SUPREME COURT OF NOVA SCOTIA

Citation: Jerabek v. Scotia Fuels Ltd., 2015 NSSC 283

Date: 20151009
Docket: Hfx. No. 319848
Registry: Halifax

Between:

Reinhard Jerabek and Mary Jerabek

Plaintiffs

v.

Scotia Fuels Limited

Defendant

Decision

Judge: The Honourable Justice Robert Wright

Heard: April 7,8,9,13,14,15,16,20,22, 2015 in Halifax, Nova Scotia

Last Written Submissions: May 27, 2015

Written Decision: October 9, 2015

Counsel: Wayne Francis for the Plaintiffs
David Coles, Q.C. and Geoffrey Franklin for the Defendant

Wright, J.

INTRODUCTION

[1] On September 17, 2007 the plaintiffs Reinhard Jerabek and Mary Jerabek moved into their newly purchased dream home in Hammonds Plains, Nova Scotia. On the earlier advice of their home inspector, they engaged their fuel oil supplier, Scotia Fuels Limited, to replace the fuel oil tank in the furnace room which was undertaken on September 20th. Unfortunately, the new fuel oil tank was defectively installed which resulted in a deleterious oil spill.

[2] There is no reliable evidence of the exact quantity of fuel oil that escaped but it was at least initially thought to have been in the range of 25-40 litres before the leak was detected by the Jerabeks from its smell. Upon entering the furnace room, Mr. Jerabek saw a pool of oil from the base of the furnace spreading across the floor and into the floor drain whereupon he immediately turned off the valve. He then called Scotia Fuels to report the incident.

[3] Scotia Fuels responded that evening by sending a technician to the residence to spread oil absorbent materials on the spill as an interim measure. On the next morning, a site visit was made by the defendant's service manager of the day, James Farquhar, who initially directed the cleanup work. Scotia Fuels accepted full responsibility for the incident. Mr. Farquhar assured the plaintiffs that their house would be made whole again through the remediation efforts to be undertaken by Scotia Fuels without any need for the plaintiffs to involve their own home insurer.

[4] At the heart of this case is the question whether Scotia Fuels, and the work forces and consultants it retained, abandoned its remediation efforts some six months later without properly completing the job.

OVERVIEW OF THE AFTERMATH

[5] Because of the concern that the leaked oil might have migrated to the septic system by way of an ejector pump, Mr. Farquhar on the following day hired Priority Environmental Services Ltd. ("Priority") to investigate. It was determined that approximately 25 litres of oil had reached the first chamber of the septic tank which was then excavated and removed. Mr. Farquhar also hired Servicemaster on September 21st to provide cleaning services for the furnace room floor and some furniture items which commenced on September 26th. That cleaning work, however, did not fully eliminate the oil smell in the house.

[6] At that point, Mr. Farquhar decided to hire an independent insurance adjuster, Mr. Andy Williams, to lead the further investigative work required. Mr. Williams had been directly engaged by Scotia Fuels a number of times over the years to handle oil spill claims. His retention in the present case took place on October 2nd .

[7] At about the same time, Scotia Fuels engaged the services of Strum Environmental Services Limited ("Strum") to provide environmental consulting services. Strum was to report to Mr. Williams who in turn was to report to Scotia Fuels.

[8] On October 1st , Priority conducted core drilling tests in the furnace room floor which immediately disclosed the presence of oil in the soil and gravel underneath. That discovery led to the decision to remove most of the concrete floor in the furnace room and to excavate and remove the contaminated soil and gravel below. That work took place beginning on October 3rd and was completed on October 15th with the pouring of a new concrete floor.

[9] Strum then reported that although the source of the spill had been cleaned up by the middle of October, a faint yet persistent hydrocarbon-like odour was evident in the residence. In order to rule out the possibility that undetected areas of fuel oil contamination existed on the property, Strum conducted a number of further investigations at the site including various test holes to assess soil, water and air conditions below and around the building. These investigations did not identify any undiscovered sources of petroleum hydrocarbons in the subsurface. Strum further reported that all soil, water and sub-floor air sample results were found to be below or within acceptable guideline limits.

[10] Strum also conducted a series of indoor air quality tests between October 16 and December 5, 2007 which showed declining concentrations of hydrocarbons in the residence. However, benzene and Total Petroleum Hydrocarbons (“TPH”) continued to exceed provincial target levels for indoor air quality.

[11] Strum ultimately concluded (some time in December) that although the source of the hydrocarbons in these samples continued to be unknown, a subsurface contamination source was not suspected based on the testing performed.

[12] It should be added that Mr. Farquhar acknowledged in his evidence that he was aware of a continuing oil smell in the residence during the fall of 2007. He

further acknowledged that there was still a smell present in January of 2008 but didn't know what it was. A final round of air quality tests was conducted by Strum on January 10, 2008 which showed a slight uptick in hydrocarbon readings. The resemblance was stated to be "one product in the gas/fuel oil range".

[13] This persistent odour problem led Mr. Williams to engage the services of another environmental specialist, Dr. Torgny Vigerstad, to do a peer review of Strum's work on behalf of Scotia Fuels. On February 22, 2008 Dr. Vigerstad performed further air quality tests which disclosed that there were air quality issues in the house requiring further management. His conclusion, however, was that whatever the cause of the continuing problem, it was not the result of the oil spill or the subsequent cleanup activity by Scotia Fuels and its agents.

[14] Resultingly, in March of 2008, Scotia Fuels confirmed its earlier position that the remediation of the oil spill had been completed successfully and complied with all provincial guidelines. It took the position therefore that there was no reason why the house could not be occupied by reason of the fuel oil spill. Whatever the source of the continuing indoor air quality problem, Scotia Fuels took the position that it was not associated with the spill of fuel oil. They then terminated their involvement with the property.

[15] At this point, the plaintiffs finally turned to their own home insurer, Royal Sun Alliance ("RSA") for assistance. RSA immediately engaged the services DLS Group ("DLS") who were industry specialists in hydrocarbon decontamination. Between April and August, 2008 DLS performed further remediation and testing to a point where RSA considered the remediation to have been completed.

[16] The plaintiffs, however, remained dissatisfied because they could still detect a faint yet persistent hydrocarbon odour in their home. They therefore decided to retain the services of Jacques Whitford on their own to conduct further air quality tests.

[17] The first of those tests took place on July 21st which lead to the recommendation by Jacques Whitford that the entirety of the house and its contents be thoroughly cleaned by a professional. That recommendation was endorsed by the Nova Scotia Department of Environment ("DOE") which belatedly became involved. The cleaning took place sometime in November and was performed by James Proper Care Restoration Limited. A second round of air quality testing by Jacques Whitford took place on December 2nd (as will be detailed later in this decision).

[18] It was then - and only then - that the hydrocarbon odour in the home was fully eliminated. Shortly thereafter (on January 9, 2009) the plaintiffs moved back into their home after a forced absence of almost 16 months. They have had no problems whatsoever with hydrocarbon odours in their home ever since.

[19] Subsequently, on November 17, 2009, this action was commenced with Mr. and Ms. Jerabek as the named plaintiffs. However, the action is comprised of a subrogated claim by RSA for recovery of all its remediation costs (including those of Jacques Whitford) together with the Jerabeks' personal claim for damages they have not been reimbursed for. It is further to be noted that on February 8, 2010 the defendant Scotia Fuels joined Strum as a third party making a provisional claim for deficient or inadequate cleanup and remediation efforts. However, that third party action was discontinued on June 14, 2010 for reasons unknown to the Court.

ISSUES

[20] The primary issue to be decided in this case is whether the hydrocarbon odour which persisted in the home after the defendant's remediation work was completed in mid-October was caused by the oil spill (and/or inadequate cleanup methods) or by some other source. That is a question of fact to be decided on a balance of probabilities from an analysis of the scientific and lay evidence presented and any inferences to be taken therefrom.

[21] Secondly, if the oil spill is found to have been the root cause of the persistent odour in the house after completion of the remedial work on behalf of the defendant, damages must be assessed accordingly both in respect of the RSA subrogated claim and the plaintiffs' personal claims.

DETAILED EVIDENCE REVIEW OF REMEDIATION WORK AND RELATED TESTING

[22] I now turn to a fuller review of the evidence of the remediation work and related testing performed at the Jerabek residence. In trying to avoid repetition from the earlier overview (some of which will be unavoidable), I will begin with the events of October 2nd which marked the hiring by the defendant of both Mr. Williams and Strum. By that time, of course, Priority had found and removed a quantity of fuel oil (approximately 25 litres) from the first chamber of the septic tank which had migrated from the floor drain in the furnace room. Also by that time, Servicemaster had cleaned the concrete floor with various solvents and had done some cleaning of furniture items inside the home.

