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CASE STUDIES: YOU BE THE JUDGE

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Lovely v. Kamloops (City)

Facts:

- City of Kamloops retained a professional engineer (Stantec) to assist in the design of its new waste transfer facility
- after the facility opened to the public, two serious accidents occurred involving falls from an unloading platform (due to the absence of guardrails or any other fall protection on the platform and/or any warning of a fall hazard)
- one injured person sued the City and the engineering firm for negligent design

— *Lovely v. Kamloops (City)* (cont.) —

- City had asked its current primary engineering consultant if he wanted the work at his current hourly rate and there was no written contract between the parties regarding the project
- engineer had no specific experience with waste transfer facilities
- engineer argued he had fulfilled the standard of a “reasonably prudent engineer”

Lovely v. Kamloops (City) (cont.)

Engineer's Defence:

- as part of his defence, the engineer relied on his classification of the unloading platform as a "loading dock" - under the Occupational Health and Safety Regulations, "loading docks" do not require installation of guardrails
- engineer also argued that, in approving the design, he had assumed that as part of the operation of the facility there would be a site safety plan in place during operations

Lovely v. Kamloops (City) (cont.)

Court's Decision:

- the Court found that the professional engineer breached his duty to ensure public safety by designing the unloading platform without sufficient safety measures and held the engineer 35% liable for the injuries suffered
- the Court confirmed that the standard of care for professionals generally is one of "reasonableness and ordinary competence, commensurate with the position of the person or entity in question and prevailing internal professional standards"

Lovely v. Kamloops (City) (cont.)

- with respect to professional engineers specifically, the Court held that “there is a paramount professional duty to ensure public safety in all designs signed and sealed by a professional engineer,” as well as a duty “to remain current on developments in the field of engineering in which they practiced”
- other aspects of the duty include the duty to make inquiries regarding how the facility is going to be used, and to communicate any key assumptions or conditions for any designs approved by the engineer

Lovely v. Kamloops (City) (cont.)

The Judge's conclusion that Stantec had not met the requisite standard of care was based on a number of factors, including:

- Stantec's lack of expertise/experience in the design of waste transfer stations;
- failure by Stantec's engineer to understand the scope of the work in designing the transfer station
- failure by Stantec to communicate its assumption that the unloading platform was a "loading dock"
- failure by Stantec to undertake adequate investigation of safety features

Lovely v. Kamloops (City) (cont.)

City's liability

- Court rejected the City's argument that it should not be liable because it had relied on the expertise of the professional engineer it had retained as: (a) the City knew the engineer had no direct professional experience in waste transfer station design; and (b) the installation of safety measures was not of an overly technical nature requiring professional training or any special knowledge, but more to do with common sense (Court found that the City knew that fall protection features were required for a transfer station)
- City 55% liable for the injuries suffered

Lovely v. Kamloops (City) (cont.)

- Plaintiff was found 10% liable for his own injuries based on his awareness of a lack of fall protection and his admission that if he had stayed away from the edge he may have avoided the fall
- Stantec unsuccessfully attempted to appeal the trial decision (the Court of Appeal rejected its argument that the plaintiff's liability should have been greater than 10%); Court of Appeal found that the trial Judge had not made any errors in his judgment

Lovely v. Kamloops (City) (cont.)

Takeaways:

- decision underscores the fact that an engineer practicing without prior professional experience will be held to the same standard of care as an experienced engineer, i.e., the standard is not lower because you do not have experience with a particular type of project if you agree to take it on
- critical to ensure that any key assumptions or conditions for the approval of a design are communicated to the client

Lovely v. Kamloops (City) (cont.)

- duty owed by engineer extends beyond the duty owed to the client; duty of public safety is of paramount importance and the duty can be extended to the “world at large” in some cases
- this decision is also an example of what can go wrong when parties operate without a written contract - it may initially appear that the parties are in agreement on the scope of the retainer, however, once an issue arises, the parties often have divergent views, leaving the Court to determine the scope of the retainer (which may lead to unexpected or undesirable results for both parties)

Hilton Canada Inc. v. SNC Lavalin Inc.

Facts:

- in March, 1989, the plaintiff invested \$1,700,000 to acquire a share in a hotel property in Halifax, Nova Scotia (built in the 1930s)
- prior to investing, the plaintiff engaged an engineering firm to inspect the hotel facility to determine whether there were any major defects to be found and to assess the general condition of the building
- the plaintiff's technical team had also previously undertaken an inspection of the building which did not reveal any major structural problems

Hilton v. SNC Lavalin (cont.)

- the defendant engineering firm carried out an assessment of the building and indicated that it was in generally good condition and, based on this assessment, the investment by the plaintiff proceeded
- within a relatively short time it was discovered that there were major defects in the building: many of the steel beams and columns which were intended to support the structure had corroded to the extent that they were no longer capable of doing the job for which they were designed

Hilton v. SNC Lavalin (cont.)

- the understanding was that "due diligence assessment" was to be a visual assessment only, however, SNC would be required to make such holes or conduct more intrusive inspections if the visual inspection turned up anything that indicated that there may be a substantial problem which required further investigation
- if SNC staff could not satisfy themselves that the structure was free from major defects based on the visual inspection, SNC had an obligation to recommend further investigation if a substantial problem was revealed for which they did not have reasonable explanation as to cause

Hilton v. SNC Lavalin (cont.)

- the structural steel problems that were later discovered constituted a major defect in the building and the Court found that the plaintiff would not have invested in the building if it had been aware of this defect
- the issue therefore boiled down to whether SNC should have reported that there was a structural steel problem or at least have noted signs of problems with the building and then recommended further investigation

Hilton v. SNC Lavalin (cont.)

- approximately \$4,000,000 was spent repairing the corroded steel and replacing the adjacent brick
- plaintiff sued for compensation, alleging the defendant engineers were negligent in carrying out their assessment or in failing to advise the plaintiff of the need for further investigation of the condition of the building
- plaintiff asked for the return of the original \$1,700,000 invested plus additional capital expenditures made after acquisition of the property

Hilton v. SNC Lavalin (cont.)

Decision of the Court:

- Judge was not satisfied on the balance of probabilities that a structural engineer should have discovered the structural defects at the time of the assessment or should have recommended further investigation
- Judge confirmed that the fact that the Hilton team had done an inspection and had not noted any structural problems did not affect the nature or extent of the duty of care owed by SNC to Hilton

Hilton v. SNC Lavalin (cont.)

- Judge found there were no obvious signs of structural stress evident when assessment carried out in March, 1989, and no evidence presented to the Court which would indicate that there were any signs of major cracks in the exterior brick work at that time
- Judge found that it was not until April, 1992, that the local engineering and architecture community was aware of the potential for problems with corrosion of steel elements in steel-frame masonry clad buildings (as a result of a repair of another building in the area)

Hilton v. SNC Lavalin (cont.)

- Judge stated: “In this case we are not to judge [SNC] and Messrs. Ouimet and Bertrand based on what we now know of structural steel buildings. We are not to judge [SNC] on what Mr. McBride knew in 1992 because of his experience with the Bank of Nova Scotia. We are not even to hold [SNC] to the standard that Mr. Elgi may profess. Mr. Elgi may be one of the few engineers who had any experience with steel corrosion in steel frame masonry clad buildings. Even Mr. Elgi did not see corrosion to the extent witnessed in the Hilton.”

Hilton v. SNC Lavalin (cont.)

Takeaways:

- the conduct of an engineer will be considered in the context of the knowledge and practice within the industry at the time the services are provided
- the existence of a written retainer/contract between the client and the engineer, in which the engineer's limited scope was detailed, assisted the engineer in defending the claim, i.e., if there had been a poorly written contract or no contract at all, the Court could have found that the engineer's scope/responsibilities were wider/greater than that actually accepted by the engineer

Canadian Natural Resources Ltd. v Wood Group Mustang (Canada) Inc.

Facts:

- involved the design and construction of the high-temperature E Pipeline built in 2007 and 2008 in the East Primrose Area of Alberta
- the pipeline was built as part of Canadian Natural Resources Ltd.'s oil sands operations in the area and was designed to carry a hot emulsion, comprised of steam, bitumen and water, for processing at CNRL's Wolf Lake Plant
- Wood Group (engineering firm) was engaged to provide engineering review of the pipeline design

CNRL v Wood Group (cont.)

- presented unique technical challenges as few buried pipelines at the time sustained operating temperatures of 140°C up to 160°C
- Additionally, the high-operating temperature of the pipeline and winter construction, at times through muskeg areas of northern Alberta, increased the difficulty of the project
- shortly after being put into service in October 2009, the pipeline was shut down due to damage to the insulation system that caused heat transfer into the surrounding ground

CNRL v Wood Group (cont.)

- CNRL commenced an action to recover the cost of a replacement pipeline, investigation costs, the costs of operating the pipeline on a modified basis, and the costs of abandoning and remediating the pipeline
- CNRL settled with the other defendants prior to trial, leaving the engineering company as the only defendant at trial

CNRL v Wood Group (cont.)

Decision of the Court:

- Judge began her analysis by setting out the general standard of care applicable to engineers as follows: "The question is therefore to establish the standard of the person of average competence exercising a particular profession"
- Judge found that the engineering firm (referred to in the judgment as "IMV") was negligent and/or breached the duty owed to CNRL in a number of ways:

CNRL v Wood Group (cont.)

- a) IMV personnel did not appear to turn their minds to the distinct risks of the high-temperature underground pipeline resulting in IMV breaching its duty to warn CNRL of the pipeline risks

CNRL v Wood Group (cont.)

- b) IMV failed to come up with independent requirements for Shaw (which was the pipeline product company that designed the Insul-8 HT lining used in the pipeline), and had simply signed off on technical compliance documents from Shaw without considering relevant EN (European) standards or test data; this failure was found to amount to negligence on the part of IMV
- c) IMV failed to assess the insulation against the design and expected stresses

CNRL v Wood Group (cont.)

- d) Judge also considered CNRL's claim that as the stamping engineer, IMV took professional responsibility over the entire pipeline, including the insulation system
 - IMV had argued that it was entitled to rely on Shaw to perform a technical assessment because the pipeline was an engineered product provided by Shaw

CNRL v Wood Group (cont.)

- Judge rejected this argument and explained that, while an engineer may be able to rely on a supplier's representations as to whether a product was designed to fit various criteria, the engineer bears responsibility to ensure functional product assembly

CNRL v Wood Group (cont.)

Ultimately, the Judge held that IMV breached duties that it owed to CNRL by failing to:

- evaluate and assess the pipeline as a whole, including the insulation and how it would perform;
- consider the CSA Standards that were applicable as a guideline to design;
- properly evaluate stresses and strains on the E pipeline as a whole; and
- show proper care in the procurement and stamping of the drawings

CNRL v Wood Group (cont.)

- notwithstanding that IMV breached its duties to CNRL, Judge held that it was not liable for the entirety of CNLR's loss: she apportioned fault to the other defendants, Shaw and Flint, and found that CNRL was contributorily negligent (on the basis that, after discovering a leak in the pipeline and commencing emergency flowback procedures, CNRL operators sent hot emulsion through the pipeline beyond the design limits of the insulation, and at times even the design limits of the pipe)

CNRL v Wood Group (cont.)

Takeaways:

- as designers, engineers owe a duty to warn clients of risks associated with the design, particularly if there are surrounding factors that could complicate the functionality of the improvement being constructed
- even if an engineered product is provided by a third party, the engineer still has responsibility to be sure that all the products are assembled together in a way to deliver a product/improvement that works

Legal Risk Mitigation Strategies

- GET IT IN WRITING! Do not work on a project in the absence of some form of written agreement
- if possible, identify a monetary limit to legal claims/exposure in engagement letters/contracts
- pay close attention to the description of the scope of services in the contract and ensure you are not agreeing to do more than you are capable of performing
- avoid the use of words like “warranty” and “guarantee” in relation to services you are providing (could result in a higher standard of care being applied to your conduct)

Legal Risk Mitigation Strategies

- set out the number, purpose and scope of field reviews in the contract
- put the onus on the owner or contractor to call for field reviews at defined milestones in the project
- have a lawyer review the proposed contract before signing it so as to ensure the client is not attempting to shift too much risk onto you
- if you are sued or if you receive a demand letter seeking compensation, inform your insurance company immediately

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