

3R - 64

REPORTS

DATE:

3/17/1986



United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VA. 22092

In Reply Refer To:
WGS-247345
Mail Stop 915

MAR 17 1986

Honorable Bill Richardson
Member, United States House
of Representatives
McKinley County Courthouse
Gallup, New Mexico 87301

Dear Mr. Richardson:

Thank you for your letter of February 3, 1986, concerning the case of Mrs. Guinevere Brady. As offered in our earlier correspondence, U.S. Geological Survey geologists did visit the Farmington area to try to determine the character and origin of soil gas on Mrs. Guinevere Brady's property, as part of an overall study of gases in the San Juan Basin. The general question appeared to be: Is the gas in question a relatively typical gas found in soils in many localities, or could it be natural gas leaking from nearby production wells or from the gas-producing reservoir rocks at depth throughout the area?

Samples were taken of the contents of polyvinyl chloride pipes stuck at some previous time into the soil of the Brady property. This gas, upon analysis, proved to be only air--that is, no potentially harmful gas was leaking up those pipes at the time of our sampling. We do not know how or why the gas-leakage situation now on the Brady property appears to be different from previously observed, but the samples we obtained certainly would not pose any danger.

A different situation was found in soil gas taken from the neighboring Roberts property on Camino Rio Street, however. That gas contained about 72 percent methane and 24 percent carbon dioxide (see enclosed table showing chemical analysis results). The methane content of the gas could be potentially dangerous.

In order to compare that gas on the Roberts property with locally produced natural gas, samples were taken from the only two nearby gas wells. Analysis of chemical compositions and carbon-isotope character clearly shows that the Roberts-property gas is different from the deep natural gas.

RECEIVED

MAR 20 1986

OIL CON. DIV.
DIST. 3

Honorable Bill Richardson

2

Except that it is evidently not related to natural gas production, we cannot tell from our sample results the origin of the soil gas of the Roberts property. Nevertheless, because there is potential for hazard in the gas found on the Roberts property, we are transmitting our findings to Mr. Frank Chavez, of the New Mexico Oil Conservation Division, who helped us in our survey. We hope that our information will aid local authorities in working with homeowners to address the matter of soil gas leakage.

Sincerely yours,

Dallas L. Peck

Director

Enclosure

Copy to: Frank Chavez ✓
Your Washington, D.C., office

Geochemical comparison of natural gas samples collected in Farmington, New Mexico, area

Gas Sample	Depth (ft)	C ₁ /C ₁₋₅ ^{a)}	¹³ C ₁ ^{b)}	C ₁	Volume percent ^{c)}			
					CO ₂	C ₂	C ₃	C ₄₊
Tycksen #1	1000	.914	-42.78	91.41	0.03	5.20	2.03	1.33
Gallegos Canyon Unit	6500	.871	-40.96	86.24	1.00	8.07	3.06	1.64
Vent-Roberts' residence Camino Rio St.	Surface	.942	-34.71	71.72	23.86	4.41	N/A	N/A

^aProportion of methane (C₁) in the hydrocarbon phase.

^b¹³C/¹²C of methane in the gas relative to ¹³C/¹²C of marine limestone standard.

^cChemical composition of gas. Major components expressed on air-free basis.

RECEIVED
 MAR 20 1986
 OIL CON. DIV.
 DIST. 2



MEMORANDUM OF MEETING OR CONVERSATION

Telephone Personal

Time 8:30 AM

Date 12/19/85

Originating Party

Other Parties

Jamie Bailey

Charles Threlkeld - USGS
(303)
236-9371

Subject Interpretation of gas analyses - Farmington leak

Discussion S HD analysis on methane = 172. "Indicative of deep producing gas origin." Sample date, 5/30/82.

Threlkeld would not commit himself on the origin of the gas, but did agree that many factors did point to origin from depth, of incipient metamorphism. The CO₂ content could be due to partial oxidation of methane, through bacterial activity, selectively oxidizing ¹²C rather than ¹³C.

Other experts to consult: Dudley Rice, USGS Branch Chief, and Jan Kaplan of UCLA + Global Geotechnical Corp.

Conclusions or Agreements

Distribution file

Signed Jamie Bailey



TONY ANAYA
GOVERNOR

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION



1935 - 1985

December 13, 1985

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Congressman, Bill Richardson
Federal Building
Gallup, NM 87301

Dear Congressman Richardson:

The following is in response to your letter of December 6, 1985, concerning the problem of "natural gas" in the soil in the area of Mrs. Guinevere H. "Winnie" Brady's home in Farmington, New Mexico.

