Kingston
1966
Mar. 29-31,
Apr. 1,
5-7, 12
May 2

BETWEEN:

ALASTAIR R. C. DUNCAN and FRANÇOISE DUNCAN ..... SUPPLIANTS;

AND

HER MAJESTY THE QUEEN .....RESPONDENT.

Petition of Right—Negligence—Crown Liability Act, S. of C. 1952-53, c. 30, s. 3(1)(a)(b)—Damages claimed for the alleged pollution of well supplying water for domestic purposes to suppliants' house, in which they live—Doctrine based on a legal duty arising out of the concept that "one must so use his property as not to injure the property of others"—Crown is liable as "if it were a private person of full age and capacity", "in respect of a breach of duty attaching to the ownership, occupation, possession or control of property"—Suppliants are entitled to be paid compensation of $5,000 by the respondent.

This is a Petition of Right whereby the suppliants claimed damages for the alleged pollution of the well supplying water for domestic purposes to the house in which they live.

In the fall of 1961, the suppliants and their children were seriously ill in a manner usually associated with bad water.

For a period of three years from the fall of 1961 until the fall of 1964, the water from the suppliants' well was so obviously polluted that they did not dare to use it for human consumption.

In the fall of 1964, it was discovered that a twelve-inch Department of National Defence sewer main had been discharging raw sewage into the ground less than one hundred feet from the suppliants' well. In these circumstances, the suppliants reached the conclusion that the troubles with their water were attributable to some fault on the part of officers or servants of the Crown, or some breach of duty owing to them by the Crown, by reason of which they were entitled to be compensated by the Crown.

By 1958, the Department of National Defence had constructed a housing development to the north of the suppliants' property known as Cartwright Point in the Township of Pittsburgh, Division of Kingston

and Frontenac in the Province of Ontario. During the latter part of 1960, the Department of National Defence undertook the construction of a twelve-inch lateral sewer main to take the sewage from the National Defence housing development which lay to the north of Cartwright Point so that it could be emptied in the City of Kingston's four-foot sewer main at a manhole which was at an eighty-five foot distance from the Duncan well. The ditch in which the National Defence lateral was to be laid had to be blasted out of limestone. This blasting was carried out during the month of January, 1961, and was so severe that it shook the suppliants' house.

The contractor built the National Defence lateral in accordance with specifications supplied to him by the Department. The specifications for the principal part of the main were prepared by a "consultant" from "standard" Department of National Defence specifications.

By September 1964, a substantial break in the lateral main was discovered through which sewage was escaping. The earth and fill surrounding the area bore all indications of having been subjected to very substantial pollution by sewage. This discovery was made in the period from July 12 to July 15, 1964.

By sometime in October 1964, permanent repairs were made to the National Defence lateral.

Later in 1964, or early in 1965, the stench, discolouration and frothing character of the water from the suppliants' well had disappeared and, since that time, the water from the suppliants' well has been, as far as outward appearances are concerned, quite normal.

Held, That in the Court's view, sewage was finding its way from the break in the National Defence sewer main into the suppliants' well in substantial quantities from the fall of 1961 until after the break was repaired in the fall of 1964. It could not have been caused by any other source of possible contamination to which the Crown, or any other party, has pointed throughout the course of the trial. Even more significant is the fact that, after the break in the National Defence sewer was repaired, the character of the water that reflected a massive invasion of the suppliants' well by sewage gradually disappeared. These facts are inferences "of fact legitimately arising out of the facts established by the evidence". (see *Shawinigan Carbide Co. v. Doucet*, (1909) 42 S.C.R. 281, per Duff at page 304.)

2. That having regard to the background of knowledge given by Dr. Ambrose, head of the Department of Geology at Queen's University, a highly qualified geologist, the Court comes to the conclusion that the overwhelming probability is that the obvious physical characteristics in the water from the Duncan well (the stench and discolouration) from the fall of 1961 to the end of 1964, were entirely attributable to sewage coming from the break in the Department of National Defence sewer, even though it is not improbable that some pollution was reaching the well from other sources from time to time.

3. That it is not irrelevant to consider what the probabilities or possibilities are as to what physically caused the break.

4. That the obvious fouling of the suppliants' water, which stopped when the break in the National Defence sewer was repaired, had its origin in sewage from that break.

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5. That in the Court's view, the Crown is liable to the suppliants by virtue of subsection (1) of section 3 of the *Crown Liability Act*, chapter 30 of the Statutes of 1952-3, which reads as follows:

> 3. (1) The Crown is liable in tort for the damages for which, if it were a private person of full age and capacity, it would be liable
>
> (*a*) in respect of a tort committed by a servant of the Crown, or
>
> (*b*) in respect of a breach of duty attaching to the ownership, occupation, possession or control of property.

6. That "sewage" is, from the present point of view, just as "dangerous" as gas. See *Northwestern Utilities Ld. v. London Guarantee and Accident Co.* [1936] A.C. 108, where Lord Wright said at pp. 118-9 that "though they are doing nothing wrongful in carrying the dangerous thing so long as they keep it in their pipes, they come prima facie within the rule of strict liability if the gas escapes ... and the rule established by *Rylands v. Fletcher*, L.R. 3 H.L. 330 (1868) requires that they act at their peril and must pay for damage caused by the gas if it escapes, even without any negligence on their part". What Lord Wright said as to the state of the law applies equally to the facts of this case.

7. That the bringing of sewage on to land in a sewer main is not such a "natural" use of the land as to take the facts outside of the doctrine. The application of the doctrine to sewage allowed to escape from sewer mains has been recognized in such cases as *Haigh v. Dendraith, R.P.C.*, per Vaisey J., [1945] 2 All E.R. 661-664, and *Smeaton v. Ilford Corpn.*, per Upjohn J., [1954] 1 All E.R. 923, 929 *et seq.*

8. That the contention that the fact that the blockage material in the National Defence sewer system included sticks, twigs and a skipping rope showed that the break was the result of a deliberate act of a third party, has no application here as the evidence makes it clear that the possibility of such material getting into their sewer system was the very thing that they foresaw or ought to have foreseen. They knew that they could expect such pranks and must guard against them.

9. That there was no evidence of a deliberate forming of a blockage or creation of a break in the sewer by a third person.

10. That the respondent has, therefore, failed to discharge the onus of showing that the escape was due to the deliberate or conscious act of a stranger over whom he had no control and against whose acts he could not reasonably be expected to have taken precautions. (see *Salmond on Torts*, 14th ed., (1965) page 460, and *Windfield on Tort*, 7th ed. (1963) page 457.)

11. That a private person would be liable to the suppliants by virtue of the doctrine in *Rylands v. Fletcher*, as that doctrine is based on a legal duty arising out of the concept that one must so use his property as not to injure the property of others *(Rylands v. Fletcher*, L.R. 3 H.L. p. 341, per Lord Cranworth: "For when one person, in managing his own affairs, causes, however innocently, damage to another, it is obviously only just that he should be the party to suffer. He is bound *sic uti suo ut non laedat alienum".)*

12 That this is clearly a case in which "if it were a private person of full age and capacity" the Crown would be liable "in respect of a breach

of duty attaching to the ownership, occupation, possession or control of property". That the Crown is therefore liable by virtue of paragraph (*b*) of subsection (1) of the *Crown Liability Act*.

13. That the Crown is liable for the negligence of the officer or servant who authorized the use of a sewer built in accordance with the specifications which were provided to the contractor, without taking adequate precautions against the risks involved, with the result that the suppliants' well was bombarded with sewage from the National Defence sewer for over three years. That the officer or servant of the Crown who had failed to guard against the dangers inherent in the use of it as built was guilty of negligence that caused the suppliants' well supply to be polluted by sewage from that sewer, and therefore draws on the Crown a liability by virtue of paragraph (*a*) of subsection (1) of section 3 of the *Crown Liability Act*.

14. That there will be judgment that the suppliants be entitled to be paid by the respondent the sum of $5,000 as damages and their costs to be taxed.

