SR&ED cases – TECHNOLOGY Losses

Indusol Industrial Control Ltd. v. The Queen

National R&D Inc. v. The Queen

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Indusol Industrial Control Ltd. v. The Queen (2020)

- Fiscal year 2012, CRA denied SR&ED eligible expenses $111,883 and ITCS $49,224.
- Judge used a two-part test to determine if SR&ED took place and if the expenses were eligible.
- [11] The DIS Project objective was described as being to determine whether it is possible for a vessel to transit from Montreal to Lake Erie (via Lake Ontario and the Welland Canal) consistently at a draft of 8.15 m with a minimum UKC of 30 cm.
- [114] The overall [technological] objective of the DIS implementation specifications was to develop a standard that specified how the UKC of a vessel could be calculated by considering water level, bottom depth and ship dynamics. […]

Indusol's Position

- [6] The DIS Project is an extension of another project, called the "3D-Navigator Electronic Navigation System" (the "3D-Navigator system") project, carried out during previous years by Indusol.
  - Electronic marine navigation system for commercial vessels allows 2D or 3D. DIS part of system.
  - 3D navigation displays the DIS and changes were required.
- [20] Indusol's activities can be classified as either applied research or experimental development within the meaning of the definition of SR&ED.
- Research was published.
- Tested their research on board CSL vessels. Experimental development made incremental improvements to 3D-Navigator system.

CRA position for denial

[24] The DIS Project does not qualify as SR&ED […]

- No evidence was submitted by Indusol regarding the nature of activities.
- Technology was available by 2010.
- Salaries do not qualify as SR&ED expenditures.
  - Claim was filed without documentation or evidence.
  - License and computer not deductible because SR&ED requirements have not been met.

Facts

- The judge reviewed the eligibility using the 5 questions cited in the Northwest Hydraulics Case.
  - 1. Was there a technological risk or uncertainty which could not be removed by routine engineering or standard procedures?
  - 2. Did Indusol formulate hypotheses specifically aimed at reducing or eliminating the technological uncertainty?
  - 3. Did the procedure adopted accord with the total discipline of the scientific method, including the formulation, testing and modification of hypotheses?
  - 4. Did the process result in a technological advancement?
  - 5. Was a detailed record of the hypotheses tested, and results kept as the work progressed?

Question 1 – Technological Uncertainty

- [48] For the reasons stated below, I find that, on a balance of probabilities, only some of the uncertainties raised with respect to the squat issues constitute technological uncertainties within the meaning of the SR&ED criteria. Other uncertainties and challenges identified by the Appellant do not constitute technological risks or uncertainties within the meaning of the SR&ED criteria.

Question 1 – Technological Uncertainty

- [62] The Appellant identified three uncertainties with respect to implementing the squat formulas in the DIS:
  - (1) the speed of a vessel could not be easily measured because there was no solution for measuring the velocity of the current in real time;
  - (2) the squat formula needed to be altered for different sections of the channel; and
  - (3) the additional squat that occurs when two vessels approach each other at different speeds has to be accounted for.

Question 1 – Technological Uncertainty

- 1 – the judge did not find evidence at trial that this uncertainty could not be resolved using routine engineering or standard practice.
- 2 – The judge ruled that “there was no technological uncertainty within the meaning of the SR&ED criteria, because I am not satisfied that the uncertainty could not be resolved using routine engineering or standard procedures”.
  - The formulas developed in 2002 took into account different channel types.
- 3 – The judge ruled there was a technological uncertainty within the meaning of SR&ED.

Question 1 – Technological Uncertainty

- The judge ruled there were not uncertainties within the meaning of SR&ED regarding:
  - User interface and the display requirement issues
  - Water level information issues
  - Communication issues
  - Deciding what alarms to display
    - Considered this an admin decision
  - Alarm and alert issues
  - Data recording
  - Determining whether a computer was fast or reliable enough for their purposes – computer hardware issues

Question 2 – Hypotheses

- [93] On the evidence adduced at trial, I find that, on a balance of probabilities, hypotheses were formulated that were designed to reduce or eliminate the technological uncertainties involved with respect to the squat issues. However, for the reasons explained below in the section dealing with the third criterion, I am not convinced that Indusol conducted a methodical and systematic testing of the hypotheses. Accordingly, I find that the second criterion is not met, as it requires the methodical and systematic testing of hypotheses.

Question 3 – Scientific Method

- The judge ruled Indusol did produce sufficient evidence that the scientific method was followed.
- Results and descriptions of tests were vague.
- No information on testing presented.
- [101] […] no evidence as to whether systematic observation, measurement, and experiment were performed with a view to modifying the proposed solution which led to the final solution.

Question 3 – Scientific Method

- [102] For these reasons, I am not convinced that the procedure adopted by Indusol accorded with the total discipline of the scientific method. The Appellant simply did not adduce sufficient evidence to meet this criterion. Therefore, for these reasons, I find that, on a balance of probabilities, the third criterion is not met.

Question 4 – Technological Advancement

- [107] […] the evidence suggests that much of the work to advance the technology was completed by 2010, and only part of the implementation of the squat formulas qualifies as involving a technological uncertainty within the meaning of the SR&ED criteria in the 2012 taxation year. I find that some incremental advancements were achieved in the 2012 taxation year in relation to the DIS, but no advancement within the meaning of the SR&ED criteria. A technological advancement for SR&ED purposes requires the removal of technological uncertainties through a process of systematic investigation. As the Appellant has not adduced sufficient evidence to demonstrate that systematic investigation was undertaken during the 2012 taxation year, I simply cannot conclude that this criterion is met.

Question 5 – Detailed Record

- 2 documents were provided – implementation specifications and DIS conformance tests.
- [113] After examining these two documents, I find that they are not contemporaneous detailed records of the hypotheses formulated and tests performed by Indusol; in other words, they are not records such as those described in Northwest Hydraulic.
  - No evidence of hypotheses being tested or test results.

Salary or Wages

- The judge examined the salary and wages to determine IF he had ruled the project was SR&ED eligible would the expenses also be eligible.
- He determined the salaries for Mr. van Eijle and Ms. Clement would not qualify.
  - Ms. Clement was not directly engaged (proofreading documents, driving Mr. van Eijle).
  - No documentation to support they were directly engaged in SR&ED (ie. timesheets, logs, agendas, records, meeting minutes, etc.)
  - Documentation was requested by the CRA in February 2013. The CRA would have accepted emails as documentation.

Computer

- Capital expenditure (prior to 2014 costs are eligible) means all or substantially all used in prosecution of SR&ED.
  - Computer was tested for durability.
  - No evidence provided of computer's use or context.
- The judge ruled the computer was not an eligible expenditure as Indusol did not provide evidence of its use.

License

- Expenditure of a current nature – materials consumed in prosecution of SR&ED
  - Subscription to company which Indusol used to program development software.
- The judge ruled the license could not be considered material as it is not form which something is made.
- The judge ruled that it could be considered a capital expenditure had the project qualified as SR&ED.

Results - LOSS

- Judge ruled that project did not constitute SR&ED.
- The appeal was dismissed.
- Costs to the Respondent.

Lessons

- The Appellant was unable to prove they had identified a technological uncertainty and sought to reduce or eliminate that uncertainty through experimentation or analysis in all of their projects.
- It is vital to show how the uncertainties, or gaps in the knowledge base, could not be resolved using routine engineering practices.
- Using the scientific method can be a determining factor if a project is or is not SR&ED eligible.

National R&D Inc. v. The Queen

- Background
  - National R&D is a consultant in the areas of engineering, information technology, SR&ED tax credits, and Ontario interactive digital media tax credits
  - F2011 SR&ED ITCs were denied totaling $23,810.
  - Project titled “Project Tracking System”

National R&D's Position

- State their project was undertaken for the purpose of a technological advancement.
- Argued sufficient due diligence done and evidence provided.
- Illustrated a technological uncertainty, formed hypotheses for the reduction or elimination of the technological uncertainties, followed the scientific method, and kept detailed records.
- Witness – Mr. Saini the CEO and sole shareholder.

CRA position for denial

- Project does not constitute SR&ED.
- National did not meet its burden in showing on a balance of probabilities the project involved technological uncertainty and technological advancement.
- Little knowledge base research.
- Routine engineering could have been used.
- Witness for National R&D not credible.

PTS Project Objectives

- [22] The first phase of the PTS Project, which was carried out during the 2011 taxation year, involved establishing an efficient and concise time-tracking system, and it had three sub-objectives (hereinafter collectively referred to as the “Objectives”):
  - 1. To develop techniques for record set paging, sorting, and indexing that were compatible with the MTA (“Objective 1”);
  - 2. To develop a mechanism for in-memory array initialization of joint record sets such as “pivot-like output” (“Objective 2”); and
  - 3. To develop methods for deterministic and stateful client-side control (“Objective 3”).

Facts

- The judge reviewed the eligibility using the 5 questions cited in the C.W. Agencies case.
  - 1. Was there a technological risk or uncertainty which could not be removed by routine engineering or standard procedures?
  - 2. Did the person claiming to be doing SRED formulate hypotheses specifically aimed at reducing or eliminating that technological uncertainty?
  - 3. Did the procedure adopted accord with the total discipline of the scientific method including the formulation[,] testing and modification of hypotheses?
  - 4. Did the process result in a technological advancement?
  - 5. Was a detailed record of the hypotheses tested, and results kept as the work progressed?

Question 1 – Technological Uncertainty

- No web-based program for time tracking SR&ED projects (at that time).
- Internet search done for knowledge base of the objectives.
- The judge ruled that there were technological uncertainties which could not be resolved using routine engineering or standard procedures.
  - Objectives were specific, constraints to system, and system uncertainty.
  - Resolution of the uncertainties not reasonably predictable.

Question 2 – Hypotheses

- [47] Given the testimony of Mr. Saini and the documents referred to above and adduced in evidence at the hearing, I find, on a balance of probabilities, that National did formulate hypotheses specifically aimed at reducing or eliminating the technological uncertainties raised by the PTS Project. However, as indicated below under the analysis of the third criterion, Mr. Saini failed to convince me, on a balance of probabilities, that methodical and systematic testing of the hypotheses was conducted by National. Accordingly, the second criterion is not met as it requires the methodical and systematic testing of the hypotheses.

Question 3 – Scientific Method

- Project Timeline
  - Judge ruled the document does not show the formulation, testing, and modification of the hypotheses.
  - He also ruled there no logical progression between entries.
- The Letter
  - Objective 1 - specifies hypotheses and 50 experiments.
  - Objective 2 – states experiment were done but no details.
  - Objective 3 – hypotheses and vague description of how the objective was achieved.
  - Judge ruled what was being tested was unclear, how testing was done was not clear, results were vague, and no references to testing or modifying the hypotheses.

Question 3 – Scientific Method

- Source Code
  - Jude was unable to determine which version of source code was provided.
  - National R&D said there were other versions of code not presented.
  - No explanations regarding how or why code was altered.
- [58] As a result, I am not convinced, on a balance of probabilities, that National followed the scientific method while carrying out the activities in respect of the PTS Project. I therefore find that this criterion is not met.

Question 4 – Technological Advancement

- [64] I find Mr. Saini's testimony credible on this point. As a result, I find that there was some technological advancement in relation to the Objectives of the PTS Project, but not advancement within the meaning of the definition of SR&ED. As mentioned above, in order to find that a technological advancement was achieved, I would have to first find that technological uncertainties were removed through a process of systematic investigation, which I do not. Having concluded that National did not carry out systematic investigation to remove technological uncertainties, I cannot find that this criterion is met.

Question 5 – Detailed Record

- Project Timeline – judge ruled this did not show the formulation, testing or modification of any hypothesis. It also does not show experimentation or results.
- Document – does not show testing, it is breakdown of time spent on tasks.
- Source code – if a revision history had been submitted it may have been possible to determine tests. Judge ruled no advancement presented.

Question 5 – Detailed Record

- [72] As a result, I cannot conclude that any of the documents provided by National can be considered contemporaneous documentation that details any of the tests and the results of those tests.
- Testimony provided was not sufficient to make up for lack of documentary evidence.

Results - LOSS

- The judge ruled that the project did not constitute SR&ED.
- Appeal was dismissed.
- Costs to the Respondent.

Lessons

- The format for the Plan, Develop, Conclude/Correct, Act (PDCA) alone does not satisfy the definition of the scientific method.
- Detailed records of the meetings, the hypotheses, and tests are needed to help satisfy the definition.
- To be eligible for SR&ED Investment Tax Credits (ITCs), work must be approached through a systematic investigation where hypotheses formed using the existing knowledge base are tested through experimentation and analysis and documentation is kept throughout the process.