The problem afflicting Mrs. Brady's property is both distressing and perplexing. Early in the course of this problem, this office spent in excess of \$250,000 locating and plugging an old well in the vicinity of Mrs. Brady's home. This well was initially suspected as the source of the gas, however, we believe the complete manner in which we carried the plugging operations on this well precludes it from further consideration. A special gas analysis conducted by the U. S. Geological Survey in June of 1984 showed that a gas sample collected from the problem area bears little resemblance to samples taken from the producing horizons existing below the area. A later sample shows this same dissimilarity. Unfortunately the test results are insufficient in and of themselves to pinpoint the source of the gas.

At this point we have no reason to believe that any well or any other facility under our jurisdiction is the source of the gas. However, with the impetus of your letter, I am turning my file on this case over to our Environmental Bureau to have them take one more look at the situation and to make recommendations for further action or study.

At this time there are no funds available to this agency which could be used to provide the kind of direct help Mrs. Brady apparently seeks. Our only "extra" funds are in the Reclamation Fund. These funds are used to plug abandoned wells when no other resources are available. In the past, attorneys in this Division and in the Energy and Minerals Department have carefully reviewed the range of available State resources for problems such as this and they have yet been unable to identify any.

We believe we acted promptly and properly in this matter. Our reservoir of ideas and options as to the problem is currently exhausted. The only thing that occurs to me is the possibility of your meeting with representatives of the city, the gas company, the insurance companies, and us sometime when you plan to be in Farmington. Perhaps through your

good offices, enough movement could be achieved to give Mrs. Brady a chance to move back into here house.

Sincerely,

R. L. STAMETS
Director

RLS/dp

cc: Paul Biderman
Frank Chavez



Congress of the United States
House of Representatives
Washington, DC 20515

Congressman Richardson's Office
Federal Building
Gallup, New Mexico 87301
(505) 722-6522

December 6, 1985

R. L. Stamets
Director
State Land Office Building
Oil Conservation Division
Room 206
310 Old Santa Fe Trail
Santa Fe, New Mexico 87504

Dear Mr. Stamets:

One of my constituents, Guinevere H. "Winnie" Brady, has contacted me on a matter of concern. I am now writing to you on her behalf.

Ms. Brady lives in Farmington and in November, 1981 the presence of a high level of gas was found beneath her home. Since then numerous and extensive contacts have been made with government agencies, all without success in solving the problem. Details are noted in the enclosed materials.

At this point Ms. Brady, a retired lady in her 60's, has been living away from her paid-off home for four years. I am very concerned in this matter and am writing to determine if there is any assistance your agency could provide. In particular, I have been advised that there is a pool of funds into which oil producers pay to handle emergencies. I wonder if such a pool might be tapped in this situation.

I am advised that under the New Mexico constitution that aid to private individuals is limited. However, I respectfully request you consider whether this could be deemed an expenditure for public purposes. I am informed of the following factors which might cause it to be so:

1. The house might possibly explode and thus cause harm to the public at large.
2. There is a school three blocks away.
3. There is a park nearby which sometimes contains hundreds of persons.

R. L. Stamets
December 6, 1985
Page 2

4. The danger of the house is a factor depressing to property values in the neighborhood.

I also suspect that if aid can be provided, it could be channelled through a local public body rather than to Ms. Brady in order to take necessary protective measures.

I would appreciate your careful evaluation of this situation. At your earliest convenience, I would then be grateful to know your findings and views. Please route a response to me through my Gallup office at the address noted at the top of the first page.

Thank you very much for any and all assistance you can provide on Ms. Brady's behalf.

Sincerely,



BILL RICHARDSON
Member of Congress

BR/dcn

Enclosures

cc: Winnie Brady

RELEASE OF INFORMATION

I, GUINEVERE H. "WINNIE" BRADY, do hereby authorize the release of any and all information contained in my file to any authorized representative of CONGRESSMAN BILL RICHARDSON'S office.
(please print full name)

I understand that under the privacy laws, federal and state, I do not have to give such a release but do so since I have voluntarily sought the assistance of CONGRESSMAN BILL RICHARDSON'S office.

I also understand that if deemed necessary by CONGRESSMAN RICHARDSON'S office, they have my full permission and authorization to forward any correspondence I may have sent them concerning said case.

I further understand that I will save harmless both the agency divulging the information and CONGRESSMAN RICHARDSON'S office as it relates to the giving and accepting of any information on my behalf.

Guinevere H. "Winnie" Brady
(Signature of Full Name)

2109 CAMINO RIO (MAILING ADDRESS)
(Address)

DO NOT SEND MAIL TO 2013 TICKET APT #4

Please Return This Form To:

McKinley County Courthouse
Gallup, NM 87301

FARMINGTON, N. M. 87401
(City and Zip Code)

505-325-5868
(Day Phone)

(Social Security Number)

This is delayed because it was sent to the Tucson address

TO: CONGRESSMAN BILL RICHARDSON
RE: GAS LEAK AT 2109 CAMINO RIO, FARMINGTON, N.M. 87401

PERSONAL PROFILE: GUINEVERE H. BRADY

FEMALE - AGE 65 - WIDOWED 1967 - RETIRED FROM TEACHING 1980 - HOME ACQUIRED IN 1958 - MOVED INTO HOME SPRING 1959 - HOME FREE OF ENCUMBRANCES BEFORE RETIREMENT - DISPLACED FROM HOME SINCE NOV. 23, 1981 - HAVE HAD TO RENT APARTMENT

CONCERNS:

- NO ONE APPEARS TO BE CONCERNED ABOUT PUBLIC HEALTH & SAFETY OF AREA - PUBLIC PARK 1/2 BLOCK FROM HOME - ELEMENTARY SCHOOL ONLY 3 TO 4 BLOCKS FROM HOME - CLOSE NEIGHBORS
- POSSIBILITY OF FIRE, EXPLOSION, THEFT, VANDALISM AT HOME
- DETERIORATION OF PROPERTY WHILE STANDING VACANT (SINCE NOV. 31)
- INABILITY TO GET FULL COVERAGE OF HOME (HOM POLICY CANCELLED IN 1982 - NOW UNDER FAIR PLAN - PARTIAL COVERAGE ONLY)
- POSSIBLE SUITS FOR ACCIDENT OR INJURY ON PREMISES

BRIEF OVERVIEW
GAS LEAK

1981

- DISCOVERED NOV. 16 BY GAS COMPANY OF NEW MEXICO ON ROUTINE CHECK OF THEIR GAS LINES - I WAS OUT OF TOWN - GAS COMPANY TURNED OFF GAS - DISCONNECTED ELECTRICITY - LEFT WATER TAPS RUNNING TO PREVENT FREEZING & MOVED REFRIGERATOR TO NEIGHBOR'S GARAGE
- NOT PERMITTED TO OCCUPY MY HOME WHEN I RETURNED NOV. 23 - ONLY LIMITED ACCESS TO HOME - DISCOVERED INSURANCE WOULD NOT TAKE CARE OF OUT-OF-HOME LIVING EXPENSES BECAUSE OF NATURE OF PROBLEM (POLICY COVERAGE \$10,200) I STAYED WITH NEIGHBOR
- BECAME VERY ILL NOV. 30 - HOSPITALIZED DEC 1 FOR 7 DAYS - AGAIN ON DEC 22 FOR 2 DAYS (I.C.U.) CORONARY
- BALANCE OF DECEMBER CARED FOR IN INDIVIDUAL'S HOME
- GAS COMPANY ABLE TO PROVE GAS NOT THEIRS - O.C.D TOOK OVER IN EARLY DECEMBER - STARTED SEARCH FOR OLD WELL WHICH THEY THOUGHT MIGHT BE SOURCE OF GAS LEAK - WELL LOCATED DEC. 13TH AFTER EXTENSIVE SEARCH (STATE MAPS DID NOT CONFORM TO ACTUAL LOCATION)
- O.C.D. STARTED PLUGGING OPERATIONS ON ABANDONED WELL DECEMBER 14, 1981 CEMENTING COMPLETED JAN. 13, 1982. NO POSITIVE RESULTS - WELL RE-ENTERED JAN. 29, 1982 FOR FURTHER TREATMENT & RE-PLUGGING COMPLETED FEB. 25, 1982 - THREE PERFORATED PIPES SUNK IN YARD WITH HOPES OF VENTING GAS OUT-OF-SOIL (APRIL 27, 1981) LAST EFFORT OF O.C.D TO CORRECT OR DETERMINE SOURCE OF GAS LEAK

1982

MID-FEB. PIPES IN HOME FROZE IN SPITE OF RUNNING TAPS -
AGAIN, INSURANCE WOULD NOT COVER DAMAGE

APRIL 30-TO

~~MAY 4~~ MAY 4 - LETTERS FROM O. C. D. & CITY OF FARMINGTON ADVISING:
1) EFFORTS SUSPENDED 2) ABSOLVED THEMSELVES OF EITHER
RESPONSIBILITY OR LIABILITY 3) DECLARED SITUATION A MARKET
NATURAL PHENOMENON 4) SOME HALF DOZEN SUGGESTIONS AS TO
HOW HOME MIGHT BE MADE SAFE FOR OCCUPANCY (AT MY EXPENSE)
NOTE: I DID NOT SEE FIT TO SPEND MONEY ON SUGGESTIONS UNTIL I
HAD SOME GUARANTEE OF BOTH SERVICES OF UTILITY & GAS (& SAFETY)

MAY 7 MY WRITTEN REQUESTS TO CITY & GAS CO. FOR RESUMPTION
OF UTILITY & GAS SERVICE & QUESTION OF GUARANTEE OF
SAFETY

MAY 11 CITY WOULD RESTORE SERVICES - BUT NO GUARANTEE OF SAFETY

MAY 18 LETTERS TO: DISTRICT O. C. D. SUPERVISOR FOR PERTINENT
RECORDS PERTAINING TO PROCESSES & OTHER INFORMATION
ON WELL; DIRECTOR OF ENERGY & MINERALS DEPARTMENT
RE: DISBURSEMENT FOR OUT-OF-HOME LIVING EXPENSES;
DEPARTMENT OF INSURANCE RE: COVERAGE OF POLICY

JUNE 22 GENERAL LIABILITY INSURER OF GAS COMPANY OF N. MEX.
ADVISED GAS WOULD NOT BE TURNED ON NOW OR FOR
LONG AS GAS WAS PRESENT

- EFFORTS SAN JUAN LEGISLATORS TO GET ASSISTANCE - (FUTILE)
- EFFORTS TO GET FUNDS FROM OIL & GAS RECLAMATION FUND (DENIED)

JULY 21 APPOINTMENT WITH HON. BRUCE KING, GOVERNOR - HEARD
OUR PLIGHT - ASSIGNED CHAS. TURPIN TO INVESTIGATE ALL AVENUES
FOR RELIEF FUND TO ASSIST US -

SEPT 16 *
NEXT PAGE

OCT. 8
SEPT.

MET WITH ATTORNEY IN SANTA FE - ATTORNEY CONTACTED CITY
OF FARMINGTON ATTORNEY (VIA TELEPHONE) & ENERGY & MINERALS
ATTORNEY IN AN EFFORT TO HIRE AN OUTSIDE CONSULTANT
TO DO SOME TESTS, ETC. TO PROVIDE MORE INFORMATION ON
THE PROBLEM. IT WAS SUGGESTED THEY SHARE THE EXPENSE AS
HOMEOWNERS COULD NOT AFFORD THE EXPENSE ON THEIR OWN.
NO REPLY WAS EVER RECEIVED & IT WAS QUITE BY CHANCE
I LEARNED THE CITY ABANDONED ANY ACTION AFTER
CONTACT WITH RISK MANAGEMENT. I HAVE NO IDEA
WHAT HAPPENED AS FAR AS ACTION IS CONCERNED ON
THE STATE'S PART

1982

- *
SEPT. 16 ATTORNEY WROTE FARMINGTON CITY ATTORNEY TO REVIEW
POSSIBILITY OF SEWER GAS - ATTORNEY REQUEST FOR
E. I. D. INVESTIGATION -
- OCT. 12
SEPT RESPONSE E. I. D. STATED PROBLEM BEYOND SCOPE OF DEPARTMENT
- NOV. 9 ANOTHER EFFORT BY ATTORNEY TO GET CITY, STATE, OCD,
RISK MANAGEMENT, & GAS CO. TO GET ASSISTANCE IN
MATTER OF OUTSIDE CONSULTANT (NO RESPONSE FROM ANY)
- NOV. 19 DENIAL OF FUNDS FROM THE OFFICE OF CIVIL EMERGENCY
PREPAREDNESS (LETTER FROM CHARLES TURPEN, CABINET SECRETARY)
ALSO STATED RECOMMENDATION NOT A FINAL DETERMINATION
- NOV. 22 LETTER FROM ATTORNEY TO DISTRICT OFFICE OF OCD.
FOR REPORT OF GAS LEVEL READINGS (NEVER FURNISHED)
- DEC. 3 LETTER FROM ATTORNEY TO GOV. KING ASKING THAT HE
BE REFERRED TO APPROPRIATE PERSONNEL SO AN ATTEMPT
COULD BE MADE TO RESOLVE THE MATTER ON AN AMICABLE BASIS
- DEC 30 LETTER FROM GOVERNOR TO ATTORNEY ASSIGNING PERBY
PEARCE AS PERSON TO CONTACT - ALSO IMPLIED THREAT THAT
RISK MANAGEMENT WOULD BECOME INVOLVED

NET EFFECT ALL PARTIES CONCERNED DENY RESPONSIBILITY

CORRESPONDENCE GERMANE TO PROBLEM ENCLOSED.

RESPECTFULLY SUBMITTED,
Guinnell A. Brady