[23] Everyone was concerned, however, over the impact of the oil spill on the subsurface soils and gravel after it reached the floor drain which was borne out by core drilling in the furnace room floor conducted on October 1st. As previously recited, that lead to the decision to tear up the concrete floor in the furnace room and excavate and remove contaminated soil and gravel materials underneath. All of that work was completed with the repouring of a new concrete floor on October 15th. Strum's site professional at the time of this work was Mr. Randy McIntyre as Project Coordinator (who did not testify).

[24] It should be noted at this juncture that this was the first and last actual remediation work undertaken or overseen by Strum. All of its subsequent work was concerned with testing of soil, water and air quality samples.

Evidence on Behalf of Strum

[25] It was not until late October that Mr. Sean Cassidy first visited the site after having been assigned by Strum as Project Manager. Mr. Cassidy was the first of two experts who prepared an expert report and testified on behalf of the defendant. Mr. Cassidy was found to be qualified as an expert in the field of environmental testing and remediation, capable of giving opinion evidence on the subject of oil spill analysis, remediation and residual effects. He ultimately prepared and signed an expert report under date of March 7, 2008.

[26] Although no objection to his evidence was taken at trial, it should be noted that Strum was an instrumental player in the remediation work now complained of by the plaintiffs and indeed was initially joined as a third party by the defendant as previously recited. With only a discontinuance of that third party claim (as opposed to a dismissal), there remains a possibility of its continued exposure to

liability down the line. This raises the spectre of a lack of true independence in presenting its expert evidence. However, in the final analysis, the veracity of the evidence presented by Strum within its acknowledged limitations is not a major issue in this case.

[27] Backing up to mid-October, it was the evidence of Mr. Williams that after the removal of the contaminated subsurface materials and pouring of a new concrete floor, there was an improvement and a change in the remaining odour. Mr. Williams testified that there was still an odour present but it was different and did not appear to him to be fuel oil. He said that it was almost a sour smell with a component of dampness. He acknowledged, however, that he knew that others had a different opinion of the nature of the smell, among them the plaintiffs who described it as a continuance of the oil smell.

[28] Given the plaintiffs' concerns, air quality tests were conducted by Strum on October 16th and again on October 18th on both levels of the house. Both those tests showed elevated results which exceeded the applicable guidelines for hydrocarbon levels known as Atlantic Risk-Based Corrective Action for Petroleum Impacted Sites ("RBCA"). Indeed, the tests showed a distribution breakdown with high readings of the C10-C21 readings identified with fuel oil. More particularly, these tests showed fractional readings of .920 and .983 against an acceptable reference standard of 0.2. The resemblance was recorded as being one product in the gas/fuel oil range on the first test and fuel oil fraction on the second test.

[29] I interject here the inconsistency of this scientific evidence with Mr. Williams' characterization of the prevailing odour in the home which later was relied on by Dr. Vigerstad.

[30] In any event, as a result of the continuing concerns over the lingering odour, Strum then engaged in further testing in three respects, namely, the furnace exhaust (later discounted as a factor), the exterior testing of soil along the foundation wall outside the furnace room (where only one sample was taken with no reported hit for fuel oil) and continued air testing inside the residence. These further air quality tests were conducted on November 1 and December 5, 2007 and again on January 10, 2008. These tests showed a continuing decline of the presence of hydrocarbons in the inside air (albeit there was a small uptake on the last test conducted). Although much reduced, the total petroleum hydrocarbon reading still slightly exceeded the RBCA guidelines, including the specific C10-C21 fraction for the range of fuel oil. The same could be said for benzene which is a component of gasoline.

[31] Nonetheless, Mr. Williams testified that he could not attribute these air quality test readings to the oil spill given that Priority had earlier removed all the contaminated soil and gravel in the subsurface, poured a new concrete floor and flushed out the fuel oil found in the septic system. He testified that he reached the conclusion in early December, in consultation with Strum, that the lingering odour was not being caused by the oil spill.

[32] Concurrently with the air quality tests conducted on January 10th , a Strum field technician completed a form entitled "Indoor Air Quality Building Survey". In that survey, which Mr. Cassidy accepted at trial as being accurate, the technician made a comment of "going downstairs, open door, strong odours".

[33] The test results and survey from January 10th apparently prompted Mr. Cassidy to contact the lab for its interpretation on the type of product resemblance producing the odour. On January 16th he wrote an e-mail to Mr. Williams stating

that "I talked with the lab and they feel that the results still resemble fuel oil. ... Assuming that the results are indeed fuel oil (which it seems to be) it would appear that there remains a residual fuel oil source in the house."

[34] Mr. Cassidy then went on to make two further recommendations to Mr. Williams, namely:

(1) That all contents of the downstairs closet be removed for investigation under the sub-floor in that area; and

(2) If nothing there, that further test holes be cut through the floor in the furnace room, closet and downstairs entranceway to investigate subsurface conditions under the floor.

[35] Both of these tests were conducted in late January but produced negative results. This was the last of the work ever performed on site by Strum.

[36] After receiving the negative results from the last round of testing, Mr. Cassidy acknowledged that he was at a loss to determine the source of the continuing hydrocarbon odour and why the TPH levels still exceeded RBCA guidelines. He did acknowledge on cross-examination that oil vapours can attach to fabrics and soft materials but that since Strum did not do any testing on this, he had no personal knowledge of the impact of oil vapours on household contents. He said that the source of the hydrocarbon odour remained an unknown but he acknowledged in cross examination that he could not definitively say that the source of the air contamination was not the oil spill.

[37] As earlier stated, Mr. Cassidy authored Strum's expert report under date of March 7, 2008 describing the remediation and testing performed as above described. Again in this report he recorded that although the source of the spill had been cleaned up by the middle of October, a faint yet persistent hydrocarbon-like

odour was evident in the residence and was confirmed with air testing to resemble a hydrocarbon source. He further wrote that with the exception of the garage samples (which would be expected to be influenced by items such as snow blowers, lawn mowers, rubber tires etc ...) the source of the hydrocarbons in the indoor air samples is unclear. He added that based on the subsurface testing completed at the site (namely, soil, water and air, whose results complied with RBCA guidelines), that “a subsurface contamination source is not suspected”. He later added the limitation that the results in his report rely only on surface and subsurface conditions identified at the time.

[38] It should be noted that Mr. Cassidy confirmed this opinion in a subsequent letter written to Mr. Williams dated September 22, 2008 after he had reviewed the reports of DLS Group and Jacques Whitford which will be described later in this decision. Mr. Cassidy also later became involved in providing a Record of Site Condition to DOE on behalf of the plaintiffs in February of 2009 seeking closure of the matter which also will be recounted later in this decision.

<u>Evidence of Dr. Torgny Vigerstad</u>

[39] Because of the persisting fuel-like odour in the house, and the elevated TPH levels shown in the air quality test results by Strum, Mr. Williams decided in January to engage the services of Dr. Vigerstad to do a peer review of Strum’s work. Dr. Vigerstad was at the time the Director for Scientific Investigations for Environmental Solutions Remediation Services (a division of Cunningham Lindsey Claims Services Limited). Dr. Vigerstad holds a Ph.D. in biology and has extensive experience in providing field assessments and scientific advice to the insurance industry in respect of home heating oil remediations. His qualifications

were accepted by the Court as an expert in the field of environmental testing and remediation, capable of giving opinion evidence on the subject of oil spill analysis, remediation and residual effects.

[40] Dr. Vigerstad was first contacted by Mr. Williams in early January of 2008. He said that his mandate was to investigate whether Strum had successfully cleaned up the oil spill and to look for any evidence that they had failed to do so. He was looking for a cause or source of the elevated levels of TPH in the house.

[41] Dr. Vigerstad said that in taking on the assignment from Mr. Williams, he did not speak with either the plaintiffs or Strum representatives. Rather, he reviewed Strum's data and reports before visiting the house for an inspection and ultimately to take air samples.

[42] Dr. Vigerstad visited the Jerabek home on three occasions in early 2008, namely, January 18th, February 14th and February 22nd. On his first site visit, according to his expert report he detected a strong odour of deodourizer compound. He said at trial that he was not certain of the smell but that is what he thought it was. In his time entries for billing purposes, he noted that "problem is deodourizer". Dr. Vigerstad acknowledged in cross-examination that that phrase is probably what he was told by Mr. Williams but that he himself did not know when deodourizer was last used in the house.

[43] On his second site visit on February 14th , Dr. Vigerstad recorded in his time entries that the odour had lessened since his last visit. His report concerning his last visit a week later records that he could no longer smell the presence of deodourizer at all.

[44] Dr. Vigerstad also testified at trial that although he was aware that the plaintiffs were uncomfortable with an odour in the house, he was not aware that it had been specifically stated to be fuel oil vapors. He maintained that when he was at the house, there was no such odour.

