



Attachment A

12/85
DOH/DEC

New York State Department of Environmental Conservation

MEMORANDUM

TO: Minerals Staff
FROM: C. Bruce McGranahan
SUBJECT: COMPLAINT PROCEDURES, PRIVATE WATER SUPPLIES
DATE: December 3, 1985

FILE

Effective December 1st, the State Department of Public Health in cooperation with Allegany, Cattaraugus and Chautauqua County Health Departments are instituting a new procedure for recording first instance visits for water well "contamination" complaints.

The change in procedure is as follows: Any requests that come in to this Office must be referred to the local County Health Authorities "LHU" rather than us log in the report. That is, when a complaintant calls you are to refer them to either Allegany, Cattaraugus or Chautauqua County Public Health. The phone numbers for the referral are as follows:

Allegany County Health Department	268-9250 or 268-9254
Cattaraugus County Health Department	375-4121
Chautauqua County Health Department	753-4481

The intent behind this new procedure is that the complaintant will receive health advise on the first instances from somebody who is procedurally responsible for same. The Health Departments will then refer the complaint to us and we will proceed in our usual manner to try and determine the cause of the contamination.

Attached is the supporting documentation for this new procedure. If you have questions concerning it, please see me. Incidentally, the local health units do have our water well complaint form which they will have the complaintant endeavor to fill out in its entirety and correctly. Thank you for your cooperation in instituting this new procedure.

CBM

C. Bruce McGranahan
Regional Minerals Manager
Region 9 - Olean

CBM/tg

Attachment

Attachment B

Selected Drinking Water Well Investigations Conducted by CCDOH* Potentially Impacted by Gas and Oil Well Activity

Abbreviations: petro=petroleum by-products; 503.1=VOCs; Cl=chloride; IOC=primary drinking water inorganics;

Complaint & Investigation Information								Well Information				Comments
Township	Complaint Date	Complaint	Investigation Date	Water Sampled	Analyses	Results	Conclusion	Type	Year Drilled	Depth	Depth to Rock	
Poland	Nov-1983	Methane gas in water well and house	11/83-5/84	yes	petro,503.1, methane - numerous times	high methane	Methane contamination					Problem reportedly impacted 12 homes in area; Short residence was worst. This is a very large file containing several consultant reports and a report by Dr. Harrison, hydrogeologist. Homeowner contacted NYDEC, Local, State and Federal representatives. Many Public meetings held. Methane tests show National Fuel lines are not the source of problem. Soil around house and in basement and well casing was vented to resolve problem. Data showed no abnormal levels for parameters tested except methane.
Sherman	4/25/1986	Salty taste in well water possible gas well contamination	5/9/1986	yes	Ca, Na, TDS, Cl, petro, 503.1, Fe/Mn	Ca-72mg/L, Na-840mg/L, TDS-2613mg/L, Cl-1270mg/L	well impacted by brine					No recommendation given to the homeowner about what to do with well water
Harmony	7/29/1987	Gas/Oil in water due to neighbors gas well	8/5/1987	yes	petro, 503.1, b act	Low levels of hydrocarbon contamination	Not safe for water consumption					Low levels of hydrocarbon contamination, not recommended for human consumption
Westfield	8/3/1987	Having problems with water	8/6/1987	yes	petro, 503.1, TDS's and chlorides	Na-2140mg/L, Ca-620mg/L, TOC's-8675mg/L, Cl-5250mg/L	well impacted by brine					Advised not to use water - recommended that they contact the NYSDEC for further advice
Pomfret	5/19/2003	Unusual taste suddenly appeared in tap water	1/22/2003	yes	Pb, NO3, NO2, Bact, Chlorides	all good except chlorides-5,670mg/l	well impacted by brine					Only source of Cl- in area are gas wells located upgrade ~750 ft; water well drilled into bedrock
Ellery	8/11/2006	New well has stong odor and bad taste	7/20/2006	yes	petro, VOC, S OC, IOC, PCBs, Chlorides, metals	Cl:2550-3140mg/l, Ba:4.4-5.2mg/l, TDS:3290-4280mg/l, Na:1070-1200mg/l	well impacted by brine; odor is H2S	drilled	2006	100	46.5	Extensive testing and chemical fingerprinting completed that shows well is contaminated with brine.
Hanover	5/11/2007	Contaminants in water including methane causing skin irritation/rash		yes	Chloride, Na, TDS,	Cl-800mg/l, Na-50mg/l, TDS-1600mg/l	well impacted by brine					Tested and investigated by Diefenbach Water Systems

*CCDOH = Chautauqua County Department of Health

Complaint & Investigation Information								Well Information				Comments
Township	Complaint Date	Complaint	Investigation Date	Water Sampled	Analyses	Results	Conclusion	Type	Year Drilled	Depth	Depth to Rock	
Kiantone	5/14/2007	Possible Gas well contamination in water well. Sample taken before and after gas well	5/14/2007, 1/9/2008	yes	pH, Hardness, TDS, Bact, Cl, Methane/Ethane	Levels for all parameters tested increased after gas well was drilled	Gas well impact	drilled	2/2/2005	85		Contact the gas drilling company for additional samples
Poland	8/8/2008	Gas in water	8/8/2008	no			Methane contamination	drilled	1967			Presence of gas bubbles in the water. Referring complaint to the NY Dept. of Conservation Mineral Resource Division for further investigation
Clymer	1/13/1986	Brine in well	2/5/1986	yes	Chloride and loc's	Positive for chloride, calcium, sodium and Hardness,	well possibly impacted by brine					Barium, Hardness and Chloride levels (very high 968mg/L) all exceed NY State MCL's
Chautauqua	6/2/1986	Salty taste to water possible due to local gas drilling	6/2/1986	yes	chloride, loc's	Cl-309mg/L, Ca-66mg/L, TDS's-744mg/L	well possibly impacted by brine	drilled	1976	106		Cl and other IOC's very high which exceed NY State MCL's
Ripley	6/25/1987	Problems with salt and sulphur in water well	7/13/1987	yes	Ca, Na, TDS, Cl	Bacteria levels high, Cl-244mg/L, TDS-575mg/L, Na-200mg/L, Ca-9.7mg/L	well possibly impacted by brine					Bacteriological sample was unsatisfactory (disinfection of well recommended), TDS slightly over recommended levels, Na and Cl-high, Treatment recommendations given to homeowner.
Gerry	2/17/2004	Unusual taste in tap water	2/17/2004	yes	Na, Fe, Mn, Ba, Chlorides	all good except chlorides-1,880mg/l	well impacted by brine or road salt					need water well info
Hanover	5/11/2007	Possible Gas well contamination in water well. Water causing skin irritation and burning		yes	TDS, Cl, Na	TDS-1200-1600mg/L, Cl-800mg/L, Na-500mg/L	well possibly impacted by brine					RO is the only way to remove Na and Cl from water
Ellicott	5/18/1984	Gas in water	5/18/1986	yes	chloride, turbidity, bact, methane	positive for chloride and methane	inconclusive	drilled		113		Water tested in May and Nov. Both times chloride levels were above MCL (412 and 396)
Ellicott	11/18/1983	Possible Gas well contamination in water well	11/18/1983	yes	petro,503.1	negative for parameters tested	inconclusive					Advised to contact NYDEC for further investigation
Ellington	5/29/1984	Methane gas in water	5/29/1984	yes	petro,503.1	negative for parameters tested	inconclusive	drilled	1960	113		No abnormal levels for parameters tested
Harmony	11/30/1984	Brine spreading on Stevens Road		no			inconclusive					Letter of concern written to NYDEC (Robert Wozniak) on 11/30/84. Respond by saying any complaints must be directed to the Town Of Harmony
Carroll	7/16/1985	Possible Gas well contamination in water well		no			inconclusive					No investigation on this complaint

Complaint & Investigation Information								Well Information				Comments
Township	Complaint Date	Complaint	Investigation Date	Water Sampled	Analyses	Results	Conclusion	Type	Year Drilled	Depth	Depth to Rock	
Cherry Creek	12/9/1985	gas in water	12/9/1985	yes	loc's	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Ellery	1/30/1986	Cloudy water that tastes like gas which burns his mouth	11/30/1986	yes	petro,503.1	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Hanover	2/4/1986	Methane gas in water	2/4/1986	no			None					No water test, no conclusions, no answers
Cherry Creek	2/7/1986	Taste and odor problems	2/10/1986	yes	petro,503.1	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Ripley	2/11/1986	Odor in well water, possible gas well contamination	2/25/1986	yes	bact	negative for parameters tested	inconclusive	drilled		42		No abnormal levels for parameters tested
Sheridan	2/21/1986	Drinking water contamination from local gas well drilling	2/25/1986	yes	bact	Bacteria levels high	inconclusive					Disinfection need of well
Stockton	5/7/1986	Gas odor and taste from well water	6/9/1987	yes	bact	Bacteria Levels high	Advised to boil water used for consumption					Disinfection need of well
Villanova	6/12/1986	Possible Gas well contamination	6/12/1986	yes	petro,503.1	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Villanova	6/12/1986	Possible well water contamination from local gas well drilling	6/30/1986	yes	petro,503.1	negative for parameters tested	inconclusive	drilled		60		No abnormal levels for parameters tested
Villanova	6/12/1986	Possible well water contamination from local gas well drilling	6/30/1986	yes	petro,503.1	negative for parameters tested	inconclusive	driven		32		No abnormal levels for parameters tested
Clymer	7/7/1986	brown color of water and particles in it since gas well fractured on adjoining property	7/7/1986	yes	petro, purgeable aromatics	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Busti	7/22/1986	Gas in water	7/22/1986	yes	petro,503.1	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Chautauqua	7/24/1986	Water is cloudy and dirty. Drilling rig has just pulled out of the area earlier	7/24/1986	yes	petro,503.1,b act	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Busti	10/6/1986	Gas in water	10/7/1986	yes	petro,503.1	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Busti	1/6/1987	Oily film on water and smells like gas	1/13/1987	yes	petro,503.1,b act	negative for parameters tested	inconclusive					No abnormal levels for parameters tested

Complaint & Investigation Information								Well Information				Comments
Township	Complaint Date	Complaint	Investigation Date	Water Sampled	Analyses	Results	Conclusion	Type	Year Drilled	Depth	Depth to Rock	
Chautauqua	1/26/1987	Gas and Oil odor and taste	1/28/1987	yes	petro,503.1,b act	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Pomfret	1/28/1987	Water tastes like salt, smells and killed tropical fish	1/28/1987	yes	petro,503.1,b act	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Ripley	1/28/1987	Odor in well water, possible gas well contamination	2/11/1987	yes	petro,503.1	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Ripley	3/30/1987	Fish dying in pond possible gas well contamination	4/13/1987	yes	petro,503.1	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Harmony	4/17/1987	Suspect brine from nearby gas well is contaminating their well	4/21/1987	yes	petro,503.1,b act	negative for parameters tested	inconclusive	drilled			9	No abnormal levels for parameters tested
Chautauqua	4/23/1987	Riley water with Methane in water. Can light faucet with match.	4/27/1987	yes	petro,503.1,b act	negative for parameters tested	inconclusive	drilled	1971		107	No abnormal levels for parameters tested
North Harmony	7/23/1987	Strange odor. Would like it tested for Bacteria, Gas/Oil and other chemicals	8/5/1987	yes	petro,503.1,b act	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Ellington	8/10/1987	Turbidity in water (for 2 weeks) maybe due to gas well contamination	8/10/1987	yes	petro,503.1	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Sheridan	11/2/1987	Salty taste in well water	11/2/1987	yes	Ca, Na, TDS, Cl	Ca-170mg/L, Na-230mg/L	inconclusive	drilled			36	No abnormal levels for parameters tested. Recommended that individuals on low Na diets should use caution if drinking water
North Harmony	3/7/1988	Taste and odor of gas in well water	12/14/1989	yes			unable to contact homeowner					No contact with homeowner
Ripley	3/10/1988	Well water yellowish in color possible contamination from local gas well drilling	3/10/1988	yes	petro,503.1,fe/mn,IOC's	Ba-0.12mg/l,Fe-0.35mg/l,Mn-0.06mg/l,Strontium-0.11mg/l	inconclusive					No abnormal levels for parameters tested
Ellery	3/22/1988	Water tap gives off strong gas smell	4/11/1988	yes	petro,503.1	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Busti	3/23/1988	Gas in water, can light faucet with a match		no			inconclusive					Called to set time to investigate, no answer
Poland	3/28/1988	Water has slight chemical odor and taste, possible gas well contamination	4/12/1988	yes	petro,503.1	negative for parameters tested	inconclusive					No abnormal levels for parameters tested

Complaint & Investigation Information								Well Information				Comments
Township	Complaint Date	Complaint	Investigation Date	Water Sampled	Analyses	Results	Conclusion	Type	Year Drilled	Depth	Depth to Rock	
Ripley	4/11/1988	Smell of gas coming from faucet	4/11/1988	yes	petro,503.1	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
Westfield	6/1/1988	Water tastes very salty, killing the house plants	6/1/1988	yes	petro,503.1,bact,TDS,Na,Ca,Cl	Ca-77mg/L, Na-410mg/L	inconclusive			80		Na and Ca were higher than recommended. Given info on how to treat water
Ripley	7/29/1988	Possible well water contamination from local gas well drilling	7/28/1988	yes	Ca, Na, TDS, Cl,petro,503.1,bact,Fe/Mn,bact	Ba-2.1mg/l,Fe-0.345mg/l,Mn-0.05mg/l,Na-160mg/L,Ca-64mg/L	inconclusive					Also investigated by NYDEC(Allen Alexander). TDS slightly over recommended levels, high Na. No direct link in local gas well to homeowners well
Harmony	8/23/1989	Gas odor and taste from well water		no			Needs water treatment system					No water test done.Given options of identifying and/or correcting the problems such as filtration
North Harmony	5/24/1990	Gas and oil complaint	5/24/1990	yes	petro,503.1,fe/mn,Chlorides	negative for parameters tested	inconclusive					No abnormal levels for parameters tested
	1/16/2007	Possible Gas well contamination in two water wells	1/16/2007	yes	TDS, Cl, Fe/Mn,503.1	negative for parameters tested	No impact from the surrounding gas wells				125&77.5	Homeowner has good water quality

Environmental
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FRUSTRATION

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FEAR

Attachment C

ANGER



The sign tells the world how Clarence and Susan Mundy feel about the gas leaks.

By JOHN MOORE

Natural gases mysteriously leaking into a Levant home in southeastern Chautauqua County and a number of Cobham Park Road area homes in eastern Warren County has ignited the emotions of a slew of apparently innocent families.

In both communities, hard-working families are attempting to keep their lives and their homes in some sort of order while the problems are tangled messes of legal responsibilities.

In Levant, Tim and Debbie Short and their family of 427 Willett Drive have slept on a "time-bomb" for five months.

Their problem started in October 1983 when water from their well became cloudy, bubbly and tasted bad.

"The water is so bubbly at night it's like you put some alka-seltzer in it," said Mrs. Short. But they didn't believe they had a big problem ... yet.

On Nov. 2, an explosion blew the cover off the water well. Short said he was concerned, but "it still did not ring a bell."

The next morning, National Fuel Gas workers who were called in discovered explosive levels of natural gas seeping out of the ground.

"Things happened so fast," said Mrs. Short. "Within a

couple of hours, they checked it and had the (gas) meters turned off."

The Shorts were feeling anger, panic and confusion. The family — including Matthew, 8, Jason, 5, and Timmy, 2 — moved in with Mrs. Short's parents for two days.

After digging two trenches in the backyard, the gas levels dropped and the gas service was resumed two days later. The Shorts moved back home.

But the unwanted gas is still leaking and no one seems to know the source.

Short works on the problem continuously. With the help of friends and relatives, he has driven five pipes into the ground to help release the gas. He rented a back-hoe to dig the trenches. He bought a gas-detector that shrieks if the gas level get to high.

He calls state and local officials religiously.

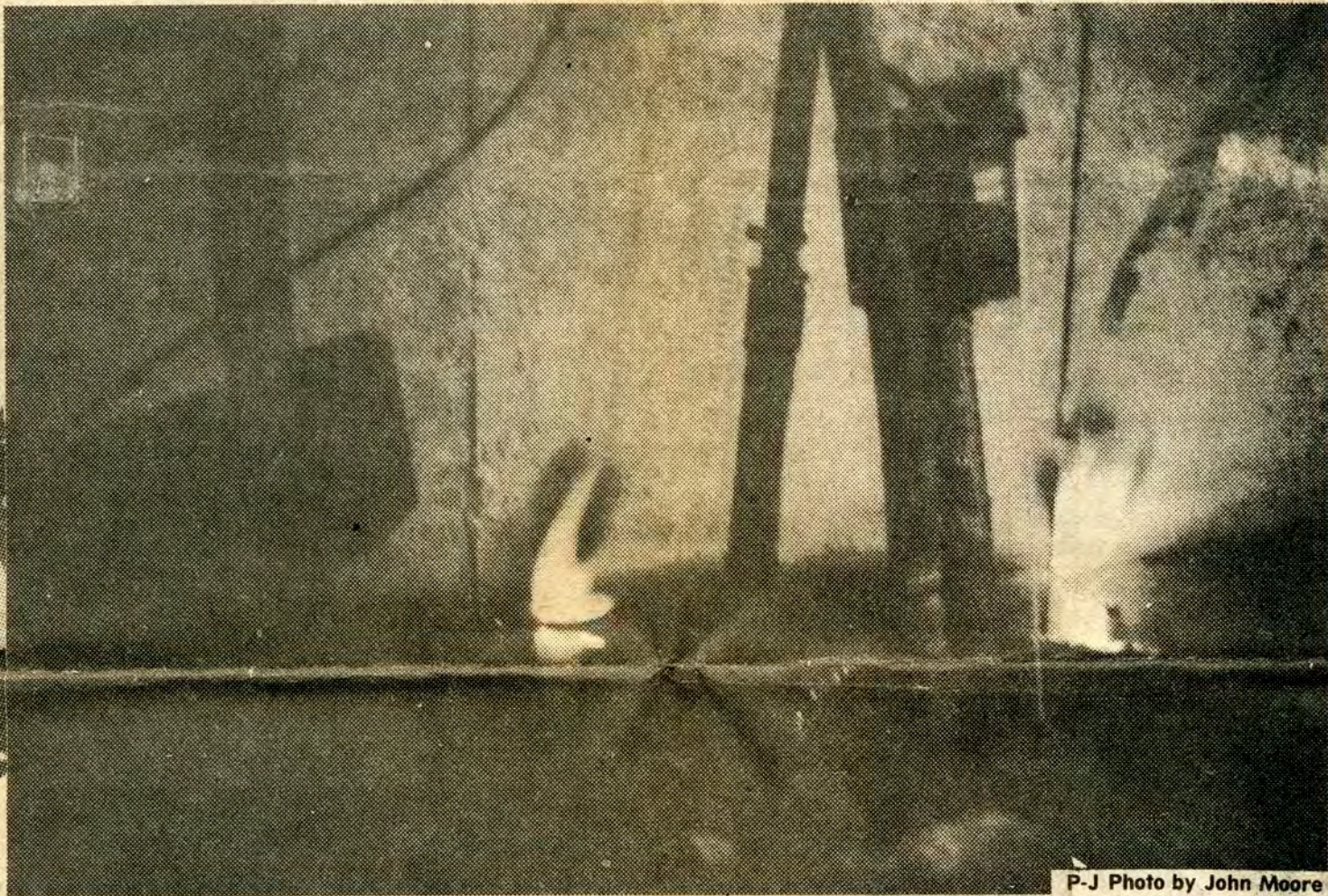
The gas levels fluctuate with the weather conditions. The siren went off once when the weather got warm in February. "It's a very piercing siren," said Mrs. Short. She packed up the kids and went up to her mother-in-law's house.

Because their water contains 5.5 percent methane, for the past three months they have been bringing their water in from their parents' houses. The methane will ignite if water is placed in a container and a match is held over the

Want, Warren Families

MAR 24 1984

Tell Their Stories



P-J Photo by John Moore

The seeping gas is shown burning in the Mundy's basement.

lid.

"I feel reasonably safe now," said Short, adding that he can't help but worry about his family. He took up smoking again.

Mrs. Short wants to do some more painting and remodeling. Short was building a garage so he can work on cars — his hobby. "If I tried to sell the house right now, I couldn't get the face value of it if I wanted to," he said.

His wife added, "We feel like we want to get on with our lives ... we are on hold. It's been five months. I hope it's not going to take another five months."

Short said he is frustrated with dealing with bureaucratic red tape. Mrs. Short added, "we just hope they are going to do what they say they are going to do."

Down in the Cobham Park Road area, about 50 families have been affected by a gas leaks. However, some action is being taken.

A temporary injunction was ordered Thursday to force Ellington Hardwood of Cherry Creek, the major gas driller in the area, to cut the pressures in all of its well sites in the area down to zero.

For the past year, however, the situation there has been a nightmare. Some families were forced to evacuate their homes last weekend.

Clarence and Susan Mundy and their daughter Jill, 6,

fled from their 245 Cobham Park Road home Sunday night when a 100 percent gas reading was discovered in their basement. The family has been staying with friends in North Warren since then.

"My hand shakes constantly," said Mrs. Mundy. "My daughter won't sleep alone. If we talk about it in front of her she gets headaches."

She said her nerves have re-inflamed an ulcer and she has doubled her cigarette smoking — but not in the house.

Throughout the past week, gas leaks in their basement wall would burn with a blue flame when ignited.

Right next door, the Buerkle family — Robert, Connie and their son, Rob, 13 — had the same problem but wouldn't budge.

Buerkle said the local fire chief recommended that they shut off their gas and leave the home. But even if the chief had shut the gas off, Buerkle said, he would stay.