PETITION OF RIGHT whereby the suppliants claimed damages for the alleged pollution of their well supplying water for domestic purposes to the house in which they live.

Henry L. Cartwright for suppliants.

Norman D. Mullins and *H. A. Newman* for respondent.

James R. Herrington and *Philip D. Quintin* for third party L. M. Welter Limited.[1]

JACKETT P.:—This is a Petition of Right whereby the suppliant, Alastair R. C. Duncan and his wife, Françoise Duncan, claim damages for the alleged pollution of the well supplying water for domestic purposes to the house in which they live.[1]

Alastair R. C. Duncan was at all relevant times a professor of philosophy at Queen's University in Kingston, Ontario, and during a large part of the time was Dean of Arts and Science at that university.

The unadorned facts are: that, in the fall of 1961, the suppliants and their children were seriously ill in a manner usually associated with bad water; that, for a period of over three years commencing at about the same time, the water from the suppliants' well was so obviously polluted

[1] Third Party proceedings were dismissed with costs during the course of argument.

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that they did not dare use it for human consumption; and that, in the fall of 1964, it was discovered that a twelve-inch Department of National Defence sewer main had been discharging raw sewage into the ground less than one hundred feet from the suppliants' well. In these circumstances, it is not surprising that the suppliants reached the conclusion that the troubles with their water were attributable to some fault on the part of officers or servants of the Crown, or some breach of duty owing to them by the Crown, by reason of which they are entitled to be compensated by the Crown.

To decide whether they were justified, as a matter of law, in reaching that conclusion, I must examine, in some detail, the facts that have been established in order to reach a conclusion as to what, on a balance of probability, the relevant facts are.

The suppliants' residence stands on an irregularly shaped parcel of land referred to during the trial as "Lot 71". Lot 71 is part of a slightly larger lot which, under the following description,

> "that certain parcel or tract of land and premises situate, lying and being part of the Fort Henry Reserve in the Township of Pittsburgh, being Block B according to registered Plan No. 419 as registered in the Registry Office for the Registry Division of Kingston and Frontenac."

was leased in 1949 by Henry L. Cartwright and Vera A. Cartwright to Glen Shortliffe and Margaret Shortliffe, for a term of ten years commencing January 1, 1950, at an annual rent of $75 per year. The lease was renewable in perpetuity on the same terms subject to adjustment in the rent and it provided that any buildings placed on the demised land were to remain the property of the lessees who were entitled to sell any such buildings to a sub-lessee or assignee.

The premises so leased are on an area of land known as Cartwright Point, which is surrounded by the Saint Lawrence River and land in the occupation of the Department of National Defence. Cartwright Point slopes from the Department of National Defence property at the north in a southerly or southeasterly direction towards the Saint Lawrence River. At the time of the commencement of the Shortliffe lease, there were no year round residences upon

Cartwright Point except the Cartwrights', there were no water main or sewer main services available and the only building on the demised premises was an old barn.

Glen Shortliffe, who was and is a professor of French at Queen's University in Kingston, and his wife, erected a residence on the property, had a well drilled under the north part of the residence, and, on the south side thereof, constructed a septic tank and weeping tile field for sewage disposal. They lived there until 1958.

In 1950 or 1951 the Shortliffes, having encountered some difficulty with the weeping tile field (which was not adequate to prevent the effluent reaching the surface of the soil above it), added to the four twenty-foot lines of weeping tile constituting the original field, a further line of tiles leading to an old disused well at the far end of the lot. After that, they found their sewage disposal system satisfactory.

During the period from the commencement of the lease until 1958, the Shortliffes had the water from the well tested periodically. In the beginning the tests were made monthly, later they were made twice a year and during the last part of the period they were made only in the spring of each year. Those tests never showed any bacillus content in the water. (At some time in this period a neighbour, Dr. Rublee, had apparently had some trouble with his well.)

By 1958, the Department of National Defence had constructed a housing development to the north of the demised premises and a number of other all year round residences had been constructed on Cartwright Point.

Prior to May, 1958 the City of Kingston had built a four-foot sewer main across Cartwright Point. This sewer passed very close to the northeast corner of the demised premises and was only eighty-five feet from the well on the demised premises. It was apparently not yet in use at that time.

In May, 1958 the suppliants, for a consideration of $16,000, purchased the buildings on the demised premises from the Shortliffes and obtained an assignment of the lease. They moved into the property at that time and have lived there with their family ever since.

At the time that they moved into the premises, the suppliants had a contractor rebuild the tile field for the

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septic tank and about a year later they had the septic tank itself cleaned out. The suppliants have never had any trouble with this system. The suppliants were indeed quite satisfied with their water system during the first while they lived on the premises.

After taking possession of the premises, the suppliants built an addition to the residence at a cost of $7,300, and, in 1959, they insured it against fire for $24,000.

In 1959, the lease was renewed with an increase in the rent from $75 per year to $100 per year.

In 1960, the suppliants had a special pit and tile bed constructed for the disposal of their washing machine and sink water. This bed was also south of the house but was separate from the tile bed to which the effluent from their septic tank went.

In July 1959, the suppliants had the water from their well tested and received a satisfactory report. This report showed zero "Total Coliform organisms" and zero "E. Coli". What this was meant to convey to the householder is indicated by the back of the report form which read, in part, as follows:

E. coli. Water containing bacteria of this type should not be used for drinking purposes without treatment. E. Coli organisms indicate pollution of intestinal origin.

Other coliform organisms. These bacteria may or may not indicate pollution of human origin and water containing these should be re-examined to determine whether or not E. Coli may be present at times. If repeated examinations do not show the presence of E. Coli and there is no source of pollution nearby, the water may be considered to be satisfactory particularly if the water site has been inspected by a medical officer of Health or Sanitary Inspector. Drinking water should be boiled or chlorinated meantime.

Some time in 1960, the suppliants received a report showing slight pollution of their well but this disappeared and Professor Duncan was not unduly alarmed as he understood that wells did show such indications of pollution from time to time and that it was nothing to be alarmed about. In the summer of 1960, Professor Duncan, while in Nova Scotia, and the suppliants' son, while at Cartwright Point, each suffered from a stomach upset of the kind that one associates with water. In November of that year, however, they received a further satisfactory report on a sample of water from their well.

Some time, during the latter part of 1960, the suppliants commenced the practice, which they continued until the fall of 1961, of treating the water from their well, before using it for human consumption, with pills known as Halozone pills, which, they understood, would protect them against any possible contamination. This practice was adopted by reason of the fact that the Kingston sewer main was then in use and, presumably, also by reason of the occasional bad reports they, and their neighbours, had already had on water from wells on Cartwright Point. During the latter part of 1960, the Department of National Defence made a contract with a local contractor in Kingston for the construction of a twelve-inch lateral sewer main to take the sewage from the National Defence housing development which, by that time, lay to the north of Cartwright Point, so that it could be emptied into the City of Kingston's four-foot sewer main at a manhole in the latter main known as manhole fourteen, which was eighty-five feet from the Duncan well.

The ditch in which the National Defence lateral was to be laid (that is, from manhole fourteen to the sewer mains in the housing development) had to be blasted out of limestone. This blasting was carried out during the month of January, 1961 and was so severe that it shook the suppliants' house.

