Court of Queen's Bench of Alberta

Citation: Dow Chemical Canada ULC v NOVA Chemicals Corporation, 2022 ABQB 422

Date: 20220620
Docket: 0601 07921
Registry: Calgary

Between:

Dow Chemical Canada ULC and Dow Europe GmbH

Plaintiffs

- and -

NOVA Chemicals Corporation

Defendant

Memorandum of Decision
of the
Honourable Justice B.E. Romaine

I. Introduction

[1] The primary issue before the Court discussed in these reasons is whether the report of Dow proposed expert witness Alan W. Reynolds contains evidence relevant to Part 1 of Issue D, and whether his evidence is therefore admissible. I gave oral summaries of my decisions, and these are my written reasons.

II. The First Decision

[2] The admissibility of Mr. Reynolds' expert report has been in issue in this litigation since at least as early as the oral decision of this Court on August 20, 2020. More most recent issues with respect to this expert report were addressed in this Court's April 29, 2022 decision at 2022 ABQB 292 at paras 27-31 as follows:

> I ruled in August 2020, which ruling was affirmed on appeal, and I repeated in paragraph 11 of my December 8, 2021 written decision, that portions of Mr. Reynolds report continue to be inadmissible as evidence at the damages hearing to the extent that this report refers to Mr. Waguespack's new definition of productive capability as set out in his first report.
>
> In a previous written decision I noted that Mr. Reynolds' report, to the extent that it was responsive to the report of Dow witness John Holloway and in compliance with accepted assessment principles was admissible. To the extent it did not, and that it relied on Mr. Waguespack's inadmissible opinion, it was not admissible.
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> I have now found that Mr. Waguespack's opinions with respect to E3s productive capability, his opinions with respect to Slowdowns, Transitions and constraints are inadmissible.
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> Therefore, it follows that the extent that Mr. Reynolds report refers or relies on Mr. Waguespack's opinions on those issues, it is inadmissible.
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> I also note that Mr. Reynolds' report is entitled "Rebuttal Report to Top-Up Analysis by John T. Holloway." While it appears that Mr. Holloway will not be testifying, the comments that specifically respond to his report would not be relevant. However, to the extent that Mr. Reynolds' report is relevant to the part 1 question of Issue D, his evidence of the next part of this hearing may be admissible.

[3] Dow takes the position that none of Mr. Reynolds written opinion is relevant to the Part 1 issue, but only the remainder of Issue D. NOVA submits that certain parts of the written opinion are relevant to the issue, and that Mr. Reynolds testimony is admissible with respect to these parts of his opinion.

[4] Mr. Reynolds written report was first issued as a rebuttal report to an anticipated Dow expert, John Holloway which referred to the second part of Issue D (paras 1-3, 5 of Mr. Reynolds report). Given this, and given that Dow decided not to call Mr. Holloway in the damages hearing, I directed NOVA to identify the parts of Mr. Reynolds' written report that may be admissible. NOVA did so, and the parties made written submissions on the issue.

A. Preliminary Issue: What is the Part 1 Issue?

[5] Part 1 of Issue D is whether one or more plant equipment changes made to E3 after the 2014 plant turnaround but before the 2018 rate trial improved E3's productive capability (the Part 1 issue). In the April, 2022 decision at paragraphs 1-11, I decided that it was appropriate to hear the Part 1 issue as a preliminary matter before a decision was made on whether it was necessary to proceed to the remainder of Issue D.

[6] NOVA, however, now submits that the Part 1 issue is not about "E3's productive capability," but about "production capacity," and that these concepts are different things.

[7] It is true that Appendix A to this Court's decision of July 31, 2020, which predated the Court of Appeal's decision on the trial, and the decision of October 26, 2021 refer to the Part 1 issue as follows: "Did plant equipment changes made to E3 after the 2014 plant turnaround improve E3's production capacity." (emphasis added)

[8] However, until NOVA's most recent written submissions, there is ample evidence on the record that the Court and the parties considered the terms "production capacity" and "productive capability" to refer to the same thing: E3 and E3's productive capability.

