tr> <td>Flammability (Red)</td> <td style="text-align: right;">4</td> </tr> <tr> <td>Reactivity (Yellow)</td> <td style="text-align: right;">0</td> </tr> </table>	Category	Classification	Health Hazard (Blue)	2	Flammability (Red)	4	Reactivity (Yellow)	0
Category	Classification								
Health Hazard (Blue)	2								
Flammability (Red)	4								
Reactivity (Yellow)	0								
<p style="text-align: center;">8. WATER POLLUTION</p> <p>8.1 Aquatic Toxicity: 1.5 ppm/1-6 hr/minnows and sunfish/killed/fresh water 8.2 Waterfowl Toxicity: Data not available 8.3 Biological Oxygen Demand (BOD): None 8.4 Food Chain Concentration Potential: None</p>	<p style="text-align: center;">12. PHYSICAL AND CHEMICAL PROPERTIES</p> <p>12.1 Physical State at 15°C and 1 atm: Gas 12.2 Molecular Weight: 28.0 12.3 Boiling Point at 1 atm: -312.7°F = -191.5°C = 81.7°K 12.4 Freezing Point: -326°F = -199°C = 74°K 12.5 Critical Temperature: -220°F = -140°C = 133°K 12.6 Critical Pressure: 507.5 psia = 34.51 atm = 3.502 MN/m² 12.7 Specific Gravity: 0.791 at -191.5°C (liquid) 12.8 Liquid Surface Tension: 9.8 dynes/cm = 0.098 N/m at -193°C 12.9 Liquid Water Interfacial Tension: Not pertinent 12.10 Vapor (Gas) Specific Gravity: Data not available 12.11 Ratio of Specific Heats of Vapor (Gas): 1.3962 12.12 Latent Heat of Vaporization: 92.8 Btu/lb = 51.6 cal/g = 2.16 X 10⁶ J/kg 12.13 Heat of Combustion: -4,343 Btu/lb = -2,412 cal/g = -101 X 10³ J/kg 12.14 Heat of Decomposition: Not pertinent 12.15 Heat of Solution: Not pertinent 12.16 Heat of Polymerization: Not pertinent 12.25 Heat of Fusion: 7.13 cal/g 12.26 Limiting Value: Data not available 12.27 Reid Vapor Pressure: Data not available</p>								
<p style="text-align: center;">9. SHIPPING INFORMATION</p> <p>9.1 Grades of Purity: Liquid: 98.6+%; Gas: Research High Purity; CP (99.5%); Technical (99.0+%), Commercial (97.5+%) 9.2 Storage Temperature: Ambient (for gas); -312.7°F (for liquid) 9.3 Inert Atmosphere: No requirement 9.4 Venting: Safety relief</p>									
<p style="text-align: center;">6. FIRE HAZARDS (Continued)</p> <p>6.11 Stoichiometric Air to Fuel Ratio: 2.451 (Est.) 6.12 Flame Temperature: Data not available</p>									

Mo J.S. 9:21 AM from [unclear]

Police, fire log

Suspect arrested for Dumpster fires

An Ellicott City man was arrested last week in connection with a string of deliberately set Dumpster fires, fire officials said.

Mark F. Albrecht, 21, of the 9700 block Gwynn Park Drive, was charged with two counts of burning a trash container, Deputy State Fire Marshall John R. Earp said Friday.

Mr. Earp said Mr. Albrecht is a suspect in 11 other Dumpster fires since September in Ellicott City. Mr. Earp said state fire officials will meet with prosecutors in the county state's attorney's office before deciding whether further charges will be brought against the suspect.

Mr. Earp said the suspect was taken to Howard County police headquarters after a spectator spotted him at the most recent Dumpster fires, Wednesday at Centennial High School and at

nearby Glastonbury Road. Mr. Earp said the suspect had been present at at least some of the other Dumpster fires.

Since Sept. 7, 13 Dumpster fires, including at least five at Centennial High School, have been reported. Fire officials had listed the Dumpster fires as deliberately set.

On Oct. 9, four Dumpster fires at Centennial High and at nearby construction sites were reported.

Noting that fires cause only minor damage to Dumpsters, Mr. Earp said the primary concern about the problem was that "it was running the fire department ragged up there, and you never know if there's going to be an accident on the way to fighting the fires."

He said the suspect was charged under a section of state law that specifically prohibits setting fire to trash containers. He said the maximum penalty under that law is 30 days in jail and a fine.

County police and the county fire department assisted in the investigation.

Mother, son felled by toxic fumes

A mother and son from were hospitalized Thanksgiving Day after carbon monoxide from a malfunctioning exhaust fan on a heater left them semiconscious in a

high-rise apartment in Columbia, county fire officials said.

Paramedics responding to a call at 4:06 a.m. Thursday found Belinda Green, 37, and her son, Derice Green, 14, lethargic from exposure to toxic fumes in their apartment in the Abbott House, in the 5400 block Cedar Lane, said a spokesman for the county fire department.

The two initially were taken to Howard County General Hospital,

but less than two hours later county ambulance crews drove them to the Maryland Shock Trauma Center at University Hospital in Baltimore.

There, they were treated in the hospital's hyperbaric chamber for exposure to carbon monoxide, said a spokeswoman for Shock Trauma. The spokeswoman said Friday that their conditions were improving and they were scheduled to be released Friday or Saturday.

HCC prof seminars accent the scientific

The science department of Howard Community College is sponsoring a seminar series this fall that will feature members of the science faculty.

The seminars, which are de-

signed for high school and middle school science teachers and students, will be conducted monthly on Tuesday afternoons from 3:15 to 4:30 p.m. The seminars are free and open to the public.

Information: Professor Poch, 922-4891; Professor Bard, 992-4887.

Fairview Federal's 9³/₄% New Car Loan: Sporty, Economical, And Very Practical.

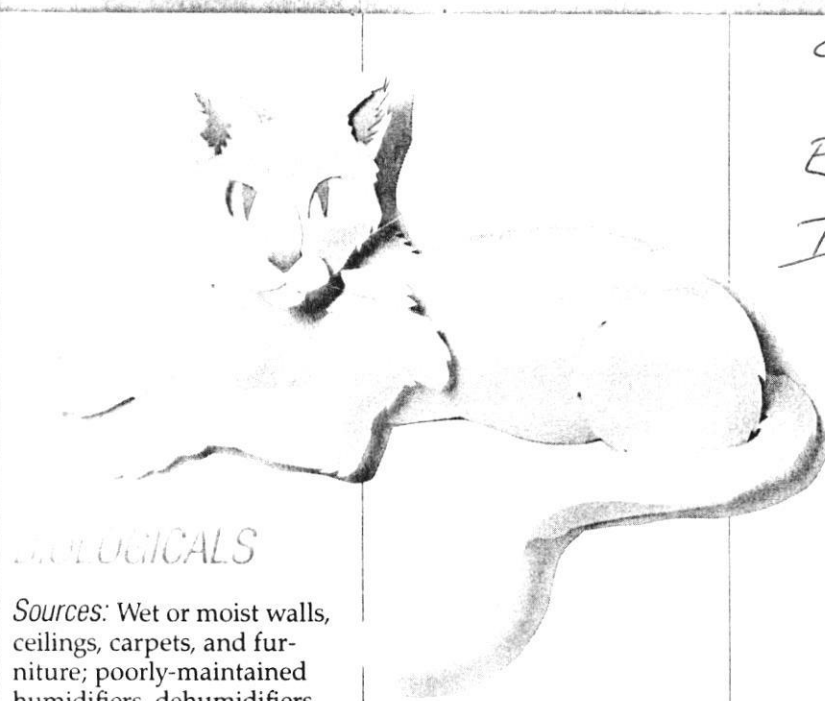
SPECIAL
LOW RATE

Just right for that new family stationwagon. Sleek new red sportscar.

Or something nice in between.



9/88
EPA
Indoor Air



BIOLOGICALS

Sources: Wet or moist walls, ceilings, carpets, and furniture; poorly-maintained humidifiers, dehumidifiers, and air conditioners; bedding; household pets.

Health Effects: Eye, nose, and throat irritation; shortness of breath; dizziness; lethargy; fever; digestive problems. Asthma; humidifier fever; influenza and other infectious diseases.

Levels in Homes: Indoor levels of pollen and fungi are lower than outdoor levels (except where indoor sources of fungi are present). Indoor levels of mites are higher than outdoor levels.

- Steps to Reduce Exposure:*
- Install and use fans vented to outdoors in kitchens and bathrooms.
 - Vent clothes dryers to outdoors.
 - Clean cool mist and ultrasonic humidifiers daily and use only distilled water in them.
 - Empty water trays in air conditioners, dehumidifiers, and refrigerators frequently.
 - Clean and dry, or remove, water-damaged carpets.
 - Use basements as living areas only if they are leak-proof and have adequate ventilation. Use dehumidifiers, if necessary to maintain humidity at 30-50 percent.

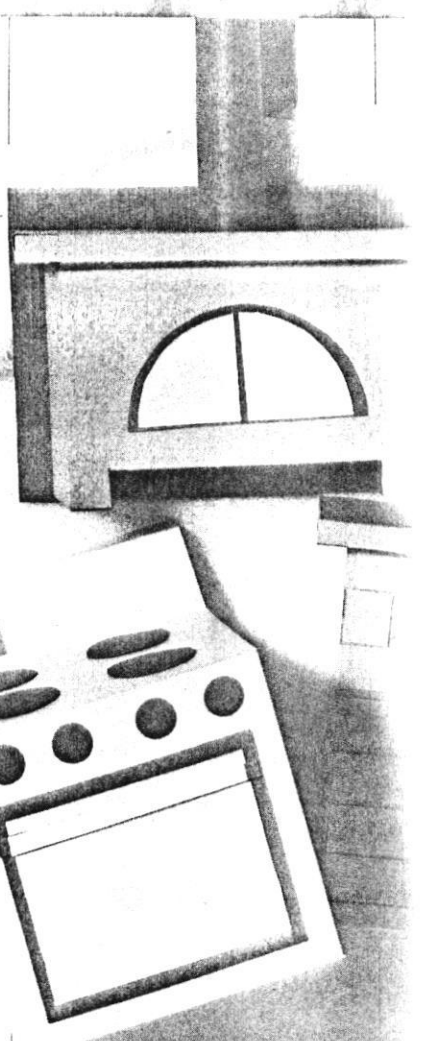
CARBON MONOXIDE

Sources: Unvented kerosene and gas heaters; leaking chimneys and furnaces; down-drafting from wood stoves and fireplaces; gas stoves. Automobile exhaust from attached garages. Environmental tobacco smoke.

Health Effects: At low concentrations, fatigue in healthy people and chest pain in people with heart disease. At higher concentrations, impaired vision and coordination; headaches; dizziness; confusion; nausea. Can cause flu-like symptoms that clear up after leaving home. Fatal at very high concentrations.

Levels in Homes: Average levels in homes without gas stoves vary from 0.5 to 5 parts per million (ppm). Levels near properly adjusted gas stoves are often 5 to 15 ppm and near poorly adjusted stoves may be 30 ppm or higher.

- Steps to Reduce Exposure:*
- Keep gas appliances properly adjusted.
 - Consider purchasing vented gas space heaters and furnaces.
 - Use proper fuel in kerosene space heaters.
 - Install and use exhaust fan vented to outdoors over gas stoves.
 - Open flues when gas fireplaces are in use.
 - Choose properly sized wood stoves that are certified to meet EPA emission standards. Make certain that doors on all wood stoves fit tightly.
 - Have a trained professional inspect, clean, and tune-up central heating system (furnaces, flues, and chimneys) annually. Repair any leaks properly.
 - Do not idle car inside garage.



NITROGEN DIOXIDE

Sources: Kerosene heaters, unvented gas stoves and heaters. Environmental tobacco smoke.

Health Effects: Eye, nose, and throat irritation; may cause impaired lung function and increased respiratory infections in young children.

Levels in Homes: Average level in homes without combustion appliances is about half that of outdoors. In homes with gas stoves, kerosene heaters, or unvented gas space heaters indoor levels often exceed outdoor levels.

- Steps to Reduce Exposure:*
- See steps under carbon monoxide.



Department of Public Works
BUREAU OF INSPECTIONS, LICENSES & PERMITS

M. Robert Gemmill, Bureau Chief

December 1, 1988

Mr. Philip Glover
Property Manager
c/o Columbia Residential Management, Inc.
1005 Old Columbia Road
Columbia, MD 21046

SUBJ: Violation Notice - Abbott
House - Defective Furnaces

Dear Mr. Glover:

On November 28, 1988, an inspection was made in 10 of the 100 units in Abbott House and 5 of those units tested have furnaces which are unsafe due to high readings of carbon monoxide). Howard County Housing Code (hereinafter HCHC) Section 33.01.

Apartments 209, 407, 606, 708 & 912 had readings of carbon monoxide levels 130 to 150 parts per million at flues at the tops of the furnaces. The above apartments are vacant and were declared unfit for habitation and ordered not to be occupied until certified safe from carbon monoxide. These units must be repaired within 24 hours. (We note that work is in progress to accomplish these repairs on November 29, 1988). HCHC Section 33.01 and 42.02.e.

Apartment 504 is not to be occupied until a new furnace is installed under permit and certified safe from carbon monoxide. HCHC Section 33.01.

The old furnace in Apartment 504 is to be inspected by an authorized factory representative and a Maryland registered professional mechanical engineer to determine cause of carbon monoxide seepage no later than 12/3/88. A copy of the report must be furnished to this office.

Certification will be required that all furnaces in all units through out Abbott House are carbon monoxide safe. Compliance must be no later than 12/3/88.

*Elizabeth Bobo, County Executive
James M. Irvin, Director of Public Works*

NOTE: Safe level of carbon monoxide is less than 10 parts per million and unsafe for over 10 parts per million according to Burn Nixon of the Howard County Health Department.

Any furnace replacement is to be done under permit. Your rental license will continue to be held in obedience until compliance of carbon monoxide safety certification and items as cited in violation notice dated October 26, 1988.

Sincerely,



Clyde S. Shippe
Housing Inspector

CSS/rh

cc: Capt. E. Shilling, HCFD
Fire Admin. Office

Burt Nixon, HCHD

Mike Rzepiennik
Gen. American Real Estate
10005 Old Columbia Road
Columbia, MD 21046

CERTIFIED MAIL - P 446 562 941
RETURN RECEIPT REQUESTED

Room 204³, 503, 505, 912

Room 203 (21st fl) - stroke victim

Truck 7, Clyde Shippe

Vent systems checked for CO - no detection

Room 209

Slight reading just prior to door on my machine
in room = 5 ppm

At heating vent in bedroom (which houses
furnace) $\uparrow \rightarrow$ 18-19 ppm. (our machine = 10 ppm)

Room 407 - noticeable odor upon entry

furnace running; our meter registered = 10 (total)
their meter 136 ppm CO at fan / vent in
bedroom. In living room 6-7 ppm CO

Room 503

In hallway picked up 3 ppm reading; theirs
for CO - none

In apt - as high as 5 ppm (mine)

Max at furnace 5-6 (joints taped where other
 \rightarrow theirs (CO) (taking one would)

Room 505 (new furnace)

rooms seem clear

right next to vent top reading of 3 ppm (theirs)
our machine 0 \pm

shut ← 209, 407, 606, 708, 912

gas → immediate repair
repair 1st → replace exhaust motor duct

#606 (vacant)

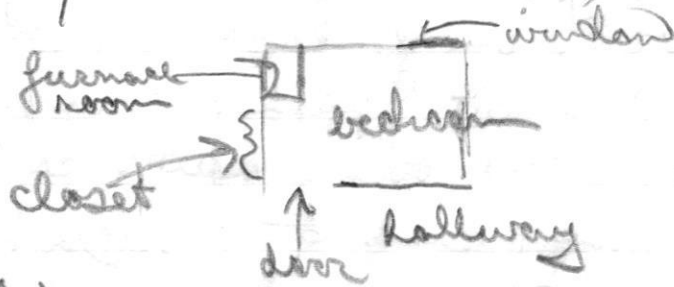
upon entry - immediate odor 10-11 ppm (theirs)
in living room (mine 10)

In bedroom w/ furnace (vent) readings
as high as 157 ppm

703 (vacant)

upon entry - mine 9-10; theirs (3 ppm CO)

In furnace/vent room - max 3-5 ppm (theirs)



708 (vacant)

In room w/ furnace = 77 ppm CO

912 (vacant)

low reading in living area 3-6 (total) = 3 CO

In furnace area fluctuated between 28 + ⁹⁰⁻¹⁰⁰ ppm

Appt w/ recent death 32 yr male
cause still unknown - may have been diabetic
= 11/13-14/88

{ orig GE furnaces - no longer made.
Eco Systems & Assoc - replace/test
furnaces
were contacted & agreed. Will call
tomorrow w/ sched

11/28/88

Central Alarm info

Sta 35, and 9. @ 4:06 AM

EMS

2 lethargic people
then to Hyperbolic

Exhaust fan for heating
system was not working

Lt. King was
at scene.

11/28
Karen
Fisher
at Central

Don
Commander Howe
to return

Fire Marshall

tel Conv w/ Jim Ladd

Kenny Manning #504
Mgmt

one person affected

in morning and out
in afternoon per Manning

730-4340

Lita Benton Mgr.

Units vent fan failed - gas heat

- Hood has complained about gas smells
and odors of combustion, he referred
her to us for gas detection

203 heat attacks
912 person died

Mrs Hood in 505, tel # 964 3621
will be back

11/28/88 Bert + F. Dpt w/ meter to OKM's Hood's Unit

Paper and Fri or Saturday

He called them and
they tried the heart of
me.

So before I could

call any body and every-
body as he has the

called to ask them

who would make the decision

as to whether I was going back
or. Also, who decides it was

the furnace that caused problem

Howard County Health Department

To: _____

Evelyn Hardy

1400 @ home

11/23/88

Geo Bernhart 1540

attorney for tenant @
Abbott House who was overcome

He had talked
From: Sep Fire Marshall John Eorp

heard it was a faulty fan.

Date: _____

HD-170

IMPORTANT MESSAGE

FOR

Grey

DATE

11/28/88

TIME

*12:55*A.M.
P.M.

WHILE YOU WERE OUT

M

Cmdr. Donald Howell

OF

PHONE NO.

992-2311

TELEPHONED

PLEASE CALL

CALLED TO SEE YOU

WILL CALL AGAIN

WANTS TO SEE YOU

RUSH

RETURNED YOUR CALL

MESSAGE

1600 called after talking to Geo Bernhard and Howe left for the day

SIGNED

IMPORTANT MESSAGE

FOR

Grey

DATE

11/29/88

TIME

*1:21*A.M.
P.M.

WHILE YOU WERE OUT

M

Cmdr. Freas

OF

Richard

PHONE NO.

992-2307

TELEPHONED

PLEASE CALL

CALLED TO SEE YOU

WILL CALL AGAIN

WANTS TO SEE YOU

RUSH

RETURNED YOUR CALL

MESSAGE

*He will not
be in tomorrow.*

SIGNED

11/28/88
Abbott House
- East Month

daughter called

964-3621

Every Friday is daughter's
Mary Reed-mother

on 5th floor

Dick Cummings

Shirley



Robb, Jim - to call back

880-3430

with responded + made determination

MARYLAND STATE DEPARTMENT OF HEALTH

Group Nursing Activity

I COUNTY		II AREA/DISTRICT			III NURSE			IV DATE				V TIME *		IX	
								MO.	DAY	YEAR	HRS.	MIN.			
<input type="checkbox"/> 00	<input type="checkbox"/> 00	<input type="checkbox"/> 00	<input type="checkbox"/> 00	<input type="checkbox"/> 00	<input type="checkbox"/> 00	<input type="checkbox"/> 00	<input type="checkbox"/> 00	<input type="checkbox"/> J	<input type="checkbox"/> 00	<input type="checkbox"/> 00	<input type="checkbox"/> 00	<input type="checkbox"/> 00	<input type="checkbox"/> 00	<input type="checkbox"/> 00	<input type="checkbox"/>
<input type="checkbox"/> 10	<input type="checkbox"/> 10	<input type="checkbox"/> 10	<input type="checkbox"/> 10	<input type="checkbox"/> 10	<input type="checkbox"/> 10	<input type="checkbox"/> 10	<input type="checkbox"/> 10	<input type="checkbox"/> F	<input type="checkbox"/> 10	<input type="checkbox"/> 10	<input type="checkbox"/> 10	<input type="checkbox"/> 10	<input type="checkbox"/> 0	<input type="checkbox"/> 00	<input type="checkbox"/>
<input type="checkbox"/> 20	<input type="checkbox"/> 20	<input type="checkbox"/> 20	<input type="checkbox"/> 20	<input type="checkbox"/> 20	<input type="checkbox"/> 20	<input type="checkbox"/> 20	<input type="checkbox"/> 20	<input type="checkbox"/> M	<input type="checkbox"/> 20	<input type="checkbox"/> 20	<input type="checkbox"/> 20	<input type="checkbox"/> 20	<input type="checkbox"/> 1	<input type="checkbox"/> 05	<input type="checkbox"/>
<input type="checkbox"/> 30	<input type="checkbox"/> 30	<input type="checkbox"/> 30	<input type="checkbox"/> 30	<input type="checkbox"/> 30	<input type="checkbox"/> 30	<input type="checkbox"/> 30	<input type="checkbox"/> 30	<input type="checkbox"/> A	<input type="checkbox"/> 30	<input type="checkbox"/> 30	<input type="checkbox"/> 30	<input type="checkbox"/> 30	<input type="checkbox"/> 2	<input type="checkbox"/> 10	<input type="checkbox"/>
	<input type="checkbox"/> 40	<input type="checkbox"/> 40	<input type="checkbox"/> 40	<input type="checkbox"/> 40	<input type="checkbox"/> 40	<input type="checkbox"/> 40	<input type="checkbox"/> 40	<input type="checkbox"/> M	<input type="checkbox"/>	<input type="checkbox"/> 40	<input type="checkbox"/> 40	<input type="checkbox"/> 40	<input type="checkbox"/> 3	<input type="checkbox"/> 15	<input type="checkbox"/>
	<input type="checkbox"/> 50	<input type="checkbox"/> 50	<input type="checkbox"/> 50	<input type="checkbox"/> 50	<input type="checkbox"/> 50	<input type="checkbox"/> 50	<input type="checkbox"/> 50	<input type="checkbox"/> J	<input type="checkbox"/>	<input type="checkbox"/> 50	<input type="checkbox"/> 50	<input type="checkbox"/> 50	<input type="checkbox"/> 4	<input type="checkbox"/> 20	<input type="checkbox"/>
	<input type="checkbox"/> 60	<input type="checkbox"/> 60	<input type="checkbox"/> 60	<input type="checkbox"/> 60	<input type="checkbox"/> 60	<input type="checkbox"/> 60	<input type="checkbox"/> 60	<input type="checkbox"/> J	<input type="checkbox"/>	<input type="checkbox"/> 60	<input type="checkbox"/> 60	<input type="checkbox"/> 60	<input type="checkbox"/> 5	<input type="checkbox"/> 25	<input type="checkbox"/>
	<input type="checkbox"/> 70	<input type="checkbox"/> 70	<input type="checkbox"/> 70	<input type="checkbox"/> 70	<input type="checkbox"/> 70	<input type="checkbox"/> 70	<input type="checkbox"/> 70	<input type="checkbox"/> A	<input type="checkbox"/>	<input type="checkbox"/> 70	<input type="checkbox"/> 70	<input type="checkbox"/> 70	<input type="checkbox"/> 6	<input type="checkbox"/> 30	<input type="checkbox"/>
	<input type="checkbox"/> 80	<input type="checkbox"/> 80	<input type="checkbox"/> 80	<input type="checkbox"/> 80	<input type="checkbox"/> 80	<input type="checkbox"/> 80	<input type="checkbox"/> 80	<input type="checkbox"/> S	<input type="checkbox"/>	<input type="checkbox"/> 80	<input type="checkbox"/> 80	<input type="checkbox"/> 80	<input type="checkbox"/> 7	<input type="checkbox"/> 35	<input type="checkbox"/>
	<input type="checkbox"/> 90	<input type="checkbox"/> 90	<input type="checkbox"/> 90	<input type="checkbox"/> 90	<input type="checkbox"/> 90	<input type="checkbox"/> 90	<input type="checkbox"/> 90	<input type="checkbox"/> O	<input type="checkbox"/>	<input type="checkbox"/> 90	<input type="checkbox"/> 90	<input type="checkbox"/> 90	<input type="checkbox"/> 8	<input type="checkbox"/> 40	<input type="checkbox"/>
								<input type="checkbox"/> N					<input type="checkbox"/> 9	<input type="checkbox"/> 45	<input type="checkbox"/>
								<input type="checkbox"/> D					<input type="checkbox"/> 10	<input type="checkbox"/> 50	<input type="checkbox"/>
													<input type="checkbox"/> 11	<input type="checkbox"/> 55	<input type="checkbox"/>

SECTIONS VI & VII CODED BY NURSE IN CHARGE ONLY.								
VI	UNIT OF WORK				VII ATTENDANCE			
<input type="checkbox"/>	1. VISIT TO SCHOOL				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	2. VISIT TO DAY CARE CENTER - MEB				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	3. VISIT TO DAY CARE CENTER - M, RETARDED				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11/29/88
Tel. Conv. w/ Commander Trease

Multi-gas
\$1200 / Explosimeter
CO

Call was as "a sick person" -

I thought they smelled gas @ hallway

- Mitrice ^{Manning} said for wasn't working @ the scene
- he wasn't surprised.



FIRE DEPARTMENT

Elizabeth Bobo, County Executive
Richard W. Shaw, Fire Administrator

TO: Bertram F. Nixon, Technical Services
Howard County Health Department
3525-H Ellicott Mills Drive
Ellicott City, Maryland 21043

FROM: David G. Ebersole, Lieutenant
Howard County Fire Department

DATE: December 12, 1988

SUBJECT: Air Samples of Various Apartments in
the Abbott House, 5495 Cedar Lane,
Columbia, MD 21044

On December 9, 1988, representatives from the Howard County Health Department, County Inspections, Columbia Management, Baltimore Gas and Electric Company, and myself conducted inspections of various apartments on different floors as a verification of subsequent repairs. The inspection was done with the same Three-Range Industrial Scientific CMX271 monitor which measures lower explosive limits of combustible gases, oxygen and carbon monoxide levels. The measuring range for carbon monoxide is from 0 to 1999 parts per million (ppm) and the accuracy for carbon monoxide is \pm 5% of the reading for 0-300 ppm and 7.5% of the reading for 300-1999 ppm.

As you are aware, the random sampling was done in the living area, near a heat discharge vent in living area and in the furnace closet area near the vent pipe. Although I recorded no readings, I believe the highest reading encountered was 7 ppm in one of the furnace closet areas. The monitor was tested with a known source of CO and found to be maintained and calibrated accurately.

I am enclosing a copy of the instrument's specifications for your information.

If you have any further questions or testing, please contact me at Fire Station #7, 992-2307.

DGE/rmw

cc: Richard A. Freas, Commander
Marna L. McLendon, Office of Law
Station 7 Files

w/encl.

INDUSTRIAL SCIENTIFIC

CORPORATION

Models CMX271 / HMX271

3-Range Monitors

CMX271

Carbon Monoxide,
Combustible Gases
and Oxygen

Part No. 1810-1113

HMX271

Hydrogen Sulfide,
Combustible Gases
and Oxygen

Part No. 1810-1139

These versatile instruments monitor ambient air for toxic gases, combustible gases and oxygen and are suitable for sampling confined spaces prior to entry.

Features

- CMX271 detects and measures concentrations of carbon monoxide (CO), oxygen (O₂), and combustible gases in ambient air continuously and simultaneously.
- HMX271 monitors for hydrogen sulfide (H₂S), O₂, and combustible gases.
- Audible and visual alarms warn user of potentially hazardous gas and high or low O₂ conditions, low battery condition, and sensor malfunction.
- Digital liquid crystal display (LCD) with built-in back-light provides constant, accurate readouts under all lighting conditions.
- Range to be displayed on LCD is easily selected or changed by touch-type switches.
- Power supplied by rechargeable nickel-cadmium battery pack, which operates for a minimum of 10 hours when fully charged.
- Plug-in sensor assemblies can be replaced in the field.
- Unique on-off switch prevents accidental shutoff.
- Dust-tight stainless steel case provides maximum protection for shock-resistant electronics and sensor elements.
- Optional accessories are available to enhance operating flexibility.



Applications

Model CMX271 and HMX271 3-Range Monitors, intrinsically safe designs, can be used in virtually any type of work environment to provide greater personal protection against potentially hazardous gases and an oxygen deficiency. Equipped with three plug-in sensor assemblies, these instruments continuously and simultaneously monitor ambient air for carbon monoxide (CO) or hydrogen sulfide (H₂S), combustible gases (such as butane, hexane, hydrogen, methane, propane, etc.), and oxygen (O₂). When equipped with an optional battery-operated sampling pump, both instruments can take remote air samples of enclosed or confined spaces prior to entry.

CMX271/HMX271

Range Selection

All gas measurements are revealed on an easy to read, digital liquid crystal display (LCD). The type of readout desired is selected by actuating one of three touch-type switches on the front of the case. Once activated, a specific readout will remain on display until an alternate sensor switch is touched. Carbon monoxide and hydrogen sulfide are measured and displayed in parts per million (ppm), combustible gases in percent of lower explosive limit (LEL), and oxygen in percent by volume. Integral switch-actuated incandescent lights provide display back-lighting for good readability under low light conditions.

Alarms/Warning Signals

These instruments have both audible and visual alarms, including warning signals related to battery power level

and sensors. All three sensor assemblies have adjustable limits and are furnished with a factory-set specific alarm point that can be changed easily in the field, if desired. Whenever a gas concentration or the ambient O₂ level reaches the appropriate sensor's preset limit value, pulsating audible and visual alarms are activated to warn the instrument user of potential danger.