The Department of National Defence lateral sewer main was constructed in or about the month of February, 1961. It was constructed of bell and spigott concrete tiles three feet long. The main as constructed was intended to test for the internal pressure developed by a three-foot head of water. It would probably contain a pressure double that—that is, the pressure developed by a six-foot head. There was a head of nine feet from the level of the National Defence lateral at manhole fourteen to the top of the first manhole on the lateral (National Defence manhole 512) up the hill from manhole fourteen. The connection of the lateral to the City of Kingston sewer was effected by a drop pipe type of connection, which involved the sewage coming to a twelve-inch T-shaped tile and normally falling down a "drop pipe" being the upright portion of the T and passing from the drop pipe to the City sewer. If any sewage passed over the drop pipe, it could pass into the manhole through

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the part of the tile constituting the cross line of the T. The contractor built the National Defence lateral in accordance with specifications supplied to him by the Department. The specifications for the principal part of the main were prepared by a "consultant" from "standard" Department of National Defence specifications. The drop pipe connection was constructed in accordance with a "standard" City of Kingston specification. There is no indication that any person, and particularly any person qualified to do so, gave any consideration to the adequacy of the design for this sewer coming down an incline and entering another sewer through a drop pipe connection. There was evidence that, by reason of blockages that developed periodically in the housing development sewer system, it was necessary to have a maintenance crew who had equipment to clear such blockages and who, at least in the period up to 1962, were supposed to inspect the sewers by flushing them out periodically when they were not clearing blockages or doing other maintenance or repair work. The National Defence lateral was laid on a compacted bed consisting of gravel of a mix sized from fine sand to half-inch diameter. The lateral was approximately six feet below the surface of the land at manhole fourteen.

On February 28, 1961, water from the suppliants' well showed the presence of "2.0" E. Coli, and, on March 1, 1961, a similar test showed "39+" E. Coli.

On March 6, 1961, a solicitor for the suppliants and seven other residents of Cartwright Point wrote to the Ontario Water Resources Commission and stated that, since the installation of the City of Kingston sewer across the Fort Henry Reserve in the Township of Pittsburgh, a number of wells in the vicinity had become contaminated and that those showing "serious contamination" included the well of the suppliants. The letter, which was written to seek an investigation of the source of contamination, stated further that there had been "serious sickness as a result of this contamination".

About the 15th of March 1961, the flow of sewage was started through the Department of National Defence lateral for the first time.

Following an inspection of Cartwright Point made by an official of the Ontario Water Resources Commission on

April 4 and 5, 1961, as a result of the solicitor's letter of March 6, 1961, a report was made to the Commission reading, in part, as follows:

GENERAL DESCRIPTION OF AREA

From the northern limit of this subdivision where it borders the military premises, the terrain slopes downward in a southerly direction to the St. Lawrence River. A lower area extends from north to south through the subdivision, from the general location of Lot #70 to Lot #58. Fractured limestone bedrock predominates to the east of this natural indentation, while to the west the limestone reportedly tapers off on Precambrian granite. The depth of overburden reportedly varies from several feet in the low-lying area to an absence thereof in some sections. Well-drilling records on file with this Commission indicate that the limestone bedrock frequently extends to the surface in this area.

The City of Kingston trunk sanitary sewer, which extends through the Barriefield area to the city sewage treatment located approximately 3 miles to the east in Pittsburgh Township, crosses the Cartwright Point subdivision as shown on the appended plan. This sewer lies in the fractured limestone at depths varying from 16 to 20 feet at this location, according to profile plans examined at the Kingston city engineering office. This 48-inch diameter concrete sewer has tongue and groove cement joints. The specifications for constructing this sewer called for the use of a concrete cradle which would embrace approximately the lower ¼ of the sewer.

SERVICES PROVIDED AT CARTWRIGHT POINT

Private drilled wells supply water for domestic purposes at this subdivision. Although private septic tank systems are employed in some instances, there several premises located near the city trunk sanitary sewer have connections thereto.

Data was obtained during these investigations with respect to sewage disposal facilities and private wells utilized at the pertinent premises at Cartwright Point. This information is shown in Table 1 which is appended to this report.

REPORTED POLLUTION OF WELLS

Frequent sampling of the private water supplies at Cartwright Point for bacteriological analysis at the Regional Health Laboratory, Kingston, reportedly has revealed the consistent presence of coliform organisms and, in most instances, Escherichia coli organisms in the majority of these waters. Diverging from this trend, however, are the wells located at Mr. Cartwright's former home (Lot #74, Reg. Plan #970), and on the premises of Mr. MacLeod (Lot #8, Reg. Plan #419). The Cartwright well is drilled through limestone into granite bedrock. Samples of water taken from this well reportedly have remained free from coliform organisms.

It is the contention of Mr. H. L. Cartwright, owner of this tract of land, that pollution of the wells there resulted from sewage flows escaping from the local section of the city sewer and seeping into the wells. Pollution of these wells could result from either one or both of the following two conditions:

1. It is not improbable that some sewage flows may escape from the city trunk sewer and seep through the limestone bedrock into water-bearing strata

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2. The use of private septic tank and associated tile bed systems on numerous premises there could contribute to pollution of ground water, especially in an area where fissured limestone bedrock prevails. The overburden is shallow and in some instances is non-existent, thus permitting surface run-off flows not only to conduct contaminants into the ground, but also to flush subsurface disposal system contaminants into the ground water supplies.

INVESTIGATIONS

Samples were collected from 9 private water supplies in the Cartwright Point area on April 5th, 1961, and were submitted to the Ontario Water Resources Commission Laboratory for sanitary chemical analysis and coliform determination. The results of the laboratory tests are appended to this report in Table 11.

The free ammonia and total Kjeldahl values of samples taken from the Rublee well and the Avis well are somewhat higher than those obtained from the other wells. A high 5-day B.O.D. was revealed in the Avis well which is located only a few feet from the city sewer. These values suggest, but do not confirm, the fact that these water supplies may be adversely affected by seepage from the city sewer. Confirmation is lacking due to the proximity of underground sewage disposal systems. A small hypochlorinator has been provided at the Avis residence for disinfecting the private water supply there; the chlorine line was disconnected in order to obtain a sample of untreated water. Coliform organisms were not present in this sample.

The bacteriological analysis of samples taken from the 9 wells revealed coliform organisms in 6 of these wells, indicating that well pollution is general in this area. Of some significance is the satisfactory bacterial quality of samples collected from the Cartwright well and the Thompson well, both wells extending into granite bedrock which normally is less likely to conduct polluting materials than is the fissured limestone.

Householders in this area reported that the well pollution appears to predominate during the spring months when a higher ground water table would exist. The pollution appears to abate or become absent at other times. This would support the theory that abundant ground waters, as well as surface run-off flows entering through the shallow overburden, tend to conduct shallow subsurface contamination into the wells.

In assessing the possible sources of contamination, it is apparent that several potential sources exist. The contributing factor is the fissured limestone bedrock which would permit contaminants to seep readily into ground waters.

PROVISION OF SAFE WATER SUPPLIES

A discussion was held on April 4th, 1961, with Mr. G. R. Davis, Manager, Kingston Public Utilities Commission concerning the possibility of providing city water to the Cartwright Point premises. The city presently supplies water to the Department of National Defence premises and the Royal Military College, both located in Pittsburgh Township. The city has received several requests for the extension of water services into the township. These requests either have been refused or held in abeyance until a distinct policy therefor[e] may be formulated. Some apprehension was expressed concerning the legal responsibilities which the city would assume in supplying water to adjacent municipalities.

SUMMARY

Investigations were made on April 4th and 5th, 1961, to determine the extent of pollution reported in private wells at the Cartwright Point subdivision (Reg. Plan #970). This survey had been requested by Mr. H. L. Cartwright, Kingston, who owns the land comprising this subdivision.

The high coliform contents revealed in many of the private drilled wells there has caused Mr. Cartwright to regard the Kingston trunk sewer, which extends through a section of this subdivision, as a possible source of pollution. Although some of these premises have obtained connections to the city sewer, private septic tank and tile bed systems are employed in several instances.

The bacteriological analysis of samples collected from the wells at this subdivision revealed coliform organisms in 6 of the 9 wells sampled.

In view of the fissured limestone bedrock which is prevalent in this region, and the minimal depth of overburden thereon, it would appear unlikely that ground waters free from coliform organisms could be assured at all times. In short, elimination of either of the possible sources of pollution would not necessarily ensure the safety of ground water quality. The fissured limestone bedrock, combined with a shallow or nonexistent overburden, is synonymous with ground water pollution.