[9] This Court confirmed in both its March and April 2022 decisions (2022 ABQB 237 and 2022 ABCA 292) that the Part 1 issue involved E3's productive capability. While the wording changed from earlier references, and while it may have been less than accurate for the Court and the parties to use the terms interchangeably, NOVA's current position is a change from its previous statements.

[10] During Mr. Waguespack's voir dire, during oral argument that followed and during Mr. Waguespack's direct testimony, references to the Part 1 issue were framed in terms of E3's "productive capability" (hearing transcripts pps 1326, 1352, 1354, 1538, 1540, 1592, 1617-1618, 1671, 1680-1681, and Mr. Waguespack's slide presentation during his testimony.) Mr. Waguespack's testimony with respect to the Part 1 issue never referred to the distinction that NOVA now seeks to establish.

[11] In oral submissions as late as April 25, 2022, NOVA counsel noted as follows:

> a) "We do take the position that [Mr. Reynolds'] report speaks directly to part 1 of issue D. There are expressed statements in his report that he is of the view that equipment changes were necessary in order to reach the productive capability achieved in 2018 and 2019 and that without those changes, that NOVA could not have attained those numbers;" and
>
> b) "But Mr. Reynolds is able to speak how an ethylene plant is designed and how a new design of trays, for instance, is different from the previous ones and would lead to an increase in productive capability."

[12] I do not fault counsel or Mr. Waguespack for this. It is an indication that the Court and the parties recognized that the Part 1 issue was an issue of productive capability.

[13] On the same day, Dow counsel stated:

> The reason that issue D was created by the Court was to give NOVA an opportunity to say. Don't just take the rate trial information as is. We want to argue that there are some plant equipment changes that increase this from what it really was back in 2014. Let us make that argument, My Lady. And you said. Yes.

[14] This comment does not, as NOVA suggests, support its new position, but relates rate trial productive capability information from the actual rate trial to productive capability as it was in 2014.

[15] NOVA seeks to support its position by noting a comment made in my decision of March 29, 2022, (2022 ABQB 237), in which I found that Mr. Waguespack's opinion evidence with respect to productive capability was inadmissible on the grounds of relevance, as it did not comply with the Court-accepted methodologies, but allowed Mr. Waguespack to give evidence with respect to hearing issue D.

[16] In making that decision, I commented that the issue "does not require compliance with the [trial reasons], as it is a new issue for the top-up period."

[17] Thus, NOVA asserts that this Court was affirming that the Part 1 issue was not about productive capability as it has been accepted and defined in the trial reasons, but a confirmation that the Part 1 issue requires only proof of production capacity.

[18] However, I made clear in the conclusion of the decision that:

> Mr. Waguespack may give evidence with respect to hearing issue D, whether one or more plant equipment changes made after the 2014 turnaround but before the 2018 rate trial improve E3's Productive Capability: para 119. (Emphasis added)

[19] Read in context of the decision as a whole, my comment referred to the fact that the Court-approved methodology of calculating E3's Productive Capability from turnaround to turnaround did not preclude NOVA from submitting as part of Issue D that it is incorrect to measure E3's productive capability from rate trial or its equivalent to rate trial, when the rate trial in the period at issue did not follow closely after a turnaround and equipment changes were made in the interim. This is obvious from the nature of Issue D. The comment in context did not change the Part 1 question from a focus on E3's productive capability to a question of what NOVA now calls the production capacity of different types of equipment. The focus of Issue D has always been on E3 as a whole.

[20] The terms are interchangeable, but refer, most accurately, with respect to the Part 1 issue, to E3's productive capability. As indicated in the July, 2020 decision (2020 ABQB 441), Issue D arose from the question of whether any differences in the Court-approved productive capability methodology were properly necessary in order to apply the methodology to the top-up period: para 44.

B. Rule 8.16(1)

[21] Rule 8.16(1) of the Rules of Court states that "...[u]nless the Court otherwise permits, no more than one expert is permitted to give opinion evidence on any one subject on behalf of a party."

[22] As noted in ***Vu v Hope***, 2017 ABQB 136 at para 31, the Rule only prevents calling more than one expert where the experts are giving opinion evidence on the same subject matter. In that case, the Court allowed both a neurosurgeon and a neuropsychologist to give evidence for the defendants in a professional negligence action. Tillman, J's decision to allow the evidence of both experts appears to be based on fairness, the fact that the plaintiff had argued that a neuropsychiatrist cannot comment on the opinion of an neuropsychologist.

[23] In another medical negligence case, ***Anderson v Harari***, 2019 ABQB 745, Anderson J commented at para 167:

> I heard from two experts on causation . . . . In considering their evidence on the plaintiff's treatment I am mindful of Rule 8.16(1) of the Alberta *Rules of Court*, ... In this instance, expert opinion as to treatment was provided by . . . a general practitioner and emergentologist respectively. The experts on causation, . . . practice as a podiatric surgeon and an orthopedic surgeon respectively. While there are strong policy reasons for placing a limit on the number of experts - including issues of expense and delay – in this case the interests of justice were

> served by hearing from both sets of witnesses. As treatment was very much in issue during this trial and the court benefitted from receiving opinion evidence from practitioners with varying specialities. While this resulted in some duplication, it was not excessive or abusive. In my view, this was an appropriate instance for the court to permit evidence from additional expert witnesses. My conclusion is supported by a review of the factors mentioned by this court in *Smith v Obuck*, 2018 ABQB 849. (Emphasis added)

[24] Thus, the Court exercised its discretion to allow additional expert evidence on the same issues – treatment and causation – given that the evidence was from practitioners with varying medical specialities and was not excessive or abusive.

[25] As noted in ***Smith v Obuck***, 2018 ABQB 849, there is little case law in Alberta on this Rule. Yungwirth, J. helpfully set out certain factors at para 21 that she considered in coming to a decision. These included relevance (which will be referenced later in this decision), whether calling both experts could be considered "piling on" or "duplicative," whether the evidence of the second expert added anything to the evidence of the first, whether the evidence was required to allow the plaintiff to fairly present its case, whether the evidence would assist the trial judge, whether allowing the proposed expert to testify would be prejudicial to the defendant, and whether any abuse or delay that is caused by allowing the second expert to testify could be addressed by an award of costs at trial.

[26] The Court noted at para 20, that the issue of duplication must be weighed and balanced against the right of the plaintiff to put its best case forward.

[27] In ***Raniga v Kang***, 2021 BCSC 2340, a case considering a similar rule, the Court noted at para 13 that:

> ... the question is not so much whether there is overlap amongst some of the reports, but whether the specific subject matter of the proposed additional report is already addressed in other reports served." (Emphasis added)

[28] Again, the proposed additional witnesses were medical witnesses with distinctly different specialities.

[29] In making the first decision, I assumed relevance, which will be addressed later in these reasons.

[30] I had real concern that calling both experts was "piling-on". They both purport to address the same subject matter – part 1 of Issue D. Mr. Reynolds does not, as submitted by NOVA, address different subjects, but primarily addresses three of the four equipment changes that Mr. Waguespack also addressed. It was not clear at this point from NOVA's mark-up of Mr. Reynolds opinion whether he had anything to add to Mr. Waguespack's opinion, apart from the distinction between production capacity and productive capability, which I have rejected. I found that Mr. Reynolds' opinion duplicated that of Mr. Waguespack in most respects with respect to the Part 1 issue, to the extent that it addressed that issue at all. It is clear that his opinion addresses the remainder of Issue D, but that was not the issue before me at this stage of the hearing.

[31] NOVA submitted that Mr. Reynolds' opinion adds to that of Mr. Waguespack because of his "specific and distinct" expertise in "ethylene plant design." Further comment on Mr. Reynolds' qualifications in this area are referenced later in this decision, but the issue at this

stage of the hearing was whether Mr. Reynolds' opinion adds to Mr. Waguespack's on the issue of whether plant equipment changes made to E3 after the 2014 plant turnaround but before the 2018 rate trial improved E3's productive capability.