[45] I find this part of the evidence to be perplexing considering that Dr. Vigerstad recorded in his expert report dated March 24, 2008 that Strum Environment had taken air samples in apparent response to a complaint of fuel-like odour. In the same proximity of time, we also have an e-mail from Mr. Cassidy to Mr. Williams dated January 16, 2008 advising that he had talked with the lab who felt that the results still resembled fuel oil, before going on to say that "assuming that the results are indeed fuel oil (which it seems to be), it would appear that there remains a residual fuel oil source in the house".

[46] I also note that no other witnesses described the odour in the house in this time frame as being that of a deodorizer. Indeed, the evidence shows that Service Master had last used deodorizer products when it did the initial cleanup some three months earlier. It is doubtful that the smell of deodorizer would have persisted for three months, as compared to the more pungent smell of fuel oil. All of this causes the court some skepticism about the reliability of Dr. Vigerstad's perception of smell on his site visits to the house, which factored into the conclusions he reached.

[47] In any event, Dr. Vigerstad undertook his assignment with a focus on whether or not the fuel oil had been completely removed. After reading the Strum data and reports, he was satisfied that there was no risk of the indoor air being impacted by any residual fuel oil beneath the floor of the house. More specifically, the soil measurement test results confirmed that there were non-detectable

concentrations of fuel oil from the soil samples taken from beneath the floor of the furnace room before the new floor was poured. Dr. Vigerstad wrote that any odour problems or any measurements made could not be a result of the presence of fuel oil from the reported spill.

[48] Dr. Vigerstad also reviewed the air sample tests taken by Strum (which indeed were taken on six different occasions between October 16, 2007 and January 10, 2008). The TPH levels showed a decline from one series of tests to another (with the exception of a small uptake on the last occasion) but nonetheless disclosed TPH levels above the regulatory standards and moreso in the basement level. That was the indication at least in the table attached to the Strum report which shaded the results in the TPH column with an explanation that that shading indicated exceedence of target concentrations. That same table also contained a comments column in which several readings are noted as reflecting one product in the gas/fuel oil range in the basement living space and furnace room areas.

[49] For reasons not fully understood by the Court, Dr. Vigerstad maintained that the Strum air sample test results did not show elevated levels of TPH above regulatory standards. He did not say that the Strum test results were inaccurate. Rather, he disagreed with Strum's comment in the table attached to its report that the shading indicated exceedence of target concentrations. He explained that there was not a sufficient breakdown of the TPH levels in relation to the RBCA protocols for complete air samples analyses.

[50] Dr. Vigerstad did acknowledge in his report and at trial that there was an air quality problem within the house. His conclusion, however, was that it was not caused by the oil spill or the cleanup effort. As he put it on one occasion, he could never find fuel oil as the source of what was going on in this house.

[51] Central to this conclusion was Dr. Vigerstad's testimony that:

● Based on the Strum soil tests, he knew there was no fuel oil under the basement floor or at least there wasn't a significant source of fuel oil in the house to impact on air quality;

● His observation that there was no smell of fuel oil in the house when he was there in January and February of 2008 and that he was unaware of anyone having stated it to be a continuing fuel oil vapour problem;

● The air tests conducted by Strum confirmed that there was an indoor air quality problem but his interpretation of Strum's results were that the problem could not be attributed to the presence of fuel oil;

● The air tests which he himself conducted on February 22, 2008 further confirmed to him that the continuing air quality problem was not attributable to the presence of fuel oil, based on his scientific analysis.

[52] In the latter respect, Dr. Vigerstad's company, Environmental Solutions Remediation Services, took their own air samples on a single occasion on February 22, 2008, using two locations in the house (the kitchen and basement). Dr. Vigerstad felt that an eight hour test period would suffice, even though a period of 24 hours is the guideline.

[53] The measurements taken indicated that concentrations of benzene (one of the components of gasoline) and TPH that might require further management of indoor air quality was found in the kitchen area. Benzene but not TPH was also identified in the basement at concentrations indicating the need for further management.

[54] Based on his limited testing, Dr. Vigerstad could not determine the actual cause of the elevated TPH level. He took care not to extrapolate beyond the accuracy and limitations of the samples taken. He concluded, however, that the

evidence did indicate air quality issues in the house requiring further management but that whatever the cause, it was not the result of the oil spill or the subsequent cleanup activity by Scotia Fuels and its agents.

[55] Having reached this conclusion, Dr. Vigerstad then offered two other hypotheses about the possible source of the elevated TPH levels. One was the possibility of a preexisting problem, a hypothesis which is easily dispensed with because there is no evidence whatsoever that a pre-existing problem ever existed. Indeed, all of the evidence is to the contrary.

[56] The second hypotheses is that the source of the elevated TPH levels emanated from the contents of the garage, namely, a gasoline storage can, a snow blower, and lawn mower equipment. He mentioned this because he said that garages generally are a known source of indoor air quality problems. However, he did not personally make any inspection of whether the gas can was sealed, whether there was gas in the snow blower (which had never been used) or whether the storage of tires or household solvents might be contributing to the problem. He readily acknowledged that this was merely a hypothesis and that he was not propounding it as the actual cause of the problem. His mandate was to confirm the elimination of the oil spill as the source of the problem.

[57] Dr. Vigerstad was then asked on cross-examination whether the fuel oil odour could have spread through the house and contaminated household contents, given the circumstances here where the furnace room was not sealed off for about three weeks subsequent to the spill and the concrete floor was not torn up and replaced (under which the oil had seeped through drain) for about two weeks thereafter. There was also a lack of proper ventilation in the basement area during the initial remediation work. His answer was that the spread of TPH molecules

and its effect would depend upon the size or concentration of the spill, the length of time of exposure of the oil product before it was adequately responded to and removed. However, he said that he does not subscribe to the theory that the spread of TPH molecules throughout the house constituted a significant contamination of the Jerabek house.

[58] He acknowledged that TPH molecules might attach to soft materials such as furniture, fabric and packing boxes but maintained that it would be tiny. When referred to the plaintiff's evidence that they smelled oil on their clothes during this time period, Dr. Vigerstad replied that he can't argue with them but that he would consider such an impact on clothing to be strange, given the size of the spill and the fact that there was no odour of fuel oil while he was there in the house.

[59] He added at one point that if he had been told the plaintiffs had observed the smell of fuel oil, he would have walked around the house with them to find out exactly where and then he could have conducted air sample tests accordingly. That, of course, did not happen.

Evidence of DLS Group Work

[60] As earlier mentioned, RSA did not become involved in this claim until mid March of 2008. The claim was not initially reported to RSA until November 21, 2007 when it appeared to the plaintiffs that matters were not progressing as smoothly as they should have been. Prior to that, they were content to allow Scotia Fuels to attend to the initial cleanup and subsequent remediation. When the claim was reported, RSA felt that it was late for them to become involved and simply asked the plaintiffs to keep them informed of developments.

[61] The situation as of mid March was that there was still an air quality issue being reported in the house and Scotia Fuels was taking the position that the problem was not as a result of the fuel oil spill. The Jerabeks therefore turned to RSA for assistance who responded by assigning DLS Group, specialists in hydrocarbon decontamination, to the file. The initial mandate of DLS was to review all the file documents, obtain samples for analysis in the Jerabek home, and prepare a report of their findings and recommendations.

[62] The work of DLS Group began on March 24, 2008 when a site visit was made by Messrs. Bert Wood and Al Horsman. Mr. Wood was a V.P. and principal consultant for DLS Group and held the credentials of a Certified Site Professional (although not so assigned in respect to this property). Mr. Wood had 43 years of industry experience with residential oil spills and estimated that he had been involved in about 2,000 of them during his career.

[63] Upon entering the residence on March 24th, Mr. Wood testified that the air seemed pretty good upstairs but that near the bottom of the stairs to the basement, he detected a hydrocarbon smell. The sensations he experienced were a moist texture or film on the lips, a burning sensation in the eyes and a slight headache. He testified that this sensation is different from that he experiences from the presence of gasoline which is more of a tingling sensation, a difference he has learned over his vast experience in the field. Once he entered the furnace room itself, he testified there was a smell of fuel oil.

[64] The testimony of Mr. Horsman was that on this March 24th site visit, he observed a slight smell of hydrocarbons on the main level but that when he went to the basement, there was a distinct hydrocarbon smell, especially outside the furnace room door. He said there was also a bit of a chemical smell. He also

testified that when he went into the garage he could smell gasoline but that the smell dissipated over a half hour or so once the garage was aired out.

[65] Mr. Horsman testified that he also looked for possible pathways for odours to migrate through the sealed envelope between the house and the garage. The only possibility that he identified was a small gap along a drainpipe running from the laundry tub in the garage.

[66] In a preliminary assessment report dated April 4, 2008 authored by Mr. Horsman as senior project manager and reviewed and approved by Mr. Wood in his supervisory capacity, two main concerns of the Jerabeks were noted:

(1) That the indoor air quality was adversely impacted by the release of fuel oil in the furnace room the previous September, and

(2) Following completion of the remediation work on behalf of Scotia Fuels, there still remained a faint yet persistent hydrocarbon-like odour within the home, which was not there before the fuel oil spill occurred.

[67] Indeed, after reviewing the documents provided by both Strum and ESRS, DLS observed that the lab results clearly showed that a source still remained within the home that was causing elevated levels of TPH and BETX above the acceptable RBCA guidelines for air quality.

[68] DLS began its investigative work by taking water samples, soil samples and samples of some building and household materials for analysis.

[69] Once the initial results were in, all four water samples showed that slight amounts of contamination remained in the drainage system although below the RBCA guidelines. One of the soil samples taken at the exterior corner of the house outside the furnace room indicated that there may have been some further

contamination along the rear footing of the home. As for the materials sampled from the furnace room, all had a definite strong odour. The sections of gyproc and insulation sampled all disclosed readings above RBCA guidelines (as did the testing of fabric from a dog bed) although as noted elsewhere in this decision, the RBCA guidelines are not suitable for testing materials of this nature. DLS also observed in its report that all of the soil, building and household materials, along with one water sample, showed elevated toluene levels that required further investigation.

[70] Based on this information, DLS recommended a much more detailed assessment be undertaken of the interior and exterior contamination levels. RSA accepted that recommendation and engaged DLS to do a complete assessment of all soils, water, cleaning compounds and indoor air quality to identify if the persistent smell and air quality problems inside the house were related to the fuel oil spill.

[71] That work began on April 21, 2008 with the excavation of exterior soils along the back of the home outside the furnace room. The tests of soil samples taken there showed some level of hydrocarbons including fuel oil along the footing and drain tile which was then removed. Soil samples and water samples taken from other locations proved to be non-detect.

[72] Initial indoor air quality samples were taken on May 8, 2008 in the furnace room, basement rec room, kitchen and garage areas. The results of these tests showed levels of BETX and related compounds in all those areas although not in excess of the applicable guidelines. It should be noted, however, that the test results obtained by DLS did not contain a hydrocarbon fractionalization breakdown.

[73] As summarized in an air quality assessment report dated June 26, 2008 DLS undertook the following actions over the preceeding two month period:

(a) Filters for the air exchanger were replaced which unit was thought to have been wrongly left on for most of the earlier remediation work;

(b) Contaminated soils along the footing and in the drain tile outside the furnace room were removed and a new drain tile installed;

(c) The plastic barrier along that outside footing was removed allowing for better ventilation under the building footprint;

(d) The furnace was inspected and adjustments made;

(e) An Air-Phase blower was installed and left running to remove volatiles from the basement level to the outside;

(f) The upstairs of the home was ventilated on a daily basis to facilitate removal of any trapped vapours inside the home;

(g) A vapour barrier was installed between the furnace room and the basement living area; and

(h) All items inside the garage were packed up and removed after the initial air quality testing which included a gas storage can, a lawn mower, snow blower and household solvents. Also the garage walls and floor were washed down and the garage fully ventilated. This work was completed on May 31, 2008.

[74] In addition, air quality samples from the interior of the home and garage were taken again on June 6, 2008. These latest results showed a remarkable improvement from the initial air quality samples taken on May 8th. Concentrations of BETX and related compounds dropped dramatically and were all below the RBCA standard. Again, however, DLS did not test for TPH or other hydrocarbon fractions.

[75] As the result of a meeting held on June 27, 2008 between the Jerabeks and representatives of RSA and DLS, Reinhard Jerabek agreed to stay at the house for a while on his own to see if it was now habitable. That trial period near the beginning of July lasted just one night. Mr. Jerabek testified that he awoke during the night with his eyes watering and a burning throat sensation. He said there was still a smell of oil present, that the house was fairly dusty, and that the house was still not liveable.

[76] On July 18th, Mr. Jerabek wrote an e-mail to RSA stating that the house needed a thorough cleaning and requested that such work be done by a company named System Care rather than Service Master with whom he had been dissatisfied the previous fall. RSA declined the request at the time, having arranged a retesting of air quality on that same date through DLS.

[77] This retesting on July 18th produced very similar test results from the month before. Upon receipt of these results at the end of July, DLS prepared a final Detailed Assessment and Remediation Report under date of August 7, 2008 which began with the conclusion that “Since the installation of an Air-Phase blower and daily ventilation of the home from May 12 to July 2, 2008 the unacceptable smell has gradually disappeared and now appears to be gone from inside the home”.

[78] With this last set of air quality tests, Mr. Horsman felt that the house was now habitable and recommended to RSA that the house was finally ready for the Jerabeks to move back into. Mr. Horsman further testified that he was supportive of the plaintiffs’ request that the house be emptied of its contents and everything completely cleaned and voiced those concerns to RSA as something that would probably help. However, he was advised that RSA considered that their mandate

was complete which left DLS to complete its finishing touches at that site which was done by August 15th. RSA took no further remedial action thereafter.

Evidence of Evelyn Bostwick (Jacques Whitford)

[79] Despite the improved hydrocarbon readings in the indoor air within the guidelines, Mr. Jerabek continued to detect a faint yet persistent hydrocarbon odour in the house which he believed to be the same smell. He was dissatisfied with the way things were going so decided to take the matter into his own hands by retaining the Jacques Whitford firm to conduct further air quality testing on his behalf. The file was undertaken by Evelyn Bostwick, M.Eng., P.Eng. who was the only expert witness called by the plaintiffs at trial. Her qualifications were accepted by the court, without objection by the defendant, as an expert in the fields of environmental engineering and contaminated site remediation, capable of giving opinion evidence on the Nova Scotia regulatory framework for domestic fuel oil spills, industry standards for domestic fuel oil spill remediation, and the testing and remediation work completed at the plaintiffs' home following the oil spill.

[80] On July 17th, Ms. Bostwick sent a proposal to Mr. Jerabek to conduct indoor air quality monitoring at the house, the purpose of which was to be the determination of air quality within the house following the fuel oil spill and the subsequent remediation program. That proposal was promptly accepted by Mr. Jerabek because on July 21st , Jacques Whitford conducted its first air quality testing. As Ms. Bostwick said at trial, they were dealing with a known fuel oil spill and the concern was whether or not all had been done that should have been done in the remediation of that spill.

[81] Jacques Whitford conducted its first testing by setting up the necessary equipment in two locations within the house, one near the master bedroom on the main floor and the other in the basement at the bottom of the stairs. The testing pumps were set to run for 24 hours.

[82] The regulatory framework fell under the Atlantic Risk-Based Corrective Action for Petroleum Impacted Sites ("RBCA") which provides guidance for the sampling and interpretation of measured air concentrations. Those concentrations are then compared to a Reference Concentration which provide an indication of exposure that is not expected to pose unacceptable risk.

[83] In her cross-examination at trial, Ms. Bostwick introduced the court to the arcane world of hydrocarbons. She described the various hydrocarbon fraction ratios as measured against fresh product. She said that carbon fractions within the C6-C10 range identify with gasoline while the fractions between C10-C21 identify with fuel oil.

[84] The analytical results for this petroleum hydrocarbon testing disclosed concentrations in the vicinity of the master bedroom on the main floor that did not exceed the referenced standards. The laboratory resemblance of the detected hydrocarbons was listed as "one product in the gas/fuel oil range".

[85] The results also disclosed a concentration of benzene in the basement at the bottom of the stairs that ever so slightly exceeded the reference standard (in a reading of 0.004 versus a standard of 0.003). The concentration of C6-C10 hydrocarbons was right on the standard while the concentration of C10-C21 hydrocarbons was slightly less than the reference standard. Again, the laboratory

resemblance of the detected hydrocarbons was listed as "one product in the gas/fuel oil range".

[86] Based on those results, Ms. Bostwick concluded that a source of petroleum hydrocarbons remained within the house but that the source thereof was not clear. She hypothesized that there might be residual impact in shallow soil under or adjacent to the house (which was later determined not to be the case) or alternatively a residual impact in various building materials and household contents. She noted that earlier testing had been carried out by DLS of gyproc insulation and fabric samples within the house but the analytical methodology used was developed specifically for soil and cannot be used for other such materials that have a different physical composition. Nonetheless, she opined that the results of testing of building and other household materials by DLS would seem to indicate the presence of hydrocarbons in those materials.

[87] Ms. Bostwick concluded her August 6, 2008 report by recommending to the plaintiffs that their insurer be advised that a continuing source of hydrocarbons did potentially remain on site. She further recommended that since the furniture had been in the house throughout the fuel oil release and remedial action, it was not unreasonable to request that those pieces be thoroughly cleaned.

[88] Ms. Bostwick followed up with a letter to the plaintiffs dated September 24th after another member of her firm conducted a site visit to the property to review the work completed to date. In that letter, Ms. Bostwick noted that there were unpacked boxes, drapery and furniture that had been inside the house since the fuel oil release and subsequent remedial activities (creating a heavy dust and dirt throughout). Based on her understanding of the manner in which ventilation was

conducted during the early stages of the remedial activities (or lack thereof), she made the following series of recommendations:

(a) All of the furniture, clothing, draperies etc. should be removed and cleaned;

(b) All surfaces within the house should be cleaned, including steam-cleaning of all carpets;

(c) Once completed, and before removed articles are returned to the house, the house should be aired out for 24 hours;

(d) Indoor air quality samples should then be collected from both the downstairs and upstairs living areas (per RBCA standards);

(e) If the air monitoring results do not exceed the guidelines, the cleaned items should be moved back into the house using new shipping boxes.

[89] Mr. Jerabek was still unable to persuade RSA to undertake and pay for the recommended cleaning work. He therefore took the initiative and retained James Proper Care Restoration Limited who provided a quote for such work dated October 6, 2008 by its Estimator, Ralph Corkum.

[90] Mr. Corkum was called as a witness at trial to describe the agreement and the work performed thereunder. He also testified that on his site visit to the property, he could smell furnace fuel in the furnace room.

[91] The cleaning work was carried out sometime in November. As per the agreement, the cleaning company removed the entirety of the household contents and transported them to a warehouse for a professional cleaning. All of the clothes on site were either washed or dry cleaned as well. As for the house itself, the cleaning company cleaned each and every surface in both levels of the house. Mr. Corkum testified that his company used a lot of different products that are environmentally friendly.

[92] Meanwhile, on October 24th, Jacques Whitford conducted a soil sample test and a water sample test from specific locations where DLS had found contamination as part of its investigative work. No hydrocarbons were detected by those further efforts which put the focus once again on indoor air quality testing.

[93] In keeping with its earlier recommendations, Jacques Whitford conducted a second episode of air quality testing on December 2, the results of which are set out in a report dated December 12, 2008. The same two locations were chosen for this retesting which spanned a period of 24 hours.

[94] The analytical results for petroleum hydrocarbons in the ambient air disclosed concentrations in the vicinity of the master bedroom on the main floor that did not exceed the referenced standards. The laboratory resemblance of the detected hydrocarbons was listed as "possible gasoline fraction".

[95] Neither did the concentrations detected in the basement at the bottom of the stairs exceed the referenced standards. Again, the laboratory resemblance of the detected hydrocarbons was listed as "possible gasoline fraction".

[96] The attached table of readings showed a significant decrease in the concentration of fuel oil fraction hydrocarbons since the previous testing on July 21st. On the main floor, the reading of the C10-C21 fraction decreased from 0.07 to 0.02. In the basement the same reading reduced from 0.17 to 0.05.

[97] The C6-C10 range identified with gasoline, on the other hand, stayed much the same on the main floor between the two test dates and in the basement, it reduced from 0.2 to 0.06. The benzene reading in the basement was reduced from 0.004 to 0.002 against the RBCA reference standard of .003.

[98] In her testimony, Ms. Bostwick acknowledged that one does not typically see the presence of benzene in fuel oil. Rather, it is a component of gasoline (although only approximately 2% of a fresh gasoline mixture). She further acknowledged that if benzene were present in the house, its source could not be fuel oil.

[99] Ms. Bostwick further added that ambient air sampling will be subject to variability when tested at different times, even though at the same locations. She also acknowledged that tires, gasoline cans and household solvents are other common sources of hydrocarbons found in houses.

[100] The December 2, 2008 air quality testing by Jacques Whitford was the last to be performed at the Jerabek residence. At that point, the fuel oil fraction readings were 0.02 on the main floor and 0.05 in the basement measured against the RBCA reference standard of 0.2 (the latter being an exposure level which would not pose unacceptable risks).

[101] Significantly, it was the testimony of the Jerabeks that once the thorough cleaning inside the house and all of its contents was completed by James Proper Care Restoration Limited in November, then and only then did the smell of oil completely disappear. Once they were assured of that, they moved back into the house on January 9, 2009 and have remained living there ever since without incident. They testified that their home has remained odour free even though they subsequently continued to use their garage for the storage of a sealed gasoline can, lawn mower and snow blower equipment and household solvents in the same manner as they had before.

Belated Involvement of Department of Environment

[102] As alluded to earlier, the Nova Scotia Department of Environment ("DOE") had no involvement with this oil spill when Strum undertook its remediation work on behalf of Scotia Fuels. Strum did not report the spill to DOE at the time presumably because the threshold reporting requirement under the *Environment Act* and *Emergency Spill Regulations* calls for spills of furnace oil equal to or exceeding 100 litres. However, the reporting requirement is also triggered for spills involving less than that quantity if they might potentially cause an adverse effect. The DOE literature specifies that the presence of vapours within the building is considered to have the potential for an adverse effect and that the DOE should therefore be notified of the spill. Strum's decision not to do so at the time was indeed questionable.

[103] In any event, at the instigation of Mr. Jerabek in consultation with Jacques Whitford, Strum did send a notification form for domestic fuel oil spills to DOE under date of September 18, 2008. This written notice was presumably preceded by a telephone call because on September 8th, DOE sent a letter to the plaintiffs advising that they had received a report of a furnace oil spill at their property, along with a package intended to provide them with information and directions to properly address it. The letter was sent under the signature of Nicole Perry, an Inspector Specialist with DOE to whom the case was assigned.

[104] Ms. Perry testified at trial that it was her duty to ensure that the remediation work complied with the requirements of the *Environment Act* and Regulations and related guidelines under a site professional. She spoke to the application of the Domestic Fuel Oil Spill Policy and the RBCA guidelines for petroleum impacted sites. She testified that the former is the current standard in Nova Scotia for

cleanup of domestic fuel oil spills which bases its criteria upon the Atlantic RBCA. However, since the latter captures air quality criteria and not just soils, and given the cleanup efforts carried out to date, she recommended that the Atlantic RBCA guidelines be used for comparison of indoor air results at the Jerabek residence.

[105] Ms. Perry could not recall whether or not she made a site visit to the Jerabek home where she has done so many others. However, on October 22, 2008 she sent a letter to the Jerabeks acknowledging the receipt of various reports she had reviewed along with the various test results previously obtained. She noted that the most recent indoor air samples collected by Jacques Whitford in July 2008 did not fully comply with RBCA standard and that the source of the hydrocarbons identified remained unclear.

[106] Ms. Perry then commented that the recommendation put forth by Jacques Whitford to conduct further indoor air monitoring, once household items that may be holding petroleum hydrocarbon vapours were removed and cleaned, was an acceptable option in an attempt to address the remaining indoor air quality issue. She went on to observe that where the area where the fuel oil release originally occurred was not vented to the exterior of the home during initial remedial activities, the prolonged exposure may have resulted in petroleum hydrocarbon vapours adhering to some household items.

[107] Because the Atlantic RBCA standard had not been fully met at that point (which was prior to the final air quality testing conducted by Jacques Whitford on December 2nd) Ms. Perry recommended that further measures be taken to ensure that the levels inside the home were at or below risk based criteria.

[108] The only further measures that were in fact taken in that interim period was the thorough cleaning of the Jerabek house and all its contents by James Proper Care Restoration Limited some time during the month of November. As noted earlier, it was the evidence of the Jerabeks that only after this extensive cleaning was performed did the odour in the house completely disappear after almost 16 months had passed. With that achievement, they moved back into the house permanently on January 9, 2009.

[109] Mr. Jerabek then turned his attention to obtaining a Record of Site Conditions from Strum to confirm to DOE that the regulatory standards finally had all been met. The fact that this request was made to Strum should not be interpreted as an endorsement of Strum's work by the plaintiffs but rather a practical choice of the site professional best positioned to then provide that service.

[110] On February 3, 2009 Strum sent a letter to DOE setting out some of the background and the fact that they had visited the residence with Mr. Jerabek on January 26, 2009 with no outstanding issues having been identified. Strum then expressed its conclusion in that letter that the site conditions at the home now complied with the criteria outlined in the Domestic Fuel Oil Spill Policy. Attached to that letter was a Record of Site Conditions under the signature of Mr. Cassidy.

[111] With the receipt of that Record and confirmation of the satisfactory December 2nd test results from Jacques Whitford, DOE provided a letter dated March 5, 2009 to the plaintiffs recognizing that the provincial standard had been met and that DOE's file was being closed. This closure was important to the Jerabeks, of course, not only to reach the end point of their saga but for the preservation of the market value of their home in the future.

<u>LEGAL ANALYSIS and FINDINGS ON LIABILITY</u>

[112] The perplexing question in this case is the identity of the odour in the plaintiffs' home which persisted after the end of the defendant's involvement in remediation efforts in March, 2008 and the cause of the odour during that time.

[113] As previously stated, the actual remediation work carried out under the defendant's direction by Priority, Strum and Servicemaster was completed by mid October. After that, only various testing of subsurface conditions and indoor air quality was performed.