RECOMMENDATIONS

In view of the geological conditions prevalent in the Cartwright Point area, measures should be adopted in order to provide water of satisfactory bacterial quality for domestic use. One of the following procedures should be considered:

1. Present water supplies could be disinfected on a private basis utilizing chlorination facilities.
2. A community water supply employing adequate treatment facilities could be considered.
3. Water is supplied from the City of Kingston water distribution system to the Department of National Defence premises which are located adjacent to the Cartwright property in Pittsburg Township.

If a satisfactory arrangement could be made with the city for supplying water to the Cartwright property, the local residents could abandon the use of their private wells.

A copy of this report was sent to the solicitor for the residents of Cartwright Point under cover of a letter from the Commission dated May 12, 1961, reading in part:

In the first place, I should like to comment on what may be expected of water quality in wells in a geological formation such as that in this locality. Where rock is present close to the surface, and it contains fissures, it is the usual experience that the wells will be contaminated because of drainage from near the surface getting down into these waters. This pollution may come from many places. In the samples collected, the bacterial pollution was not high in any of the wells, but coliform organisms were found in six of the nine wells sampled. It is quite impossible to say whether this contamination came from leakage from the sewer or from the different septic tanks in the area, or from surface drainage in general. The fact that all wells are relatively deep should give some degree of protection regardless of the source of pollution.

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I do not know what more we can do in this investigation. Even if it were shown that some pollution is getting into the wells from the sewer, the situation would still be an undesirable one because of the nature of the formation and the presence of other polluting substances. It is interesting also to observe that wells quite some distance back from the sewer also show pollution and in about the same degree as those close at hand. Under these circumstances, it does appear highly desirable to have water from a public system installed as soon as this can be.

If there is anything further we can do to assist you in this, please let me .

During the summer of 1961, the suppliants used the water from their well for all household purposes, treating the water used for consumption with Halozone pills and the dish water with Javex. There was no outward indication of anything abnormal about it and they suffered no ill effects from it.

In September of 1961, in the course of clearing a blockage that originated in the housing development sewer system, National Defence personnel, including one Staff Sergeant Webber, had occasion to visit manhole fourteen and the staff sergeant made a visual inspection of the horizontal National Defence lateral at the higher of the two points where it entered the manhole. There was, of course, limited light for such inspection but, as far as he could see, there were no defects in the six feet of pipe which could be viewed from inside the manhole.

On October 16, 1961, the solicitor for the local residents wrote to the National Defence District Engineer in Kingston a letter reading as follows:

Anything you could do to expedite the department's decision with regard to the supply of water to this area would be appreciated. The situation is that eight wells have been seriously contaminated and there is great danger to the health of the parties concerned. The probable source of infection is the city sewer which is also used by army housing. In these circumstances I suggest that you should do everything possible to assist these people in clearing up the health hazard at the earliest possible moment.

The number of people affected is only eight and the total number that could possibly, in the future, become members of the water area would be thirty. The Kingston Public Utilities Commission is prepared to supply the water and the only obstacle, at present, is obtaining the permission of the Department of National Defence to passing this water through D.N.D. water mains. The Kingston Public Utilities Commission would take all responsibility for metering and billing and would deduct the amount of water supplied to the water area from the total amount going into the D.N.D. mains.

I would appreciate your assistance in getting this matter cleared soon as we had hopes of installing the water before winter.

In the fall of 1961, all the members of the Duncan family became seriously ill in a way associated with contaminated water. Commencing at about the same time, there was a pronounced change in the character of the water from their well. It was seriously discoloured, it gave off a strong sewer-like stench whenever water was drawn from the taps and, when boiled, it frothed. (The frothing is apparently attributed to detergents in the water.) Since the water developed these obvious manifestations of pollution, the suppliants have, of course, refrained from using the water for personal consumption, cooking, or the washing of teeth. Indeed, it may be said, without undue exaggeration, that, since that time, everybody on Cartwright Point has been seriously worried about their water supplies.

Since the commencement of the drastic change in the apparent character of the water from their well, Professor Duncan has had to bring, from either the university or the home of a neighbour, all water used in their home for personal consumption, cooking or washing of teeth.

The conditions of stench, discolouration and frothing in the water from the suppliants' well that developed in the fall of 1961, continued unchanged throughout 1962, 1963 and most, if not all, of 1964. During this period, the residents of Cartwright Point made strenuous efforts to obtain a safe supply of water through their own municipality but no results were attained.

On July 16, 1964, water from the suppliants' well still showed the presence of "39 + E." Coli.

On July 23, 1964, a further inspection was made of private wells on Cartwright Point and the report made as a result read as follows:

INTRODUCTION

In response to a request submitted to this Commission by Mr. H. L. Cartwright, Kingston, investigations were made on the above date to review conditions pertaining to the quality of ground water at Cartwright Point. Mr. Cartwright had requested a general investigation of ground-water supplies and the possible sources of any pollution. In conjunction with the investigations which were made on July 23, 1964, interviews were held with Mr. H. L. Cartwright and with Mr. D. P. Ross, P. Eng., City Engineer, Kingston.

A survey of ground-water quality was made at Cartwright Point by OWRC staff on April 4 and 5, 1961. The results of that survey can be reviewed by making reference to the report which was prepared and distributed subsequent to the field investigations.

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DESCRIPTION OF THE AREA

The residential area known as Cartwright Point is located east of the community of Barriefield and south of the Department of National Defence premises in the Township of Pittsburgh. Approximately 40 houses are located in this subdivision where the residents have leased building lots from Mr. H. L. Cartwright.

The general topographical and geological features of the area were described in the 1961 report. Of special interest in these investigations is the fact that fractured limestone bedrock predominates in the area where polluted ground-water supplies have been reported. The depth of overburden varies from several feet to an absence thereof in some sections.

The City of Kingston trunk sanitary sewer extends through the Cartwright Point subdivision to the city's sewage treatment plant which is located near the St. Lawrence River in the Township of Pittsburgh. As described in the 1961 report, this trunk sewer lies in the fractured limestone at depths varying from 16 to 20 feet in the Cartwright Point area.

WATER SUPPLIES

The residents of this subdivision obtain water from private drilled wells. Sampling of various wells in the area during 1961 revealed the incidence of appreciable pollution in some of the water supplies. The appended laboratory results pertaining to water samples collected on July 23, 1964, reveal varying degrees of pollution in the wells which were sampled. Excessive pollution was revealed in the water samples obtained from the well which serves the Avis residence. A hypochlorinator is utilized on these premises for the disinfection of the domestic water supply. (The hypochlorinator was disconnected in order to obtain unchlorinated water samples.) In general, the presence of sanitary waste was apparent in many of the samples collected on July 23, 1964.

POTENTIAL SOURCES OF POLLUTION

The fissured limestone bedrock would facilitate the entry of contaminants to ground waters. Two possible conditions which could result in pollution of the ground water at Cartwright Point are as follows:

1. In the area concerned, several residences utilize sub-surface sewage disposal systems. The presence of fractured limestone bedrock and the minimal depth of overburden are factors which could permit waste flows to gain access readily to ground waters.
2. It is not improbable that some sewage flows could escape from the city's trunk sanitary sewer and enter the ground water.

Although either or both of these conditions could result in the pollution of ground-water supplies at Cartwright Point, elimination of either of the possible sources of pollution would not necessarily ensure the safety of ground-water quality.

It is Mr. Cartwright's contention that the city's trunk sanitary sewer is responsible for the adverse quality of the water supplies. The city's recent proposal to purchase equipment for inspecting the interior of sewers has prompted Mr. Cartwright to suggest the use of such a device in the trunk sewer extending through his property. It is understood that the officials concerned would not be averse to the consideration of such a proposal when the equipment has been obtained for inspection.

PROVISION OF A SAFE WATER SUPPLY

Subsequent to the aforementioned investigations which were conducted in 1961, the Commission report recommended that one of the following procedures should be adopted in order to provide water of satisfactory quality at Cartwright Point:

1. Present water supplies should be disinfected on a private basis utilizing chlorination facilities. (It is obvious that, if well pollution is severe, treatment in addition to chlorination might be required.)
2. A community water supply employing adequate treatment facilities could be considered.
3. If a satisfactory arrangement could be made with the City of Kingston for supplying water to the Cartwright property, the local residents could abandon the use of their private wells. The city supplies water to the Department of National Defence premises which are located adjacent to the Cartwright subdivision.

COMMENTS

The use of a tracer dye by local residents to determine if waste escapes from the city's trunk sanitary sewer was unsuccessful, probably due to the high dilution in the sewage flows. A great deal of dye would be required even if flows do escape from the sewer. An alternate procedure would be to place a non-toxic dye in the private sewage disposal systems at Cartwright Point to determine if this dye would establish a relationship between these systems and the well pollution. This action would at least provide a deductive method of investigating the pollution problem.

According to information obtained during this survey, the City of Kingston officials have displayed a co-operative attitude by offering to supply city water to the Cartwright Point premises providing that the local residents would agree to waive any future claims concerning ground-water pollution. Since some of the residents in the subdivision have refused to sign such an agreement, the negotiations have collapsed. The negative response made by some residents is attributed to the belief that their water supplies are of satisfactory quality and will remain so.

SUMMARY

Investigations were made on July 23, 1964, to determine the extent of pollution in private wells at the Cartwright Point subdivision. This survey was performed at the request of Mr. H. L. Cartwright who owns the land comprising the subdivision, and was a review of conditions investigated previously by OWRC staff on April 4 and 5, 1961.

Many of the wells yield water which appears to be adversely affected by sanitary waste gaining access to the ground waters. The immediate potential sources of pollution could be the private sub-surface sewage disposal systems and the City of Kingston's trunk sanitary sewer. The removal of either of these potential sources of pollution would not ensure the safety of water supplies due to the geological conditions. There is an obvious necessity for an adequate supply of safe water.

RECOMMENDATIONS

Consideration should be given to the provision of an adequate supply of safe water at the Cartwright Point subdivision. Successful negotiations with the City of Kingston is one practical method by which this objective could be achieved.

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A copy of this report was sent to the solicitor for the residents under cover of a letter from the Commission dated September 8, 1964.

Very shortly after receipt of that letter by their solicitor, a pool of raw sewage was discovered on the ground in the vicinity of manhole fourteen. As a result of excavation to discover the source of that sewage, it was discovered that about four inches of the gravel bed under the second and third tiles in the National Defence lateral (i.e., the two tiles closest to the T tile through which the lateral connected with manhole fourteen) had disappeared, with the result that those tiles had subsided under the pressure of the fill above (breaking off part of the "bell" shaped end of the T-shaped tile that connected with manhole fourteen) leaving a substantial break in the lateral through which the sewage was escaping. In the tile next to manhole fourteen (the T-shaped tile), there was a blockage consisting of twigs, sticks, toilet paper, rags, a skipping rope and other material preventing sewage from entering the Kingston sewer by either of the two possible entrances. The earth and fill surrounding the area bore all indications of having been subjected to very substantial pollution by sewage. This discovery was made in the period from July 12 to July 15, 1964.

By some time in October 1964, permanent repairs were made to the National Defence lateral.

Later in 1964, or early in 1965, the stench, discolouration and frothing character of the water from the suppliants' well had disappeared and, since that time, the water from the suppliants' well has been, as far as outward appearances are concerned, quite normal. It has, however, shown indications of pollution when tested from time to time. For example, on September 22, 1965 and on October 4, 1965, it showed 39 + E. Coli. What is more important, Mrs. Duncan, and others, had been present at the opening of the break in the National Defence lateral and everybody living on Cartwright Point or thinking about living on the Point would have heard vivid descriptions of the conditions discovered when it was opened up. Mrs. Duncan said, according to my note of her evidence, "...when I saw the amount of the soil contamination and smelled the incredible stench I personally thought it might remain a long time and I was not going to risk anything". The change in the apparent

character of the water back to normal did not therefore have the effect of making it possible for the suppliants to resume the use of water from the well, subject to appropriate treatment, for personal consumption, cooking, washing of teeth and other similar uses. It did, however, relieve the suppliants from the annoyance, discomfort and odium of having sewer stench and discoloured water in their home and it did make the use of their own water for personal washing and bathing less distasteful.

On these facts, considering the matter without the assistance of any scientific or other expert evidence, I am of opinion that the balance of probability is that sewage was finding its way from the break in the National Defence sewer main into the suppliants' well in substantial quantities from the fall of 1961 until after the break was repaired in the fall of 1964. The stench and colour that appeared in their water in the fall of 1961, as described by the suppliants, could only have been caused, as nearly as I can judge without expert assistance, by a very substantial invasion of their well by sewage. Such an invasion could have been caused by sewage from a twelve-inch main. As nearly as I can judge without expert assistance, it could not have been caused by any other source of possible contamination to which the Crown, or any other party, has pointed throughout the course of the trial. Even more significant, of course, is the fact that, after the break in the National Defence sewer was repaired, the character of the water that reflected a massive invasion of the suppliants' well by sewage gradually disappeared.[1]

The only argument of the Crown against this conclusion is that the break in the National Defence sewer could not have occurred until very shortly before it was discovered in September 1964, because, otherwise, it would have been discovered by periodic National Defence inspections of their sewers that were supposed to take place at intervals of not more than two weeks. The evidence relied upon for this argument is that of Staff Sergeant Webber, who was,

[1] In the absence of explanation, these facts warrant the inferences that I have drawn. They are not mere "conjectures" such as were the subject matter of *The King v. Moreau*, [1950] S.C.R. 18. They are inferences "of fact legitimately arising out of the facts established by the evidence". See *Shawinigan Carbide Co. v. Doucet*, (1909) 42 S.C.R. 281, per Duff J. at page 304.

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from January 1960 to January 1962, a sort of superior foreman or clerk of works who worked under the National Defence Engineer who was responsible for the sewer system. The Staff Sergeant's evidence was that he had instituted such a system of inspection. I am not satisfied that, if the system of inspection as described by the Staff Sergeant had been carried out, it would necessarily have revealed the break; I have no evidence that it was in fact carried out during the period when the witness was in charge;[1] and I have no evidence that that system of inspection was even supposed to be in effect after his time. The Staff Sergeant himself had not been near manhole fourteen since the incident in September 1961, to which I have already referred. If any National Defence personnel had visited the sewer in question during the vital period from September 1961, to September 1964, he was not called as a witness nor was any explanation given for not calling him. Furthermore, when the pool of sewage was discovered near manhole fourteen, a plumber, who was working under Staff Sergeant Webber's successor and who was sent to inquire into the source of the sewage on the surface, thought it necessary to seek Mr. Cartwright's permission to go on his land at manhole fourteen, which suggests to me that there was no practice of inspecting the sewer at that point. For all these reasons, I reject the contention that the evidence concerning a system of inspections establishes that the break in the National Defence sewer could not have happened until shortly before it was discovered.

Neither party put before the Court the opinion of any expert witness as to what caused the break in the National Defence sewer or as to when it occurred. The Crown took the position that the suppliants, who had the onus of proving their case, should have incurred the very considerable expense of providing the Court with this type of assistance. I repeat that, in the absence of any such assistance, I can only conclude that what happened is what seems probable to a person who has not the advantage of scientific or other

[1] That all instructions given in the unit in question by higher authority are not automatically carried out precisely as given is shown by the fact that the instructions that appear on Exhibit R10, that Staff Sergeant Webber was to notify the City of Kingston when the National Defence sewer was being connected so that the City might inspect the work during construction of the connection, was not complied with.

expert training or experience or of advice from a person who has such training or experience. I infer that the Department of National Defence did not feel impelled to obtain any expert opinion as to why or when their sewer broke and discharged sewage into their neighbours' ground or that any such opinion that the Department did obtain supports the result that I have reached.