[32] As support for its submissions that Mr. Reynolds' proposed expertise in plant design allowed him to add to the opinion of Mr. Waguespack, and that "production capacity" means something different from "E3's productive capability," NOVA stated that Mr. Reynolds does not purport to be a productive capability expert, and that this is an additional reason why his evidence was not duplicative of Mr. Waguespack's. However, this raises the issue of whether he has the required expertise to give evidence on the Part 1 question at all.

[33] In summary, I was satisfied that Rule 8.16(1) applied.

C. First Oral Decision

[34] Despite these concerns, after reviewing the written briefs of the parties, I was persuaded by NOVA's submissions that it may be unfair to make a decision without hearing further from Mr. Reynolds. I was aware of NOVA's submissions that Dow may have mischaracterized Mr. Reynolds' intended evidence, and that it was unfair to decide what evidence he would offer without at least hearing his qualifications. Therefore, on May 24, 2022, I gave an oral decision summarizing my reasons as follows:

> Despite the fact that Mr. Reynolds' proposed evidence is in many respects a duplication of Mr. Waguespack's evidence on Part 1 of Issue D, and that for that reason, Rule 8.16(1) applies, in order to make the best use of available hearing time, I will not require NOVA to make a formal application under Rule 8.16. Applying the tests with respect to when the Court may allow a second expert witness on the same subject, I have decided that Mr. Reynolds may be called to give evidence on Part 1 of Issue D limited to the following parts of his written report as highlighted by NOVA:
>
> a) paragraph 7, the sentence commencing "from a mechanical perspective," including items 1), 6) and 7), to the end of that paragraph, excluding footnote 2;
> b) paragraph 9, the sentence commencing "Had those constraints not been resolved....";
> c) part 3.1, on the basis that it sets out Mr. Reynolds' understanding of the facts;
> d) paragraph 16 and 17, on the understanding that the phrase "NOVA operated E3 at maximum capacity" will not be part of Mr. Reynolds' evidence;
> e) paragraphs 26 and 27 and footnote 31;
> f) paragraph 31 and footnotes;
> g) the highlighted portions of paragraph 37 with footnotes; and
> h) the highlighted portions of paragraph 40.
>
> Given that Mr. Reynolds' opinion was prepared to respond to the opinion of Mr. Holloway, it is difficult to identify with any precision where his report deals with the second part of Issue D, rather than the first part, but the highlighted portions proposed by NOVA that I have not allowed clearly deal with the second part of

> that issue. Dow is, of course, entitled to continue to make submissions that the parts of Mr. Reynolds' report that I have allowed him to testify about are not properly Part 1 issues, that they are not related to productive capability, and any other submission that Dow may have with respect to Mr. Reynolds' evidence.
>
> I have made my decision primarily on the basis that Mr. Reynolds' evidence may be required to allow NOVA to present its case, despite the strategic decisions it has taken in this matter, and that this evidence may assist me in coming to a decision on Part 1 of Issue D. I have attempted to balance the prejudice that could be caused by this decision to both parties, and I do not foreclose any application with respect to prejudice that Dow may make after the evidence is heard, including an application for an opportunity for rebuttal, given the basis for my decision.
>
> Lastly, I do not agree with much of the characterization of these proceedings and the litigation conduct of Dow expressed in the NOVA brief, and I will address these matters in my written decision.

III. The Second Decision

[35] Mr. Reynolds gave evidence on May 25 and May 26, 2022 in a voir dire on his qualifications. That testimony provided additional clarity.

[36] NOVA sought to have Mr. Reynolds qualified as an expert in the area of ethylene plant design, operations and equipment. Mr. Reynolds was extensively examined on his design experience, but, while that may be an issue for the weight of his evidence, he gave sufficient details of that experience that he would be able to meet the threshold of a properly qualified expert set out in ***R v Mohan***, [1994] 2 SCR 9 and subsequent cases. However, the test for admissibility of expert evidence sets out:

> . . . four threshold requirements that the proponent of the evidence must establish in order for proposed expert opinion evidence to be admissible: (1) relevance; (2) necessity in assisting the trier of fact; (3) absence of an exclusionary rules; and (4) a properly qualified expert . . . *Mohan* also underlined the important role of trial judges in assessing whether otherwise admissible expert evidence should be excluded because its probative value was overborne by its prejudicial effect – a residual discretion to exclude evidence based on a cost-benefit analysis: *White Burgess Langille Inman v Abbott and Halliburton Co*, 2015 SCC 23 at para 19.

[37] The question thus becomes, how does this proposed area of expertise equip Mr. Reynolds to give relevant and necessary evidence on the issue of whether the changes improved E3's productive capability in the period at issue. NOVA does not seek to have Mr. Reynolds qualified as an expert on productive capability: it expressly argues that this is not his expertise, and that this is one of the reasons why his opinion does not duplicate Mr. Waguespack's opinion. NOVA continues to submit that the Part 1 issue has nothing to do with productive capability, but instead focuses on production capacity. As noted previously, these terms are interchangeable. It is noteworthy that Mr. Reynolds' written opinion refers to productive capability of E3 from time to time (for example, in his description of the dispute).

[38] NOVA says that Mr. Reynolds will be testifying that the plant equipment at issue before it was changed did not have the design capacity that would allow E3 to operate at the rates achieved in the 2018 rate trial.

[39] NOVA supports this submission by specific reference to the following excerpts from Mr. Reynolds' opinion:

a) [F]rom a mechanical perspective, the increased capacity achieved in late 2018 was also a result of 1) upgrading the de-propanizer tower ... 6) debutanizer re-tray in April 2017; and 7) in-kind replacement of E-650 and installation of larger E-650 in outages in 2018. Without addressing these mechanical constraints, NOVA would not have been able to achieve the capacity they achieved following the 2018 turnaround, which was approximately 121.2%.
b) Had those constraints not been resolved, the production rates achieved following the June 2018 turnaround and October 2018 outage would not have been realized. (Emphasis added)

[40] However, it is necessary to view these excerpts in context. Mr. Reynolds testified during the voir dire that he had never read either of Mr. Waguespack's reports "cover to cover," that the Court should consider his report a "very separate work," and that he did not need to read Mr. Waguespack's report because "what [he] was covering was a rebuttal report to Mr. Holloway and [Mr. Waguespack] was covering a rebuttal report to Mr. Kapur," so that their scope of work did not overlap. He confirmed that, from the very start, his report of January 15, 2020 was to respond to Mr. Holloway's report.

[41] Excerpt a) is found in a paragraph that refers to Mr. Holloway's criticism of NOVA for not addressing alleged bottlenecks. Mr. Reynolds responds to this by stating that NOVA undertook significant efforts to maximize E3 production as a matter of routine, giving as an example the upgrades mentioned in excerpt a). Excerpt a) is essentially a response to Mr. Holloway's report and the opinion that NOVA had missed opportunities to initiate steps.

[42] Excerpt b) is found in a paragraph in which Mr. Reynolds asserts that NOVA diligently maximized E3 production identifying and resolving constraints in a systematic and prudent manner. Read in context, it, too, is a response to Mr. Holloway's report, and refers to the second part of Issue D, and not the Part 1 issue.

[43] Stating that plant equipment was replaced or upgraded is not the same as saying that the replaced equipment did not as a matter of design have the capacity of allowing E3 to reach the rate trial productive capability it achieved in 2018. Mr. Reynolds' opinion does not refer to the design, or even the design capacity, of the replaced equipment.

[44] NOVA submits that, relying on certain excerpts from Mr. Reynolds' written report, prepared specifically in response to Mr. Holloway's opinions with respect to the second part of Issue D, Mr. Reynolds should be able to testify about the design limitations of each piece of equipment that was changed during the period in question, based on NOVA's business records in 2014 through 2016. There is nothing of this nature set out in the excerpts of Mr. Reynolds' written report upon which NOVA proposes to rely. NOVA submits that it is implied in the written report that Mr. Reynolds did that exercise in coming to his opinions. I disagree.

[45] Even if this opinion could be implied, as Dow notes, in order to be helpful, this opinion would have to include an analysis of how the design limitations of specific equipment affected

the productive capability of E3 as a whole. NOVA concedes this, noting that the three pieces of equipment that Mr. Reynolds refers to in his report do not operate in isolation. Mr. Waguespack, NOVA's other expert on this subject matter, testified that a project must increase the design capacity of a piece of limiting equipment in order to potentially increase E3's productive capability. NOVA submits that Mr. Reynolds can speak to this, if he is allowed to, but what Mr. Reynolds can speak to is limited by the scope of his written report. Again, nothing of that nature is included in the excerpts of the written opinion on which NOVA relies on.

[46] This would be a new opinion unsupported by Mr. Reynolds' written opinion.

[47] It is necessary to review the remainder of the excerpts from that written opinion that are said by NOVA to support this opinion:

> c) (Mr. Reynolds' understanding of the facts) E3's production during the Top-up Period is the subject of a dispute between NOVA and Dow. It is my understanding that the post Top-up Period Plant Rate Trial results were used by Dow as the basis for determining E3's productive capability during the Top-up Period rather than relying on the production capabilities actually demonstrated during the Top-up Period.

[48] Mr. Reynolds conceded during the voir dire that his description of the dispute was not accurate. It is noteworthy that he refers to the issue using both the terms "productive capability" and "production capabilities."

> d) Between December 2014 and June 2018, NOVA determined the maximum E3 <u>production</u> on a continuous basis as it operated to resolve constraints.
>
> - By the end of December 2014, E3 <u>Production capacity</u> was 115.2% limited by the debutanizer column.
> - By the end of 2015, E3 <u>Production maximum capacity</u> was increased to approximately 117.3%.
> - In 2016, E3 <u>demonstrated a maximum capacity</u> of 118.5%, constrained by the debutanizer column.
> - In 2017, E3 demonstrated <u>the ability to produce</u> 119.0% as a result of the debutanizer re-tray. The constraint at that time was the C3R.
> - Prior to the turnaround in 2018, <u>E3 demonstrated maximum capacity</u> of 119.1%, limited by the C3R.
>
> In summary, the plant records provide evidence that while at seven furnace operation, . . . from the end of 2014 throughout the remainder of the Top-up Period. E3 maximum capacity improved from approximately 115% to 119% of hourly nameplate, as a result of NOVA removing current constraints along the way. (Emphasis added)

[49] This is merely a statement of what NOVA's opinion of E3's maximum productive capability was during the top-up period, supported by reference to plant records of actual daily production rates. It does not relate that information with respect to either design capacity of the changed equipment or E3's productive capability.

> e) Improvement is measured by the extent to which the flow coefficients (y-axis) drop after each cleaning/flushing. It can be seen that there is marked improvement after each clean up until 2917 (red line).

> It is also important to note that E-650 is a type of exchanger with many parallel small passes, much like a car radiator (Figure 2). If a pass becomes plugged, then solvent washing ceases to work because the solvent can no longer reach the plug in that particular pass. Although solvent cleaning was still proving to be an adequate mitigation measure for E-650's fouling in 2016, NOVA nonetheless anticipated that a capital project would be required in the coming years, not only to address the impacts on unit production due to fouling but also to increase E-650's capacity. In April 2017, as anticipated by NOVA, E-650 became a persistent constraint to production, as the number of passes plugged had become unmanageable, and future solvent washing would have less of an effect. The E-650 capital project, which included, among other things, replacement of E-650, installation of a spare E-650 and the installation of necessary additional piping, was implemented beginning in the 2018 turnaround. The capacity of the E-650 system was thereby increased.[31]

[50] This refers to the issue of fouling, which is not a capacity design issue, but again, relates to the second part of Issue D. It does not refer to the design capability of the replaced E-650, and notes that a spare E-650 does not resolve the fouling problem, even if it provides added "capacity". Mr. Waguespack provided evidence of this fouling issue in his report and testimony.

f) The debutanizer is in a fouling service,[33] and this was known to the designers/licensor at the time of design. That is why a connection for injecting anti-foulant is provided to the debutanizer tower in its original design. Fouling is worse at higher temperatures and at higher concentrations of 1-3 butadiene, both of which conditions exist in T-611. Separation towers include a series of trays throughout the column to facilitate separation of the column feed components. In the debutanizer, the type of trays originally installed would have been chosen to accommodate anticipated fouling. Fouling of the debutanizer trays will result in the tower not being able to operate at design capacity. Fouling in the debutanizer is normal and routinely occurs in ethylene plants. NOVA's report following the debutanizer re-tray confirms, *"the experienced capacity loss from 2014 T/A to April 2017 seemed to obey a gradual fouling increase."*[34] Additionally, "*During the as-found inspection, a thick enough film looking polymer was found covering the top surface of the upper trays. This film could very well explain upper trays' valves sticking on a closed position and contributing to the tower hydraulic restrictions."*[35]

g) In 2017, NOVA re-trayed the debutanizer, and the debutanizer constraint was resolved. During the re-traying in 2017, it was confirmed that tray fouling was the root cause of the constraint. Instead of replacing with like-in-kind trays, NOVA opted for a slightly different designed tray with improved fouling resistance. The re-traying did not eliminate the cause of fouling, however, it did increase the capacity of the column/tower. Some of this additional capacity may be reduced over time as a result of the fouling.

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[31] A spare E-650 does not reduce fouling: it mitigates the immediate effect of the fouling. The spare E-650S, with added capacity, will also experience fouling and continued solvent flushing will be required for the spare.

[33] The feed to the debutanizer contains fouling precursors, such as butadiene.

[34] NVA006810-T-611 Re-tray during April 2017 Outage-Summary Report, Executive Summary

[35] NVA006810 - *Ibid*

[51] These excerpts again refer to the fouling issue, although Mr. Reynolds refers to the re-traying increasing the capacity of the column/tower, which, however, he says may be reduced over time as a result of fouling. There is no connection between this increased capacity and E3's productive capability.

h) The November 2018 post Top-up Period Plant Rate Trial was conducted after the E-650 constraint and the debutanizer tower constraints, among others, were removed. During that test, E3 production was at 121.2% of nameplate, a rate not previously achieved.

[52] This is merely a statement of when the 2018 rate trial was conducted, and that the productive capability of E3 in that trial was found to be "a rate not previously achieved."

[53] In conclusion, I find that NOVA is attempting by selective passing of Mr. Reynolds' written report to turn it into something it is not. Even if it could be implied from the excerpts of Mr. Reynolds' written report that Mr. Reynolds is able to give the opinion that plant equipment before it was changed or upgraded did not have the design capacity that would allow E3 to operate at the rates achieved in the 2018 rate trial, the excerpts do not provide the necessary connectivity to address the issue of how this would affect E3's productive capability as a whole.

[54] Therefore, this opinion, as well as being new, would not be helpful or necessary with respect to the Part 1 issue. Dow has not mischaracterized Mr. Reynolds' intended evidence, as alleged by NOVA.

[55] Calling Mr. Reynolds as a second expert on the issue that Mr. Waguespack has already addressed would be duplicative, and thus prejudicial to Dow. That prejudice is not a prejudice that could be addressed by an award of costs: it would require a remedy such as allowing Dow to re-open its case and call an additional expert to respond to such a second opinion.

[56] NOVA is not without evidence on the Part 1 issue. Mr. Waguespack has given expert evidence on the issue, and therefore NOVA has not been deprived of putting its best case forward.

[57] Both on the basis of the factors set out in ***Smith***, and the threshold tests set out in ***Mohan***, I find Mr. Reynolds' evidence inadmissible on the Part 1 issue.

Dated at the City of Calgary, Alberta this 20th day of June, 2022.

B.E. Romaine
J.C.Q.B.A.

Appearances:

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