Audible and visual alarms are provided for sensor failure or omission and low battery conditions.

Dependable Protection

CMX271 and HMX271 can provide an extra margin of safety in many different types of work sites. Their compact design, rugged construction, and reliable sensor elements assure optimum performance with minimal maintenance. And they will give fast warnings if a hazardous condition exists or develops at a job site.

Specifications

Case:	Stainless steel, dust tight, splash resistant.
Dimensions:	4.75 x 2.75 x 1.5 inches (121 x 70 x 38 mm).
Weight:	22 ounces.
Sensors:	Carbon Monoxide—Electrochemical. Hydrogen Sulfide—Electrochemical. Combustible Gases—Catalytic, Diffusion Type. Oxygen—Electrochemical.
Measuring Range:	Carbon Monoxide—0 to 1999 parts per million (ppm). Hydrogen Sulfide—0 to 1999 parts per million (ppm). Combustible Gases—0 to 99% LEL. Oxygen—0 to 30% of volume.
Accuracy:	Carbon Monoxide—±5% of reading for 0-300 ppm; ±7.5% of reading for 300-1999 ppm. Hydrogen Sulfide—±5% of reading for 0-100 ppm; ±10% of reading for 100-1999 ppm.

Accuracy:	Combustible Gases—±3% LEL for 0-30% LEL; ±7.5% LEL for 30-100% LEL. Oxygen—±.5% O ₂ for 10-30%; ±.75% O ₂ for 0-10%.
Power Source:	750 mA hour rechargeable, nickel cadmium battery pack.
Battery Life:	Minimum 10 hours per battery charge.
Readout:	Digital liquid crystal display.
Temperature Range:	-15°C to +40°C.
Humidity Range:	0-95% RH (Noncondensing).
Alarms:	Pulsing visual and audible alarms. Continuous visual and audible low battery alarms accompanied by display blanking. Expiring batteries indicated by a unique audible warning signal. Audible and visual alarms are activated when the oxygen sensor is missing. When the combustible gas sensor is open or missing, the fault condition will occur, and the audible alarm will sound a continuous tone. (See photo below).

2.1000 points calibrated
I do you have to set it up with the gas sensor?
Is it a good indicator?
How many reliable?
Simple Sec. Ft. work available



In the battery failure mode, the LCD becomes blank except for the numeral "1" and the word "LOBAT", and the audible alarm sounds a continuous tone. Approximately 1/2 hour before this condition, the audible alarm begins to beep periodically, with the time between beeps decreasing, as the battery nears the end of its useful charge life.



If the instrument's combustible gas sensor should malfunction, the monitor will go into a failure mode similar to the low battery failure mode. The word "FAULT" will appear in the lower left corner of this display, and the audible alarm will sound a continuous tone.

INDUSTRIAL SCIENTIFIC CORPORATION

355 Steubenville Pike • Oakdale, PA 15071-1093
 (412) 788-4353 • Toll Free 1-800-DETECTS (338-3287)
 TWX 510-697-4065 • FAX 412-788-8353

DISTRIBUTED BY

Handwritten notes and signatures under the distributor heading.



Beeper # Baltimore 291-2031
Beeper # Washington 668-7202

MARK HUSAK

Director of Maintenance Operations

COLUMBIA RESIDENTIAL MANAGEMENT
COLUMBIA, MARYLAND

Mike Rzepiennik

Office (301) 381-3360

MARKS 730 3430

RETTA / 1

21

GENERAL AMERICAN REAL ESTATE, INC.

Crystal Heights Office Center, 10005 Old Columbia Road, Columbia, MD 21046

THOMAS P. DOUGHNEY, Chief Mechanical Inspector
Bureau of Inspections, Licenses & Permits

(301) 880-3440

Public Works Annex
11226 Route 216
Laurel, MD 20707





BALTIMORE
GAS AND
ELECTRIC

KENNETH E. WIDERMAN

SERVICE SUPERVISOR - APPLIANCE SERVICE

CUSTOMER SERVICE DEPARTMENT

BALTIMORE GAS AND ELECTRIC COMPANY

2034 Greenspring Drive, Timonium, Maryland 21093

[301] 455-9027

EMERGENCY - DIAL 911



DAVID G. EBERSOLE

Lieutenant

OFFICE OF FIRE ADMINISTRATOR

3430 COURT HOUSE DRIVE

ELLICOTT CITY, MARYLAND 21043

PHONE: (301) 992-2311

992-2314