[114] It is all too obvious that the cause of the strong odour in the plaintiffs' home up until mid October was the spill of fuel oil. Both Mr. and Ms. Jerabek firmly testified that it was the same smell that persisted, albeit faintly, until the thorough cleaning of the house and its contents was performed by James Proper Care Limited in November, 2008.

[115] More specifically, Mr. Jerabek testified that there was still an oil smell in the house when he met with Messrs. Williams and Cassidy in early December whose position then was that the continuing odour was not attributable to the oil spill. The plaintiffs disagreed and wanted Mr. Williams to try other solutions, refusing to move back into their home at that time. One of the possible solutions requested by Mr. Jerabek was a thorough cleaning of the interior of the house and all its contents. However, Mr. Williams declined that request and opted to engage ESRS for further indoor air quality testing as previously recited.

[116] It bears repeating that on January 16, 2008 Mr. Cassidy wrote an e-mail to Mr. Williams following a conversation with the lab which had indicated that the results still resembled fuel oil.

[117] Because he was dissatisfied with the slow progress being made under the direction of the defendant, and because he still could detect an oil smell in the house (more so in the basement) in the January-March period, Mr. Jerabek asked his own insurer RSA to do its own investigation. RSA in turn engaged the services of DLS under whose assignment Mr. Bert Wood made a site visit on March 24th. His testimony bears repeating that when he neared the bottom of the basement stairs, he detected a hydrocarbon smell followed by the detection of fuel oil when he entered the furnace room. With Mr. Wood's vast experience and credentials with respect to domestic oil spills, I accept his testimony on the observations he then made.

[118] It was only a week later, on March 31st, that Mr. Williams wrote to the plaintiffs informing them that it was the opinion of their experts that the adverse effects of the fuel oil spill had been remediated successfully to comply with all applicable regulations and that as such, there was no reason why the house could not then be re-occupied by reason of the oil spill. As he put it in his trial testimony, at that point "we were done". The plaintiffs refused to move back into the house, however, because they felt it was still unsafe to do so.

[119] Even after the completion of further remediation work by DLS by mid summer, and the resulting improvement in the indoor air quality, Mr. Jerabek testified that the same smell was still faintly there. He tried staying overnight at the home in early July but awoke during the night with sensations of a burning throat and watering eyes. He concluded that the house was still not safe to move back into, and all the more so because of his wife's environmental sensitivities. It was then that the plaintiffs decided to engage Jacques Whitford on their own to conduct further indoor air quality testing.

[120] To come full circle, it was Jacques Whitford who made a recommendation for a full cleaning of the house and its contents, a recommendation that was endorsed by the Department of Environment as an acceptable option. That comprehensive cleaning took place in November by James Proper Care which turned out to be the pivotal event in the elimination of the odour completely.

[121] At this juncture, I want to record that I found both plaintiffs to be honest credible witnesses. They gave their testimony in a forthright and matter of fact fashion, without exaggeration or embellishment. More specifically, I accept their evidence that there was a faint but persistent odour in the house until the November cleaning. They earnestly wanted to move back into their newly acquired home and were highly inconvenienced in having to live in various alternative accommodations for what turned out to be a period of almost 16 months. As Mr. Jerabek once put it in his testimony, they were "pulling out all the stops" to get back into their home. I find that but for this persistent odour, the plaintiffs would have moved back into their home at an earlier time.

[122] I also find on the evidence of the plaintiffs, amongst the evidence as a whole, that it was a hydrocarbon odour that was so frustratingly persistent. The vital question to be decided is whether it was the oil spill that was the continuing source of that hydrocarbon odour in some fashion or whether it emanated from some other unrelated source within the household.

[123] That brings me to a concise review of causation in the law of negligence. One need look no further than the recent decision of the Supreme Court of Canada in *Clements v. Clements*, 2012 SCC 32 for a restatement of the applicable principles.

[124] The defendant in the present case has readily acknowledged that it was negligent in the installation of the new oil tank in the plaintiffs' home which resulted in the oil spill in the furnace room. Accordingly, it paid for the remediation and testing work carried out by Strum, Priority and Servicemaster respectively as well as some later testing of indoor air quality by ESRS. However, the defendant maintains that is where its liability ends (as of March, 2008) and that any ongoing odour problem in the house was not attributable to the oil spill.

[125] Causation in the law of negligence was concisely summarized in *Clements* as follows (at paras. 8-10):

> 8. The test for showing causation is the "but for" test. The plaintiff must show on a balance of probabilities that "but for" the defendant's negligent act, the injury would not have occurred. Inherent in the phrase "but for" is the requirement that the defendant's negligence was necessary to bring about the injury -- in other words that the injury would not have occurred without the defendant's negligence. This is a factual inquiry. If the plaintiff does not establish this on a balance of probabilities, having regard to all the evidence, her action against the defendant fails.
>
> 9. The "but for" causation test must be applied in a robust common sense fashion. There is no need for scientific evidence of the precise contribution the defendant's negligence made to the injury. [citations omitted]
>
> 10. A common sense inference of "but for" causation from proof of negligence usually flows without difficulty. Evidence connecting the breach of duty to the injury suffered may permit the judge, depending on the circumstances, to infer that the defendant's negligence probably caused the loss. [citations omitted]

[126] As it was succinctly put later in that decision (at para. 14) " 'But for' causation is a factual inquiry into what likely happened".

[127] Counsel for both parties agree that the "but for" causation test is applicable here. However, they have differing views of the proper outcome of this case on the application of this test.

[128] To be clear, the burden is not on the defendant to prove on a balance of probabilities that the source of the odour following completion of its own remediation work was something unrelated to the oil spill. Rather, the burden remains on the plaintiffs to prove on a balance of probabilities that it was the oil spill which continued to cause the odour problem in their residence up until its elimination in November of 2008.

[129] Strum itself in its expert report of March 7, 2008 acknowledged that indoor air sample results since November 2007 steadily showed benzene and TPH concentrations generally exceeding the provincial target levels for indoor air quality. The unknown was the source of the hydrocarbons in these samples. However, Strum could only say in its report that a subsurface contamination source was not suspected because all soil, water and sub-floor air testing results complied with the RBCA guidelines. It bears repeating, however, that Mr. Cassidy acknowledged on cross-examination that while the source of the hydrocarbon odour remained unknown, he couldn't definitively say that the source of air contamination was not the oil spill.

[130] The evidence as a whole discloses three possible sources of the continuing hydrocarbon odour in the house after the completion of the defendant's remediation work, namely:

(1) The possibility of residual subsurface pockets of fuel oil which continued to emit vapours;

(2) The emission of hydrocarbon vapours by the contents of the garage consisting of a sealed gasoline storage can, a lawn mower, snow blower, car tires and household solvents; or

(3) The absorption and adherence of the original fuel oil vapours from the oil spill in permeable building materials (such as insulation and gyproc) and various household contents (such as furniture, fabrics, draperies, linens, carpets and clothing etc..) which persisted until the comprehensive cleaning in November of 2008.

[131] I am satisfied from the scientific testing and remediation work by both Strum and DLS, and the eventual elimination of the odour problem, that there is no evidence that there were any surviving subsurface pockets of fuel oil which caused the continuing odour problem.

[132] The second hypothesis advanced by the defendant, primarily through the evidence of Mr. Cassidy and Dr. Vigerstad, is that the proximate cause of the continuing indoor air quality problem was the emission of hydrocarbon vapours from the contents of the garage above listed. One of the mainstays underpinning this argument is the fact that after DLS removed all of the contents of the garage in late May and cleaned it out, there was a significant drop in the hydrocarbon readings of the indoor air. Another underpinning of this argument is the fact that excessive levels of benzene and TPH concentrations (including those within the gasoline fraction) were earlier detected inside the house from air quality testing. Benzene in particular is a component of gasoline but not fuel oil. The court is essentially asked to infer that it was the contents of the garage that became the proximate cause of the continuing hydrocarbon odour in the house.

[133] Although the contents of the garage may very well have been a contributor to the indoor air quality problems in terms of hydrocarbon readings, the problem with this argument in terms of the continuing odour problem is that:

(a) The plaintiffs stored similar contents in the garage at their previous home without experiencing any odour problems;

(b) The plaintiffs stored these very same contents in the garage of their newly purchased home for some number of weeks prior to actually moving in (they had closed the transaction two months earlier) without experiencing any odour problems, and

(c) Most significantly of all, after they moved back into their home on January 9, 2009 following the comprehensive cleaning work in November, the plaintiffs continued to store these very same contents in their garage thereafter without ever again experiencing any odour problems. I accept their evidence in this regard without reservation.

[134] It should also be noted that no one testified at trial to detecting the smell of gasoline in the plaintiffs' home except inside the garage (which dissipated when the garage was aired out). Many witnesses testified, however, that the hydrocarbon odour was the strongest at the bottom of the stairs outside the furnace room in which the oil spill occurred.

[135] It should also be noted that DLS commissioned some further testing by Maritime Testing in June, 2008 the purpose of which was to measure the pressure differential between the garage and living area of the house. The data collected indicated that there was a lower pressure inside the house in comparison to the garage, meaning that the net flow of air from the garage was into the house provided that pathways existed for the air to flow. The only direct pathway observed between the garage and furnace room was a gap around the domestic water supply lines and drainpipe running from the garage sink into the furnace room.

[136] There is no specific expert evidence asserting the opinion that the contents of the garage containing hydrocarbons was the proximate cause of the ongoing odour problem in the house. This was only advanced as a possible theory (by Mr. Cassidy) or a hypothesis (by Dr. Vigerstad) which again is not required to be

proved by the defendant. However, based on the scientific evidence, I conclude that the emissions from the contents of the garage more likely than not accounted for the excessive benzene and gasoline fraction hydrocarbon readings inside the home until they were reduced to risk free levels under the guidelines in early June, simply because there is no other explanation for them.

[137] The ultimate focus of this case, however, is not simply circumscribed by scientific measurements of indoor air quality testing. Indeed, it is widely acknowledged in the evidence that ambient air sampling is subject to variability at different test times in the same location. Rather, the higher focus is on the cause of the ongoing odour problem which prevented the plaintiffs from moving back into their home. I cannot infer, in light of all the surrounding factors, that it was these ordinary garage contents that were the proximate cause of the hydrocarbon odour which persisted until the November, 2008 cleaning.

[138] That leaves for consideration the third potential source of the odour identified above. There was no expert evidence presented by the plaintiffs with respect to the absorption and adherence of fuel oil vapours in permeable building materials and household contents earlier referred to. However, the following evidentiary points have been established:

● Even though the oil spill had obviously reached the furnace room floor drain, Scotia Fuels declined the plaintiffs' request to remove and excavate under the floor and opted instead for a surface cleaning. It was another two weeks before the floor and contaminated materials underneath were removed, thus allowing the spread of fuel oil vapours.

● There was a delay in the cleanup efforts by Servicemaster which began on September 26th (the sixth day after the spill occurred). Furthermore, the ventilation methods utilized by Priority during its floor and subsurface remediation work between October 3 and October 15 (consisting of ozonators and air extraction unit

attached to the dryer vent) have been criticized as inadequate. More could have been done to prevent a spread of fuel oil vapours throughout the house during those critical early days;

● Mr. Campbell of Servicemaster acknowledged in his testimony that the odour of fuel oil can be trapped in soft materials like fabrics;

● Mr. Cassidy of Strum acknowledged that oil vapours can attach to fabrics (although Strum did not test for any impact of such vapours on household contents);

● In his preliminary report on behalf of DLS on April 2, 2008 Mr. Wood first listed the embedding of fuel oil in house materials and contents as a potential fugitive source of the problem in the home. Mr. Horsman of DLS had added concern that the air exchanger unit in the basement may have been left on during the original remediation work, given that later testing of its filters disclosed a definite strong hydrocarbon smell;

● In her letter to the plaintiffs dated September 26, 2008 Ms. Bostwick recommended that a thorough cleaning of the house and its contents be carried out as was ultimately done in November. This recommendation was based on her understanding of the manner in which ventilation was conducted during early stages of the remediation activities (i.e., the release area was not directly vented). She also commented in her earlier report of August 6th that although the testing of building and other materials by DLS was conducted using unreliable methodology, the results generally seemed to indicate the presence of hydrocarbons in these materials;

● Ms. Bostwick's recommendation was endorsed by Ms. Perry of DOE as an acceptable option in an attempt to address the remaining indoor air quality issue. She too was of the view that the prolonged exposure from inadequate ventilation during the initial remediation activities may have resulted in petroleum hydrocarbon vapours adhering to some household items;

● Most significant of all, the hydrocarbon odour was completely eliminated by the thorough cleaning which took place in November of 2008 and it did not reappear after the plaintiffs moved back into their home even though they resumed the storage of the same contents in their garage as were there before in subsequent years.

[139] As recited earlier from *Clements*, “but for” causation is a factual inquiry into what likely happened. Scientific proof of causation is not required.

[140] The cumulative effect of the evidentiary points listed above leads me to the conclusion that it is more likely than not that the root cause of the faint but persistent hydrocarbon odour complained of was the adherence of fuel oil vapours which permeated certain building materials and household contents during the initial remediation work. I recognize that the opinion of Dr. Vigerstad is to the contrary, who presented himself as a very knowledgeable individual in this area. While the court is respectful of his opinion, it is based on a very narrow platform of involvement (a single round of air quality testing) and it does not negate the other evidence of causation that the court finds more compelling.

[141] In the result, I find that the defendant is liable to pay all proven and recoverable damages which accrued after the end of its involvement with the site in March of 2008.

DAMAGES

[142] The plaintiffs have framed this action in both breach of contract and negligence on the part of the defendant. Under either cause of action, the measure of damages recoverable is governed by the legal maxim *restitutio in integrum* which requires the defendant to restore the plaintiffs to the same position they would have been in had the breach of contract/negligence not occurred.

[143] It is therefore not sufficient that the remediation work produce indoor air quality test results for the presence of hydrocarbons that were within the risk-free

RBCA guidelines. Rather, the obligation of the defendant was to restore the home to the same odour-free state that it clearly was before the oil spill occurred.

[144] I have already made the central finding of fact, based on a balance of probabilities, that the persistent odour in the home was likely caused by the oil spill and that it was not fully eliminated until after the comprehensive cleaning of the house and its contents by James Proper Care in November of 2008.

[145] As noted earlier, this action is comprised of a subrogated claim by RSA for recovery of all its remediation costs paid for (including those of Jacques Whitford and James Proper Care) together with the Jerabeks' personal claim for damages they have not been reimbursed for. I will begin the assessment of damages with the latter category.

General Damages

[146] Mr. Jerabek is employed at the Northwood care facility where he serves as Chief Financial Officer. He is also a Chartered Accountant. Ms. Jerabek is an elementary school teacher where she is employed in a half-time job share position.

[147] It is abundantly clear from their testimony that this 16 month ordeal took a lot out of them, especially when they laboured under the uncertainty as to when, or if ever, they would be able to return to their new home. This oil spill caused a drastic interruption of their normal lifestyle and peace of mind. It curtailed their social life as well. They understandably suffered great frustration, anxiety and stress in having to deal with this incident over a prolonged period of time.

[148] It was mostly Mr. Jerabek who personally dealt with the many ongoing problems which constantly arose in his pursuit of the elimination of the hydrocarbon odour. He estimates that he spent approximately 300 hours in dealing with these issues including the various meetings, countless trips to the home, communications with those involved in remedial work, review of reports and moving in and out of various alternate living accommodations. In the latter respect, over that 16 month period, the plaintiffs bounced around between four different condos after having spent the first 10 nights being lodged in various hotels. It was difficult for them to make any secure plans for alternate living accommodation because they could never tell when the end was in sight. Mr. Jerabek was constantly left with trying to juggle his heavy work demands with having to deal with these various issues.

[149] The effects of the oil spill were exacerbated in Ms. Jerabek's case because she suffers from rhinosinusitis. This is a respiratory chronic sinus infection condition which is aggravated by her environmental sensitivities. She continued to be treated for this condition by an ENT specialist, Dr. Kirkpatrick, during 2007-08. In a brief letter dated June 5, 2008 Dr. Kirkpatrick recommended that she not return to live in her home if exposed to even modest levels of airborne irritant.

[150] As time went by, Ms. Jerabek began feeling fatigued and was not able to sleep well. She began to see her family physician to help her, followed by visits to a psychologist beginning in April of 2008. She said she was not sleeping and needed help by talking to someone to help her cope with it all. She said she began losing hope that things would ever get better. Ms. Jerabek also started taking some sick leave days from her employment, the first of which was on December 10, 2007.

[151] I hasten to add that the plaintiffs clearly acknowledged at trial that they were not advancing a personal injury claim as a result of the oil spill. Rather, they are advancing a general damages claim for mental distress for all the hardship and inconvenience they endured during the forced absence from their home.

[152] The defendant concedes that the plaintiffs are entitled to general damages for mental distress for the period of September 20, 2007 (the date of the oil spill) until March 24, 2008 (when it ended its involvement with the property). The defendant proposes that an appropriate award under this head of damage would be $9,000 in total. This figure appears to be based on a formula utilized in a class action case in Ontario which the court does not find useful in deciding this case.

[153] The plaintiffs, on the other hand, propose a general damages figure for mental distress in the total amount of $40,000. Their counsel has referred the court to three precedent cases on the subject but none of them are closely on point.

[154] The first of these cases is a provisional assessment of damages in *Venedam v. Tanks & Ducts R. Us Ltd.*, 2010 NSSC 186. In that case, Justice Coughlan provisionally assessed general damages at $5,000 after an oil spill occurred at the plaintiff's home. The situation was different there in that the plaintiff was able to continue to reside in his home but the remediation work in the basement extended over a period of seven months. That, of course, is less than half the time the plaintiffs in the present case were displaced from their home completely.

[155] The second case referred to is *Van Duren v. Chandler Marine Inc.*, 2010 NSSC 139. That case involved the defective construction of an expensive custom made boat which the plaintiffs ultimately were no longer able to use. Justice Coady awarded the two plaintiffs a total of $15,000 in general damages as a result

of a great deal of anxiety and stress they suffered as a direct result of the defendant's negligence and breach of contract.

[156] The third case I have been referred to is *McClean v. Manorgate Estates Inc.*, 2010 ONSC 949. In that case, the plaintiffs brought a successful claim against a neighbouring developer who had caused undermining of the soil underneath their home causing settling of its foundation. The court there assessed damages in the total amount of $14,250 using a breakdown that the court does not find useful in the present case.

[157] It is well-established that damages for mental distress in cases such as this lie both in negligence and breach of contract. In my view, the acute hardship and inconvenience suffered by the plaintiffs in the present case warrants an award of general damages in the amount of $10,000 each.

Loss of Sick Leave

[158] Under her contract of employment, Ms. Jerabek was entitled to sick leave benefits at the rate of 10 days per year which she was allowed to accrue and carry forward. As noted earlier, she was employed in a 50% job share position as a teacher, thereby working five days out of every ten at a daily rate of pay of $276.

[159] During her testimony at trial, Ms. Jerabek reduced her initial claim for loss of 39.2 days of sick leave to 24 sick days that she could attribute to the oil spill (arithmetically from the records provided, it should read 23.5 days). The records show a breakdown of 18 days taken between December 10, 2007 and January 6, 2009 when the plaintiffs returned to their home. The remaining 5.5 days were

taken between January 6 and June 10, 2009. Ms. Jerabek also acknowledged that for all but 7.5 days, she received EI benefits of $60 per day.

[160] The loss was not immediate. Rather, about a year after her return to the home, Ms. Jerabek suffered an illness and ultimately had to be placed on disability leave. However, because her sick leave bank had been partially depleted as a result of the oil spill, she was short of what she needed to bridge the gap a year later. In the result, she has lost the value of her bank of sick leave to the extent of 23.5 days.

[161] Claims of this nature have been allowed in the past where the sick leave bank is allowed to accrue. An asset has thereby been lost or partially depleted (see for example, the decision of this court *Tasker v. Romo* cited as S 78/5).

[162] I am satisfied that this is a compensable loss for Ms. Jerabek, although I find that the claim should be reduced by a further 2.5 days taken between April and June of 2009. Although I will allow three sick leave days taken within the month following the return to the home, the latter days in my view are too distant to allow the recovery thereof.

[163] By my revised calculation, and factoring in the EI income of $60 per day during the relevant period, Ms. Jerabek is entitled to recover the value of her lost sick leave days measured at $4,986.

Claim for Diminished Value of Home

[164] The plaintiffs submit that because they will be required to disclose this oil spill on any future resale of the property, there will be a stigma attached to it which will likely reduce its market value. The plaintiffs did not call any evidence to

support this proposition but suggest a 10% diminution of value from the purchase price as a reasonable basis for this claim.

[165] In so doing, I have again been referred to the *McClean* case in which the plaintiffs were awarded damages of $25,000 once the court found that the market value of the property would be impacted even with the restoration proposed.

[166] More specifically, this award recognized that the plaintiffs' house would not be restored to the way it was before the damage occurred. That is not the situation in the case at bar. The Jerabek home has now been completely odour-free for more than six years and they will be able to produce the site closure documentation issued by DOE that the remediation work completed was compliant with all applicable guidelines. In my view, the possibility of a reduction in market value with this incident well in the past is too speculative to be allowed by the court. I also note that a similar claim was denied by this court in *Venedam* where again there was no supporting evidence adduced. This aspect of the claim is therefore disallowed.

Ruined Refrigerator Contents

[167] The plaintiffs have entered in evidence a list of refrigerator items that they eventually had to discard from their forced absence from the home without knowing any end date for their return. They have itemized 24 products with individual values totaling $269.34.

[168] Assuming that several of these products must have been partly used at the time of their departure, or might never have been fully used, I will allow recovery of one half of the total claimed, i.e., the rounded sum of $135.

Damaged Clothing and other Contents

[169] Again, the plaintiffs have provided a list of seven clothing items which were damaged in the course of being dry cleaned as a result of the odour. The nature of the damage described is shrinking, fabric discolouration or dye runs in the clothing.

[170] Considering that all clothing items are required to be periodically cleaned as a matter of course, the damage to these clothing items may well have occurred at some point in any event. I am therefore unable to find a satisfactory causal link to these damages and they are therefore disallowed.

[171] I will allow, however, recovery of the sum of $58 for the loss of use of an ironing board cover and dog bed (the latter having tested positive for the general presence of hydrocarbons as earlier mentioned).

Increased Power Bills

[172] The amount claimed here for added power usage during the course of the remediation work is $952.63. This head of damage is not contested by the defendant and it is allowed accordingly.

Pre-litigation Legal Fees

[173] The plaintiffs have also advanced a claim of $7,483.11 for recovery of legal accounts (five in total) incurred with two different law firms between December, 2007 and August, 2009.

[174] The legal work provided has generally been described as falling under two categories. One was to help the Jerabeks to gain a basic understanding of the

applicable law for communication purposes with Scotia Fuels and to help them formulate a potential damages claim. The second category was legal work related to a final resolution of their insurance claim with RSA.

[175] The court has not been provided with any legal authority for the allowable recovery of such legal accounts preceding this litigation. Indeed, a significant portion of these accounts relates to the plaintiffs' disputes with their own insurer which cannot be recovered. Furthermore, to the extent that these invoices do directly relate to the claim against Scotia Fuels, I conclude that they should fall under the *Civil Procedure Rules* costs regime. This aspect of the claim is therefore disallowed.

Subrogated Claim for DLS Invoices

[176] I have already reviewed in some detail the investigative and remediation work performed by DLS between March and August of 2008. As recited, DLS was engaged at the behest of RSA after Strum came up short in its remediation work. The problem of the persistent hydrocarbon odour in the home still had to be addressed at that point and I have already made the factual finding that the oil spill was the likely root cause of that continuing odour. The cause was unknown at the time, however, without the benefit of the hindsight of the elimination of the odour after the thorough cleaning of the house and contents by James Proper Care.

[177] As matters stood in March of 2008, with the abandonment of the project by Strum, the work undertaken by DLS was reasonable and necessary in an attempt to identify and eliminate the odour problem. Clearly, the indoor air quality was much improved after the steps taken by DLS and even though the odour itself was not thereby fully eliminated, I conclude that this subrogated claim for the sum of

$100,551.28 should succeed. All things considered, it was reasonably incurred in mitigation of this loss. I would add that each of the supporting invoices was proved through the testimony of Mr. Horsman.

Jacques Whitford and James Proper Care Invoices

[178] The final chapter in the remediation process through the efforts of Jacques Whitford and James Proper Care proved to be successful in fully eliminating the odour problem. I readily conclude that the steps taken by both companies were appropriate, reasonable and necessary in finally solving the problem. Their respective invoices having been satisfactorily proved at trial, I allow the full recovery of $3,949.35 for the accounts of Jacques Whitford and $21,743.23 for the accounts of James Proper Care.

Alternate Living Expenses

[179] The defendant has already paid for the plaintiffs' alternate living expenses between September 20, 2007 and April of 2008. The remaining claim of $14,024 represents alternate living expenses from the latter date until January 9, 2009.

[180] Given the findings of liability I have earlier made against the defendant, it follows that it is also liable to pay this subrogated claim of $14,024 incurred as a result of the oil spill.

CONCLUSION

[181] Having failed to remediate the plaintiffs' home to its original odour-free condition in its mistaken belief at the time that the persistent odour was not caused by the oil spill, the defendant is liable to pay the following damages:

Personal Claims	Amount
General Damages	$20,000.00
Loss of Sick Days	$ 4,986.00
Ruined Refrigerator Contents	$ 135.00
Damaged Contents	$ 58.00
Increased Power Bills	$ 952.63

Subrogated Claims	Amount
DLS Invoices	$100,551.28
Jacques Whitford	$ 3,949.35
James Proper Care	$ 21,743.23
Alternate Living Expenses	$ 14,024.00
Grand Total:	**$166,399.49**

[182] In summary, the personal claims of the plaintiffs are assessed at $26,131.63 while the subrogated claims are assessed at $140,267.86 for a grand total of $166,399.49.

[183] I will leave it to counsel in the first instance to try reach agreement on pre-judgment interest and party and party costs payable as a result of this decision. If agreement cannot be reached, I would ask for written submission in this regard within the next 30 days.

J.