In attempting to assess the probabilities as to whether the suppliants' well was invaded by effluent escaping from the break in the National Defence lateral, I have had the assistance of evidence from a highly qualified geologist, Dr. J. W. Ambrose, head of the Department of Geology at Queen's University.[1] As I understand it, one can conceive of the relevant part of Cartwright Point as consisting of a hill sloping down towards the Saint Lawrence River in a southerly direction, such hill consisting of limestone with a layer of earth on top of it. The limestone, in itself, is to be conceived of as impervious to water but it is divided by cracks or spaces (some of which are filled with earth, gravel, and other material, and some of which are not so filled) following more or less a pattern that can be described in technical terms by the geologists and through which water can percolate or flow. The earth layer, which varies in depth from several feet in some places to zero where there are outcroppings of rock, is full of air spaces more or less perceptible to the human eye through which water can percolate or flow. Furthermore, one can conceive of all the spaces in the limestone or the earth constituting this hill as being filled with water, called "ground water", up to a level, called the "ground water level," which follows a line from the level of the water in the Saint Lawrence River, at the river edge, to a level somewhere in the neighbourhood of twenty feet below ground level at the top of the hill. Such ground water level is a "subdued reflection" of the ground level above it. Furthermore, one can conceive of a tendency of the ground water to flow or move towards the river by virtue of the tendency of water to seek the lowest level. This flow or movement is relatively slow compared to a flow of water in ordinary surface channels because a movement

[1] During the course of the trial the Court, in the presence of counsel and Dr. Ambrose, took a view of the locality, which was of assistance in an appreciation of the evidence.

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of water through relatively small, if not minute, channels is of necessity slowed down by the physical impediments to flow.

In effect, therefore, one can think of the situation as being

(*a*) that there is an area below the ground water level where, except for spaces in the centre of rocks or other contained places, all space not filled with solid material is filled with water, which is generally tending to flow towards the river,

(*b*) that there is an area between the ground water level and the ground level—which can be called the "aerated zone"—in which the spaces between the solids (the rock and the earth) are filled with air through which water entering from the surface percolates, in accordance with the principle that water seeks the lowest level, until it reaches the ground water level where it joins the ground water which is moving towards the river, and

(*c*) that there is water on the surface known as surface water, which flows towards the river until it encounters open spaces in the ground surface through which it enters the aerated zone to percolate towards the ground water.

The result is that water below the earth surface percolates either directly down towards the ground water or follows cracks or other spaces in the limestone, which will, generally speaking, lead it in a direction downward and towards the river but which could conceivably, in exceptional cases, lead downward but away from the river. In any event, when water percolating through the aerated zone reaches the general body of ground water, it will then follow the general tendency to flow towards the river.

Having regard to the background of knowledge given to me by Dr. Ambrose, I am satisfied that the overwhelming probability is that the obvious physical characteristics in the water from the Duncan well (the stench and discolouration), from the fall of 1961 to the end of 1964, were entirely attributable to sewage coming from the break in the Department of National Defence sewer, even though it

is not improbable, as I will show later in these reasons, that some pollution was reaching the well from other sources from time to time.

In reaching the conclusion that I have already expressed that sewage was escaping from the break in the National Defence sewer from September 1961 until the break was repaired in October, 1964, it is not irrelevant to consider what the probabilities or possibilities are as to what physically caused the break.

In my view, having regard to the evidence as to the physical facts and the evidence of Mr. J. D. Lee and Mr. D. C. Smith, each of whom was a well qualified engineer with experience in connection with sewer works (neither of them had been employed to prepare themselves to express an opinion as to what actually happened and neither of them expressed any such opinion), the most probable hypothesis as to what happened is as follows:

1. After Staff Sergeant Webber's view of the first six feet of the National Defence lateral in September of 1961, another plug developed, this one in the T drop pipe—this block would have prevented the sewage from going from the lateral into the Kingston sewer.
2. As a result of the block, the lateral would relatively quickly fill with sewage from the T drop pipe towards manhole number 512 and possibly almost to the top of that manhole, which would create a nine-foot head of sewage effluent.
3. The resulting pressure at the lower end of the lateral would have fractured the joint between the T tile, which adjoins manhole fourteen and the next tile, letting liquid effluent out and bringing about relief from the pressure.
4. The liquid effluent leaving the sewer through the cracked joint under pressure would wash away, through fissures in the rock, the finer components in the bed under the two tiles next to the T drop tile. Having regard to the pressure of a head of six to nine feet, this would take place fairly quickly.
5. When sufficient of the bed under those two tiles was washed away, the weight of the six feet of fill and soil above them (1200 pounds per running foot)

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would have forced them to subside breaking off the lower part of the "bell" end of the T tile and leaving a four-inch opening through which the sewage effluent would escape and this would have permitted the renewal of normal flow through the National Defence sewer.

(All of the above could have happened, so far as I can judge unassisted by expert testimony on the question, between the time that Staff Sergeant Webber inspected the sewer from manhole fourteen, in September of 1961, and the time that the suppliants' well water became obviously foul.)

6. The sewage thus diverted from the National Defence sewer would then have found ways to flow off through the aerated space between the level of the broken tile and the ground water level and one of these ways would have led directly or indirectly to the suppliants' well.

7. The next stage would have been the gradual formation of gelatinous material in the soil and the open spaces in the rocks which ultimately sealed off some of the routes by which the sewage effluent was escaping so that less was then able to escape downward from the break than was flowing down the sewer to the break. This would have resulted in the sewage again backing up in the sewer to a head of at least six feet and so building up pressure on the sewage effluent that could not find adequate escape routes from the break by reason of the gelatinous material.

8. This pressure would have forced the sewage upward so that it finally bubbled out on the surface in August or September, 1964.

Counsel for the Crown accepted this theory as to what had happened except that he submitted that the whole process took place in a matter of days or weeks before the middle of September, 1964. As I have indicated, he based this submission on the evidence about an inspection system. I have already given my reasons for rejecting this qualification on the view that I have expressed as to what probably happened

Counsel for the suppliants put forward a somewhat different version as to what had probably happened. In the first place, he suggested that there was probably water flowing down the trench in which the National Defence sewer was laid before the bed for the pipe was completed. He suggested that this would result in water in the gravel constituting the bed below the two tiles next to the T tile, that this water would be frozen when the tiles were laid in February 1961, that when spring came, this water would thaw and that the bed would then subside enough so that there would be a fracture in the joint at that time through which small amounts of effluent would escape (causing small amounts of pollution to the suppliants in the spring and summer of 1961) and that this effluent would gradually wash away the bed under the two tiles that ultimately subsided in the fall of 1961, after Staff Sergeant Webber's view from manhole fourteen, causing the major pollution from that time until after the break was discovered in September of 1964. Counsel for the suppliants further suggested that the blockage in the T pipe did not occur until September 1964, when it caused the sewage to bubble out at the surface.

I find the suggestions put forward by counsel for the suppliants to be no more than conjectures. There are no proven facts that make such conjectures probabilities. Their main merit, from the point of view of the suppliants, is that they put the responsibility for minor pollution of the suppliants' well in the summer of 1961 on the break in the National Defence sewer.

I repeat that my view starts with the probability that I have already developed that the obvious fouling of the suppliants' water, which stopped when the break in the National Defence sewer was repaired, had its origin in sewage from the break. I regard my conjectures as to how and when the break occurred as being the most probable explanation of how the obvious fouling of the suppliants' water by the sewage from the National Defence sewer could have happened.

On these facts, I am of opinion that the Crown is liable to the suppliants by virtue of subsection (1) of section 3 of the *Crown Liability Act,* chapter 30, of the Statutes of 1952-3, which reads as follows:

3. (1) The Crown is liable in tort for the damages for which, if it were a private person of full age and capacity, it would be liable

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(a) in respect of a tort committed by a servant of the Crown, or

(b) in respect of a breach of duty attaching to the ownership, occupation, possession or control of property.

In the first place, the facts, as I have found them, in my view fall clearly within the principle of strict liability laid down in *Rylands v. Fletcher*[1] as applied by the Judicial Committee of the Privy Council in the Alberta case, *Northwestern Utilities Ld. v. London Guarantee and Accident Co.*[2] See per Lord Wright at pages 118-9:

> Before discussing the facts in the case, it is desirable to explain the principles of law which, in their Lordships' judgment, are applicable.
>
> That gas is a dangerous thing within the rules applicable to things dangerous in themselves is beyond question. Thus the appellants who are carrying in their mains the inflammable and explosive gas are prima facie within the principle of *Rylands v. Fletcher*, L.R. 3 H L. 330, affirming *Fletcher v. Rylands*, (1886) L.R. I Ex. 265: that is to say, that though they are doing nothing wrongful in carrying the dangerous thing so long as they keep it in their pipes, they come prima facie within the rule of strict liability if the gas escapes: the gas constitutes an extraordinary danger created by the appellants for their own purposes, and the rule established by *Rylands v. Fletcher*, L.R. 3 H.L. 330, requires that they act at their peril and must pay for damage caused by the gas if it escapes, even without any negligence on their part. The rule is not limited to cases where the defendant has been carrying or accumulating the dangerous thing on his own land: it applies equally in a case like the present where the appellants were carrying the gas in mains laid in the property of the City (that is in the sub-soil) in exercise of a franchise to do so: *Charing Cross Electricity Supply Co. v. Hydraulic Power Co.*, [1914] 3 K.B. 772.
>
> This form of liability is in many ways analogous to a liability for nuisance, though nuisance is not only different in its historical origin but in its legal character and many of its incidents and applications. But the two causes of action often overlap, and in respect of each of these causes of action the rule of strict liability has been modified by admitting as a defence that what was being done was properly done in pursuance of statutory powers, and the mischief that has happened has not been brought about by any negligence on the part of the undertakers.

There was no question of a defence based on statutory authority here. (Another defence that is well established, and which was relied upon here, is that the "escape" was caused by the deliberate act of a third party. I refer to this a little later in these reasons.) In my view "sewage" is, from the present point of view, just as "dangerous" as gas and what Lord Wright said as to the state of the law applies equally to the facts of this case. Further, in my view, the bringing of sewage on to land in a sewer main is

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[1] L.R. 1 Ex. 265; L.R. 3 H L. 330 (1868).

[2] [1936] A C. 108. Referred to in *Read v. Lyon & Co. Ltd.*, [1946] 2 A.E.R. 471, per Viscount Simon at page 474.

not such a "natural" use of the land as to take the facts outside of the doctrine. The application of the doctrine to sewage allowed to escape from sewer mains has been recognized in such cases as *Haigh v. Dendraith, R. P. C.*,[1] per Vaisey J. at page 664, and *Smeaton v. Ilford Corpn.*,[2] per Upjohn J. at pages 929 *et seq.* (compare Salmond on Torts, 14th ed., 1965, page 451). Cases holding that the *Rylands v. Fletcher* doctrine does not apply to water, gas or electricity in domestic installations have no application to cases concerning water, gas or sewage in mains or reservoirs where "these dangerous things were being handled in bulk and in large quantities".[3] Compare *Collingwood v. Home and Colonials Stores Ltd.*[4] per Lord Wright at page 208, referred to in *Crown Diamond Paint Co. v. Acadia Holding Realty Co.*[5] per Rand J. at page 173. See also *Western Engraving Co. v. Film Laboratories, Ltd.*[6]

It was contended that the fact that the blockage material included sticks, twigs and a skipping rope showed that the break was the result of a deliberate act of a third party within the defence in such cases as *Rickards v. Lothian.*[7] In my view, this exception has no application because Staff Sergeant Webber's evidence makes it clear that the possibility of such material getting into their sewer system as a result of childish pranks was the very thing that they foresaw or ought to have foreseen. They knew that they could expect such pranks and must guard against them. In any event, there is no evidence of a deliberate forming of a blockage or creation of a break in the sewer by a third person. Twigs, small sticks, a skipping rope, rags, and other miscellaneous objects, were found in the block. Some of such things probably got in the sewer system as a result of childish pranks which the design of the system apparently seemed to invite. Whether the things that got in in that way were essential to the formation of the blockage we do

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[1] [1945] 2 All E.R. 661.
[2] [1954] 1 All E.R. 923.
[3] While the point has not been raised by the respondent, it should be noted that the *Rylands v. Fletcher* doctrine applies where the person bringing fluids into a main has only a license to have its main in the land. See *Charing Cross Electricity Supply Company v. Hydraulic Power Company*, [1914] 3 K.B. 772, cited with approval by the Privy Council in the *Northwestern Utilities* decision in 1936 (*supra*).
[4] [1936] 3 All E R. 200.
[5] [1952] 2 S C R. 161.
[6] [1936] 1 All E.R. 106.
[7] [1913] A.C. 263.

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not know. Assuming that they were, the children did not create the blockage but rather the National Defence sewer system operating on material properly in it and material that should not have been in it brought about the blockage. The "plugging up" here was not "a deliberately mischievous act of some outsider" as it was in *Rickards v. Lothian, supra.* The respondent has, therefore, failed to discharge the onus of showing that the escape was due to the deliberate or conscious act of a stranger over whom he had no control and against whose acts he could not reasonably be expected to have taken precautions. See Salmond on Torts, 14th ed., (1965) page 460, and Winfield on Tort, 7th ed. (1963) page 457.

In my view, therefore, if the construction, operation and maintenance of the National Defence lateral had, during the relevant period, been carried out by a private person instead of the Crown, such person would be liable to the suppliants by virtue of the doctrine in *Rylands v. Fletcher.* As that doctrine is based on a legal duty arising out of the concept that one must so use his property as not to injure the property of others,[1] this is clearly a case in which "if it were a private person of full age and capacity", the Crown would be liable "in respect of a breach of duty attaching to the ownership, occupation, possession or control of property". The Crown is therebore liable, by virtue of paragraph (*b*) of subsection (1) of the *Crown Liability Act.*

The same conclusion would be reached on the basis of the tort of nuisance. See *City of Portage La Prairie v. B.C. Pea Growers Ltd.*[2] where the appellant municipal corporation was held to be liable for damages to the respondent's property arising from seepage from a sewage lagoon. In particular, see page 508 per Martland J., delivering the judgment of the Supreme Court of Canada: "It was not necessary, in order to fix the appellant with liability for the creation of a nuisance, for the respondent to establish negligence on the part of the appellant or of its engineers in the construction of the lagoon."

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[1] See *Rylands v. Fletcher, supra,* L.R. 3 H.L. at page 341, per Lord Cranworth, "For when one person, in managing his own affairs, causes, however innocently, damage to another, it is obviously only just that he should be the party to suffer. He is bound *sic uti suo ut non laedat alienum.*"

[2] (1966) 54 D.L.R. (2d) 503.

In any event, I am of opinion that the unknown officer or servant of the Crown who caused the National Defence sewer to be used for the movement of sewage after having been built in accordance with the specifications that were supplied to the contractor, without taking any steps to guard against the dangers inherent in the use of it as built, was guilty of negligence that caused the suppliants' water supply to be polluted by sewage from that sewer from the fall of 1961 until the end of 1964. Such officer or servant may have been the engineering officer who authorized the specification (and thus impliedly authorized the use of the sewer built in accordance with the specification) or it may have been some other officer who authorized the use of the sewer without taking whatever steps were necessary to protect the neighbours against the risks involved in using it as built. For present purposes, it does not matter precisely who he was. It is sufficient to find that there must have been some officer who took responsibility for causing sewage to flow in the National Defence lateral and who was therefore under a duty to those who might be affected to take care for their safety just as much as an officer who operates a National Defence vehicle on the highway at a high speed is under a duty to take care not to injure persons who might be injured by the vehicle if care is not taken. In either case, the officer who fails to take care with resultant injury to a third person draws on himself a personal liability in the tort of negligence and therefore draws on the Crown a liability by virtue of paragraph (*a*) of subsection (1) of section 3 of the *Crown Liability Act*.

Here again, no engineer was called by the Crown to explain or justify the use of these specifications for this installation. In the absence of any such explanation, my conclusion is that what happened was a probable and foreseeable consequence of the use of the lateral constructed as specified. The T tile for the drop connection constituted a trap for sticks, twigs and other material which, it was well known, were likely to get into this sewer system. A blockage at this point was, having regard to the experience in connection with the system, probable and foreseeable. A combination of the fact that the lateral as constructed was only designed to take the pressure from a three-foot head and the fact that a head of nine feet would be developed

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before sewage would be backed up so as to emerge from the first manhole up the hill, which is the first place where it would be noticed, meant that it was probable that the sewer tiles or the joints between them would fail and that the sewage would escape into the ground without there being any indication above ground that there was anything wrong. There is nothing in the evidence to show that, once a good size break was developed, even the flushing out of the sewer by use of a water hydrant would give any indication that there was a break. It is not for me to say what the fault was. It may have been that there should have been stronger pipe and joints or more manholes, or both, or an efficacious system of inspection, or something that does not occur to me.[1]

Quite apart from the *Rylands v. Fletcher* doctrine of strict liability, I am, therefore, of the view that the Crown is liable for the negligence of the officer or servant who authorized the use of a sewer built in accordance with the specifications which were provided to the contractor, without taking adequate precautions against the risks involved, with the result that the suppliants' well was bombarded with sewage from the National Defence sewer for over three years.

Paragraph 7 of the Statement of Defence to the Petition of Right sets up a defence of lack of the notice required by subsection (4) of section 4 of the *Crown Liability Act*. This defence was abandoned by counsel for the Crown during the course of the trial.

I come now to the question of the relief that the suppliants are entitled to. They ask only for damages. It is conceded that the break has been repaired and that there is no threat of a continuation of the *tort* which would justify seeking an injunction, even if an injunction can be obtained in Petition of Right Proceedings, a question concerning which I need express no opinion.

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[1] It is a fair inference from the established facts, in my view, that the break would not have occurred without the negligence of an officer or servant of the Crown. In the circumstances, it was for the Crown to show that it could have happened without negligence. See *Gauthier & Company, Ltd. v. The King*, [1945] S.C.R. 143 at page 157, per Kellock J., delivering the judgment of the majority.

In considering the quantum of damages, it is necessary to appraise precisely what it was that the suppliants had in the fall of 1961 before their water supply was attacked by Department of National Defence sewage. To do this, I propose now to bring together all the evidence bearing on that question even though most of it has already been referred to.

The water from the suppliants' well until the fall of 1961, to all outward appearances, was just as good as water from any city main. It looked the same. It had no noticeable odour. It had no physical characteristic that detracted in any way from its acceptability for domestic use.

Nevertheless, it was obtained from a well located in a fairly highly populated area that had been bored in limestone and as such was a subject of apprehension. While an ordinary householder would, as far as his own observations were concerned, have no reason for apprehension, nevertheless, information or advice, emanating, presumably, from public health or sanitary engineering sources, would make him realize that it was not safe to accept well water from such a source at face value. Indeed, the evidence shows that the Ontario Water Resources Commission looks with disfavour on a well and septic tank system being on the same premises in this area. So, Dr. Shortliffe, when he first started using the well, when there were practically no neighbours close by, had tests made of the water every month. When such tests showed no bacillus count, he decreased the frequency of the tests to twice a year and finally to once a year. Until he sold the place in 1958, he was so fortunate as to have a consistent result of no bacillus content. Nevertheless, he realized that water from such a source had to be watched.

By the time the suppliants bought from Dr. Shortliffe in 1958, the surrounding area had become relatively heavily populated.

The suppliants did not, after they purchased in 1958, at first realize that their water, by reason of its source, required to be tested from time to time. However, this hard fact of life was before long brought home to them and they also made a point of having periodic tests made. During the period from the time they acquired the property in 1958 until the fall of 1961, the reports on these tests that they

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were able to find when preparing for the trial of this case showed the following results:

July 20, 1959—nil
Nov. 23, 1960—nil
Feb. 28, 1961—2.0 E. COLI
Mar. 1, 1961—39+E. COLI

There were, apparently, other tests performed in 1960, because, according to the evidence there was, in that year, a report of some slight pollution or "some trace of pollution" which was subsequently cleared up. This did not unduly alarm the suppliants because they had been told that wells did have periodic pollution. A further test on their water was performed as a result of the survey by the Ontario Water Resources Commission on April 5, 1961. It showed forty-three Membrane Filter Coliform Count per 100 ML, which, according to the evidence indicates that the water was not fit for human consumption. Another fact that must not be left out of account in assessing the confidence that the suppliants might be expected to have had in their water supply during the relevant period is the fact that, while the female suppliant was abroad in the summer of 1960, the male suppliant and their son each had the sort of stomach upset that one associates with bad water. When this happened, between the middle of August and the middle of September, the male suppliant was in Nova Scotia and the son was at home. It is not without significance that, when asking for a report on a sample of their water after this, that is, on November 23, 1960, a request was endorsed on the form to "Please state if drinkable".

Another indication of the degree of confidence the suppliants had in their well water during this period is the fact that commencing in the fall of 1960, they started using "Halozone pills", which, they understood, would protect the user of the water against any dangerous organisms that might possibly be in it.

Finally, in appraising the character of the suppliants' water supply at the time that that break developed in the National Defence lateral, it must be noted that the suppliants and their neighbours had had so many bad reports on samples from their respective water wells and had had so much sickness apparently due to bad water that they employed a solicitor who made a complaint on their behalf, by

letter dated March 6, 1961, to the Ontario Water Resources Commission which stated, *inter alia*, that the suppliants' well and the wells of the others showed "serious contamination" and that "there has been some serious sickness" as a result of this contamination.

Having regard to all the above circumstances, I am of the view that the suppliants did not in September, 1961, have, in their well water, a source of domestic water in which they could, as reasonably prudent persons, have complete and absolute confidence. On the other hand, they had a source of water which looked all right and smelled all right and which they could use with a reasonable feeling of safety as long as they took the precautions which they were in fact taking at that time.

Such a source of water, while far from satisfactory, made the use of their residence acceptable during the period after the increase in the number of neighbours made the acquisition of a proper source of water inevitable and before the time when such a source could actually be acquired; or it would have done so if the National Defence sewer break had not occurred.

Counsel for the Crown conceded that, if there is liability, the suppliants are entitled to $500 a year for the period during which they had to carry water. Whether or not that amount is the right amount for carrying water, I should have thought that all other aspects of the disagreeable situation created in their home by foul smelling, nauseating appearing water have to be considered in determining damages.[1] Furthermore, there is an indefinite period in the future in respect of which the effects inevitably linger on in a way that must receive some consideration.[2] On the other hand, money cannot compensate for everything and damages must not be inflated in an attempt to do the

[1] Counsel for the suppliants made it clear during the trial that no claim was being made for illness of the suppliants or their family.

[2] Evidence for the Crown by a bacteriologist indicates that it is unlikely that E. Coli from the National Defence sewer would survive in the well or the soil for more than 200 days. It cannot be said with certainty, however, that there is any set period beyond which E. Coli or certain disease organisms could not survive. Certainly it would be some considerable time before the suppliants or their local advisors would have confidence that the effect of the massive invasion of National Defence sewage had completely disappeared. See, for example, the evidence of the sanitary engineer, Mr. J. D. Lee

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impossible.[1] Finally, it must be borne in mind that the damages are for injury to a very imperfect water supply and not to a safe and sound water supply.

In all the circumstances, the best estimate I can make of a fair compensation is $5,000. There will therefore be judgment that the suppliants are entitled to be paid by the respondent the sum of $5,000 and their costs to be taxed.

[1] Compare *Liesbosch Dredger v. S.S. Edison,* [1933] A.C. 449 per Lord Wright at page 460.