

153 FERC ¶ 61,233  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

OPINION NO. 544

BP Pipelines (Alaska) Inc.	Docket No. IS09-348-004
BP Pipelines (Alaska) Inc.	Docket No. IS09-395-004
BP Pipelines (Alaska) Inc.	Docket No. IS10-204-002
BP Pipelines (Alaska) Inc.	Docket No. IS10-491-000
ConocoPhillips Transportation Alaska Inc.	Docket No. IS09-384-004
ConocoPhillips Transportation Alaska Inc.	Docket No. IS10-205-003
ConocoPhillips Transportation Alaska Inc.	Docket No. IS10-476-001
ExxonMobil Pipeline Company	Docket No. IS09-391-004
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Unocal Pipeline Company	Docket No. IS07-41-005
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Unocal Pipeline Company	Docket No. IS11-3-000
Koch Alaska Pipeline Company, L.L.C.	Docket No. IS10-54-001
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ORDER ON INITIAL DECISION

Issued November 20, 2015

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Before Commissioners: Norman C. Bay, Chairman;  
Cheryl A. LaFleur, Tony Clark,  
and Colette D. Honorable.

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(Issued November 20, 2015)

1. This order addresses briefs on and opposing exceptions to an Administrative Law Judge's Initial Decision<sup>1</sup> regarding 2009 and 2010 rate filings on the Trans Alaska Pipeline System (TAPS). As discussed below, the Commission generally affirms the Initial Decision while granting exceptions regarding the remedy for imprudence and litigation costs.

**I. General Background**

2. TAPS consists of a 48-inch diameter oil pipeline and its related facilities. The pipeline is about 800 miles long and transports commingled crude oil produced from different fields on the Alaska North Slope (ANS) from Prudhoe Bay to the Port of Valdez. TAPS is owned by the Carriers.<sup>2</sup> Each Carrier possesses an entitlement to its

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<sup>1</sup> *BP Pipelines (Alaska) Inc.*, 146 FERC ¶ 63,019 (2014) (Initial Decision).

<sup>2</sup> At the time of the 2009 and 2010 rate filings issue in this proceeding, the TAPS Carriers consisted of BP Pipelines (Alaska) Inc. (BP), ConocoPhillips Transportation Alaska, Inc. (ConocoPhillips), ExxonMobil Pipeline Company (ExxonMobil), Koch

(continued...)

percentage ownership share of the pipeline's capacity, and each Carrier posts its own tariffs and has its own customers. The TAPS system is operated by Alyeska Pipeline Service Company (Alyeska). Alyeska is jointly owned by the Carriers in direct proportion to their ownership of TAPS.<sup>3</sup>

3. The Carriers made a series of rate filings which have been consolidated with this proceeding. The filings were protested, and the Commission accepted and suspended the filings subject to refund and the outcome of hearing procedures.<sup>4</sup> On February 27, 2014, the Presiding Judge issued an Initial Decision. On May 16, 2014, the Carriers, Anadarko Petroleum Corporation (Anadarko), the State of Alaska (Alaska), Koch,<sup>5</sup> and Commission Trial Staff (Trial Staff) filed briefs on exceptions. On July 25, 2014, the Carriers, Anadarko, Alaska, Trial Staff, and Flint Hills Resources Alaska, LLC (Flint Hills) filed briefs opposing exceptions.<sup>6</sup>

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Alaska Pipeline Company, LLC (Koch), and Unocal Pipeline Company (Unocal) (collectively, Carriers). Koch and Unocal provided final notice of their withdrawal from TAPS effective as of August 1, 2012. Koch has completed its exit, and Unocal is in the process, subject to applicable governmental approvals, of completing the transfer of its TAPS interests to the remaining Carriers.

<sup>3</sup> At its peak in 1998, TAPS throughput averaged over 2 million barrels per day (bpd), while at the close of this record throughput averaged under 620,000 bpd. Carrier affiliates transport 95 percent of the throughput on the TAPS pipeline.

<sup>4</sup> *E.g.*, *BP Pipelines (Alaska) Inc.*, 127 FERC ¶ 61,316 (2009). The Initial Decision contains an extensive procedural history describing the nature and timing of these filings. 146 FERC ¶ 63,019 at PP 22-61.

<sup>5</sup> Koch also joined the Carriers' brief, but filed its own brief on exceptions.

<sup>6</sup> Also, May 16, 2014, the Association of Oil Pipelines and the Interstate Natural Gas Association of America (collectively, AOPL/INGAA) filed a motion requesting leave to file an amicus brief supporting certain exceptions to the Initial Decision. On June 2, 2015, Anadarko filed an answer opposing AOPL/INGAA's motion. The Commission denies AOPL and INGAA's motion because the parties' filings in this proceeding have provided a full analysis of the issues before the Commission. *Mo. Interstate Gas, LLC*, 142 FERC ¶ 61,195, at P 2, *order on reh'g*, 144 FERC ¶ 61,220 (2013).

## II. Prudence of the SR Project

4. On exceptions, the Carriers assert that the Initial Decision erred by holding that the Strategic Reconfiguration Project (SR Project) was imprudently sanctioned for construction.<sup>7</sup> Alaska, Anadarko, and Trial Staff filed briefs opposing exceptions urging the Commission to affirm the Initial Decision's holding that the SR Project expenditures were imprudent. For the reasons discussed below, the Commission affirms the Initial Decision and holds that the SR Project was imprudent.<sup>8</sup>

### A. Description of the SR Project

5. The SR Project was the largest modification to TAPS since the pipeline's construction in the mid-1970s. TAPS was originally constructed with 11 pump stations, but only TAPS pump stations Nos. 1, 3, 4, and 9 remain in use due to declining throughput. The SR Project involved replacing the four remaining pump stations with new pumps driven by variable-speed electric motors as opposed to the existing gas and diesel turbines. The SR Project also replaced the existing control systems in order to automate the pump stations. At the time the SR Project began, the Carriers believed that the existing gas turbines could remain operational well into the future;<sup>9</sup> however, the Carriers believed that the SR Project could reduce personnel and major maintenance expenses by \$1.1 to \$1.4 billion over a 20 year period.<sup>10</sup>

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<sup>7</sup> The Carriers do not challenge the Initial Decision's holding that the SR Project was imprudently implemented, which would disallow \$153.6 million under the Initial Decision's holding. Carriers Brief on Exceptions at 4 (citing Initial Decision, 146 FERC ¶ 63,019 at P 1461).

<sup>8</sup> As an alternative to the prudence ruling, the ID found that – even if costs for the SR Project were prudently incurred – the SR Project was not “used and useful.” Initial Decision, 146 FERC ¶ 63,019 at PP 1587-1588. Given that the Commission is upholding the Initial Decision's conclusion that the SR Project was imprudent, the Commission need not reach the alternative ruling.

<sup>9</sup> *E.g.*, Ex. SOA-473 at 1; Ex. SOA-21 at 1; Ex. SOA-282 at 1; Ex. ATC-19 at 109; Ex. ATC-147 at 22; Tr. 7980-7981; Ex. SOA-17 at 16; Ex. ATC-898 at 11-12; Ex. ATC-20 at 22.

<sup>10</sup> *E.g.*, TAPS Carriers' Brief on Exceptions at 1-2.

6. Beginning in the 1990s, the Carriers and Alyeska initiated a number of studies exploring different options for upgrading the existing TAPS System.<sup>11</sup> In November 2001, Dick Rabinow (President of ExxonMobil) and Bill Howitt (Alyeska Senior Vice President) advised consideration of a new “electrification option” using electric powered motors at all pump stations.”<sup>12</sup> Consistent with this recommendation, conceptual engineering began in February 2002 to evaluate two upgrade options: (a) the electrification proposal and (b) a hybrid option upgrading controls and automating the existing gas turbine infrastructure. The conceptual engineering process included an August 2002 report by General Electric Industrial Systems (GE), an August 2002 report by JTG Technologies (JTG), Alyeska’s October 2002 “Electrification versus Hybrid Decision Document,” and Alyeska’s “2003 Long Range Plan” to the Carriers.<sup>13</sup> Based on the conceptual engineering process, the Carriers elected to proceed with preliminary engineering for the electrification option.

7. In order to oversee the SR Project, the Carriers formed in October 2002 the SR Project Team directed by John Barrett.<sup>14</sup> In December 2002, the Carriers approved AFE S020 which authorized \$7 million for preliminary engineering of the SR Project.<sup>15</sup> The SR Project Team retained SNC-Lavalin Constructors Inc. (SNC-Lavalin) and Hinz Automation as the preliminary engineering contractors. These companies produced a Preliminary Engineering Design Report in November 2003.<sup>16</sup> On December 18, 2003, Alyeska submitted AFE S020 for project sanction of \$242 million and the SR Project was projected to be completed by the end of 2005. The Carriers approved the Project, and in March 2004, the project transitioned from preliminary engineering to implementation.<sup>17</sup>

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<sup>11</sup> These studies included: (a) the Alyeska Control and Telecommunication Long Range Plan (1994), (b) the Bailey Report (1997), (c) the Reinvestment Strategy Study (1999), (d) the VECO Report (1999), (e) Authorization for Expenditure F180 (AFE F180) (2000), and (g) Kenonic Controls Report (2000).

<sup>12</sup> Carriers Brief on Exceptions at 28 (Ex. ATC-19 at 43-48; Ex. ATC-20 at 24-27).

<sup>13</sup> *Id.* 29 (Ex. ATC-147; Ex. ATC-148; Ex. ATC-154; Ex. ATC-153).

<sup>14</sup> *Id.* at 31 (citing Ex. ATC-24).

<sup>15</sup> *Id.* (citing Ex. ATC-165).

<sup>16</sup> *Id.* (citing Ex. ATC-208 through Ex. ATC-216).

<sup>17</sup> *Id.* at 33 (citations omitted). Contemporaneous with the submission of AFE S020, Alyeska separately submitted AFEs to upgrade the facilities and control systems at the ramp down stations no longer in use. Ex. SOA-73; Ex. SOA-76; Ex. SOA-80. The costs and savings of these other projects were considered in the “all in” electrification

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In August 2004, Alyeska submitted to the Carriers AFE S020, Supplement 1 seeking additional funding of \$26.5 million related to electric power at pump stations 1 and 9.<sup>18</sup>

8. It soon became clear that additional expenditures would be necessary due to inadequate engineering supporting the initial increase.<sup>19</sup> In November 2005, the Carriers approved AFE S020 Supplement 2 authorizing an additional \$168.1 million.<sup>20</sup> However, the cost escalation continued. In September 2006, Alyeska submitted AFE S020 Supplement 3 for an additional \$80.3 million dollars.<sup>21</sup> The Carriers did not approve AFE S020 Supplement 3 and, in order to control the escalating costs, the Carriers required subsequent funding requests to be on a pump station by pump station basis.<sup>22</sup> In February 2007, Alyeska submitted a request for an addition \$6.36 million related to Pump Station 9 in AFE S920.<sup>23</sup> In May 2007, Alyeska submitted AFE S320 requesting an additional \$39.3 million to finish pump station 3.<sup>24</sup> In December 2007, Alyeska submitted a funding request for an additional \$66.5 million to complete AFE S420 for pump station 4.<sup>25</sup> At the close of the record in this proceeding, SR Project facilities at pump stations 3, 4, and 9 had entered into service, but the upgrades at pump station 1 were not expected to enter into service until 2014.<sup>26</sup> The total estimated project cost had reached \$786 million.<sup>27</sup>

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case that was included in Alyeska's AFE S020 economic analysis (Ex. ATC-238 at 15, 21-22), but the work at these other pump stations did not involve the installation of new pumps and electric motors.

<sup>18</sup> Ex. ATC-279; Ex. SOA-358; Ex. ATC-24 at 28-29; Ex. ATC-27 at 39.

<sup>19</sup> *E.g.*, Ex. SOA-166 at 1; Ex. SOA-219 at 1.

<sup>20</sup> Carriers Brief on Exceptions at 34 (citing Ex. ATC-327; Ex. ATC-328).

<sup>21</sup> Ex. SOA-63 at 2.

<sup>22</sup> Carriers Brief on Exceptions at 153-54 (citing Ex. ATC-18 at 43).

<sup>23</sup> Ex. ATC-378.

<sup>24</sup> Ex. SOA-121 at 2.

<sup>25</sup> Carriers Brief on Exceptions at 152 n.156 (citations omitted).

<sup>26</sup> Ex. ATC-18 at 50.

<sup>27</sup> Ex. SOA-546 at 7.

## **B. Initial Decision**

9. The Initial Decision determined that the SR Project was imprudently sanctioned and imprudently implemented. The Initial decision noted that Larkspur Associates (Larkspur), a cost estimating company hired by the Carriers to evaluate preliminary engineering, had warned the Carriers that the pre-sanction cost estimates were inaccurate.<sup>28</sup> Along similar lines, the Initial Decision cited to internal emails prior to SR Project sanction in which Alyeska and Carrier employees expressed concerns about the SR Project engineering and cost estimates.<sup>29</sup> The Initial Decision also concluded that the flawed SR Project planning was tied to a rushed schedule that did not allow time for adequate engineering<sup>30</sup> and the selection of an inexperienced project manager.<sup>31</sup> The Initial Decision further explained that the SR Project cost estimates were based upon misconceptions, finding that the Carriers (a) incorrectly assumed the SR Project was a greenfield project as opposed to a higher cost brownfield project,<sup>32</sup> (b) incorrectly believed that the SR Project would allow the Carriers to avoid certain expenditures to comply with Alaska building codes,<sup>33</sup> (c) incorrectly assumed that the variable speed stiff shaft motors were previously used, tested technology,<sup>34</sup> and (d) imprudently failed to finalize power sources for pump stations 1 and 9 at sanction.<sup>35</sup> The Initial Decision also stated that its imprudence finding was corroborated by post-sanction documents concluding that the Carriers had not planned the SR Project sufficiently prior to sanction and at the time of subsequent funding authorizations.

10. The Initial Decision rejected the justifications offered by the Carriers for the SR Project. The Initial Decision criticized the Carriers for relying upon their engineering

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<sup>28</sup> *E.g.*, Initial Decision, 146 FERC ¶ 63,091 at PP 608 – 613, 667, 750, 771, 840 – 841, 873, 913, 1228.

<sup>29</sup> *Id.* PP 540-554, 632-638, 652.

<sup>30</sup> *Id.* PP 393, 497, 503, 690-698. 1454.

<sup>31</sup> *Id.* PP 107, 502, 659, 1016, 1110, 1442.

<sup>32</sup> *Id.* PP 653, 656, 658, 744, 902-903.

<sup>33</sup> *Id.* PP 648.

<sup>34</sup> *Id.* PP 1086.

<sup>35</sup> *Id.* PP 727, 898, 1456.

contractor SNC-Lavalin, which lacked Alaska experience.<sup>36</sup> The Initial Decision dismissed the Carriers' reviews of the pre-sanction cost estimates as superficial.<sup>37</sup> The Initial Decision dismissed the Carriers' reliance upon various third party reviews which the Carriers argue supported the project sanction, including (a) a report by Independent Project Analysts (IPA), a consulting firm hired by the Carriers to review the SR Project,<sup>38</sup> (b) a report by Argonne National Laboratories, (c) a report from Joint Pipeline Office (JPO),<sup>39</sup> (d) a letter from the Alaska Attorney General,<sup>40</sup> and (e) conceptual engineering reports from GE and JTG Technologies.<sup>41</sup> Furthermore, the Initial Decision rejected the Carriers' argument that they reasonably projected SR Project savings resulting from reductions in personnel or maintenance costs.<sup>42</sup> The Initial Decision also criticized the Carriers' expenditure of funds subsequent to sanction in AFE S020 Supplement 2 and thereafter.

11. On exceptions, the Carriers challenge these holdings as discussed below. Trial Staff, Alaska, and Anadarko urge the Commission to affirm the Initial Decision.

### C. Discussion

12. The Commission affirms the Initial Decision's holding that the SR Project was imprudent. To determine the prudence of an investment, the Commission evaluates whether a "reasonable utility manager" would have made the same investment under the same circumstances.<sup>43</sup> A prudence inquiry addresses whether the pipeline conducted reasonable evaluation of the costs and benefits prior to incurring a financial

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<sup>36</sup> *Id.* PP 660-663, 1045-1049, 1061, 1082.

<sup>37</sup> *Id.* PP 663, 862-869, 1045-1048, 1061.

<sup>38</sup> *Id.* PP 763-764, 876, 913.

<sup>39</sup> *Id.* PP 762-764.

<sup>40</sup> *Id.* PP 645 n.375.

<sup>41</sup> *Id.* PP 364 – 375, 444, 447, 458.

<sup>42</sup> *Id.* PP 1388 – 1405.

<sup>43</sup> *New England Power Co.*, 31 FERC ¶ 61,047, at 61,084 (1985), *order on reh'g*, 32 FERC ¶ 61,112, *aff'd sub nom.*, *Violet v. FERC*, 800 F.2d 280 (1st Cir. 1986).

commitment.<sup>44</sup> A prudence determination is based upon what the pipeline knew or should have known at the time a decision was made.<sup>45</sup> The prudence standard ensures that ratepayers are not required to pay for “unnecessary costs.”<sup>46</sup>

13. The regulated entity has the burden of proof to establish prudence. However, in order to ensure that rate cases are manageable, a presumption of prudence applies until the challenging party “creates a serious doubt as to the prudence of an expenditure....”<sup>47</sup> Serious doubt must be more than a “bare allegation of imprudence,” but this threshold may not be so demanding that it effectively reverses the statutory burden of proof.<sup>48</sup> Once such serious doubt has been raised, the pipeline has “the burden of dispelling these doubts and proving the questioned expenditure to have been prudent.”<sup>49</sup>

14. The Commission holds that Anadarko, Alaska, and Trial Staff have raised serious doubt about the Carriers’ prudence in approving the SR Project. As discussed above, prudent management requires considering the costs and benefits prior to initiating a project.<sup>50</sup> Implicit in this obligation is the responsibility to develop cost estimates based upon sufficiently complete engineering, planning, and scope to make the cost-benefit analysis meaningful. Significant evidence suggests that the Carriers sanctioned the SR Project based upon a cost estimate they should have known was inaccurate. As a result, there is serious doubt whether the Carriers performed a reasonable cost-benefit analysis prior to sanctioning the SR Project. In the face of this serious doubt, the Carriers have failed to justify the prudence of the SR Project costs. Accordingly, for the reasons stated below, the Commission affirms the holding that the SR Project was imprudent and that the Carriers should be denied full recovery of the SR Project costs.

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<sup>44</sup> *Entergy Servs., Inc.*, 130 FERC ¶ 61,023, at P 52 (2010); *Iroquois Gas Transmission Sys., L.P.*, 87 FERC ¶ 61,295, at 62,170 (1999) (prudence inquiry involves comparing *ex ante* savings to *ex ante* costs).

<sup>45</sup> *New England*, 31 FERC at 61,084.

<sup>46</sup> *Id.* at 61,083.

<sup>47</sup> *Iroquois*, 87 FERC at 62,168.

<sup>48</sup> *Id. Anaheim, Riverside, Banning, Colton, & Azusa, Cal. v. FERC*, 669 F.2d 799, 809 (D.C. Cir. 1981).

<sup>49</sup> *Anaheim*, 669 F.2d at 809.

<sup>50</sup> *Entergy*, 130 FERC ¶ 61,023 at P 52; *Iroquois*, 87 FERC at 62,170.

## 1. Serious Doubt Exists Regarding the SR Project

15. The record supports the allegations of serious doubt regarding the prudence of the SR Project. As discussed below, the Carriers should have known that the SR Project cost estimates were inaccurate because (a) prior to SR Project’s authorization or sanction, Larkspur, a cost estimating company, warned that the SR Project cost estimates awaiting approval and sanction were unrealistic; (b) prior to SR Project sanction, internal Carriers emails warned of the poor quality of the preliminary engineering used to develop SR Project cost estimates; (c) an overly aggressive schedule and underqualified SR Project manager created risks that the preliminary engineering cost estimates would be flawed; (d) conspicuous misconceptions and unrealistic assumptions afflicted the SR Project design forming the basis of the cost estimate; (e) Carriers’ internal assessments concluded that they sanctioned the SR Project based upon insufficient up-front planning and undefined scope; and (f) the Carriers concluded that subsequent SR Project funding authorizations were also based upon incomplete engineering and poor planning. The Commission finds this evidence far exceeds the threshold for establishing serious doubt regarding the SR Project’s prudence.

### a. Pre-Sanction Warnings from Larkspur

16. Serious doubt regarding the SR Project’s prudence was raised by the December 2003 and January 2004 Larkspur reports, which warned the Carriers of potential inaccuracies in the cost estimates used to sanction the SR Project. Hired by Carriers to evaluate the SR Project cost estimates prior to SR Project sanction, Larkspur<sup>51</sup> provided a December 2003 report informing the Carriers that the SR Project’s preliminary engineering cost estimates did not fall within 15 percent accuracy. The report expressed “major concerns that the project as currently designed could be built for the current estimate value.”<sup>52</sup> Larkspur further warned that the project’s scope was “not clearly defined in detail” and that there was a “high degree of certainty that additional scope” would be required.

17. Although the Carriers claim they responded to the December 2003 report, the Carriers failed to assuage Larkspur’s concerns. In its second report issued in January 2004, Larkspur reiterated doubts that the current project design could be built for the projected costs.<sup>53</sup> Additionally, Larkspur stated that “[a]lthough the current scope of the

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<sup>51</sup> Larkspur is a cost estimating company with experience on Alaska’s North Slope.

<sup>52</sup> Ex. SOA-222 at 3, 13.

<sup>53</sup> Ex. SOA-223 at 14.

project is changing rapidly since the original estimate was published, many if not all of the potential cost issues stated in this report still apply to the project.”<sup>54</sup> Larkspur requested a meeting with the SR Project Team, stating that it was “very important” to discuss these findings.<sup>55</sup> Despite this request, there is no evidence that such a meeting transpired, and there is no evidence of subsequent interaction with Larkspur related to the December 2003 and January 2004 reports.<sup>56</sup> Larkspur’s warnings and the Carriers’ failure to address those warnings support serious doubt regarding the SR Project’s prudence because they indicate that the Carriers should have known that the preliminary engineering cost estimates were inaccurate.

**b. Pre-Sanction Warnings from Carriers’ Staff**

18. Serious doubt regarding the SR Project’s prudence is also supported by concerns raised by Alyeska’s employees prior to sanction. As SNC-Lavalin finalized its preliminary engineering report in 2003, Alyeska senior rotating equipment engineer Jerry DeHaas criticized SNC-Lavalin’s preliminary engineering documents for containing several inaccuracies.<sup>57</sup> He questioned the expertise of SNC-Lavalin regarding the turbines and rotating equipment associated with the project.<sup>58</sup> He added that when he

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<sup>54</sup> *Id.*

<sup>55</sup> *Id.* The Carriers emphasize that Larkspur also “found the estimate to be well prepared and documented.” Carriers Brief on Exceptions at 119. However, the fact remains that Larkspur found the estimate to be inaccurate.

<sup>56</sup> Alyeska’s Vice President, Engineering and Projects, Lee Monthei’s understanding was that Larkspur was relieved of its contract because the estimates were too high. Ex. SOA-308 at 1. The Carriers argue that Mr. Monthei lacked direct knowledge of the relationship between the SR Project and Larkspur. However, the Carriers’ brief provides no evidence of further follow-up by the Carriers after the January 2004 report. The Carriers also point to no evidence in the record directly refuting Mr. Monthei’s understanding.

<sup>57</sup> Ex. SOA-284 at 2. The Carriers object that the emails are hearsay. The Commission has found that in an administrative proceeding, the issue is not whether evidence is hearsay, but whether it is probative. *Missouri Interstate Gas, LLC*, 144 FERC ¶ 61,220, at n.53 (citing *Old Dominion Elec. Coop.*, 119 FERC ¶ 61,253, at 62,426 (2007)). The Commission finds that the emails are probative because they indicate that the Carriers’ received warnings regarding potential problems associated with the preliminary engineering of the SR Project.

<sup>58</sup> Ex. SOA-284 at 2.

asked for certain specifics, he was troubled that SNC-Lavalin could not go into that detail.<sup>59</sup> Mr. Monthei forwarded Mr. DeHaas' concerns, stating, "[f]our of our most knowledgeable engineers are not convinced this makes good economic sense and I agree with their concerns."<sup>60</sup> In October 2003, Greg Jones, Alyeska Senior Vice President, Operations & Maintenance stated that Alyeska engineering staff "believe there are errors in the analyses, including present value numbers ...."<sup>61</sup> Carriers' employees and SR Project Team members also expressed concern regarding the rapidly changing scope<sup>62</sup> and cost estimates in October and November 2003.<sup>63</sup> Because these warnings provide evidence that the Carriers should have known of, and anticipated the overruns arising from, the flaws in the preliminary engineering (and the related cost estimates), they support serious doubts regarding the SR Project's prudence.

19. Moreover, the record indicates that Alyeska staff's concerns were not adequately considered.<sup>64</sup> In October 2003, Mr. DeHaas emphasized that despite the project being primarily about rotating equipment, the Alyeska in-house experts had been inadequately

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<sup>59</sup> *Id.* Mr. DeHaas had expressed concerns well before October 2003. In February 2003, Mr. DeHaas stated:

.... I find I am in rather continual disagreement, and to some extent dismay, with some of the assumptions and figures I have seen coming out of the strategic reconfiguration project. What is even more odd is that very little if any of what I have seen is reviewed by a competent rotating equipment engineer, before it goes out. The primary component of this project is rotating equipment....

Ex. SOA-282 at 1. In July 2003, Mr. DeHaas characterized parts of the electrification option design as "absurd." Ex. SOA-187 at 1.

<sup>60</sup> Ex. SOA-284 at 1.

<sup>61</sup> Ex. SOA-280 at 1.

<sup>62</sup> Ex. SOA-183 (ExxonMobil's Mike Tudor November 2003 email expressing concern regarding scope growth).

<sup>63</sup> Ex. SOA-220 (SR Project Team member expressing concern that Hinz Automation cost estimates had increased by 54 percent in 15 days).

<sup>64</sup> Ex. SOA-172 at 1.

consulted and, when they did offer suggestions, those ideas were rejected.<sup>65</sup> In October 3, 2003, Mr. Monthei stated that “the [Alyeska] Engineers feel their concerns were not considered and that they were shut down by Kevin Brown [Vice President of BP Pipelines (Alaska) Inc.] and Joe Riordan [also of BP] who spoke with passion but not with sound engineering justification.”<sup>66</sup> In October 2003, Greg Jones, Alyeska Senior Vice President, Operations & Maintenance described poor communication in which Alyeska experts “are not consulted with early on, or if they are, their input is dismissed because it does not conform to preconceived views about the answers, including costs.”<sup>67</sup> Referring the Alyeska engineering staff’s concerns involving present value numbers, he stated “no one on the project team apparently wants to listen....”<sup>68</sup> Writing in January 2004, despite characterizing the SR Project Team’s work as a success and acknowledging that the documents reflected his staff’s input, Mr. Jones continued to voice concerns regarding inaccurate cost estimates:

Many times the SR team was pre-disposed to answers that appeared to best fit very preliminary cost estimates, almost giving the illusion of working the problem backwards. By putting preconceived "cost" guardrails around the issues, the team effectively was making key decisions that were not theirs to make. It had the effect of disenfranchising some employees who were being asked for their input.<sup>69</sup>

He further added that “[t]here is an inherent bias by the team towards a desired outcome when putting together business cases together [versus] remaining more neutral[;] . . . [t]hey are too quick to get invested in a desired outcome and fail to accurately describe

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<sup>65</sup> Ex. SOA-284 at 2. *See also* Ex. SOA-284 at 3 (Mr. DeHaas stating, “As such the present mode of doing things is to leave your own experts on the sidelines even if you have them... If your own in house expert has something contradictory to say, you ignore it.”)

<sup>66</sup> Ex. SOA-284.

<sup>67</sup> Ex. SOA-280 at 1. Preconceived opinions also appear to have been a concern in the selection of the electrification proposal. As early as early as October 2002, Kevin Brown, Vice President of BP Pipelines (Alaska) Inc., stated BP was not interested in continuing to explore alternatives to electrification. Ex. SOA-180 at 1. Along similar lines, Mr. DeHaas stated that the SR Project Team had “more or less been given a mission that required the electrification approach.” Ex. SOA-187 at 1.

<sup>68</sup> Ex. SOA-280 at 1.

<sup>69</sup> Ex. SOA-281 at 1.

the downside and operational risks.”<sup>70</sup> The Commission recognizes that Carriers’ assertions that Alyeska employees were involved in various aspects of the SR Project,<sup>71</sup> and the Commission acknowledges examples cited by Carriers in which various Alyeska personnel supported some of the decisions made in the SR Project.<sup>72</sup> However, the above-cited emails show that Alyeska staff expressed concerns regarding the quality of SR Project planning, and that those prescient concerns were apparently disregarded in favor of preconceived outcomes.<sup>73</sup> This evidence supports the assertion that the Carriers should have known that the preliminary engineering cost estimates were inaccurate, and thus contributes to the serious doubts regarding the SR Project’s prudence.

**c. Poor Management**

20. Serious doubts regarding the SR Project’s prudence are also supported by the Carriers’ decisions which impaired the preliminary engineering cost estimates for the SR Project, including (a) an accelerated schedule despite the known risks that aggressive scheduling could adversely affect project planning and (b) the appointment of an inexperienced project manager with no prior experience managing large projects such as

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<sup>70</sup> *Id.* at 2. In a similar vein, referring specifically to SR Project Team member Glenn Pomeroy, Mr. Jones stated “he is not as thorough as he should be when it comes to the ‘cons’ side of the equation. He is prone to rush into the things he is advocating and view opposing views as getting in the way of progress.” Ex. SOA-281 at 1. Although Mr. Jones ultimately described the SR Project Team as a success, his email, combined with the other evidence in the record, supports the conclusion that internal concerns were being raised regarding the quality of the planning process and the engineering itself.

<sup>71</sup> *E.g.*, Carriers Brief on Exceptions at 129-32 (citing Ex. ATC-19 at 77-78; Ex. SOA-208 at 101-108).

<sup>72</sup> *E.g.*, Carriers Brief on Exceptions at 130-31 (Ex. ATC-232; Ex. ATC-228; Ex. ATC-249). Regarding Mr. DeHaas, the Carriers emphasize that in December 2003 after expressing some additional complaints about SNC’s decisions and staff, he stated “all in all I feel [SNC-Lavalin] is doing a decent job” (Ex. ATC-228 at 1) and that in 2007 he praised the operation of the new equipment at pump station 9 (Ex. ATC-844). Regarding the latter, of course, noting the effective operation of the new equipment does not the same as concluding that it was worth the cost.

<sup>73</sup> This finding is corroborated by evidence indicating that the Carriers deliberately marginalized Alyeska employees and the Carriers’ own conclusion that failure to integrate Alyeska personnel contributed to the dysfunctional SR Project planning. Ex. SOA-172.

the SR Project. The prudence standard exists to protect ratepayers from such improvident managerial decisions.<sup>74</sup>

21. The Carriers' aggressive schedule created inherent risks that planning and engineering would not be completed appropriately. SR Project Team Manager John Barrett claims that he was "vocal" about the tight schedule and warned that completing the project within the scheduled time frame was "going to be very difficult to do."<sup>75</sup> The Carriers were aware that such an accelerated project deadline created risks regarding project economics:

IPA studies demonstrate that accelerating projects to meet earlier schedules so you can "start saving money soon" rarely pay out. Instead, what is typically seen is that project acceleration causes one to miss out on Value Improving Processes and you therefore are forced to live with a sub-optimized project.<sup>76</sup>

The Carriers also failed to adopt appropriate measures to mitigate the risks associated with the aggressive schedule. Insufficient time was allowed for planning, including preliminary engineering,<sup>77</sup> and, as the Carriers later concluded, the rush to complete the SR Project "drove us forward with less detailed engineering than would normally be prudent."<sup>78</sup> In October 2003, Greg Jones warned "[c]ost and schedule pressures to make the project 'a go' are permeating interactions with client teams...."<sup>79</sup> In addition, the use

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<sup>74</sup> *New England Power*, 31 FERC at 61,084.

<sup>75</sup> Tr. 5663. The SR Project Team also explained that meeting the scheduling goals would require "flawless execution." Ex. SOA-197 at 9. The SR Project Team also explained that the "[s]chedule is aggressive with very little flexibility" and characterized the schedule as having "zero float." *Id.*

<sup>76</sup> Ex. SOA-173. SR Project Team Manager Barrett stated that when he became project manager, he was aware that "speed destroys megaprojects." Tr. 5856. He also agreed that "fast tracking" implementation prior to final design causes significant risk. Tr. 5806.

<sup>77</sup> SR Project consultant Peter Flonos found that an unrealistic completion deadline caused cost overruns and that preliminary engineering was allocated six months when preliminary engineering should have been allocated "2-3 years." Ex. SOA-171. Similarly, Alaska expert witness Doyle Sanders testified that preliminary engineering for this type of project required 18-30 months. Ex. SOA-425 at 42.

<sup>78</sup> Ex. SOA-166 at 1.

<sup>79</sup> Ex. SOA-280 at 1.

of an accelerated schedule limited the Carriers' ability to proceed incrementally and to learn lessons from the experience at the prior pump stations.<sup>80</sup> The aggressive schedule supports serious doubts regarding SR Project's prudence because (a) it was a known risk and (b) the record supports the finding that the aggressive schedule contributed to the flawed preliminary engineering of the SR Project.

22. Moreover, the urgency was misplaced. The existing pumps remained in excellent condition,<sup>81</sup> and there was no operational reason for the Carriers to replace them prior to completing the proper engineering analysis. Although the Carriers claim that they adopted the accelerated schedule because they believed it would provide certain cost savings,<sup>82</sup> this does not justify sanctioning the project based upon "insufficient upfront planning," "inadequate scope definition," and, ultimately "an original AFE estimate that was never realistic or achievable."<sup>83</sup> The Carriers' adoption of an unnecessarily accelerated schedule supports serious doubts regarding the SR Project's prudence.

23. Also increasing the risks associated with the project, the Carriers selected an inexperienced SR Project Team Manager, John Barrett. Mr. Barrett's sole prior experience as a project manager related to small pipeline projects with budgets under \$2 million, the largest of which involved installing two miles of six-inch pipe.<sup>84</sup> In contrast, the SR Project was a highly complex, multimillion dollar project – the largest

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<sup>80</sup> Carriers Brief on Exceptions at 154 (a sequential approach provides "the ability to evaluate the merits of the project completion one pump station at a time in light of the experience on the previous pump stations."). *See also* Ex. ATC-384 at 1 (stating that Alyeska would manage costs of pump station 4 based upon the lessons learned from pump stations 3 and 9); Ex. ATC-404 at 20 (concluding that phased Implementation alternative offers the greatest economic value and lowest operational risk of the alternatives that have been evaluated. In addition, this alternative offers the greatest cost certainty); Ex. ATC-28 at 7-8 (describing proceeding in stages helped the pipeline personnel apply the lessons learned from previously completed pump stations).

<sup>81</sup> Ex. SOA-17 at 16; Ex. SOA-19 at 2.

<sup>82</sup> Carriers Brief on Exceptions at 123. However, as discussed above, the Carriers' incomplete engineering and failure to understand Alaska regulations also caused them to exaggerate the savings from the SR Project associated with the fire suppression and gas systems.

<sup>83</sup> Ex. SOA-65 at 3.

<sup>84</sup> Tr. 5707-5708.

project on TAPS since the pipeline's construction.<sup>85</sup> On exceptions, the Carriers do not dispute the subsequent conclusion in Carriers' documents that Mr. Barrett was ineffective and "simply didn't know how to run a project of this size and organizational complexity."<sup>86</sup> Rather, they state that the Initial Decision's focus upon Mr. Barrett was unfair, and they emphasize that some of Mr. Barrett's deputies had more experience.<sup>87</sup> This defense is unavailing as the Carriers' own documents conclude that the inexperience of the project manager adversely affected the project.<sup>88</sup> The Carriers themselves ultimately concluded that "[a] program [manager] with the appropriate skills and knowledge should have been appointed."<sup>89</sup>

**d. Multiple Misconceptions in the SR Project Design**

24. Serious doubts regarding the SR Project are also supported by fundamental misconceptions in the initial design. These basic misconceptions in the preliminary engineering of the SR Project should have been corrected by reasonable diligence prior to sanction. Thus, these misconceptions are evidence that the Carriers "should have known" about the flaws in the engineering cost estimates prior to sanction.

25. The Carriers' briefs concede that they underestimated the onsite work that would be required to integrate the SR Project into legacy facilities.<sup>90</sup> Rather, the Carriers' cost estimates assumed that the new electric motor, drive, and pump would be manufactured into a module offsite, transported to the pipeline, and plugged into the existing equipment with relatively little work onsite.<sup>91</sup> However, rather than a greenfield project, the SR Project was a much more expensive brownfield project requiring significant onsite work

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<sup>85</sup> Greg Jones, Alyeska Senior Vice President, Operations & Maintenance, described the project as the "most extensive change in the history" of Alyeska. Ex. SOA-453.

<sup>86</sup> Ex. SOA-172.

<sup>87</sup> Carriers Brief on Exceptions at 127 n.131.

<sup>88</sup> Ex. SOA-172.

<sup>89</sup> *Id.*

<sup>90</sup> *E.g.*, Carriers Brief on Exceptions at 22 n.28.

<sup>91</sup> Initial Decision, 146 FERC ¶ 63,091 at P 656 (citing Tr. 3024, 3029-3030, 3065-3066, 3279), 658; ATC-31 at 22-24; SOA-542 at 54-55; Ex. SOA-458 at 1.

at the old facilities.<sup>92</sup> This significantly increased the costs of the SR Project. As Alyeska Vice President James Johnson explained, the Carriers should have known that the project required brownfield work.<sup>93</sup> In their briefs on exceptions, the Carriers have not explained why reasonable diligence would not have corrected the mistaken assumption that the SR Project was somehow akin to a greenfield project.

26. In addition, the Carriers failed to verify that the large motors using variable frequency drives were “proven technology.”<sup>94</sup> The SR Project Team hired Electric Machinery to build the motors based upon a false understanding that Electric Machinery had built such a variable speed motor previously.<sup>95</sup> After commencement of work, it soon became apparent that the electric motors required new technology, as the new motors from Electric Machinery produced excessive vibration and required subsequent attempts at redesign.<sup>96</sup> It seems implausible that reasonable diligence would not have corrected this misconception.

27. The Carriers also incorrectly assumed that the SR Project would enable them to avoid upgrades to the fire suppression and gas systems.<sup>97</sup> The Carriers have provided no evidence that they conducted reasonable due diligence in the regulatory requirements related to the Alaska building code. To the contrary, a December 2003 JPO Report warned that the SR Project preliminary engineering design incorrectly stated the circumstances in which fire protection systems could be avoided.<sup>98</sup> The Carriers also

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<sup>92</sup> *E.g.*, Ex. SOA-542 at 54-55 (whereas preliminary engineering assumed that the SR Project as 70 percent greenfield and 30 percent brownfield, it turned out that the project was 70 percent brownfield and 30 percent greenfield).

<sup>93</sup> Tr. 8439.

<sup>94</sup> Ex. SOA-339 at 1.

<sup>95</sup> Electric Machinery had only built such a motor for a fixed speed application, which was “entirely different” from the variable speed motors required by the SR Project. Ex. SOA-338 at 1.

<sup>96</sup> *E.g.*, Ex. SOA-338 at 1. Electric Machinery built seven motors before testing the first motor. *Id.* at 3.

<sup>97</sup> Initial Decision, 146 FERC ¶ 63,091 at P 648 (citing Ex. SOA-104, Ex. ATC-233 at 9).

<sup>98</sup> *Id.* (citing Ex. ATC-233 at 9).

originally planned certain buildings to be eliminated which contained essential controls that could not be removed.<sup>99</sup>

28. Similarly, the Carriers sanctioned the SR Project for electrification at pump stations 1 and 9 without ensuring that electric power would be available from local utilities or, to the extent such power was available, the ultimate price. For pump station 1, the Carriers originally assumed that power would be available from the local utility.<sup>100</sup> However, after sanction, the Carriers ultimately realized that power must be provided onsite, which led to cost increases.<sup>101</sup> Similarly, the Carriers also failed to adequately ensure the availability of adequate commercial power at pump station 9. In December 2003, the JPO noted regarding pump station 9 that “[g]rid power is yet to be evaluated and reliability of power source has not been verified” and asked the Carriers to verify that the Golden Valley Electric Association (GVEA) could provide such power.<sup>102</sup> Ultimately, the Carriers obtained power at pump station 9 from GVEA, but additional funding was needed to install the required equipment.<sup>103</sup> The uncertainties regarding power at pump stations 1 and 9 demonstrate the Carriers’ lack of planning, engineering, and analysis prior to sanction.

29. On exceptions, the Carriers do not dispute that the SR Project engineering at sanction was either incomplete or erroneous regarding these issues. However, the Carriers assert that criticism of these misconceptions is “hindsight” and cannot be considered in a prudence analysis.<sup>104</sup> This argument is not persuasive. In performing the prudence analysis, the Commission considers what the regulated entity’s management

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<sup>99</sup> