

STANFORD UNIVERSITY
STANFORD, CALIFORNIA 94305

DEPARTMENT OF BIOLOGICAL SCIENCES

March 21, 1969

Mr. Albert E. Sandecki
50 Tanner Street
Haddonfield,
New Jersey 08033

Dear Mr. Sandecki:

Thank you very much for your letter of March 17 to Dr. Paul R. Ehrlich. Dr. Ehrlich is away on a field trip at present and will not be returning until mid-April. Your letter will then be referred to him for a reply.

Sincerely,

Christine Gilbert

Christine Gilbert (Mrs.)
Assistant Secretary to
Paul R. Ehrlich,
Professor of Biology

STANFORD UNIVERSITY
STANFORD, CALIFORNIA 94305

DEPARTMENT OF BIOLOGICAL SCIENCES

April 21, 1969

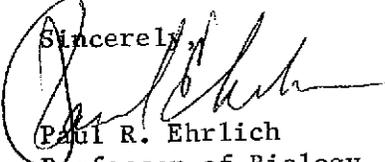
Mr. Albert E. Sandecki
50 Tanner Street
Haddonfield,
New Jersey 08033

Dear Mr. Sandecki:

Please excuse the delay in answering your letter. It arrived while I was away.

Salt water intrusions into the water table are something I've known about for some time. At this point I cannot remember exactly where I first heard of it, but it may well have been in conversations with geologists. I am enclosing a copy of the only reference to it I could find in my files, and a copy of our group's reading list. The latter includes a number of books dealing with America's water problems and you may find more information there.

Sincerely,



Paul R. Ehrlich
Professor of Biology

PRE:cg

America's wells are emptying

SALT INTRUSIONS

The recent expressions of concern over Ulster water supplies during the unusually dry spell beside drought reports now coming in from various regions of the United States. An article in *Iron Age* (1 August) tells of a day last month when the 1050 inhabitants of Gardner, Illinois, discovered that the town's three wells were dry. The fire brigades of six other towns had to join the local men in pumping water from abandoned open cast mines. But Gardner was only slightly worse off than towns across the continent from the Carolinas to California. In several Illinois towns the wells are so low that they have had to be plugged to stop salt water seeping in.

There are about 515 000 million gallons of usable water a day available for all the needs of the US. More than 340 000 million gallons are used and 100 000 million go back unfit for further use. But the usable margin is shrinking. By 1970 consumption is expected to be up to 432 000 million gallons and 10 years later the demand—at 559 000 million gallons—will have outstripped the supply.

Although a great deal of public attention has been focused on the problem of reducing pollution of the large lakes and rivers and industry has begun to take steps (some of them very expensive) to ensure that waste water is purified before being returned, the magazine is at pains to emphasize that, for many cities, it is not so much a question of having clean water having water at all.

A plastic to help the surgeon

About two years ago, Mr William Tuck, the manager of the Orthopaedic Appliances Department at the Royal National Orthopaedic Hospital at Stanmore, discovered a plastic material that had been developed for use in upholstery. He had been experimenting with many types of plastic material for some time, but none of them had come up to what he wanted. This time, it looked as if he had found the ideal material.

In theory, the material offered everything. It had the right resilience, strength and lightness for making appliances of many kinds. It was cheap. It softened at about 140°C, so that it could be moulded to any shape, which it would hold on cooling and regain if it were distorted mechanically. It could be cut with a sharp knife and ground on any emery wheel, or simply smoothed with sand-paper. It was a low-density polyethylene, foamed with nitrogen, making a cross-linked cellular material.

In practice, surprisingly, there have been no difficulties at all. Since he started using it, Mr Tuck has made neck collars, slippers, body supports, splints and so on for hundreds of patients. At first, he made notes of every case and what was done, but he has since given up because the applications expanded so fast and success made so much work. It was not long before he was shaping and fitting artificial leg and arm muscles in the material to compensate for withered or damaged ones. He has even

used it to provide a complete shoulder to replace one amputated in cancer surgery. In the past year, Mr Tuck has had a quiet revolution on his hands. Instead of building the heavy and expensive constructions of steel, leather and hard plastic that were the rule, his department is running a small scale production line with nothing more elaborate than an oven, an emery wheel and a sharp knife. In most cases, all that is necessary is to heat the plastic sheet in the oven, allow it to cool for a few moments and then mould it to the patient's limb or body. The saving in time alone is enormous.

The plastic is transparent to X-rays. It is buoyant, so that it presents no problems in swimming pool physiotherapy. Using it for casts makes a more accurate job which can be done in five minutes instead of an hour.

Slightly taken aback by the lack of problems and the catalogue of advantages, Mr Tuck has been passing on his experience to good effect at conferences. Hospitals in London and Birmingham have set up their own production lines and others in Denmark, the Netherlands and Belgium are about to do the same. Mr Tuck will be repeating the virtues of the material at the forthcoming International Leprosy Congress in London in September. Even in this apparently unrelated field it has something to offer. Lepers have no feeling in their hands or feet. They cannot walk properly and continually injure themselves. Obviously, special shoes are out of the question. But light, individual slippers of the plastic, costing a few pence and providing firm support, can correct walking and reduce damage. This is only the latest application in a continually increasing list. At Stanmore, Mr Tuck is having to extend his laboratory and workshop to cope with demands and ideas.



Success table for worrier nations

Some psychologists believe that the neurotic element in a person's character acts as a stimulant to achievement. Though he may be tense, highly strung, irritable and moody, the neurotic individual gets results. Can such observations be extended to cover whole nations, so that those with the highest levels of neurosis among their peoples might be seen to be the most efficient?

Dr R. Lynn of the Economic and Social Research Institute, Dublin, puts forward some

evidence (*Nature*, vol. 219, pp. 756-766) for such a relationship. Choosing economic growth rate as the obvious measure of national efficiency, he plots this against national levels of anxiety collected from 11 countries between 1955 and 1968. "Anxiety" is not the same thing as neuroticism but Dr Lynn thinks it close enough for his purpose.

The resulting graph shows remarkable correlation. Japan, with a growth rate of 9.2, has an anxiety level of 2. Next comes Germany (growth rate, 7 plus; anxiety level, 3 minus). At the bottom of the scale both in growth rate and anxiety are Britain (growth rate, 3; anxiety, 11) and the US (growth rate, 4; anxiety, 10). The puzzle is France which stands at the top of the anxiety table but has a growth rate of around 5. Dr Lynn points out that in all cases the anxiety scores have been derived from male university students. Recent events at the Sorbonne, Nanterre and elsewhere may be seen as the bottle popping its cork. And as for materialistic progress (implied by economic growth), the young philosophers of the all-night talk-ins showed that this was not numbered among their goals.

Prospects for home video recorders

If, towards the end of next year, you have just under \$1500 to spare and live in North America you may be able to buy a tape machine to record and play back programmes on your television set. A technical breakthrough that may lead to a recorder as cheap as this has been made in the United States. Already, successful demonstrations of a prototype machine have begun to win grudging approval from engineers in this field. But there is a long and difficult path to be followed between prototype and production models by the company, Arvin Industries Incorporated.

The great difficulty with video tape recorders, as they are called, is that any simplification of the complex mechanical arrangements for driving the tape usually results in unacceptable distortion of the pictures. Ampex Corporation, which came out with the only so far successful cheaper type of mechanism five years ago, has a black and white recorder priced at \$995 and a colour one that sells for \$4495—far too expensive for the home market. These recorders use a helical scanning technique, which is simpler than the transverse technique used in higher priced professional models. In both techniques the recording head scans across the tape as it moves slowly beneath it: the pictures are recorded in transverse or diagonal strips.

It was Ampex's success with helical scanning that led several companies, including Telcan of Great Britain, to try an even simpler and cheaper system, longitudinal recording, which uses a fixed head and records the information along the tape—just like a conventional audio tape recorder. Unfortunately, high tape speeds are necessary (120 to 180in/sec instead of 3.75in to 9.6in), and the effects known as "wow and flutter" ruin the picture.

Longitudinal recording seemed to be out a few years ago and most manufacturers returned to the helical principle. In 1965 Sony intro-

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50 Tanner Street
Haddonfield,
New Jersey 08033
April 17, 1969

Penobscot Unit
Callahan Mining Corporation
Harborside, Maine 04642

Mr. John B. Malcolm
Manager

Dear Jack:

Today I received the results of the water test recently taken from the well that your firm had contracted Mr. Foss to drill last July 1968 in an effort to restore the fine water supply the Farnhams and I lost as a result of your mining operation at Goose Pond, Harborside, Maine.

The test was made on April 11th, serial number 373262 by the Department of Health and Welfare of the State of Maine and the water analysis report is unsatisfactory due to high chloride content (360.P.P.M.) Enclosed is a copy of the report.

I have just talked with Brainard L. Farnham in regard to this test and the problems that it is causing now as well as those that will be evident in the near future. Brainard mentioned to me some ideas that you have as a means of ending this recurring problem. Would you please take the time to outline these methods in a letter to me at your earliest convenience.

I sincerely hope that there can be a genteel and satisfactory way to restore a dependable supply of sweet water such as we had prior to your firm's mining operations.

Sincerely,

Albert E. Sandecki

250 P.P.M. MAX. S.S. SANDECKI

PENOBSCOT UNIT
CALLAHAN MINING CORPORATION

HARBORSIDE, MAINE 04642
TELEPHONE (207) 326-4339

April 24, 1969

Mr. Albert Sandeckl
50 Tanner Street
Haddonfield, New Jersey 08033

Dear Albert:

Thanks for your letter of April 17, 1969 concerning the Farnham's water well.

I was, of course, sorry to note that the chloride content of the well increased over that encountered when we raised the pump last winter.

We are studying several possible courses of action, Albert, of which one may be to set-up a water system tied into our well here at the plant. This possibility was briefly discussed with Mr. and Mrs. Farnham and the Hunters a couple of weeks ago.

It will be good to see you on your return to Harborside.

Sincerely,



J. B. Malcolm
Manager

JBM/jpw

50 Tanner Street
Haddonfield,
New Jersey 08033
April 30, 1969

Penobscot Unit
Callahan Mining Corporation
Harborside,
Maine 04642

Mr. John B. Malcolm
Manager

Dear Jack:

Received your letter of the 24th. When possible could you be more specific in reference to your firms "possible courses of action" studies and the setting up of a water system tied into the mines well.

We would like to avoid delay and inconvenience in the return of good water to our residences, preferably before the Farnham's guests start arriving and my family returning to Harborside.

I have been in contact with Brainard Farnham in regard to this and have sent copies of our correspondence to him.

Sincerely,

Albert E. Sandeoki

50 Tanner Street
Haddonfield,
New Jersey 08033
April 30, 1969

24 Ardmore Avenue
Ardmore,
Pennsylvania

Mr. Francis Recchuiti
Attorney at Law

Dear Mr. Recchuiti:

I am writing to you in reference to an article which appeared in the March 6th issue of the Evening Bulletin.

The article told of four Upper Dublin homes, waterless for 118 days..byline Mr. Peter H. Binzen. I am in hopes of your being able to direct me to a source of information, study or perhaps the name of the engineer you had retained in regard to the problem watertable.

I am involved in remarkably similar circumstances in the State of Maine, and it has been difficult for me to locate information or an expert in the field.

A friend of mine who is an attorney in Moorestown, N.J. has been kind enough to take the time to look up and send me your address. If for some reason you would like to speak to him on this information I am seeking his name and address is below.

I will be leaving for Maine the end of May in regard to my problem up there and would appreciate hearing from you at your earliest convenience.

Thank you.

Sincerely,

Albert E. Sandecki

cc: Mr. William M. Baumgartner, Jr.
72 East Main Street
Moorestown,
New Jersey
08057

FRANCIS RECCHUITI
ATTORNEY AT LAW
58 EAST PENN STREET
NORRISTOWN, PENNSYLVANIA 19401
279 - 2077

May 7, 1969

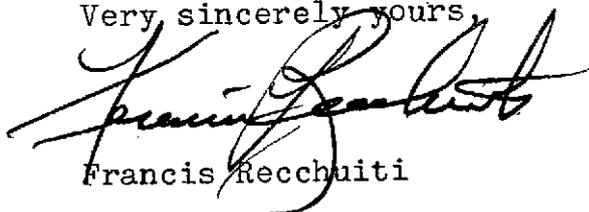
Mr. Albert E. Sandeck
50 Tanner Street
Haddonfield, New Jersey 08033

Dear Mr. Sandeck:

Receipt is acknowledged of your letter of April 30, 1969. Please be advised that my initial source in locating an expert was the Technical Advisory Service for Attorneys. This organization is located at 1528 Walnut Street, Philadelphia, Pa. There is also another outfit which is located in Hazleton, and they bring in geologists and the whole works.

The expert which I retained is basically an engineer and a man with wide experience in blasting who had testified in Court cases in four different states. Hoping that the above is helpful to you, I remain

Very, sincerely yours,



Francis Recchuiti

FR:ko

50 Tanner Street
Haddonfield,
New Jersey 08033
April 18, 1969

Mr. & Mrs. William Veague
Lawrence Street
Pepperell, Mass.

Dear Mr. Veague:

I thought I would let you know that there seems to be a continuing problem with our well at Harborside, Maine.

The Farnhams have sent me the results from the latest test (April 11) the water supply is unsatisfactory due to the high chloride content (360 P.P.M.) I believe 150 P.P.M. is the point where one can begin to taste salt in solution.

I have written to Jack Malcolm at the mine to ascertain his companies position and their intentions on the matter and if you like I will let you know how things turn out. I have written to Mr. Barthelman three times asking of his progress or lack of it in his action... but have not heard a word, do you by any chance know of the status of his situation?

Mr. Greene will be having his water tested shortly and should know by mid May his situation. In talking with Brainard he seems content to wait until summer on doing something about the wells. What I would like to know is if in the event that your well has experienced the intrusion of chloride, would you be interested in a joint effort to see that the matter is corrected? There has been mention made of the mine constructing a water tower on Dyers Hill and piping water up to it from the well at the mine and providing a gravity feed to the residents.

I would like to know how you feel about the problem in general terms.

Sincerely,

April 30, 1969

Dear Albert:

Thank you for your letter concerning the water supply in Maine. At this writing I'm afraid I cannot give you too much information, but will try to express my feelings on the subject.

As you may or may not know we received an analysis of our new well water about a month after we returned home, to the effect that there was too high a salt content, but only if someone happened to be on a salt free diet. A copy of this analysis was forwarded to Mr. Malcolm at that time. Since then, of course we have no way of knowing whether or not more contamination has taken place.

To date Mr. Barthelman has not heard a word from his lawyer concerning his situation and I would assume that he will secure other legal advice when he returns to Maine. I feel sure he intends to pursue it.

My feeling is that the mine is solely responsible for our present predicament and Mr. Barthelman's, and that they should take all necessary steps to correct the situation. I haven't given too much thought to their supplying us with water from a common source and can see some objections to this, particularly if and when they close down. Perhaps a summer meeting of all involved would be worthwhile? Incidentally Colonel Green's report will be interesting.

We hope to go to Harborside on May 23 or 24 and will attempt to get another sample at that time. Perhaps we will have enough information then to know in which direction to proceed.

Thanks for your time and effort and I am looking forward to seeing you this summer.

Sincerely,



William E. Veague

LAWRENCE ST

PEPPERELL,

MASS 01463

WATER ANALYSIS REPORT

From the Water Analysis Laboratory, Kendallville, Indiana

Report No. 5966-3 Arrived May 6, 1969 Completed May 7, 1969

Distributor: Fairbairn Equipment Co., Augusta, Maine 04330

Dealer:

Prospect: Guy F. Hunter, Jr., RR 2, Winterport, Maine

Compensated Hardness, G.P.G.	<u>7.7</u>	Free CO ₂ , P.P.M.	<u>16</u>
Actual Hardness, G.P.G.	<u>7</u>	Iron, P.P.M.	<u>.1</u>
Alkalinity, P.P.M.	<u>76</u>	Silica, P.P.M.	<u>12</u>
Chlorides, P.P.M.	<u>120</u>	PH	<u>6.5</u>
Sulphates, P.P.M.	<u>7</u>	Turbidity, P.P.M.	<u>0</u>
Hydrogen Sulfide, P.P.M.			

Parts Per Million as CaCO₃--All Others As Such
(17.1 Parts per million = 1 Grain U.S. Gallon)

To correct your water problem, we recommend the following equipment, sequence of installation according to recommendation.

129759 (0-24) Chlorinator injecting a solution of _____

Neutralizer: _____

Iron Filter: _____ Automatic Iron Filter: _____ Manual
(Regenerate every _____ weeks)

WATER SOFTENER - Model FL or 5 AF or AC-30 Automatic
(Regenerate every 3 days)

Model _____ Semi-Automatic
Model _____ Manual
(Regenerate every _____ weeks)

TASTE & ODOR PURIFIER _____

COMMENTS:

Above tests all we make.

Chloride content well within 250 PPM U.S. Standards.

Water hard - somewhat acid.

Andrew M. Milnar
Master

Soft = 0.05 GPG 8.55 ppm
Mod. Hard = 3.5 to 7.6 GPG 119.7 ppm
Hard = 7 to 10.5 GPG 180 ppm
Very " = 10.5 GPG + up

EXPLANATION OF CHEMICAL ANALYSIS

HARDNESS:

4 = 0-0.5 GPG
soft = 0.5-3.5
hard

Calcium and magnesium compounds in water are the most important hardness producing elements. Hardness in water is objectionable because of scale and curd formation and wastage of soap. Water over 3.0 grains hardness may be economically softened. Due to other factors which may be present, it is often necessary to adjust the actual hardness. This is called "compensated hardness" and is the figure used in sizing a softener.

IRON:

When water containing iron is exposed to air, it becomes red and stains plumbing fixtures, kitchen equipment and fabrics. As little as 0.2 P.P.M. may be objectionable. Most iron problems can be corrected by a softener, but higher concentrations require a filter. In extreme cases a chemical feeder feeding a potassium permanganate or potash solution, followed by a manganese greensand filter, is required.

CHLORIDES:

When the chloride concentration is high enough, it produces a salty or bitter taste and causes corrosion.

No domestic equipment is as yet available to correct this condition.

SULFATES:

Water high in sodium or magnesium sulfate has a medicinal taste and produces a pronounced laxative effect. No domestic equipment is available to correct this condition.

HYDROGEN SULFIDE:

"Sulphur" water produces a rotten egg odor. It corrodes iron to form black iron sulfide and tarnishes silver. The maximum allowable amount is 0.1 P.P.M. A chemical feeder injecting a permanganate of potash solution, followed by a manganese greensand filter effectively corrects this condition. If this odor is detected when taking sample, write for special bottle containing chemicals to retain original sulphur content. No analysis will be shown for hydrogen sulfide if this is not done.

ALKALINITY:

Excessive alkalinity produces a "soda" taste. No equipment available to correct this condition on a domestic level.

pH:

This is a scale which denotes either acidity or alkalinity. A pH of 7.0 is neutral denoting pure water. Below 7.0 indicates the varying degrees of acidity, while values above 7.0 and approaching 14 are increasing alkaline.

TURBIDITY:

This indicates the amount of visible dirt, silt, etc. This may be filtered out. In extreme cases, such as pond water, it is necessary to employ a feeder injecting an alum solution for coagulation, to prevent the filter from plugging up.

- May 8th Jack Malcolm called in regard to well (we were out) he left message to call collect on the 9th.
- May 9th Called Malcolm: Drilling new well evidently impractical Callahan wants to pipe a "Temporary" water supply from the mine's well over Dyer's Hill to a 3000 gallon steel tank with a 2" buried plastic pipe gravity feed to the Farnham's system. NOT TO BE CONSIDERED A YEAR*ROUND SUPPLY. Would cover the pipe to keep water cool. Will certify that the water is good (Farnham's License) Will present cost estimates to Bangor insurance adjuster Mr. Ralph Taylor on the 12th of May and return call to Me on the 14th giving results. (Taylor Genr'l. Ajd. Bu.)
- May 10th Called Farnham's (Bill Hunter & Mr. White there) Explained situation to them
- May 11th Called Bill Baumgartner (attorney) Find out in detail what Callahan is offering. Ask for engineering plans of proposed system. Sign nothing
Agreements: Maintenance bonding-- poor point in that Callahan could default on payment making bond worthless. Only recourse then would be to sue bonding firm (long & expensive)
Bargain when they (Callahan) want to and it is important to show good faith in dealing with them
- May 12th Called Greene & Veague to let them know of the situation. Greene: Would be nice to have water this summer IF this would not jeopardize or prejudice basic claim. Veague: Wants a year-round supply, would like to get together this summer in a joint effort.
- May 14th Malcolm called (2:15pm) Taylor would go along with the proposed system. Possibility of burying pipe below frost line (5') for year-round supply. No engineering plans drawn up. Bonding? Malcolm evasive. Could hook up system by the 30th if they started on the work by the 23rd. Talk things over on the 26th (couldn't make it)
- May 15th Wrote to Veague, Hunters & Farnhams (Malcolm's call)
- May 20th Wrote to Sherman Green Deer Isle (attorney)
- May 21st Wrote to Jack Malcolm (delay in getting to Harborside)

COULD SIGN
COVENANT NOT
TO SUE WHILE
SUPPLY OF WATER
EXISTS

FRANK H. BORING, Ph.D.
18 SKYLINE DRIVE
WILLESLEY ~~MASS.~~ MASS. 02101
617/235-8783

19 May 1971

Mr. Frederick M. Beck
Callahan Mining Corporation
41 Union Wharf
Portland, Maine 04111

Dear Fred:

That is a nice aerial photo you gave us showing the winter beauty on the Cape - and the industrial not-quite-so-beauty. You have also done quite a bit of thinking about the water supply problem. I am pleased that Callahan is taking its responsibility seriously. My mother, who is the property owner, is studying your proposal and will be writing you officially. In the meantime I would like to offer the following comments and questions for your consideration and reply.

There are, of course, other alternatives to the three you present. First, would it be practical to consider drilling on the Sanctuary property? Since the State now owns it and has an indirect responsibility for solving the water problem, it might be receptive to an easement. The pipe would have to be laid across Goose Pond before reflooding.

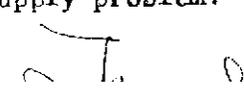
Second, what does your divining rod say about the feasibility of alternate sites on the Boring property between Howard Adman's house and the affected property owners? The distance and disturbance would be much less. Your proposed site implies a rather far-reaching impact of the mining effort on the underground water system.

Two kinds of information would help us understand your thinking as to alternate well-sites. First, what has been the experience of all the wells northeast of us since Callahan started digging? Smith? Greene? Bartelman? Eliot Cuskegg? Malcolm Gray? Did Sandecki have a separate well? Aside from those near Leach's store have any other wells turned salty or lost volume since the digging started?

Second, we could better appreciate your thinking if you would explain some of the cost factors, e.g. the cost (per foot) to drill a well-hole, e.g. the other costs of installing a pump and housing it, e.g. the cost (perfoot) to dig a trench and lay a pipe, assuming not much ledge. Or, how much is the loss if Callahan drills a well that does not work out?

You state that the real cause of the problem is that the open pit is draining off fresh water and thus allowing encroachment of salt water. Ideally, Callahan should fill the pit back up, hoping to return the underground water supply system to its original condition. Would it be possible to seal up the openings in the walls and floor of the pit when Callahan stops digging? If the pit were filled with fresh water, would the problem solve itself? If the pit were filled with salt water, would the situation be further aggravated?

Does the Town also show an interest in ^{local} the water supply problem?

Sincerely yours, 

(ORIGINAL WELL)

STATE OF MAINE
DEPARTMENT OF HEALTH AND WELFARE
AUGUSTA, MAINE

PLEASE CAREFULLY FILL OUT THIS INFORMATION FORM, AS IT WILL BE USED AS PART OF YOUR REPORT.

Bottle Number N 77 Date of Collection July 25, 1964 Time of Collection 4:30 P.
Source of Water Well, Spring, Other drilled well Located on Property of Brookside Hotel
Well or spring, how lined? rock, concrete, tile, other _____ How covered? boards, other _____
 other _____ top elevated above ground? Yes, No

FILL IN BOX WITH NAME & ADDRESS TO WHOM REPORT IS TO BE SENT

PLEASE PRINT

Name BRAIYARD L. FARMHAM
Street or RFD P.O. HARBORSIDE
City or Town BROOKSVILLE State MAINE

Kind of pipe used plastic galvanized
 copper lead other _____
Length 60 ft.
If a well, was it dug, driven, drilled
How long ago? 18 years
Depth? 60 ft.

Distance from nearest privy None ft.; stable None ft.; barnyard None ft.; sinkdrain 150 ft.; public or private sewer 150 ft.; septic tank & laterals 150 ft.; garden None ft.; manure pile None ft.; cesspool None ft.; other _____ ft. Nature of soil clay sand gravel other _____ Does the water have an unpleasant odor or taste? Yes No How is water drawn pail faucet other _____
Method of purification boiling chlorination other None Is water used by city or town? Yes No
If yes, give name of water company _____ Any change to supply since last analysis? Yes No If Yes what? _____
Is water used by a School Private home Other _____ or by a licensed establishment such as:
 Boarding Home Eating Place Lodging Place Motel Rec. Camp (Adults) Rec. Camp (Boys' & Girls') Nursing Home Located in city or town of Brooksville

DO NOT WRITE BELOW THIS LINE

Serial Number 314487

WATER ANALYSIS REPORT

Date JUN 11 1964

Satisfactory

Questionable

Unsatisfactory

(Indicates sample unsafe at time of collection. The supply is considered capable of being made safe with proper corrections.)

(Indicates continuing unsafe conditions.)

An X in the respective squares furnishes an interpretation of this analysis.

1. The bacteriological examination showed the presence of a small, large, number of dangerous bacteria. (Coliform Group)
2. This is apparently a naturally good water, but the supply needs proper protection and sterilization. After the supply is protected, another sample may be submitted for analysis. Carefully follow directions to prevent contamination of the sample. (See paragraph No. 2 on reverse side)
3. If the supply is protected with a tight metal or concrete cover and wall so that water, light or dust may not enter, as shown on the reverse side, we suggest that another sample be submitted for analysis, carefully following collection directions to prevent contamination of the sample.
4. The chemical examination showed a higher salt content than normal for the section of the State in which the supply is located.
5. The chemical examination indicates a small, a large amount of decomposing organic matter, which may be caused by contact with drainage from a sewer, cesspool, privy, septic tank system or similar type, stable, garden, heavily fertilized land, or similar source of pollution.
6. Location and removal of the sources of pollution, listed in 1, 4 and/or 5, and adequate protection of the supply may correct the unfavorable condition. The amount of the above pollution although abnormal and therefore somewhat detrimental does not appear at this time to be in sufficient amounts to completely prohibit the use of this water. There is a possibility however, as long as the sources of pollution remain, that this pollution may increase sufficiently to make the water unsafe for use. For this reason, if the water is to be used for domestic purposes, samples should be submitted at intervals of not more than six months to determine whether or not the water is deteriorating or improving in quality.
7. Locating and removing the sources of pollution, listed in 4 and/or 5, and adequate protection of the supply may correct the unfavorable condition. After the sources of pollution are eliminated a considerable period of time, estimated from 2-5 years, will elapse before the ground surrounding this water supply may be expected to return to normal and the water become safe for domestic consumption.
8. This water is not satisfactory for use in a School, a Boarding Home, or a Licensed Establishment until necessary corrections have been made and additional tests indicate that it is safe.
9. Lake, pond or stream water used for drinking or cooking purposes needs to be constantly and efficiently sterilized at all times.
10. The examination for lead (use of lead pipe having been declared) showed the presence of a trace, small, large amount. (See lead paragraph on reverse side)

E. W. Campbell

E. W. Campbell, Dr. P.H., Director
Division of Sanitary Engineering

Coliform Bacteria Group						
Chemist	10ml	BG LB	1.0ml	BG LB	0.1ml	BG LB
DDJ						
1						
2						
3						
4						
5						

DO NOT WRITE ON THIS SIDE

Serial No. 314487
 Start of Analysis MAY 26 1964
 Bottle No. N97
 Sequence No. 3
 Truck No. 7

Laboratory Analyses

Results in parts per million

Turbidity	Color	Nitrites	Nitrates	Sediment	Odor	pH	Iron
Chemist L	Chemist L	Chemist L	Chemist DS	Chemist M	Chemist MM	Chemist MM	Chemist
Result 0	Result 0	Result 4	Result 10	Result	Result	Result 7.2	Result

Chlorides	Hardness	Free Ammonia	A. Ammonia	Copper				
Chemist R	Chemist R	Chemist S	Chemist S	Chemist 18-10	Chemist	Chemist	Chemist	Chemist
7.6	10.1	2	0	1009				
6.5	8.7	0	0					
1.1	1.4	2	0					
Result 9.	Result 29.	Result 004	Result 0	Result 18	Result	Result	Result	Result

50 Tanner Street
Haddonfield,
New Jersey 08033
May 20, 1969

Mr. Sherman Green
Deer Isle,
Maine

Dear Mr. Green:

In the past I have contacted you at the suggestion of Mr. Jack Wiggins in regard to problems associated with living near the open-pit mining operations at Goose Pond on Cape Rosier.

The following is, as brief as possible a description of a situation that may in the near future require an attorney's advice and direction.

In July of last year our very dependable supply of drinking water was ruined by the mining activity carried on by the Callahan Corporation in the bed of Goose Pond. The manager of the operations verbally admitted the mine's responsibility for the draining of our well, by the lowering of the watertable in the immediate area of the pit. Shortly after the loss of our well the Callahan Corporation contracted with a well driller to drill us a new well, which for a time produced a supply of drinkable water. Since last fall the new well's water quality has deteriorated to the point of its being judged unfit for human consumption or use in the summer boarding business that is run by my neighbors Brainard and Marian Farnham. The Farnhams and I share the use of the well as well as a tenant employee of the Callahan firm who is renting an adjoining property. Two families rely on a year-round water supply as well as mine during 5 months of the year and in addition the Farnham's boarders. The board of Health in Augusta seems to think the cause of the water's testing unsatisfactory is from the intrusion of salts from the nearby waters of the Penobscot Bay. Two attempts have been made to rectify the

problem by raising the jet-pump in the well casing at 100' intervals to no avail. The water would test good for 3 months and then go bad again.

As it stands now Mr. Jack Malcolm (manager for the mine) has suggested that the Farnhams and I discuss during the first week of June his firm's recent proposal to install a "temporary" summer water supply. When first approached by Mr. Malcolm in regard to this it was made quite clear to me that this was to be a "temporary" arrangement and not to be thought of as a year-round supply, alluding to the high cost of placing the piping below the frost line and the long distance the pipe must run from the well at the mine to our properties, etc.. I was informed that we will be expected to sign some as yet undisclosed form of a release when this work is done. No engineering plans have been made available to us on this water system. This then is basically our situation.

The Farnham's and I feel that this "temporary" summer supply of water is better than none at all, but..we share concern for the need of a dependable "year-round" supply of drinking water. Brainard and Marian are in their 70's and do not wish again to haul drinking water in jugs as they did this past winter.

Brainard has lost the sight of one eye and is having trouble with the other. Anything other than a dependable year-round water supply will bring undue hardship in the winters and years to come. Since we are unavoidably situated as neighbors to the mine we are trying to make the best of things, and intend to deal in good faith with the mine in this problem.

Would you consider advising us in this matter?

Thank you.
Sincerely,

Albert E. Sandecki

50 Tanner Street
Haddonfield,
New Jersey 08033
May 21, 1969

Penobscot Unit
Callahan Mining Corporation
Harborside,
Maine 04642

Mr. John B. Malcolm
Manager

Dear Jack:

I will be unable to be in Harborside during the week of the 26th.

Things should be running a bit more smoothly by the first week of June. I will give you a call as soon as I get up as we are concerned about this water situation.

Sincerely,

Albert E. Sandeck

P.S. I hope this does not inconvenience Mr. Taylor.

Wm. Sherman Greene, Jr.
Attorney and Counsellor at Law
Sunset, Maine 04683
207-848-2881

May 26, 1969

Mr. Albert E. Sandecki,
50 Tanner street,
Haddonfield, N J 08033

Dear Mr. Sandecki:

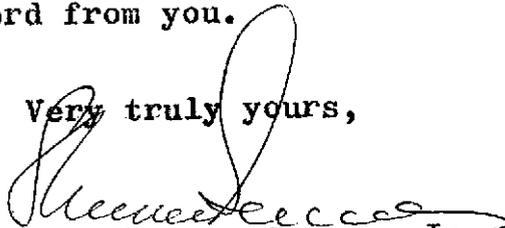
Thank you for your letter of May 20, 1969. I shall be glad to help you as may be necessary in the Callahan matter.

Although it seems that you and your neighbors have made progress with the mine, I can understand that there are various loose ends which must be clarified and eventually written up after agreement.

I would suggest that you keep me informed of any developments, forwarding any papers to me and that when you are here, you call me so that we may go over the situation.

I shall await further word from you.

Very truly yours,


Wm. Sherman Greene, Jr.

WSG:RL

MALCOLM & RALPH TAYLOR JUNE 3 3:45 - 4:30 PM.

TAYLOR: WILL GIVE US AN AGREEMENT TO LOOK OVER WITHIN 48 HRS.
IN REGARD TO ACCESS TO PROPERTY FOR INSTALLATION OF
A TEMPORARY SUMMER SUPPLY OF WATER (JULY 15TH)

MALCOLM: YEAR-ROUND SUPPLY WILL BE RUN BY TOWN ROAD (WITH ^{EASEMENT} PERMISSION OF TOWN)
(OR) RUN LINE DOWN DYDES HILL TO BRAINARD'S RESIDENCE.

TAYLOR: ROAD ROUTE BEST TO HOOK UP OTHER PEOPLE ✓
IN WARD OF WATER UTIGUES - BARTHELMAN -

MALCOLM: AGREED TO BASE OF MAINTANANCE IF LINE IS
ROUTED BY TOWN ROAD.

TAYLOR: COST 8,000 - }
MALCOLM: - 10,000 } FOR YEAR ROUND SUPPLY.

FARNHAM & I WERE ASKED WHICH SOURCE OF SUPPLY WE
WANTED - WE PRINTED OUT THE PORE WELLS IN THE AREA AND
WENT THE WATER SOURCE FROM THE MINE WAS THE ONLY
PRACTICAL SOURCE (ASKED FOR TEST RESULTS ON THE MINE'S WELL)
MALCOLM SAID IT WAS LOST, MISLAID ETC. 3-4 WEEKS SINCE
WE WERE PROMISED A COPY OF THE TEST.

CALLED SARMAN (FRENCH) TOLD HIM OF THE DEVELOPMENTS
HE KNEW ABOUT MEETING AND
THAT FENTON WOULD NOT BE THERE.

8:15 PM
3/JUNE.

50 Tanner Street
Haddonfield,
New Jersey 08033
June 7, 1969

Penobscot Unit
Callahan Mining Corporation
Harborside, Maine 04642

Mr. John B. Malcolm
Manager

Dear Jack:

In the interest of having a correct interpretation of your firms proposed "temporary" and "Permanent" return of a dependable supply of sweet water to the three residences at Harborside, Maine, the following is my understanding on the matter:

With the permission of Mr. Ralph Taylor's insurance firm the Callahan Mining Corporation will install a "temporary" supply of drinking water to our residences via a covered surface pipeline to the Farnham house. This line will probably take a route from the well at the mine up Dyer's Hill to a water storage facility then down Dyer's Hill crossing the Farnham's property and into his water line.

This is contingent on our seeing the results of a current water test on the mine's well from the State of Maine Department of Health and Welfare, with a copy of the test to be given to Marian Farnham for purposes of her boarding business license. Mr. Taylor in the mean time is to draw up an agreement towards facilitating your firms access to the Farnham property to lay the "temporary" water line, which we are to see and consider prior to your firm's beginning the work for the temporary supply of sweet water. Mr. Taylor stated that he could be back within 48 hours with this agreement, but to the best of my knowledge he has yet to stop by with it.

In regard to the installation of a "permanent" supply of good sweet drinking water, there were two proposals as a result of the discussion last Tuesday. One was to put the water line below frost over in the direction of Dyer's Hill, similar to the "temporary" supply line. The second proposal was to run the water line along the town of Brooksville's road, the consideration being for a favorable yearound access to the water line for maintanance should the need arise.

The date set for completion of the "temporary" water supply was on or about the 1st of July 1969, with the work on the "permanent" supply to start as soon as permission was received from the town of Brooksville in regard to the running of the line along side of the town road.

This then is my understanding to date. If there is any point you would care to discuss please feel free to contact Brainard Farnham or me at anytime. I will send a copy of this letter to him and we sincerely hope that we will soon be able to enjoy again the pleasure of turning on our faucets and having

good sweet water as we did for many years prior to 12:10 pm on
July 13th 1968.

Sincerely,

Albert E. Sandecki

cc:

Mr. & Mrs. Brainard Farnham
Harborside,
Maine

General
Adjustment
Bureau, Inc.

10th

REPORT

DATE 6-9-69

BRANCH OFF.
AND ADDRESSP. O. Box 658, Bangor, Maine 04401
(ZIP CODE)

GAB FILE NO. 10105-46965

INSURED CALLAHAN MINING CORP. ETAL

CO. CLAIM
NUMBER

Clarence Barthelman

92-22533

CLAIMANT Brainard Farnham-William Veague

AGENCY &
LOCATION Harrison-Black Corp.

POLICY NO.

DATE & HOUR
OF OCCUR. Discovered 7-13-68

CBT30268

LOCATION OF
LOSS/OCCUR Brooksville, MaineTYPE OF
LOSS/CLAIM PD

CONTINENTAL INSURANCE CO.-N.Y.
Charles S. Farwell, Cl. Mgr.
550 Forest Avenue
Portland, Maine

REMARKS

Following up our recent conversations on this case by telephone with Mr. Farwell, we wish to advise we visited with the insured and claimants, Brainard Farnham and Mr. Sandecki, who is a neighbor and close friend of Mr. & Mrs. Brainard Farnham. This was on the afternoon of June 2, 1969 in the presence of Mr. J.E. Malcolm, General Manager of Callahan Mining Corporation.

In our 9th report, we advised the Farnhams have salt water in their well.

This first showed up in the fall of 1968.

Mr. Jack Malcolm believed that if their submersible pump was raised 100 feet, it would then pump from a fresh water supply. The pump was raised, but they still got salt water. From a recent test at Augusta it has been found there is so much salt in the water it is unfit for human consumption.

For this reason, Mr. Malcolm has arranged for drinking water to be taken from the supply at the mine in gallon jugs. So far this arrangement has been reasonably satisfactory to the Farnhams.

Now that the summer season is beginning, the Farnhams expect to have several guests at their home and the drinking water delivered as it is at present will not be satisfactory at all and they have transmitted this information to Mr. Malcolm and to myself.

Mr. Malcolm has strongly suggested to this office the Callahan Mining Corporation arrange to supply fresh water directly from the supply at the mine to the Farnhams and eventually possibly to the Veagues and other residents of the area if it becomes necessary.

Mr. Malcolm has suggested a three inch line be run from their supply to an area where a tank will be set up on high ground behind the Farnham home and thence to the Farnham dwellings and the Sandecki summer cottage. The tank will be large enough to supply the proper pressure to the claimants in this area.

As you might realize, this arrangement brings up several points and, of course, most of them of a legal nature, such as obtaining legal advice and a proper agreement to be signed by the claimants and especially Mr. & Mrs. Brainard Farnham to allow the water line to be set below the frost line on their property.

Further, the insured is to definitely determine from the State and local town authorities legal status of the insured in being allowed to supply water to these people, and most especially that the supply meet with the standards as set up by the State of Maine.

This project will cost in the neighborhood of \$10,000 or \$12,000 for trenching, several hundred feet of three inch water line, a proper pump and storage tank plus labor of installation.

Both Mr. & Mrs. Farnham and Mr. Sandecki have agreed with this arrangement and it will be satisfactory to them.

It is strongly recommended by this office that the Continental Insurance Company seriously consider this proposition because we can see further claims being made by all of the claimants and it would be very costly to drill new wells and still not have any guarantee that the water supply thereafter would be free of contamination by salt water.

As this file already reflects claim expenditure of \$6,221.48 it is clear we would be involved with a like amount for new wells plus the possible cost of the settlement of the well of Clarence Barthelman, which claim is still pending.

As this office is not prepared to advise on the legality of these proceedings, we believe it might be good judgment to turn this file over to your company attorney for a legal opinion both as to liability and the possibility of signing satisfactory agreements by the several claimants, and of course, the preparation of said agreements.

Inasmuch as it is understood this report and your recommendations will have to be taken up with your home office, we naturally will have to wait for your further instructions.

RALPH M. TAYLOR, ADJUSTER

RMT:mah

CC: T. Jannarone Reg. Cas. Supv.
J. B. Malcolm

RALPH M. TAYLOR

ADJUSTER
GENERAL ADJUSTMENT BUREAU, INC.

51 BROADWAY
BANGOR, MAINE
TEL: 942-5551
RES. TEL 945-35

16 June.

Dear Albed;

Please excuse my delay in answering your letter of 11 June.

After I got home from our trip on which we stopped by you in Waddingfield I got sick and was laid up for several days (in bed). Then I felt better and drove up to Maine to supervise the Townie court job. I only stayed two nights June 9 & 10. I arrived late on the 9th and left early on the 10th. Consequently I saw no one except Herd Clifford and the people I bumped into while in South Brookville.

Arriving home on the 11th I promptly got under the weather again but feel all right now. (old age problems)

My only observation pertained to the problem was that my

well water tasted all right and I drank it while there. I didn't have time to measure the well or anything because I had to get home in time to see my daughter off with her husband and child on a camping trip in Europe.

My well was tested after $1\frac{1}{2}$ hours of pumping over two weeks ago but the report has not come back from the Health Dept.

The correspondence indicates a trenched pipeline rather than a line on the surface which is interesting. I think you should send copies of the correspondence to Veague and Barthelmann if you have not done so.

Our date of travel to Maine is uncertain just now. We might move up in about a week or mid-July depending on medical considerations and I would know for

several more days.

I walked down to your place about 9.00 p.m. on 9 June after I had cooked up a bite to eat but you had obviously left for which I was sorry.

I'm glad you're keeping me advised.

Our best to you both and we will be glad to see you in Maine.

Yours.

Frank