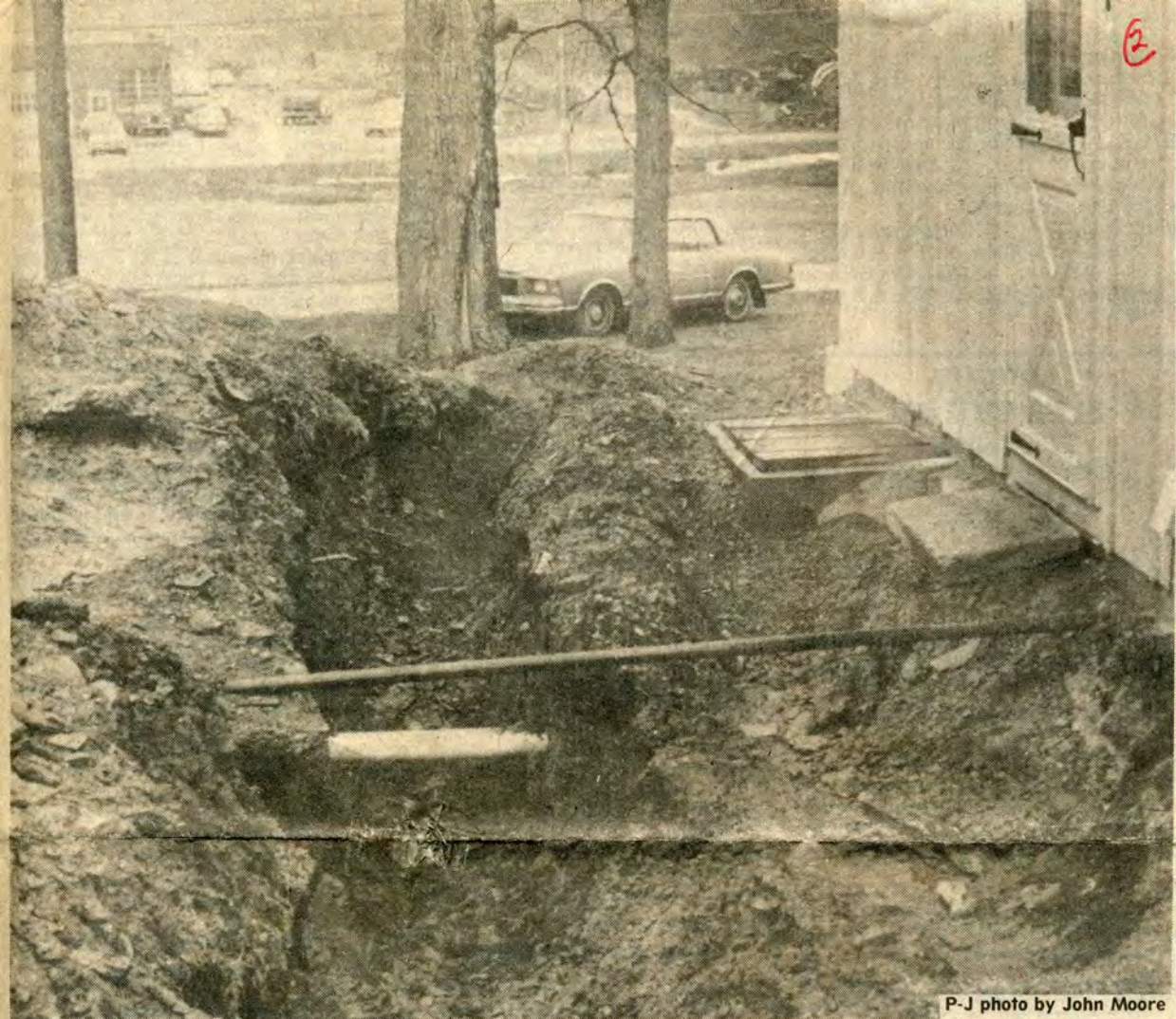
For both families, the day-to-day responsibilities that are taken for granted had come to dominate their lives.

"We really go back to primitive lifestyles," said Mrs. Buerkle. "You spend your all afternoon farming your laundry off to your relatives."

Both families, however, have no thoughts about moving.

"If I was to sell my property now, I wouldn't get a fraction of what I spent for it," said Buerkle.

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P-J photo by John Moore

Shown is a ditch dug at Tim Short's house in Levant in bid to ease gas problem

Gas Samples May End Area Mystery

MAR 31 1984

By JOHN MOORE

LEVANT — A small army of private and state officials spent Friday afternoon drawing gas samples from the area around Tim Short's house in Levant.

For the past six-months, Short's house and property at 427 Willet Drive have been plagued with unaccountable natural gas leaks. The officials hope that the source of the gas will be found by Wednesday, when the results return from the two private labs.

So do Short and his family.

Representatives from the Department of Environmental Conservation, the Chautauqua County Health Department, the state Public Safety Commission and National Fuel Gas were there.

Bruce McGranahan, mineral resources manager for the DEC, said that gas samples were taken from three holes in Short's front yard and four nearby gas wells.

He said two private labs — one hired by NFG and the other by Short — would run replication tests to see if any similarities can be found in samples from the two sources.

The gas from Short's property and from the NFG line that runs in front of the house also are to be tested for

mercaptan concentration. Mercaptan is the odorant added to natural gas.

McGranahan said the DEC also used a "gas-sniffer" to directly test the area for leaking gas.

He said the area in front of Short's house where the three holes have been drilled — an area directly over the NFG main pipeline — registered high gas readings.

However, completely negative readings were registered in the entire area in a one mile radius away from the front yard, he said.

Peter Skinner, director of scientific services for the Environmental Protection Bureau of the state Attorney General's office, also was on hand.

He said Short may have a "double problem" — gas leaks from more than one source.

Skinner said the gas wells that were tested Friday were highly pressurized, a situation that surprised him. He said the high pressure could be forcing the gas out away from the different wells, causing a cross-contamination problem.

He said that the results of the mercaptan tests could provide the evidence for the source of the leak.

Levant Family Evacuates Gas-Plagued Home

By JOHN MOORE

Tim Short and his family evacuated their home in Levant last night.

The Short's Willet Drive home has explosive levels of methane gas leaking into its basement and water supply. The situation has been going on since Nov. 2, but gas levels have shot up dramatically in the past few days.

Short said he and his wife, Debbie, and their four children will stay with his father temporarily.

"It's hard for a little kid to comprehend," he noted. "The kids are taking it hard."

Mrs. Short said this morning that Kennedy Fire Chief Les Moore is to test the gas levels in and around the house regularly. She said if the levels go back down, the family will return home; if not, they will to a mobile home that her father owns near Bemus Point.

Short and some two dozen other Levant-area residents voiced their concerns to Poland Town Board members Tuesday night in Kennedy. Many asked if the town has any power to regulate gas-well drilling within its borders.

Town Attorney Paul V. Webb said the town's power to regulate is pre-empted by the state's environmental conservation laws. He said state Department of Environmental Conservation officials take the position that if a well is not proven to be a source of the gas, then the problem is the result of a natural phenomenon.

"The burden of proof is on the landowner," said the attorney. "It's an easy way out for the DEC." He also said that situation will remain as it is until the state legislators pass new laws. He suggested that the way to get the laws changed is for the local people

to keep pushing their state lawmakers.

Although landowners have the right to sue gas companies, Webb added, the town doesn't even have the legal standing to join a landowner in a suit.

"Our hands are tied," said Town Supervisor Barry Leyman. "The board wants to help, but can't."

Leyman also contended that the town is not being informed of the latest Levant developments. He said the agencies and lawmakers involved with the situation "tend to inform" only those they wish to inform.

A number of residents expressed disgust with the way the DEC has handled the investigation.

Oleta Barton, whose Lindquist Drive home has gas bubbling up out of the backyard, said the DEC promised to give her the lab results of the gas

samples taken from her yard, but not done so yet.

Alton Sprague, a Kennedy resident who lived in Levant for 50 years, he believes the DEC has been unprofessional in its handling of the situation.

One resident asked how the DEC staffers could say the gas is a natural phenomenon when it just started in last six months. County Legislator Lynn Crandall, R-Kennedy, replied figure that they figure that they figure it out."

Mrs. Crandall said testing of the water should have taken place when the gas first showed up in November. She said if well-fracturing had caused the problem, the chemicals used would have shown up then. Because the DEC took so long to test the water, she said any fracturing chemical that might have been there is gone by now.

DEC Findings In Levant Disputed By Professor

By JOHN MOORE

The gas problems in Levant that have forced some residents from their homes and have contaminated 15 water supplies appear to be caused by one or more nearby gas wells, according to Dr. Samuel S. Harrison.

The professor of geology and chairman of the environmental-sciences department at Allegheny College in Meadville, Pa., recently was hired by Tim Short of Levant to try to determine the source of the gas contamination.

Short, his wife, Debbie, and their children evacuated their home about three months ago because explosive levels of gas were detected in their house and water supply.

Harrison said Tuesday he based his opinion about the source of the contamination upon an examination of all the data gathered during the 9-month-old situation.

Much of that data has been compiled by the state Department of Environmental Conservation, which is of the opinion that the gas is the result of a natural phenomenon.

Randy Nemecek, DEC assistant petroleum engineer, said the department's position has not changed. He added he believes the DEC's tests were very complete.

But Harrison said he believes the data indicates the problem does not have natural causes. He said it appears that the DEC did not test to find out if each gas well's annulus — the open area around the production string deep in the ground — was pressurized. Harrison said a pressurized annulus is one of the most common causes of groundwater contamination. He recently wrote a scientific paper explaining his position.

The main testing procedure the DEC used was sonic testing, which involves shutting a well, running acoustic equipment over the wellhead, and listening for gas movement. Although he has never performed sonic testing, the professor said, it looks as if such a method does not check for annular pressure.

Nemecek said sonic testing does not check for annular pressure, but that DEC personnel took separate pressure

readings of the 15 to 20 wells that were tested.

The DEC engineer suggested that Harrison might plan to examine some of the gas wells which the department chose not to test. He noted that the DEC tested the wells it determined to be the most likely cause of the contamination.

Harrison said he is acquiring well logs which show geological formations and rock structures from the DEC and the well operators in the Levant area. The main thrust of his research, he said, is to determine the annular pressures of the wells in a broad area around Levant. After he gets all of the necessary data, he said, he will compile a final report on the situation.

Harrison said his work is progressing slowly, but all of the parties involved have been providing the well logs.

Mrs. Short said this morning from the trailer the family is calling "home" that little has changed for them, and that they anxiously await Harrison's study.

Volunteers Help Rid Levant Home Of Gas

LEVANT — Through the efforts of an army of volunteers, the basement of Tim Short's gas-filled Levant home was excavated during the weekend as part of a plan to seal the gas out.

Short said the digging was completed by Sunday night. "I'd just like to say thanks to all those who donated their time and equipment," he added. "Many people worked hard and long to help me out."

The Short family has been plagued by natural gas since November, when it contaminated their water supply and began filling up their house. They left their home in May because gas concentrations had reached an explosive level.

The plan to keep the gas out involves a synthetic liner and reinforced basement walls.

Short could not offer a completion date for the project. He said he will be consulting with Peter Skinner, head engineer for the state Attorney Gen-

eral's Environmental Protection Bureau, to work out the rest of the details. According to Short, Skinner was in-

strumental in developing the plan to get the family out of a trailer court in Ellery and back into their home.

Levant Family Turns To An Expert For Help

JUL 10 1984

By JOHN MOORE

Tim Short, a Levant resident whose Willet Drive home has been contaminated with explosive levels of methane gas, has hired a geology professor to try to find the cause of the problem and to see if there are grounds for a lawsuit.

Short told *The Post-Journal* earlier this week he is confident that the gas mystery will be solved by Dr. Samuel S. Harrison, chairman of the Environmental Science Department at Allegheny College in Meadville, Pa.

Short, his wife, Debbie, and their three children, evacuated their home about two months ago when gas reached explosive levels in and around the building and in their water supply. The family now lives in a trailer in the town of Ellery.

The problem developed last November. Since that time, a number of state and county officials have investigated, but have been unable to find a solution.

After a lengthy investigation, the state Department of Environmental Conservation determined that the gas problem was a "natural phenomenon," and a panel of professors from Fredonia State College concurred with that assessment several months ago.

"We're putting a lot of faith in Dr. Harrison," said Short, who hired him June 28, the day after the professor presented a lecture at Jamestown Community College on the sources and prevention of groundwater contamination.

Harrison, contacted at his home Monday afternoon, said he is examining all the data that has been compiled on the situation. He said he has toured the Levant area twice, inspecting Short's home and Clarence Barton's property, where gas is bubbling out of the ground. He added he also has gathered some data of his own.

"I am impressed by the amount of work the DEC has done," Harrison said. He added, though, that does not necessarily mean that he agrees with the agency's assessment.

He noted that he is "tremendously impressed" with the Shorts: "I have never worked on a case as well-organized."

The professor said he has been hired to tackle similar situations in Northwestern Pennsylvania, and has come out with court victories on several occasions.

Harrison said the work he is gathering may or may not lead to a lawsuit. He said he will be putting together a preliminary report in about a month. From there, he said, it will be the Shorts' decision whether further action is taken.

The professor noted that he has been in contact with the DEC, particularly the Olean office, and the agency has been cooperative with him.

Bruce McGranahan, mineral-resources manager for the DEC's Olean office, said, "I'm looking forward to working with Dr. Harrison."

The professor said he has seen contamination problems similar to the

Levant situation, but he was surprised by the amount of gas involved. He added that he would not eliminate the Falconer Central School gas well — which has been found by the DEC to be hazardous and in violation of state drilling regulations — from being a possible source of the contamination.

The Shorts, with the help of several friends, have been waging a mini-campaign themselves to convince state and local politicians that gas and oil drilling in the area requires stricter regulation to prevent contamination problems.

Short said he recently helped distribute 6,000 flyers protesting the laxity of drilling regulations. The flyers, distributed to local residents, are to be mailed

to federal, state, county and local government officials.

Short estimated that he already has spent between \$5,000 and \$7,000 in attempting to determine the cause of the gas in his house.

Harrison said it would take about \$2,000 to get enough evidence to get the matter into court, followed by a court battle of at least two years.

The Short family seems willing to put up with the struggle.

Tim Short has been a maintenance mechanic at Carborundum in Falconer for 12 years. "I'm hoping to get some answers before it's too late," he said. Short explained that he and his wife are willing to go to such lengths for themselves, the people of Levant and the people of Chautauqua County.

A Ray Of Hope In Levant

AUG 24 1984

By JOHN MOORE

A plan to get Tim Short and his family back into their gas-plagued Levant home is being undertaken with the help of a state engineer and several local businesses and volunteers.

The plan involves sealing Short's basement with a plastic liner and digging a trench around the house's perimeter, then installing perforated drainage pipe to vent off the gas.

Gas has been seeping into Short's Willet Drive home and water supply since November. Short, his wife, Debbie, and their three children were forced to evacuate the structure in May because the gas levels had reached an extremely explosive level.

Although many public officials have examined the problem, no single source of gas has been discovered. The Shorts and more than a dozen Levant households have found they have little recourse for dealing with the gas.

Peter Skinner, head of the state Attorney General's Environmental Protection Bureau in Albany, developed the plan and was in Levant on Thursday helping Short get it started.

"The basic idea is to get the community to help these people out," Skinner said. "We are trying to prevent the gas from coming into the home."

The plan's first step, which is under way, involves digging a six-foot-deep trench around the house, he said. Then about 18 inches of earth and stone are to be dug out of the basement floor, he said.

Skinner said that after the floor is excavated, perforated drainage pipe will be installed in the floor and trench and covered with gravel and sand. The pipe will be a vehicle for the gas to escape into the air outside the house, he explained.

A synthetic liner 30-mils thick is then to be sealed to the basement floor and walls, he said, and covered by gravel and sand.



P-J photo by John Moore

Tim Short digs a trench around his Willet Drive residence

The liner, which was donated by a New Jersey firm, is most commonly used to line sanitary landfills or leachate ponds.

Skinner said Short's gas problem is more severe than for the other Levant residents because the basement walls are made of stone and the gaps allow the gas to enter.

The state engineer said a Levant contractor donated the use of a backhoe to dig the trench and a local lumber company donated the drainage pipe. He said Kennedy volunteer firemen and Poland Town officials have offered to help with the basement excavation.

Skinner, whose expertise is in landfill design, said the hardest work will be digging out the basement, and that a conveyor is needed to do the job.

Short, who works at Carborundum in Falconer, said he is skeptical of the plan, but hopes it will work so he and his family can return home. They now are living in an Ellery trailer park.

"Of course, after the liner goes in I have to get the water fixed,"

Short said. "I'll still be worried about my family."

Skinner acknowledged that his plan does not address the contaminated water supply, but said it is a method to get the Short's back into their home.

He said he was not sure what the source of the Levant gas is, adding that there is not enough "court-level proof" to determine if the gas is a natural phenomenon or is caused by gas well drilling.

Skinner suggested that funds to help the residents might become available if the town of Poland were to declare a state of emergency in the area.

He cited a situation in Moreau Township near Glens Falls, N.Y., in which the town supervisor made the declaration because a number of water supplies had become contaminated with various chemicals, including PCBs.

He said the declaration got the residents \$34,000 for water filters. The supervisor's move was upheld with an informal opinion from the state attorney general's office.



Help Thy Neighbor

AUG 31 1984

About three dozen Kennedy volunteer firemen and local citizens donated their time and elbow grease Thursday night to try to help **Tim Short** move back into his gas-filled Levant home. Volunteers began digging out 18 to 24 inches of compressed earth from Short's basement floor. A synthetic liner then is to be sealed to the floor and walls in an attempt to keep out the gas that has

contaminated Short's water supply and filled his basement. Kennedy Fire Chief Les Moore said a gravel conveyer, air compressor, jackhammer and a lot "of wheelbarrows and shovels and sweat" have been donated by local people. He said volunteers from six fire departments will work at the home Saturday, and more volunteers are being lined up. P-J photo by Roger D. Roselli Jr.

More Hands Sought In Levant Effort



By JOHN MOORE

SEP 1 1984

LEVANT — A growing volunteer effort to block the invasion of explosive methane gas in Levant home continued Friday night and will go on today and tomorrow, according to Kennedy Fire Chief Les Moore.

More than 30 local people have volunteered their time, money and muscle to try to get and keep the gas out of **Tim Short's** house, Moore said, but more volunteers are needed.

The house on Willet Drive has been contaminated with methane gas since November. The Shorts evacuated in May when the accumulation of gas reached highly explosive levels.

A 7-foot-deep trench was dug around the foundation last week and perforated tubing was installed to help vent the gas away from the house. Volunteers, including 30 Kennedy firemen and citizens, began excavating 18-24 inches of packed earth from Short's basement floor Thursday night. The plan is to seal the floor and walls with a synthetic

liner to keep the gas out of the house.

Moore said volunteer firemen from Frewsburg, Ellington, Falconer, Kiantone, Fluvanna and Gerry are to continue the work this morning.

He said Friday night that the basement was about 25 percent excavated. But the work must be completed by Sunday night because a rented gravel conveyer has to be returned, he added.

Short, who said he was very happy and surprised about the big work crew, added, "I won't rest until the job is done. I'm not getting my hopes up — I've done it too many times."

He complimented Moore and Chautauqua County Legislator Evelyn Crandall, R-Kennedy, for doing much of the telephoning and organizing of the work parties. "I've gotten more help from Kennedy Fire Department than anyone else," he added.

"My guys take it as a challenge," Moore said. "When these guys do something they have fun."

The chief said any one who wants to

volunteer some muscle should go to Short's house today or Sunday, preferably with wheelbarrows and shovels.

Short's water supply, along with more than a dozen other Levant water supplies, also is contaminated with gas, and everyone involved with the project acknowledged that this problem is not being addressed.

However, Mrs. Crandall said she is confident that money will become available to fund a water-quality-district to get treatment equipment for the Levant wells or to extend Jamestown's water supply.

Poland Town Supervisor Barry Leyman, who also is helping with the project, said he is holding back on declaring an emergency in the area until water district funding efforts are exhausted.

He said an emergency declaration is a last resort and he would like to more thoroughly examine the consequences of such a declaration.

Attorney General Sets Levant Conference

By JOHN MOORE

New York State Attorney General Robert Abrams plans to visit Levant on Wednesday to discuss water contamination there and to congratulate the community for aiding the Tim Short family.

Nathan Riley, Abrams' deputy press secretary, said Abrams is to speak at Short's Willet Drive home at 1:15 p.m.

Riley said a team of state attorneys and scientists are to meet there from 5-8 p.m. to hear about any water and/or possible drilling-associated problems.

"We are going out there to thank the people who so generously contributed to

the Shorts," he said. "We are exceedingly pleased that so many people were able to pitch in."

Short's home and water supply became contaminated with gas in November. Soon afterward, another dozen Levant water wells became contaminated. The Shorts evacuated their home in May because the gas levels had reached extremely explosive levels.

A plan developed by Peter Skinner, head engineer for the attorney general's Environmental Protection Bureau, was recently enacted to get the Shorts back home. It involves digging trenches around the house, installing

perforated pipe to vent the gas and sealing the basement floor with a synthetic liner.

Skinner said the job will be done in about a month, thanks mainly to the efforts of a small army of volunteers. "I'm very thrilled with the outpouring of community effort," he said.

Short said he is excited about Abrams' visit, but is still skeptical about moving back home until his water supply is decontaminated.

Short invited anyone with contamination or well leasing problems to come and talk to Abrams' staff members so "they won't have to go through what I

did."

Riley said it is the opinion of Abrams' staff that, in many cases, the cause of water contamination in the area is gas and oil well drilling. He said water contamination is a growing problem that is often extremely difficult to pinpoint to a single source.

The state Department of Environmental Conservation, which investigated the Levant situation, maintains that until the gas can be pinpointed to a single source, the cause is considered a natural phenomenon.

Bruce McGranahan, mineral-resources manager for the DEC's Clean office, said he respects the opinion of the attorney general's office, but felt it was only speculation: "What is its basis in fact?"

He said he would love to fix the Levant gas woes, but, unless they can be pinpointed to one or more gas wells, it cannot be done by the DEC.

Riley said that because it is so difficult to pinpoint a gas source, state officials are examining ways to create more protection for water supplies.

Skinner said Abrams' office wants to learn more about the problems associated with gas and oil drilling occurring in this area. He said his office recently received 100-200 letters from area residents concerned about drilling hazards.

"We want to get a better handle on gas problems in the area for further investigation," he said. "We want to know more before we strike."

"This is 'educate the attorney general day,'" he added.

THE POST-JOURNAL, Jamestown, New York—Wednesday, October 24, 1984

Seal To Prevent Gas Leakage Nearly Done At Short Home

By JOHN MOORE

Work to seal the basement of Tim Short's Levant home to keep gas out is nearly completed, according to a state environmental official overseeing the project.

Arrangements are being made to bring in a synthetic liner to be sealed to the basement floor and walls of Short's Willet Drive home, said Peter Skinner, head engineer for the state Attorney General's Environmental Protection Bureau in Albany.

Short and his family were forced to evacuate their home in May when gas levels in the basement and water supply reached extremely explosive levels. The gas-contamination problem was first detected in the home in November.

Skinner said he expects the liner, which normally is used to seal landfills and leachate ponds, to be brought in from the Niagara Falls area by the second week of November. A firm there — SCA Chemical Waste Services — is donating the liner.

The state official said it should take about a week — with the help of some experts he is rounding up — to seal the

liner in place.

Skinner developed the plan to seal the gas out of the home. Preliminary work involved digging trenches around the perimeter of the structure, then installing perforated pipe and gravel to vent the gas.

Work on the project began in late August. During the Labor Day weekend, more than 30 volunteers banded together to dig 18 to 24 inches of compressed earth from the basement floor to make room for the liner.

Since that time, Short has been preparing the basement almost every night after work until 9-10 p.m. and all day on the weekends. "I couldn't even guess how many hours I have put in," he said.

Short, a maintenance mechanic at Carborundum in Falconer, said he has reinforced the basement's fieldstone walls with cement, and placed perforated pipe on the floor and hooked it to the perimeter venting system. He then covered the pipe with gravel and a felt liner, topping that with sand.

Now, he said, all that needs to be done is sealing in the new liner.

Most of the equipment and supplies for the project have been donated by local businesses.

The family does not plan to return to the home until their contaminated water supply is somehow purified, Short said.

Skinner said that when he next returns to the Levant area, he plans to carry out some further investigations into local gas-contamination problems.

He said he is in the process of going through the "very valuable data" which has been collected from local citizens. He added that discussions with state Department of Environmental Conservation staffers "on their priorities" for dealing with the gas problems also are on tap.

"There are enough problems out there to keep 16 agencies working full-time," the engineer said.

Short also has been working on other projects: he has become involved in a newly formed citizens organization studying the gas-contamination problems. He noted the group is to meet Thursday at 7 p.m. in the Kennedy firehall to examine fact sheets and sign letters and petitions.

Abrams Gives Thanks Levant Volunteers

SEP 20 1984

By JOHN MOORE

LEVANT — Congratulations were extended Wednesday by state Attorney General Robert Abrams to the area residents, officials and firms for their "herculean effort" to help Tim Short salvage his gas-plagued home.

Abrams held a news conference behind Short's Willet Drive home in Levant, where explosive levels of gas in and around the structure forced the family's evacuation in May.

"I'm really very impressed to see the community rally around this family," Abrams told more than 30 onlookers. "It is gratifying to see people and government joining hands to arrive at a creative solution to a difficult problem."

He said he also was on hand to determine whether the Levant situation — where more than a dozen homes and water supplies are contaminated with gas — is an isolated incident or extends

around the area (see related story on page 1).

Abrams congratulated the local people for helping to implement a plan to get the Shorts back into their home. The plan was developed by Peter Skinner, chief scientist for the attorney general's Environmental Protection Bureau. It involves digging trenches around the home and removing 18-24 inches of earth from Short's basement, which was recently completed. The basement is to be sealed with a geotextile liner and vent pipes are to be installed in the trenches.

Skinner said he expects the work to be completed by Thanksgiving at the latest.

Abrams complimented several local firms for donating equipment to perform the digging and praised the local citizens — many of whom were volunteer firemen — for their labor.

"The excavation job was extraordinary

difficult because of cramped working conditions, the large amount of dirt to be moved and the rocky nature of the soil," he said. "It is a tribute to this community and to Tim and Debra Short that they refused to give up."

He said that the work obviously was not completed, but is well on its way to completion.

The attorney general also handed out certificates of merit to the following people:

- Jim Anderson, Kent Brumlee, John Stavato and Sam Pantall for donating a backhoe, pipe, air compressor, jackhammer and conveyor;
- Durand Peterson for donating gravel products;
- Kennedy Fire Chief Les Moore for organizing volunteers;
- County Legislator Evelyn Crandall, R-Kennedy, for facilitating the work effort;
- Jamestown Mayor Steven B. Carl-

son for introducing Short to Abrams;

- Jerry Maloney, town of Poland road supervisor, for "lots of help";
- Barry Leyman, town of Poland supervisor, for support;

- John Moore, *Post-Journal* reporter, for "accurate and timely reporting";

- Steven Johnson, director of Environmental Health for the county Health Department, for guidance and concern;

- Dell Cannon, for donating the geotextile liner.

Abrams also was given a tour of the gas-infused home. Abrams had a shocked expression when he inspected the black and bubbling interior of Shorts' toilet tank.

Short said later that he hopes that his family will be moving back home in the near future. He added, however, that before returning home, his contaminated water problem must be addressed.

State Environmental Theory Challenged

JAN 8 1985

By JOHN MOORE

The state Department of Environmental Conservation's theory that the gas contaminating Tim Short's property in Levant is a natural phenomenon is again being challenged — this time by what usually serves as the DEC's legal arm.

The office of Attorney General Robert Abrams announced Monday that the source of the gas contaminating Short's water well and lawn is "definitely" gas and oil drilling, according to Nathan Riley, Abrams' deputy press secretary.

"The bottom-line conclusion is the gas was of a petrochemical origin — not swamp gas," Riley said, summarizing the results of radiocarbon age-determination tests conducted on the initiative of Abrams' environmental-protection bureau.

"The tests indicate to the attorney general's office that the (gas and oil) industry is going to have to take a greater responsibility for the effects of drilling," he added.

Short's water well, home and lawn became contaminated with gas more than a year ago. The family evacuated the home in March.

After a long investigation, DEC officials said they had determined that the gas was a naturally occurring phenomenon, probably caused by swamp gas emanating from nearby Hartson swamp. The DEC has held firm to that theory, although it has been challenged by two noted geologists and questioned by many citizens and public officials.

Gregory Sovas, DEC director of mineral resources, said Monday that the latest test results "are an important piece of information." He added, however, that the DEC's position will not change unless it is proven that a specific well or wells cause the contamination.

Riley acknowledged the results do not pinpoint a specific source of the gas, such as a gas well.

Sovas said officials of the DEC and the attorney general's office "have to sit down and look at the results, without committing to anything." He said the latest tests provide a "good indication" that the cause of Short's gas problems is not swamp gas, as the DEC originally hypothesized.

Short, contacted Monday night, said the test results do not surprise him.

"I've known it all along," he said.

Riley said the tests, performed by Krueger Enterprises of Cambridge, Mass., determined how old the gas is — with age indicating the source. He said the tests show that gas from Short's water well and from his lawn is more than 32,000 years old. This indicates, he said, that the gas is either Devonian shale or Medina gas — the two types of gas produced by area drillers.

Abrams' office initiated its investigation in August in an effort to put together more information on the Levant problems. Riley declined to discuss whether the attorney general plans to file any lawsuits based on the investigation.

Riley said the fact that the attorney general's office is legal counsel to the DEC does not present a problem in this case because there is a close working relationship between the agencies.

Sovas agreed: "We've said all along that if someone has new information, we want to know about it. We wanted the samples taken. We will have to look again at the hypothesis and see what this really means."

Couple Files \$2.1 Million Lawsuit

FEB 22 1986

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LEVANT — A lawsuit contending a natural gas well by Mee Road is the source of gas contaminating the Willet Drive home of the Timothy Short family in Levant was recently filed for eventual hearing in State Supreme Court, according to Craig Slater, Short's attorney.

The Shorts are seeking a permanent injunction against the well's producer to prevent its operation and \$2.1 million in damages from the defendants: the owners of the well, Ralph and Warren Mee of Mee Road in the town of Poland; and the producer, Union Drilling Co. of Buckhannon, W. Va.

Paul V. Webb of Jamestown, the attorney for the defendants, said Friday evening he did not wish to issue a comment.

Both Short and his wife, Deborah, are asking for \$500,000 each in personal damages, punitive damages of \$1 million citing the defendants for gross negligence in drilling and site selection and \$100,000 for the loss of value in the Short's property.

Slater said the suit alleged that the

drill was improperly designed and built, the well was improperly drilled and the defendant allegedly failed to prevent natural gas from seeping into the aquifer.

It further alleged the defendants did not test the pressure in the well's annulus — an open section between the ground and the pipe which the pollution can come, and failed to monitor for gas contamination.

The defendants were also charged with violating DEC drilling procedures.

The well was drilled in July 1983 and the Shorts reportedly began noticing explosive levels of natural gas in their home that November. Other homes in the community have also reported similar problems.

Slater said the couple is also claiming the events since then have caused a disruption in their lives. He said natural gas had been detected coming from their water pipes, and the family heard intermittent, sudden explosions. The family was not hurt, he said. Short also sought a number of remedies, including an attempt to seal the house from any

gas seepage. The family finally moved to the town of Ellery, he said.

The state Department of Environmental Conservation has not been named in the suit, he said, noting DEC officials concluded the cause of gas seepage was natural. The department still could be named, he said.

He said the DEC has completed its study on the problem and has passed it on to the attorney general's office. He said his office is seeking the report, but must now go through the Freedom of Information Act to get it.

Slater said there have been questions why the Mee No. 1 well was named. He said after checking a possible 15 to 20 sources, the most probable origins for the gas were determined after extensive research by Short, his firm, and by Samuel Harrison of Allegheny College, who has conducted a number of studies on this problem that debunk the DEC theory.

The attorney, whose said his firm specializes in toxic torts, has found Short to be a well-prepared client who already has done much of the necessary footwork.

Family Perseveres Through Troubled Time

By JOHN YOUNG

LEVANT — Water, water everywhere — but is it safe to drink?

It isn't for at least two neighboring households in the tiny hamlet of Levant near Falconer.

Three-and-a-half years ago Tim Short and his wife Deborah lived on Willet Drive with their three boys. Today scraggly brown weeds surround the abandoned two-story home. Today they rent a mobile home in Ellery.

At 7 a.m. on Nov. 2, 1983 something happened that changed the Short family's lives.

Natural gas leaked into their underground well vault behind the house and exploded, blowing the wooden-plank cover to smithereens.

"We could feel it in the house, feel the pressure. It was traumatic for my boys: They still ask what would have happened if the explosion had been in the house," Short said.

The explosion was caused when the electric pump in the well vault came on and threw a spark into the five-foot-square by five-foot-deep earthen vault, which was full of highly explosive natural gas.

At that time, Short said his two-family house was worth more than \$80,000. Today, Short says, it is worthless.

The series of events that have taken place since that first explosion, have tested the Short's tolerance, but they persevere.

"We will not give up. You just can't turn your back on everything you've worked for," Short said, as he walked around his house pointing out the warped doors, peeling paint, rotting wood, and places where squirrels have gnawed their way into the basement.

For the past 15 years Short has worked as a maintenance man at Carborundum. He now has a second job to offset his extra expenses.

From state Attorney General Robert Abrams on down to local officials, Short has had investigations to find out where the gas comes from.

The cause of the leaks — not only in the well but in the basement and other spots on his one acre property — has never been agreed upon.

Representatives from the state De-



Troubled Water

Troubled water is the story in Levant, where Mary Kotar, at left, holds up a clear glass jar beside what was once a clear plastic tube used to measure the contami-

partment of Environmental Conservation said in 1984 that the cause was a natural phenomenon.

In January 1985 the attorney general reported that he disagreed with the DEC's findings and that the leaks were caused by nearby oil and gas drilling.

In February 1986 the Shorts hired a Buffalo law firm to file a \$2.1 million lawsuit against Ralph and Warren Mee of Mee Road, Poland, owners of a nearby gas well; and the producer, Union Drilling Co. of Buckhannon, W. Va.

Short's attorney Craig Slater said the case could make it to court this year.

At the bottom of sloping Willet Drive, Short's neighbor Mary Kotar expresses her fears about gas-contaminated water.

Mrs. Kotar said she is writing a letter to the new head of the DEC, Donald Trazen, to find out the results of her most recent tests.

She added that her water is not only dark brown and gives off an offensive odor that burns the eyes and throat, but that one time it was black.



nants in her water. The tube has been in use for two years. At right, Tim Short stands under the sign that has hung over the front porch of his house for the last year.

P-J photos by John Young

Meantime, she continues to test her water with a device made by Dr. Samuel Harrison, a geologist hired by the Shorts and chairman of the environmental services department at Allegheny College in Meadville, Pa.

Pointing to a five-foot-long plastic tube that is part of the device, Mrs. Kotar said that when she started testing two years ago, the tube was clear.

Today, it is a dark copper color with a black tar-like substance built up on the bottom.

Levant Gas Leak Cause Couldn't Be Determined

JUN 1 1989

By BRIAN BASHINSKI

Despite a five-year investigation, officials at the state Department of Environmental Conservation could not determine the cause of natural gas leaks that forced the evacuation of a Levant family from its home and contaminated the water of neighboring houses, according to a DEC report.

John Luensman, Chautauqua County Department of Planning and Development director, received the 86-page report Wednesday.

Luensman said he is dissatisfied with the study and said it may take legal action to get results from the DEC.

"The story has been left hanging. We still don't have an identity for what caused the leaks," Luensman told *The Post-Journal* this morning.

According to the report, he said, the DEC doesn't know whether an earthquake or well drilling caused the leaks.

"In a number of instances, it takes court action to get the DEC to do anything," Luensman said.

The DEC official who headed the study, however, contends that the investigation has been carried as far as possible.

"We'd love to fix the problem rather than spending years and years investigating it," Gregory H. Sovas, DEC director of mineral services, said. "All the work we have done suggests that gas exists in the area but I can't definitely say one thing is causing it or not."

All indications are that the gas leaks have subsided, he said.

"Our staff went out there and tried to take gas from people's water supply but they couldn't get enough to fill the jar for testing."

The DEC conducted an intensive well study that failed to identify any abandoned wells in the area that may contaminate groundwater or homes.

Also, to ensure well pressures were not forcing gas leakage, area wells were vented. However, this was done after a "significant" reduction in gas levels in the area's water wells, supporting the conclusion that gas wells were not the sole source of the problem, Sovas said.

The report concluded, "Chautauqua County is underlain by gassy Devonian shales and numerous gas seeps have been reported for hundreds of years. Gas rising from the bedrock, possibly triggered by the Blue Mountain earthquake, may have been a source of the ebullient gas."

The earthquake, however, occurred in October 1983, while Tim Short — whose family eventually was forced to leave their Willet Drive home due to explosive levels of gas in the house — first noticed contaminated water a month earlier, his wife Debbie told *The Post-Journal*.

"We noticed a change in the water. There was cloudiness and bubbling and high pressure in the water," Mrs. Short said.

Since leaving the area, the family has filed a \$2.1 million lawsuit contending a gas well by Mee Road is

the source of the gas that contaminated their home. The suit names the owners of the well, Ralph and Warren Mee of Poland, and the producer, Union Drilling Co. of Buckhannon, W. Va.

The Short family moved to High Acres mobile home park. They have been unable to sell their former home, once valued at about \$85,000, even though it has been priced at \$59,000 for the past year.

Although they have fond memories of their home, the Shorts said they would never go back.

"The gas has diminished but it was a bad experience and we really wouldn't feel comfortable moving back," Mrs. Short said.

"We've had enough of that whole situation and we're trying to get our lives back in order," Tim Short said.

Regarding the DEC report, Mrs. Short said, "There's a strong conflict of interest. The DEC issues permits for well-drilling, yet they are the ones responsible for checking those wells. They should be responsible for something that goes wrong."

The report "clouds the real issue — overpressurized gas wells — by bringing up all these other issues, such as swamp gas or the earthquake," Mrs. Short said.

Neighboring residents, still in Levant, also expressed uneasiness with the DEC's conclusions.

"Our water is still not right," said Sandy Schumacher of Levant-Gerry Road.

"The DEC hasn't really done anything. I'm trying to put it out of my mind," Mrs. Schumacher said. "I'm tired of dealing with the bureaucracy of it. You just have to live with it."

"I have heavy, black, oily film on my water," Mary Kotar of Rt. 1, Falconer, said. "I wonder, of course, about the DEC report. I've been buying my own bottled water for the last five years."

Levant Gas Leak Remains Mystery

By BRIAN BASHINSKI

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The DEC conducted an intensive well study that failed to identify any abandoned wells in the area that may contaminate groundwater or homes.

Also, to ensure well pressures were not forcing gas leakage, area wells were vented. However, this was done after a "significant" reduction in gas levels in the area's water wells, supporting the conclusion that gas wells were not the sole source of the problem, Sovas said.

The report concluded, "Chautauqua County is underlain by gassy Devonian shales and numerous gas seeps have been reported for hundreds of years. Gas rising from the bedrock, possibly triggered by the Blue Mountain earthquake, may have been a source of the ebullient

gas."

The earthquake, however, occurred in October 1983, while Tim Short — whose family eventually was forced to leave their Willet Drive home due to explosive levels of gas in the house — first noticed contaminated water a month earlier, his wife Debbie told *The Post-Journal*.

"We noticed a change in the water. There was cloudiness and bubbling and high pressure in the water," Mrs. Short said.

Since leaving the area, the family has filed a \$2.1 million lawsuit contending a gas well by Mee Road is the source of the gas that contaminated their home. The suit names the owners of the well, Ralph and Warren Mee of Poland, and the producer, Union Drilling Co. of Buckhannon, W. Va.

The Short family moved to High Acres mobile home park. They have been unable to sell their former home, once valued at about \$85,000, even though it has been priced at \$59,000 for the past year.

Although they have fond memories of their home, the Shorts said they would never go back.

"The gas has diminished but it was a bad experience and we really

wouldn't feel comfortable moving back," Mrs. Short said.

"We've had enough of that whole situation and we're trying to get our lives back in order," Tim Short said.

Regarding the DEC report, Mrs. Short said, "There's a strong conflict of interest. The DEC issues permits for well-drilling, yet they are the ones responsible for checking those wells. They should be responsible for something that goes wrong."

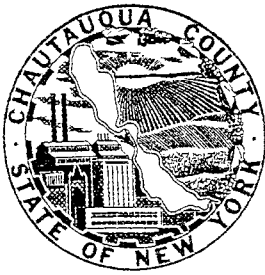
The report "clouds the real issue — overpressurized gas wells — by bringing up all these other issues, such as swamp gas or the earthquake," Mrs. Short said.

Neighboring residents, still in Levant, also expressed uneasiness with the DEC's conclusions.

"Our water is still not right," said Sandy Schumacher of Levant-Gerry Road.

"The DEC hasn't really done anything. I'm trying to put it out of my mind," Mrs. Schumacher said. "I'm tired of dealing with the bureaucracy of it. You just have to live with it."

"I have heavy, black, oily film on my water," Mary Kotar of Rt. 1, Falconer, said. "I wonder, of course, about the DEC report. I've been buying my own bottled water for the last five years."



CHAUTAUQUA COUNTY DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH SERVICES

HALL R CLOTHIER BUILDING MAYVILLE, NEW YORK 14757-1027
(716) 753-4481, FAX (716) 753-4344

MARK W. THOMAS
County Executive

ROBERT BERKE, M.D.
Commissioner of Health

STEVEN M. JOHNSON, P.
*Director of Environmental
Health Services*

July 30, 2004

Re: Impacts of Gas Well Drilling to Drinking Water Wells

Dear [REDACTED]

In response to your request regarding potential impacts of oil and gas well drilling to nearby water wells, I offer the following comments.

As you know, the New York State Department of Environmental Conservation (NYS DEC) regulates oil and gas well drilling in the state. The regulations that govern the industry were prepared in 1972 and no major changes have been made since then. There have been some efforts to substantially revise these regulations, most recently in 1998, but they were never finalized. New York regulations do not contain any requirements for offset distances between an oil and gas well and private water wells. They do require that oil and gas wells be located at least 1000 feet away from a public water supply well. This would include the [REDACTED]'s well. In addition the current regulations do not include any provisions that cover stimulating or hydraulically fracturing the gas reservoirs (i.e. hydro-fracturing).

A representative I spoke with at the NYS DEC Division of Minerals insists that the potential for drinking water well contamination by oil and gas well drilling is almost non-existent. However, this Department has investigated numerous complaints of potential contamination problems resulting from oil and gas well drilling activities. Most of these investigations took place in the 1970s and '80s during the oil and gas drilling boom. They can be categorized into two groups: surface water contamination caused by above ground drilling-related activities, and suspected ground water contamination of private drinking water wells associated with drilling and hydro-fracturing. One of the most widespread problems was in the Levant area in the Town of Poland in the early 1980s where methane gas was intruding into water wells. In response to this, the Health Department began to keep detailed records of complaints received of water well problems suspected of being caused by oil and gas well drilling. The Department responded to 120 of these complaints between 1986 and 1988. As drilling activity decreased, so did the complaints, we responded to only nine from 1989 to 1990 and, over the past 12 years since I've been with the Department, we have received about a dozen such complaints. Those complaints that were reported are probably just a fraction of actual problems that occurred.

The Pennsylvania Department of Environmental Protection (PA DEP) has much more stringent regulations with respect to oil and gas well drilling. They require that oil and gas wells be drilled at least 500 feet away from private drinking water wells and at least 1000 feet away from public water supply wells. If oil and gas wells are to be drilled within 1000 feet of a private well, then the water well must be

July 30, 2004

Page 2

tested by the drilling company before the gas well is drilled and again between three and four weeks after the well is completed for a number of baseline chemicals. If the oil and gas well is located within a known ground water recharge area of a public water supply well, that water well must also be tested as noted above.

A colleague with our Department contacted a senior engineer in PA DEP who indicated that they have confirmed numerous instances where water wells had been negatively impacted by oil and gas well drilling. These impacts were seen in parts of the state that have a similar geologic setting as our county, namely in the Allegheny Plateau. A detailed review of our files found correspondence from the United States Geological Survey (USGS) regarding the likelihood of oil and gas well drilling to contaminate nearby water wells with methane gas. This was in response to the previously mentioned problem in Levant. The USGS noted that methane gas could "migrate into water wells at considerable distances from the gas wells where the gas encountered the [rock] fracture system. The problem is not unique to Chautauqua County. Similar problems occur in northwest Pennsylvania and northern Ohio as far west as Cleveland and Sandusky." The close of the letter reads: "In conclusion, the most likely source of the [methane] gas is the open boreholes of the producing gas wells." I've attached a copy of this letter as it also makes recommendations about how to reduce the contamination potential.

If [redacted] pursues a lease with an oil and gas drilling company, I recommend that you take the following precautions to minimize the possibility of ground water contamination. It is also important to consider that most oil and gas wells drilled in the county, there are about 5000 of them, have had no known impact to our water resources.

- Require a 1000 ft setback from the Jamestown Audubon water well and reasonable setbacks from private water wells, either 500 or 1000 ft at your discretion (if directional drilling is used then the setback should consider the location of both the wellhead and the well bottom).
- Conduct baseline water quality sampling in the Jamestown Audubon well and surrounding private water wells for: iron, manganese, chlorides, sodium, barium, total dissolved solids, pH, turbidity, bacteria and methane/ethane. Water samples should be collected and analyzed by a NYSDOH certified laboratory. This could be made a requirement of the drilling company in the lease.
- Hire a consultant who is knowledgeable about oil and gas well drilling who could provide comments on the land lease, site plans and drilling plans, and also provides drilling inspection.
- Place adequate restrictions and safeguards in the lease to protect ground- and surface-water quality including the preparation and implementation of a storm water management plan that includes on-site erosion control measures.

Please note that an area surrounding the Route 62 – Riverside Road intersection has been mapped by the USGS (Miller, 1988) as overlying a "principal aquifer." New York State DEC oil and gas well drilling regulations state, "The casing and cementing practices above are designed for typical surface casing cementing. The Department will require additional measures for wells drilled in environmentally or technically sensitive areas (i.e. primary or principal aquifers)." NYS DEC oil and gas well regulations can be found at <http://www.dec.state.ny.us/website/dmn/welltrg.htm>.

July 30, 2004

[REDACTED]

Page 3

Should you or [REDACTED] have any questions regarding this correspondence, or you would like to review any of the information cited herein, feel free to contact me at 753-4481.

Very truly yours,



William T. Boria
Water Resource Specialist

Encl.

1

Attachment E

Why shouldn't all wells be so cemented? Why only in primary and principal aquifer areas? If DEC holds only to aquifer areas, the following question arises. If a well is 5 feet outside of such an aquifer, it doesn't need cement? This requirement should reach out beyond the edge of an aquifer boundary for some given distance, possibly thousands of feet.

CCD-31

Page 9-33. We agree that there should be minimum standards for pit liners associated with gas and oil wells.

This brings to an end our point-by-point comment. Items become more repetitive as we go further through the document. There are also parts of the document that are opinion, propaganda, and unrelated to the needs of Chautauqua County.

CCD-32

Through a number of local hearings held by NYSDEC, the representatives of Chautauqua County have spoken about the innocent third party that is damaged by the activity of the gas and oil industry--this damage may include water wells with gas or taste. It may mean a building with gas buildup in it.

In a number of instances in Chautauqua County, property owners have been given different responses when calling in reports of difficulties. In the case of Tim Short, tens of thousands of dollars were spent trying to prove the industry did not cause his problems--the house still stands empty. In the case of Rhodes in Ellington, New York, people from NYSDEC agreed with the property owners that their problems were related to gas and oil drilling but the State could not tell which well was causing the problem.

These and other people have had problems. NONE OF THESE PEOPLE LEASED THEIR LAND FOR GAS AND OIL DRILLING. They received no direct benefit and only very limited indirect benefit.

The NYSDEC has stated these people can get relief in the courts by private action. If the State cannot identify the offending well with all of its skills and resources, how can a small home owner take on the task?

These third party innocent damaged people should be protected. They deserve relief from the acts of the industry. It is a fact that people are harmed by the actions of the industry and there is no mechanism in the GEIS to propose a mitigation of their problem other than the responses we have been given that they may go to court with a private action.

CCD-30

The DEC drilling, casing, and cementing guidelines and aquifer conditions which are being recommended in the GEIS for adoption as formal rules and regulations are adequate for meeting the goals stated by this resolution. Because of geologic conditions, the non-aquifer areas do not require the same protection as aquifer areas. The areas mapped as aquifer areas actually extend a considerable distance beyond the aquifers to include the adjacent environmentally sensitive recharge areas.

CCD-31

Support for this proposed requirement is noted.

CCD-32

First, the Department spent significant resources to determine the cause of the problems Tim Short and others have had in Levant. Under no circumstances were there any preconceived notions that the industry was not responsible. The interim report dealt with a number of hypotheses based on available data and additional testing. A final report was issued in June of 1989 which details our findings.



Second, it is true that the DEC suspects that oil and gas wells are responsible for the problems in Ellington, but have been unable to pinpoint the exact well or wells responsible.

Third, the problems of proving a cause and effect relationship are significant particularly when dealing with improperly constructed water wells. The Department has worked under very difficult legal and technical constraints to find solutions to these problems.



Finally, the DEC has explored the need for water testing before any drilling in an area, but found the cost/effectiveness of such a program to be prohibitive. In fact, such a program could not be established that would provide the necessary legal support for a claim. Third party compensation is beyond the DEC's authority and the existing authority under Article 23. Complaints are encouraged to both the DEC and the State Attorney General's Office.


ALLEGANY COUNTY
DEPARTMENT OF HEALTH7 Court Street, County Office Building
Belmont, NY 14813-1076Loreen Ballengee, MS
Public Health Director
E-mail: ballenl@alleganyco.com585-268-9250 800-797-0581
Fax: 585-268-9264Thomas E. Hull, MS
Deputy Public Health Director
Director of Environmental Health
E-mail: hullte@alleganyco.com


June 16, 2009





To: Michael J. McCormick, Legislator
Allegany County Legislative District IVFrom: Thomas E. Hull, M.S. 
Allegany County Department of HealthSubj: Residential Water Investigation
Property of David 

Dear Legislator McCormick:

The water well serving Mr. 's residence on  has a reported completed depth of 360 feet. A well of this depth should provide water of very high quality, as long as the integrity of the well or aquifer from which it draws water has not been compromised. Of note, this well was reported to have been serviced in 2004 by David Root of Root Water Well Specialists in Scio, NY, and was determined at that time to be in very good condition.

Mr.  alleges that prior to about four months ago, his water well provided water of very good quality. However, at about that time, and allegedly after U.S. Energy had done some gas well "fracturing" (drilling) approximately 1,000 feet from his well, he began having water problems that included "muddy water", "oil" in the water, and a "gas smell" to the water.

Mr.  made contact with U.S. Energy, the New York State Department of Environmental Conservation (POC: Brian Jandrew), and this Health Department (POCs: Anne King & Thomas Hull). The information was developed as a result of these contacts:

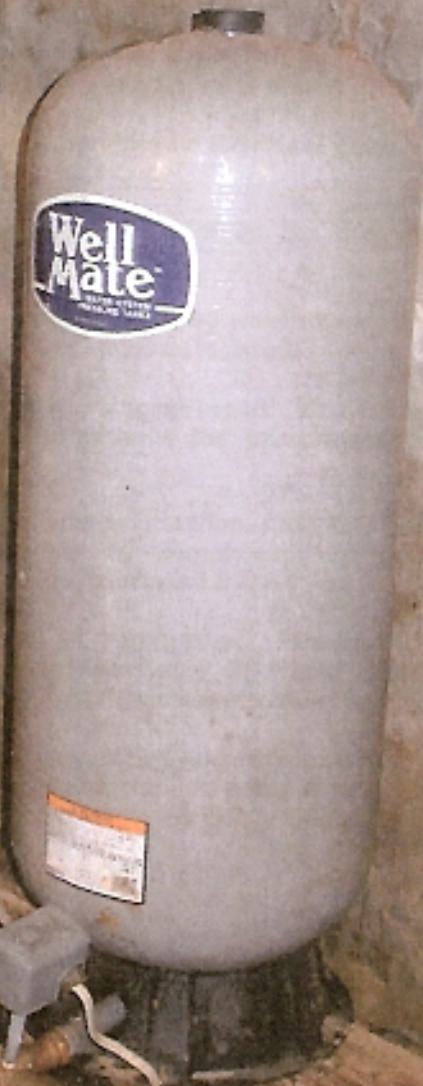
- U.S. Energy at some point apparently offered Mr.  an indeterminate amount of money in the form of a check, which Mr.  allegedly refused to cash.
- Mr.  claimed that U.S. Energy "went through" the water table twice. As a result of the concerns he expressed to them after this, when he started having problems with his water, U.S. Energy tested Mr. 's water, would not provide him with the test results, but told him the tests showed no contamination of the water.

- Mr. [REDACTED] stated that U.S. Energy had offered to install a water treatment system to remedy the problems Mr. [REDACTED] was having, at their cost, but with an indication to Mr. [REDACTED] that they would maintain the system only if the water was contaminated. Since U. S. Energy reported that the water tests they conducted were satisfactory, Mr. [REDACTED] was concerned that meant a water treatment system would be installed at no cost to him, but that the maintenance costs (he indicated up to \$500/month) would fall on him.
- Anne King made a site visit to Mr. [REDACTED]'s property to take a water sample for bacteriological analysis. The test result came back satisfactory, with no bacteriological contamination found on this analysis.
- Mr. Jandrew confirmed that U.S. Energy had committed to install a water treatment (filtration) system at Mr. [REDACTED]'s house, to treat the ongoing water problems. This treatment system was installed on Friday, June 12, 2009. (See attached photographs).
- Mr. Jandrew provided me with copies of the water test results on the sampling U.S. Energy conducted on Mr. [REDACTED]'s well (See attached water sample test results). Of significance, of the tests conducted, those for methane, ethane, and "petroleum hydrocarbons" were all "Non-Detects", meaning the compounds weren't found in the water at the lowest analytical levels the tests conducted would measure. All analyses were conducted using U.S. Environmental Protection Agency (EPA) analytical methods.
- Mr. Jandrew indicated to me that he was not convinced that U.S. Energy's drilling activity was directly related to the problems Mr. [REDACTED] subsequently had with his water. He indicated he couldn't say the drilling activity wasn't the cause of the subsequent water problems, but that he didn't have enough information to make that determination with any certainty.
- On June 17, 2009, Mr. Jandrew provided me with a copy of a letter he received from U.S. Energy, dated June 15, 2009 (see enclosed letter), that detailed events concerning the Mr. [REDACTED]'s water problems beginning with water samples taken by U.S. Energy on May 11, 2009. This letter contains updates on the situation through the present time. Within the letter, U. S. Energy documents the results of water testing conducted by Culligan, which indicated there were trace amounts of oil in the water, and included a recommendation for installation of a carbon water treatment (filtration) system to treat Mr. [REDACTED]'s water. U.S. Energy instructed Culligan to go ahead and install the treatment system, for which they agreed to pay. U. S. Energy also indicated they would pay for the system's maintenance until such time as periodic water testing proved the water was not impacted by their activities.
- Personally, I spoke with Mr. [REDACTED] on two occasions. In my opinion, Mr. [REDACTED] should continue to closely monitor his water situation to ensure no additional problems arise. U.S. Energy has installed a treatment system, and Mr. [REDACTED] should be able to determine if that system is treating the water such that it is of suitable quality for all household uses. U.S. Energy should also be fully responsible for maintaining the treatment system for as long as it is determined to be necessary, even if that length of time this is required is of indeterminate length. However, with respect to these two issues (his water quality post-treatment system installation, and the

maintenance of the system by U.S. Energy) Mr. [REDACTED] should continue to use Mr. Jandrew as his primary point of contact, and may need to hire legal counsel to represent him if any further action regarding U.S. Energy and their activities impacting his water well is deemed to be necessary.

Kenmore
Conister Vacuum

		
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U.S. Energy

Development Corporation



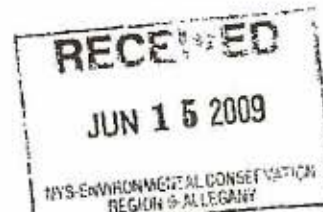
Investments in America's Energy
www.usenergydevcorp.com

June 15, 2009

N.Y.S. Department of Environmental Conservation
182 East Union-Suite 3
Allegany, New York 14706

Re: [REDACTED] Water Well

Dear Mr. Jandrew:



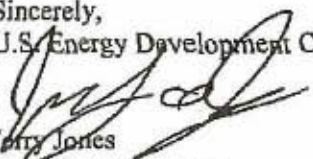
The purpose of this letter is to update the NYSDEC on the progress being made with regard to David [REDACTED]'s residential water well.

- 1) May 11, 2009 U.S. Energy collected water samples from Mr. [REDACTED]'s water well for analytical testing. U.S Energy contacted Culligan of Bradford to also test the water.
- 2) May 14, 2009 Culligan informed U.S. Energy that Mr. [REDACTED] would not make himself available until the evening of May 18, 2009 for the testing.
- 3) May 19, 2009 Culligan contacted U.S. Energy and communicated their test indicated trace amounts of oil and recommend the installation of a carbon water treatment system. U.S Energy instructed Culligan to proceed with the installation.
- 4) May 19, 2009 U.S. Energy received the analytical testing from Paradigm Environmental Services, Inc of Rochester. The testing detected no petroleum in the water from the [REDACTED] water well.
- 5) May 20, 2009 U.S. Energy instructed Culligan to install a water system and agreed to pay for the installation and maintenance of the system until periodic testing proved the water not impacted.
- 6) U.S. Energy has put Mr. [REDACTED] and his family in a hotel several nights during the initial impact. U.S Energy has been and continues to supply the home with Culligan bottled water.
- 7) U.S Energy has offered Mr. [REDACTED] compensation which he has refused.

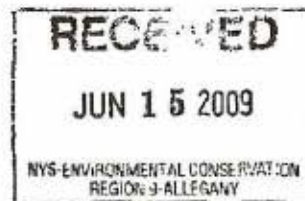
- 8) U.S Energy was contacted by Culligan on June 10, 2009 and communicated the system was scheduled to be installed on June 12, 2009 if Mr. [REDACTED]'s schedule allowed.
- 9) U.S Energy has communication with Mr. [REDACTED] almost daily. During each phone call Mr. [REDACTED] has been informed of the testing results, water treatment installation progress and our activities in the area.

If you should need further information please contact me at my office at 716-636-0401 ext. 248 or contact me on my cell phone at 716-697-1564.

Sincerely,
U.S. Energy Development Corp.


Jerry Jones
Operations Manager

722419 1204893 2



Attachment H

15 (12-75)



New York State Department of Environmental Conservation

MEMORANDUM

JUN 22 1987

Division of Environmental Conservation
Region 6 - Olean

TO: Joe Yarosz, Mineral Resources, Olean
FROM: Robert Leary, Spill Unit, Buffalo *RL*
SUBJECT: Spill Unit/Mineral Resources' Spill Cleanup Responsibility
DATE: June 16, 1987

FILE

As we discussed at our meeting on Wednesday, June 10, 1987, the following was agreed concerning the division of responsibility between the Spill Unit and Mineral Resources:

1. Mineral Resources will handle normal spills at the well head, pipeline to the stock tank and the stock tank on the lease property.
2. The spill unit will handle any spills off the lease site or past the stock tank.
3. If Mineral Resources is having a problem with a spiller concerning cleanup, they would send a certified letter to the spiller informing him that, if cleanup was not performed, the state will clean up the site. If the spiller did not respond or responded in an unsatisfactory manner, they will then contact the spill unit who would then hire a state cleanup contractor.
4. For major spills, even on a lease site, Mineral Resources will contact the spill unit. A decision could then be made at the site or over the telephone on who would handle the spill. Mineral Resources will check the spill in most instances and let the spill unit know of their findings if the lead DEC unit responsibility was in question.
5. Mineral Resources will handle brine spills.

We also discussed the responsibility of existing ongoing spill sites. I propose that responsibility for these sites be as follows:

Chautauqua County

Spill Number	Spill Name	Location	Responsibility
862787	Busti-Chautauqua Oil Co.	Busti	Spill unit to continue responsibility
865503	Hugoton Petroleum	N. Harmony	Mineral Resources to assume responsibility

Joe Yarosz, Mineral Resources, Olean
June 16, 1987
Page 2

865903	Desert Gas Exploration	Gerry	Spill unit to assume responsibility as oil has migrated off site.
866545	U.S. Energy Development Corporation	Charlotte	Spill unit to assume responsibility as oil has migrated off site.
867595	American Penn Energy	Gerry	Mineral Resources to assume responsibility.
870811	American Penn Energy	N. Harmony	Mineral Resources to assume responsibility.
871027	Doran Associates	Clymer	Mineral Resources to assume responsibility.

Cattaraugus County

865825	Oil Well Site Czyz	Perrysburg	Spill unit will continue responsibili- with BECI on this site. A legal referral has been done.
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Allegheny County

874761	Petrolia Oil Co.	Petrolia	Mineral Resources to assume responsibility.
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Please review these proposed responsibilities and let me know if you want any changes. As our meeting was very productive, I recommend we hold future meetings at least on a yearly basis to ensure that cooperation and coordination between our two units are maintained.

RNL/jmm

cc: Richard Swiniuch

JUN 22 1987

Environmental Conservation
Region 9 - Olean

Attachment I

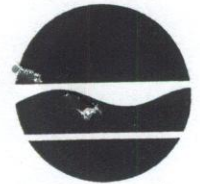
New York State Department of Environmental Conservation

Division of Mineral Resources, Region 8

6274 East Avon-Lima Road, Avon, New York 14414-9519

Phone: (585) 226-2466 • FAX: (585) 226-9034

Website: www.dec.state.ny.us



Denise M. Sheehan
Acting
Commissioner

CERTIFIED MAIL RETURN RECEIPT REQUESTED

October 20, 2005

Mr. Richard Hill
Columbia Natural Resources, LLC
900 Pennsylvania Ave.
Charleston, WV 25302

RE: Well Site Compliance Issues
Nistock #1, API# 31-101-23172
Meade #1-A, API# 31-015-23156-01
Wholeben #1, API# 31-015-23179

Dear Mr. Hill:

Department staff have informed me of violations of permit terms and conditions and/or Mineral Resources regulations (6 NYCRR, Parts 550-559) that have occurred over the past few months at several Columbia Natural Resources, LLC's (CNR) well sites. On September 26, 2005, Mineral Resources staff inspected the Nistock #1 well location in the Town of Prattsburgh, Steuben County and observed mud, in trenches leading from the mud tanks, flowing through the trenches and under the pit liner as a result of heavy rains. This occurred after staff repeatedly told CNR site representatives that the mud trenches needed to be cleaned out and lined. Although remedial action was taken by CNR, drilling mud accumulations may still exist behind the liner in the pit.

Additionally, staff have observed violations at the Meade #1-A and the Wholeben #1 well sites located in the Town of Erin, Chemung County. Mineral Resources staff inspected the Meade #1-A site on July 7, 2005 and observed that salty over-spray from the flowing well collected at the base of the drilling pit fill bank and then discharged off site. This discharge ran over pasture land and into a nearby dry stream channel. Additionally, mist from the over-spray coated and damaged an adjacent grove of long needled pine trees. Also, staff discovered that water from the Meade location pit was trucked to the Wholeben #1 well site for disposal/storage on July 13, 2005. Staff observed this transported water being stored at the Wholeben location in a pit with a liner that was ripped and non-functional.

Department staff acknowledge that remedial work has been conducted at the Nistock and Meade well sites. CNR must provide a progress summary of remedial work performed at all sites within 30 days of receipt of this letter. This summary should include an evaluation of the potential for soil, groundwater, and surface water contamination as a result of release of drilling fluids at these sites. If additional work is required, a plan and schedule must also be submitted.

Invoice Dt	Invoice Number	Description	Discount	Net Payable
11-30-2007	11307	DAMAGES	0.00	423.17
		<i>Depth Filter</i> <i>Installation</i> 273.17 <i>SMO Rental</i> - 150.00 <hr/> <i>423.17</i>		

Client No 140322-01 Check No 0000041535 Check Dt 01-31-2008 Check Total 423.17

Chesapeake Appalachia, LLC

Vendor Payable Account
 P.O. Box 6070
 Charleston, WV 25362-6070

Bank of Oklahoma
 Oklahoma City, OK
 39-13/1030

Client No
140322-01

Check No
0000041535

■ The Sum of 423 Dollars & 17cts

Date
01-31-2008

Amount
*****423.17

Pay to The Order OF **LAURIE**
 ROAD
 GENEVA, NY 14456

NOT NEGOTIABLE AFTER 90 DAYS
 NO THIRD PARTY ENDORSEMENTS

Jennifer M. Unzberg