

Canadian Nuclear Laboratories Ltd. v. Canada (Attorney General), 2026 FCA 106 (CanLII)

Source: Federal Court of Appeal
Date: 2026-05-28
File number: A-141-25
Citation: Canadian Nuclear Laboratories Ltd. v. Canada (Attorney General), 2026 FCA 106 (CanLII), <<https://canlii.ca/t/kl6vd>>, retrieved on 2026-07-02

Date: 20260528

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**CORAM: RENNIE J.A.
BIRINGER J.A.
PAMEL J.A.**

BETWEEN:

**CANADIAN NUCLEAR LABORATORIES LTD.
D.**

Appellant

and

ATTORNEY GENERAL OF CANADA

Respondent

and

**KEBAOWEK FIRST NATION, CONCERNED CITIZENS OF RENFREW
COUNTY AND AREA, CANADIAN COALITION FOR
NUCLEAR RESPONSIBILITY and
SIERRA CLUB CANADA FOUNDATION**

Respondents

Heard at Ottawa, Ontario, on November 12, 2025.

Judgment delivered at Ottawa, Ontario, on May 28, 2026.

REASONS FOR JUDGMENT BY:

BIRINGER J.A.

CONCURRED IN BY:

RENNIE J.A.
PAMEL J.A.

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REASONS FOR JUDGMENT

BIRINGER J.A.

[1] Chalk River Laboratories is a nuclear research and development facility located in Renfrew County, Ontario. It is owned by Atomic Energy of Canada Ltd. (AECL), a Crown corporation, and managed by the appellant, Canadian Nuclear Laboratories Ltd. (CNL). This appeal arises from a decision by the Minister of Environment and Climate Change Canada (Minister) to issue a permit under the *Species at Risk Act*, S.C. 2002, c. 29 (SARA). The permit authorized CNL to carry out activities associated with the construction of a near-surface disposal facility for low-level radioactive waste at the Chalk River site. The permit was granted on the basis that affecting species at risk was incidental to carrying out the activities.

[2] Under the SARA, before a permit can be issued, the Minister is required to find that “all reasonable alternatives to the activity that would reduce the impact on the species have been considered and the best solution has been adopted”: *SARA, s. 73(3)(a)*. The sole issue between the parties is whether the Minister reasonably met this standard in issuing the permit and finding that potential sites at which the facility might have been built had been adequately considered and the best solution chosen. On judicial review, the Federal Court (*per Zinn J.*) found the Minister’s decision unreasonable and quashed the permit: *2025 FC 472* (FC Reasons).

[3] I reach the same conclusion although on somewhat different grounds than the Federal Court. Following the “reasons first” approach to judicial review mandated by *Canada (Minister of Citizenship and Immigration) v. Vavilov*, *2019 SCC 65* [*Vavilov*], I would not endorse the Federal Court’s proposed interpretation of paragraph 73(3)(a) and would focus instead on the Minister’s reasons. While the Chalk River site may well be a defensible location for the disposal facility, the

Minister's reasons for issuing the permit failed to meet the applicable standards of transparency, intelligibility and justification: *Vavilov* at para. 15. There is no interpretation of the operative provisions of the SARA in the Minister's reasons, and there is no explanation as to how the selection process for the Chalk River site aligned with the statutory requirements.

[4] I would dismiss the appeal and remit the matter to the Minister for redetermination in accordance with these reasons.

I. Background

A. The Statutory Scheme

[5] The stated purposes of the SARA are to prevent wildlife species from being extirpated or becoming extinct, to provide for the recovery of wildlife species that are extirpated, endangered or threatened by human activity, and to manage species of special concern to prevent them from becoming endangered or threatened: SARA, s. 6. It was enacted, in part, to implement the *Convention on Biological Diversity*, 11 June 1992, Can. T.S. 1993/24, which commits Canada to developing strategies and programs for conservation and the sustainable use of biological diversity: *Groupe Maison Candiac Inc. v. Canada (Attorney General)*, 2020 FCA 88 at para. 37 [*Groupe Maison Candiac*], citing SARA, preamble.

[6] Species may be listed for protection under the SARA by Cabinet on the Minister's recommendation: SARA, s. 27(1). Once a species is listed, the SARA prohibits killing, harming and capturing the species (subsection 32(1)); possessing or trading the species (subsection 32(2)); damaging or destroying the species' residences (section 33) and damaging or destroying the species' critical habitat (section 56): see *Groupe Maison Candiac* at para. 38.

[7] Under the SARA, the Minister may enter an agreement or issue a permit authorizing a person to engage in an activity affecting a listed wildlife species, any part of its critical habitat or the residences of its individuals: SARA, s. 73(1). The agreement may be entered or the permit issued

only if the Minister is of the opinion that: (a) the activity is scientific research relating to the conservation of the species and conducted by qualified persons, (b) the activity benefits the species or is required to enhance its chance of survival in the wild, or (c) affecting the species is incidental to carrying out the activity: [SARA, s. 73\(2\)](#).

[8] The permit was issued to CNL under paragraph 73(2)(c), which calls for a balancing of interests—affecting the species at risk must be “incidental” to carrying out the activity. I agree with the Federal Court that while the top priority of the [SARA](#) is the protection of species at risk, “Parliament has also recognized the potential need to harmonize conservation with societal and economic realities stemming from human activities”: FC Reasons at para. 36.

[9] Criteria for entering an agreement or issuing a permit are set out in subsection 73(3):

Pre-conditions

73 (3) The agreement may be entered into, or the permit issued, only if the competent minister is of the opinion that

(a) all reasonable alternatives to the activity that would reduce the impact on the species have been considered and the best solution has been adopted;

(b) all feasible measures will be taken to minimize the impact of the activity on the species or its critical habitat or the residences of its individuals; and

(c) the activity will not jeopardize the survival or recovery of the species.

Conditions préalables

73 (3) Le ministre compétent ne conclut l'accord ou ne délivre le permis que s'il estime que :

a) toutes les solutions de rechange susceptibles de minimiser les conséquences négatives de l'activité pour l'espèce ont été envisagées et la meilleure solution retenue;

b) toutes les mesures possibles seront prises afin de minimiser les conséquences négatives de l'activité pour l'espèce, son habitat essentiel ou la résidence des individus;

c) l'activité ne mettra pas en péril la survie ou le rétablissement de l'espèce.

[10] In this appeal, only the pre-conditions in paragraph 73(3)(a) are in issue. It prescribes one aspect of the balancing the Minister must conduct in allowing activity to proceed that affects a listed wildlife species while ensuring adequate safeguards for the species' protection.

[11] The English text of paragraph 73(3)(a) provides that a permit may only be issued where the competent minister is of the opinion that "all reasonable alternatives to the activity that would reduce the impact on the species have been considered and the best solution has been adopted". The French version lacks an equivalent to the English word "reasonable", requiring: "*toutes les solutions de rechange susceptibles de minimiser les conséquences négatives de l'activité pour l'espèce ont été envisagées et la meilleure solution retenue*". However, the respondents do not rely on the difference in wording to suggest that the Minister ought to have considered more than "all

reasonable alternatives” for the disposal facility site. Accordingly, I do not address this difference in language any further.

[12] Where an agreement is entered into or a permit is issued under subsection 73(1), it must contain any terms and conditions governing the activity that the Minister considers necessary for protecting the species, minimizing the impact of the authorized activity on the species or providing for its recovery: [SARA, s. 73\(6\)](#). The Minister must also include on the public registry an explanation of why the agreement or permit was entered into or issued, taking into account the matters referred to in subsection 73(3): [SARA, s. 73\(3.1\)](#).

[13] At the relevant time, [section 79](#) of the [SARA](#) provided that every authority making a determination about a designated project under the [Canadian Environmental Assessment Act, 2012](#), S.C. 2012, c. 19, s. 52 (CEAA 2012) had to consider the project’s effects on listed wildlife species and ensure that measures were taken to mitigate those effects: see [S.C. 2012, c. 19, s. 59](#).

B. The Near-Surface Disposal Facility Project

[14] For many decades, activities at the Chalk River site have generated radioactive waste. Previous waste storage practices at Chalk River are inconsistent with modern environmentally sensitive waste management principles. In 2017, CNL started the approval process for construction of a near surface low-level radioactive waste disposal facility at the Chalk River site. Substantially all of the radioactive material intended for storage at the facility was already located at or would be generated at that site. Existing buildings and infrastructure would be decommissioned. Building the disposal facility would require clearing of grasslands and forested habitats, grubbing (removing roots, stumps and other debris) of the cleared area, rock blasting and construction of the facility. Construction would also increase vehicle traffic at the site.

[15] These activities were expected to affect species listed for protection under the [SARA](#), particularly, the Blanding’s Turtle, the Little Brown Myotis (bat) and the Northern Myotis (bat)

and their habitats. Accordingly, CNL applied to the Minister for a permit under subsection 73(1) to carry out activities associated with construction of the facility at the Chalk River site.

[16] The requested permit under the [SARA](#) was one aspect of a complex approval process for the proposed facility. In 2016, CNL started the application process for approvals under the CEAA 2012, submitting an environmental impact statement. CNL also applied under the [Nuclear Safety and Control Act](#), S.C. 1997, c. 9 (NSCA) for an amendment to its nuclear research and test establishment operating licence. As the proposed facility was a designated project subject to an environmental assessment under the CEAA 2012, neither the licence amendment nor a permit under the SARA could be issued until a positive environmental assessment decision was made by the Canadian Nuclear Safety Commission: CEAA 2012, s. 7.

[17] As part of the environmental assessment process, CNL submitted a site report justifying the selection of a preferred location for the disposal facility. The site report explained that four sites owned by AECL were considered feasible. Two options were “on-site” at Chalk River (the East Mattawa Road site and the alternate site); two options were “off-site”, one at Whiteshell Laboratories in Pinawa, Manitoba and the second at the Nuclear Power Demonstration site in Rolphton, Ontario. The Chalk River options were favoured based on a review of economic feasibility, technical feasibility and environmental effects. The report went on to compare the two potential sites at Chalk River and after a weighted ranking of cost, health and safety, environmental protection, site functionality and constructability considerations, the East Mattawa Road site was selected.

[18] On January 8, 2024, the Commission issued its decision which included: the environmental assessment decision under the CEAA 2012, the nuclear licensing amendment decision and a decision as to whether the Crown had honoured its duty to consult: see *Re Canadian Nuclear Laboratories* (8 January 2024), Decision 22-H7, online: <canada.ca/content/dam/cnsc-ccsn/documents/NSDF_-_Record_of_Decision_.pdf> [CNSC Decision]. While not directly relevant to this appeal, I note that judicial review of this decision was sought. The Federal Court upheld the environmental assessment and nuclear licensing decisions (*Concerned Citizens of*

Renfrew County and Area v. Canadian Nuclear Laboratories, 2025 FC 334) but found that the duty to consult was not fulfilled (*Kebaowek First Nation v. Canadian Nuclear Laboratories*, 2025 FC 319, appeal to this Court under reserve, A-112-25).

[19] The Commission found that the proposed facility at the Chalk River site was not likely to cause significant adverse environmental effects under the CEAA 2012 provided CNL implemented specified mitigation and monitoring measures. The Commission concluded that CNL's site selection process met all applicable Canadian and international nuclear regulatory requirements. The Commission also noted that, as part of the environmental assessment process, Environment and Climate Change Canada (ECCC) reviewed CNL's site selection and found that the Chalk River site was well-characterized after years of monitoring and would minimize transportation risks: CNSC Decision at para. 159. Finally, pursuant to section 79 of the SARA, the Commission concluded that if CNL's committed mitigation measures were implemented, the project would not cause significant adverse effects on species at risk: CNSC Decision at para. 234.

[20] CNL's permit application under the SARA indicated that alternatives for the proposed activity had been considered, based on facility type, design, location and site. The permit application set out the factors considered in eliminating the two off-site location options, leaving only Chalk River:

The location selected for this new facility is at the Chalk River Laboratories (CRL), as opposed to the Whiteshell Laboratories (WL), located in Pinawa, Manitoba or the Nuclear Power Demonstration (NPD) site located in Rolphton, Ontario. Both the WL and NPD sites could host the NSDF due to the size of the properties. Both the WL and NPD sites are scheduled for site closure within the next 5 years, therefore, no infrastructures and support services would be available for the operation of the NSDF. For this reason, the CRL site is the best option as the operating costs would be much lower. Most of the Low-level Radioactive Waste planned to be directed to the NSDF are located at the CRL site therefore, the additional transportation required for the operation of the NSDF off-site, at either WL or NPD, would significantly increase the air emissions, the risk for wildlife-vehicle collisions, transportation costs and the impact on Chimney Swifts (NPD site).

(Appeal Book, p. 359.)

[21] The permit application indicated that two sites at Chalk River were identified for the disposal facility after application of mandatory attribute criteria and exclusion criteria, and considered further. Although both sites were technically feasible, the East Mattawa Road site was determined to be the best alternative given potential constraints to expansion at the alternate site, the lower cost of construction at the East Mattawa Road site and the lesser impact on species at risk.

[22] CNL's application materials for the [SARA](#) permit were assessed by a science review team at ECCC. The science review found, with reference to the pre-conditions in paragraph 73(3)(a), that "all reasonable alternatives" were adequately assessed, both on-site at Chalk River as well as off-site. Regarding site selection at Chalk River, the science review concluded that the East Mattawa Road site was the "best" alternative, to be preferred over the alternate site, and recommended approving the disposal facility.

[23] The science review's findings were adopted in a decision memorandum prepared for the Minister dated March 8, 2024, recommending that the permit be issued and confirming that the pre-conditions in subsection 73(3) had been met.

[24] On March 8, 2024, the Minister issued the permit under the [SARA](#) with a decision letter, authorizing activities associated with construction of the disposal facility at Chalk River on the basis that affecting the species at risk was incidental to carrying out the activities. The permit was conditional on compliance with specific mitigation and monitoring measures to protect the Blanding's Turtle, the Little Brown Myotis and the Northern Myotis. An explanation of the permit decision was published on the species at risk public registry.

[25] As no formal reasons accompanied the permit decision, the science review, the decision memorandum, the permit with the accompanying letter and the public notice together comprised the Minister's reasons and formed the basis for judicial review: FC Reasons at para. 18.

C. The Federal Court Decision

[26] The application for judicial review was filed in the Federal Court by Kebaowek First Nation, Concerned Citizens of Renfrew County and Area, the Canadian Coalition for Nuclear Responsibility and the Sierra Club Canada Foundation. CNL was named as a respondent. The Attorney General of Canada was also named as a respondent but took no position on the outcome.

[27] It was the first time that the Federal Court had considered an administrative decision maker's interpretation and application of the permitting provisions in [section 73](#) of the [SARA](#). Several issues were raised before the Federal Court, although the only ones relevant on this appeal relate to whether the Minister's decision to issue the permit was reasonable in light of the requirements of paragraph 73(3)(a).

[28] The Federal Court asked: (1) whether the Minister unreasonably concluded that "all reasonable alternatives" had been considered, given the applicant's claim that many potential site locations had been overlooked or inadequately assessed; and (2) whether the Minister unreasonably determined that, among the short-listed options, the "best solution" had been adopted, meaning the one that best reduces the impact on the species: FC Reasons at para. 27.

[29] Regarding the first statutory requirement, the Federal Court held that it was unreasonable for the Minister to conclude that "all reasonable alternatives" had been considered when CNL had confined its search to AECL-owned sites, unless no suitable AECL-owned site was found. According to the Federal Court, the categorical exclusion of entire classes of potentially suitable properties, without evidence that these alternatives offered no net conservation benefit, was an arbitrary constraint that rendered the Minister's decision unreasonable: FC Reasons at para. 48.

[30] On the second statutory requirement, the Federal Court found that the Minister had failed to provide a reasonable explanation for why the Chalk River site was the "best solution". The Federal Court found that the Minister had conducted a pragmatic balancing of ecological, technical and economic factors, an approach which, according to the Federal Court, may well be permitted by

paragraph 73(3)(a) but was inconsistent with ECCC's past practice: FC Reasons at paras. 58-62. The Federal Court concluded that the Minister did not adequately justify this change from past cases where the "best solution" was interpreted as the one that best advances conservation of species at risk: FC Reasons at paras. 55, 61, quoting the affidavit of Sarah Wren.

[31] The Federal Court, finding the Minister's decision to be unreasonable, set aside the Minister's decision to issue the permit, and ordered reconsideration of the decision in accordance with the Court's reasons.

[32] The Attorney General of Canada is a respondent on the appeal but takes no position on the outcome. All future references to the respondents in these reasons are to the other respondents.

II. Issue and Standard of Review

[33] On appeal from a judgment of the Federal Court on an application for judicial review, this Court steps into the shoes of the Federal Court and examines the administrative decision afresh, giving no deference to the Federal Court: *Canadian National Railway v. Halton (Regional Municipality)*, 2024 FCA 160 at para. 27, citing *Northern Regional Health Authority v. Horrocks*, 2021 SCC 42 at para. 10 and *Agraira v. Canada (Public Safety and Emergency Preparedness)*, 2013 SCC 36 at paras. 45-46.

[34] The standard of review for the Minister's decision is reasonableness: *Vavilov* at para. 16.

[35] The sole issue in this appeal is whether the Minister's decision to issue the permit, based on the preconditions in paragraph 73(3)(a) having been satisfied, was reasonable. More specifically, whether the Minister reasonably determined that "all reasonable alternatives" had been considered for the site of the disposal facility and the "best solution" chosen.

[36] Reasonableness review relates to both the outcome and the reasons justifying the outcome. Reasons delivered by administrative bodies must contain both “an internally coherent and rational chain of analysis” and sufficient justification in relation to the facts and law that constrain the decision maker: *Vavilov* at para. 85.

[37] Reasonableness review requires a “reasons first” approach, meaning that the court must show deference by seeking to understand the reasoning process followed by the decision maker: *Vavilov* at para. 84. Reasons must be evaluated within the context of the proceedings, the governing regulatory regime and the nature of the administrative body: *Mason v. Canada (Citizenship and Immigration)*, 2023 SCC 21 at para. 61 [*Mason*], citing *Vavilov* at paras. 91-103. The court should not ask itself what decision it would have taken or otherwise create a “yardstick” to measure what the administrator did: *Mason* at para. 62, citing *Delios v. Canada (Attorney General)*, 2015 FCA 117 at para. 28 and *Vavilov* at para. 83.

III. Analysis

A. Interpretation of Paragraph 73(3)(a)

[38] Where a statutory provision has not been previously interpreted and explained by a decision maker or a court, as was the case here, the decision maker must turn its own mind to the principles of statutory interpretation: *Pepa v. Canada (Citizenship and Immigration)*, 2025 SCC 21 at para. 64 [*Pepa*]; see also *Canadian National Railway Company v. Canada (Transportation Agency)*, 2025 FCA 184 at paras. 44-47. The decision maker need not engage in a formalistic interpretative exercise—“administrative justice” will not always resemble “judicial justice”: *Vavilov* at para. 92. However, the decision maker’s interpretation of the statutory provision must be consistent with the text, context and purpose of the provision: *Pepa* at para. 63, citing *Vavilov* at para. 120.

[39] An affidavit sworn by Sarah Wren of the Species at Risk Implementation Division at ECCC and filed in the Federal Court sets out the division’s interpretation of paragraph 73(3)(a). First, all reasonable alternatives to the proposed activity must be considered. Many factors may be relied on

to determine the “reasonable” alternatives, including biological, ecological, technical and economic limitations. Then, the solution that best advances conservation of species at risk must be adopted. All parties agree that this is the proper interpretation of paragraph 73(3)(a). This interpretation is also found in a proposed *Species at Risk Act Permitting Policy* prepared by ECCC dated September 19, 2016. The proposed policy was open to public comment when CNL applied for the [SARA](#) permit and was cited by CNL in its application materials: Appeal Book, p. 358. However, it was apparently never finalized and was not included in the certified tribunal record in this application for judicial review.

[40] If this were indeed the considered interpretation of paragraph 73(3)(a) underpinning the permit decision, it would have been a good start towards justifying the outcome. However, the Minister’s reasons contain no statutory interpretation of paragraph 73(3)(a) at all.

[41] The permit and accompanying decision letter provide no insight. The same goes for the decision memorandum. The science review confirms that all reasonable alternatives have been adequately assessed and the best solution adopted but provides no analytical framework for how that decision is to be made and little on how it was made.

[42] The explanation in the public notice says only that “[a]ll reasonable alternatives to the activity that would reduce the impact on the species have been considered and the best solution has been adopted. [...] Facility location and site selection options were also considered, and the option expected to have least impact on species at risk was retained”. This statement repeats the statutory criteria under paragraph 73(3)(a) but does not explain them. Later in these reasons I return to a particular concern with the adequacy of the public notice.

[43] We cannot rely on the Wren affidavit to supplement the Minister’s reasons. Affidavits submitted by administrative bodies raise concerns of “bootstrapping” or making submissions to reviewing courts that are essentially new reasons supporting the administrative decision: *Westjet v. Lareau*, [2024 FCA 77](#) at para. 17 [*Westjet*]; *Stemijon Investments Ltd. v. Canada (Attorney*

General), [2011 FCA 299](#) at paras. 41-42. Allowing supplementary reasons in this way would undermine the duty to adequately justify administrative decisions: *Westjet* at para. 17, citing *Vavilov* at para. 83; see also *Ontario (Energy Board) v. Ontario Power Generation Inc.*, [2015 SCC 44](#) at paras. 64-65 and *Sellathurai v. Canada (Minister of Public Safety and Emergency Preparedness)*, [2008 FCA 255](#) at paras. 46-47.

[44] Notwithstanding the parties' agreement on the interpretation of the requirements of paragraph 73(3)(a), the Minister's failure to justify its interpretation of paragraph 73(3)(a) in its reasons renders the permit decision unreasonable. The statutory requirements were central to the permitting process, and without an analytical framework it is challenging to discern the Minister's chain of logic and adequately conduct judicial review: *Vavilov* at para. 194; *Alexion Pharmaceuticals Inc. v. Canada (Attorney General)*, [2021 FCA 157](#) at para. 12, leave to appeal ref'd, [2022 CanLII 21677 \(S.C.C.\)](#).

[45] An administrative decision must be justified by transparent and intelligible reasons: *Vavilov* at para. 86. On judicial review, reviewing courts may "connect the dots on the page where the lines, and the direction they are headed, may be readily drawn". But where there are no dots to connect, the court may not supply the reasons that might have been given or make findings of fact that were not made: *Komolafe v. Canada (Citizenship and Immigration)*, [2013 FC 431](#) at para. 11, cited in *Vavilov* at para. 97.

[46] Next, I turn to examine what the Minister's reasons said about why "all reasonable alternatives to the activity that would reduce the impact on the species" were considered and "the best solution" adopted. I conclude that the appellant does not simply ask us to connect the dots, but to draw much of the picture ourselves.

B. "*All reasonable alternatives to the activity that would reduce the impact on the species*"

[47] Paragraph 73(3)(a) provides that the Minister must be of the opinion that "all reasonable alternatives to the activity that would reduce the impact on the species" have been considered. The

legislation does not indicate how to determine if an alternative to the activity is a “reasonable” one or how to establish that it “would reduce the impact on the species”.

[48] The Federal Court found that the Minister had not sufficiently justified the conclusion that all reasonable alternatives had been considered in CNL’s site selection process. The Federal Court found that the categoric exclusion of sites not owned by AECL, on non-conservation grounds such as transportation distance, was not consistent with the statute: “the statutory text and scheme make clear that ecological considerations must drive the identification of ‘all reasonable alternatives’”: FC Reasons at para. 52. According to the Federal Court, excluding non-AECL sites without evidence that those alternatives offered no net conservation benefit rendered the Minister’s decision unreasonable.

[49] The Federal Court also found that the environmental assessment under the CEAA 2012 was of limited relevance to fill in this alleged gap in the Minister’s reasons because the evaluation was conducted under legislation with different objectives than the [SARA](#)’s species conservation objectives. The respondents agree.

[50] The appellant submits that the Minister’s conclusion was reasonable even though the range of alternative sites considered was limited. They explain that there were benefits to AECL-owned sites operated by CNL under an existing nuclear licence. Those included well-understood characteristics based on years of geological and environmental studies that could inform the proposed facility’s compliance with international nuclear standards. It also meant not contaminating another site with radioactive waste. Accordingly, the appellant says, there were good reasons to start the site selection by considering only AECL-owned properties.

[51] The appellant also submits that the Commission’s approval under the NSCA and the CEAA 2012 of siting the disposal facility at the Chalk River location was part of the “factual matrix” for the Minister’s decision, limiting the “reasonable alternatives”.

[52] I find the Federal Court’s analysis of “reasonable alternatives” out of step with a “reasons first” approach. It was for the Minister and not the Federal Court to interpret paragraph 73(3)(a) and decide how the “reasonable alternatives” must be determined: *Mason* at paras. 62, 71; *Canada (Attorney General) v. Responsible Plastic Use Coalition*, 2026 FCA 17 at paras. 16-18, leave to appeal requested, 42277 (S.C.C.). I need not comment on the Federal Court’s interpretation other than to note that the Minister is not bound by it—the Minister may make their own interpretation as long as it is reasonable.

[53] Because the Minister’s reasons lack an analytical framework for how “reasonable alternatives” are determined, many important questions are left unanswered. These questions reasonably arise from the interplay between the statutory provisions, the evidentiary record and the Minister’s decision and reflect gaps in the Minister’s reasons. The answers, while not prescriptive or exhaustive of what must be in the Minister’s reasons to be considered reasonable, should provide guidance for filling in those gaps, ultimately allowing a reviewing court to better connect the dots.

[54] The Minister must be of the opinion that “all reasonable alternatives to the activity that would reduce the impact on the species” have been considered. Here, the proposed “activities” were “activities associated with the construction of an engineered near surface disposal facility for low-level radioactive waste at the Chalk River Laboratories (CRL) site in Ontario”. Does the requirement to consider “all reasonable alternatives to the activity” mean only alternatives to the “activities associated with the construction” or does it include alternatives based on other factors? The science report reveals that in the context of the environmental assessment process CNL considered alternatives based on facility type, design, location, site and “doing nothing”, but the reasons do not tell us whether, in the Minister’s opinion, these were all required to be considered under the [SARA](#).

[55] We are also faced with a lack of reasons on the issue of whether the environmental assessment process under the CEAA 2012 limited the “reasonable alternatives” required to be considered under the [SARA](#). As the Federal Court observed, the Minister’s reasons contain no clear

explanation of how the CEAA 2012 environmental process aligned with or was used to satisfy the requirements of paragraph 73(3)(a): FC Reasons at para. 51.

[56] I agree with the Federal Court that the CEAA 2012 assessment cannot replace the Minister's independent obligation to look at "all reasonable alternatives" under the [SARA](#): FC Reasons at para. 51. These are separate exercises engaging distinct statutory requirements. However, that does not mean that determinations made in the CEAA 2012 process are irrelevant to the "reasonable alternatives" under the SARA or are not factual constraints that inform "the limits and the contours of the space in which the [Minister] may act and the type of solutions [they] may adopt": *Vavilov* at para. 90.

[57] A permit under the [SARA](#) could not be issued before a favourable environmental assessment: CEAA 2012, s. 7. Here, that became possible only after a multi-year environmental assessment and nuclear licensing amendment process, culminating in approval of the Chalk River site. Much of the same evidence submitted as part of the environmental process was submitted as part of the SARA application and, as noted, the Commission was itself required to consider the project's impact on listed wildlife species: [SARA, s. 79](#).

[58] Thus, a further gap in the Minister's reasons is whether or how the environmental assessment process under the CEAA 2012 was relevant to the determination of "reasonable alternatives". Does the permitting process under the [SARA](#) require a revisiting of the alternate means assessment (including site selection) completed in the environmental assessment process? Is the consideration of significant adverse environmental effects on listed wildlife species, also done as part of the environmental assessment process, relevant to the permitting process under the SARA? Or was the end of the environmental assessment process and choice of the Chalk River location the starting line for the SARA permitting process, providing only two "reasonable alternatives" to be considered?

[59] Next, I turn to the Minister's reasons evaluating the "reasonable alternatives" considered by CNL.

[60] The appellant submits that it applied biological, ecological, technical and economic factors to start with only AECL-owned sites and then funnelled the list of potential locations to the two on-site options at Chalk River. They say that the cost and environmental risk posed by waste transportation off-site, the pending closure of the Whiteshell Laboratories and Nuclear Power Demonstration sites, and the fact that only Chalk River had been approved under the environmental assessment process meant that the two on-site locations were the only "reasonable alternatives" for the disposal facility. They say the Minister's reasons reflect approval of this approach.

[61] While this is a plausible explanation, I do not find this chain of logic expressed in the Minister's reasons. The public notice states that facility type and design were considered and the options with the smallest footprint chosen, that "facility location and site selection options were also considered, and the option expected to have least impact on the species at risk was retained". The decision memorandum is similarly terse.

[62] The science review is where the Minister's reasons are most detailed. One section responds to the question "Have all reasonable alternatives to the activity that would reduce the impact on the species been considered and the best solution adopted?" The science review addresses aspects of the disposal site which are not in issue, such as the type and design of the facility. Regarding facility location and site alternatives, the science review provides:

3. Facility Location (on-site at Chalk River Laboratories (CRL) vs off-site at either Whiteshell Laboratories (WL) site, in Manitoba or Nuclear Power Demonstration (NPD) site, in Rolphton) was considered. Both the WL and NPD sites are scheduled for site closure within the next 5 years, therefore, no infrastructures and support services would be available for the operation of the NSDF. For this reason, the CRL site is the best option as the operating costs would be much lower. Most of the Low-level Radioactive Waste planned to be directed to the NSDF are located at the CRL site therefore, the additional transportation required for the operation of the NSDF off-site, at either WL or NPD, would significantly increase the air emissions, the risk for wildlife-vehicle collisions, transportation costs and the impact on Chimney Swifts (NPD site).

4. Site Selection (East Mattawa Road (EMR) site vs. the Alternate Site) was assessed and the EMR is the best alternative, although both sites are technically feasible. There are potential constraints to expansion at the Alternate site, the cost of construction is significantly lower at the EMR site and the biodiversity assessment demonstrates that this site will have less impact on Species at Risk than the Alternate site.

(Appeal Book, p. 4123 [emphasis added].)

[63] From these statements, it is not at all clear which sites were considered “reasonable alternatives” or “reasonable alternatives to the activity that would reduce the impact on the species”. Did the Minister conduct a two-step process by which “all reasonable alternatives to the activity” were first identified and then only those that would reduce the impact on the species? Were the on-site locations at Chalk River and the off-site locations at Whiteshell Laboratories and the Nuclear Power Demonstration site considered reasonable alternatives, or only the two sites at Chalk River?

[64] The Minister reduces the sites that were under consideration from four to two to one, but the basis for doing so is a mystery. It is not clear whether the only factor applied in assessing whether all reasonable alternatives had been considered was the impact on species at risk or whether other criteria—such as biological, ecological, technical and economic considerations—were relied on. The site and location selections appear to be based on both economic and species at risk considerations but the reasons do not explain how this approach aligns with the statutory requirements.

[65] The Minister’s reasons do not identify the disposal facility sites considered “reasonable alternatives to the activity that would reduce the impact on the species” or why those alternatives were chosen. Next, I turn to the Minister’s selection of the “best solution” from among these alternatives.

C. “*The best solution*”

[66] Paragraph 73(3)(a) provides that once the reasonable alternatives to the activity that would reduce the impact on the species have been identified, the “best solution” must be adopted. The legislation provides no guidance as to how the Minister is to assess whether this statutory requirement has been met.

[67] The Federal Court found that the Minister’s decision on the “best solution” reflected a shift in interpretation from past practice. The interpretation adopted by the Minister in the past, which is not disputed, is that once the reasonable alternatives have been identified, the alternative that best advances conservation of species at risk must be adopted: Wren affidavit at para. 15, Appeal Book, p. 4184.

[68] The Federal Court concluded that while a departure from past practice could be supported by the text because “the best solution” read contextually is open to multiple meanings, the Minister’s failure to justify the shift from past practice was a reviewable error: FC Reasons at paras. 56-60, citing *Vavilov* at paras. 130-31 and *Canada (Attorney General) v. Honey Fashions Ltd.*, 2020 FCA 64 at paras. 38-40.

[69] The respondents agree. They say that the Minister’s reasons on CNL adopting the “best solution” reflect a choice of the Chalk River site over the two off-site locations because operating costs would be lower at Chalk River. Both off-site locations were scheduled for closure within the next five years and therefore lacked the requisite infrastructure and support services for the disposal facility. They also say the “best solution” was not chosen for protection of species at risk because on that score, the off-site locations were more favourable.

[70] The appellant submits that the Minister’s conclusion on the “best solution” was based on the protection of species at risk and was in accordance with past practice. They say that the East Mattawa Road site was selected over the alternate site at Chalk River to minimize impact on the most sensitive species known to be present, the Blanding’s Turtle.

[71] Again, I note that it was not for the Federal Court to interpret how “the best solution” is determined, nor is the Minister bound by the Federal Court’s interpretation. However, the debate between the parties on how the Minister determined that “the best solution” had been adopted reflects a lack of clarity in the Minister’s reasons. Both parties point to the science review in support of their position but identify the “best solution” as having been chosen from different pools of contenders. The appellants say the best solution was chosen from the two sites at Chalk River. The respondents say the choice was made from multiple options, including on-site and off-site locations.

[72] The relevant section in the science review asks: “Have all reasonable alternatives to the activity that would reduce the impact on the species been considered and the best solution adopted?” Under that heading, the first question posed is whether “all reasonable alternatives have been adequately assessed” and the second question posed is whether the methodology proposed is the “best solution, sound and appropriate”.

[73] The respondents refer to the first part, in which alternatives for facility type, design, location and site are described, and the conclusion that “the CRL site is the best option as the operating costs would be much lower” as proof that the best solution was chosen for reasons other than preservation of the species at risk.

[74] The appellant points to the next section which concludes:

The best solution is to build a Near Surface Disposal Facility with an Engineered Containment Mound at the Chalk River Laboratories on the East Mattawa Road (EMR) site. The only alternative that considered the Species at Risk in the identification of the reasonable alternative means is the site selection. The EMR site has a smaller impact on the most sensitive species known to be present in the LSA – BLTU [i.e. the Local Study Area of the Blanding’s Turtle].

(Appeal Book, p. 4124.)

They say this demonstrates that the best solution was chosen for preservation of the most ecologically sensitive species at risk, the Blanding’s Turtle.

[75] While not a model of clarity, this latter section appears to support the statements in the decision memorandum and the public notice that the selected site option is expected to have the least impact on the species at risk. On this basis, the “best solution” could be said to have been sanctioned by the Minister in a manner consistent with past practice.

[76] Nonetheless, I find the Minister’s reasons on adopting the “best solution” to be lacking. It was up to the Minister to interpret the meaning of the statutory term “best solution”, including whether the sole basis for this determination was species conservation. As already noted, the Minister needed to indicate clearly which of the disposal facility sites (whether only the two sites at Chalk River or whether the two off-site locations were also included) were “reasonable alternatives” that would reduce the impact on the species and, from there, why the East Mattawa Road site at Chalk River was the “best solution” among those reasonable alternatives.

D. *The Public Notice*

[77] Before concluding, I will comment on the public notice. When a permit is issued, the Minister is required to include in the public registry an explanation of why it was issued, taking into account the matters referred to in subsection 73(3): [SARA, s. 73\(3.1\)](#). Like other filings on the public registry, the subsection 73(3.1) requirement facilitates transparency and accountability when the government authorizes conduct affecting listed species at risk: Canada, *House of Commons Debates*, 37th Parl., 1st Sess. (19 February 2001) at 1755 (Hon. David Anderson, Minister of the Environment); see also *Vavilov* at para. 79, citing *Baker v. Canada (Minister of Citizenship and Immigration)*, 1999 CanLII 699 (SCC), [1999] 2 S.C.R. 817 at para. 39 (S.C.C.). When the Minister decides to exempt an activity that adversely affects an endangered species from prohibitions in the [SARA](#), the public must be told why.

[78] Here, the public notice repeats the statutory requirements of paragraph 73(3)(a) and says little more. It mentions that facility type, design, location and site options were considered and that the option expected to have the least impact on the species at risk was retained.

[79] The notice lacks any meaningful explanation as to how the pre-conditions for the permit were satisfied or of the considerations justifying endangerment of the listed species. This insufficiency defeats the very purpose of having a public registry that includes reasons for why a permit was issued. The Minister’s explanation in the public notice must be better.

E. Conclusion

[80] While one could surmise why the East Mattawa Road site might have been a defensible choice as the “best solution” out of “all reasonable alternatives for the activity that would reduce the impact on the species”, it is not the court’s job to craft coherent reasons for administrative decisions. That is the Minister’s job, and the reasons here fall below the standard of justification required on reasonableness review.

IV. Disposition

[81] I have concluded that the Minister’s decision is unreasonable. I would therefore dismiss the appeal and remit the matter to the Minister for redetermination in accordance with these reasons.

[82] Because no party seeks costs, I would award none.

“Monica Biringer”

J.A.

“I agree.

Donald J. Rennie J.A.”

“I agree.

Peter G. Pamel J.A.”

FEDERAL COURT OF APPEAL

NAMES OF COUNSEL AND SOLICITORS OF RECORD

DOCKET:	A-141-25
STYLE OF CAUSE:	CANADIAN NUCLEAR LABORATORIES v. ATTORNEY GENERAL OF CANADA and KEBAOWEK FIRST NATION et al.
PLACE OF HEARING:	OTTAWA, ONTARIO
DATE OF HEARING:	NOVEMBER 12, 2025
REASONS FOR JUDGMENT BY:	BIRINGER J.A.
CONCURRED IN BY:	RENNIE J.A. PAMEL J.A.
DATED:	MAY 28, 2026

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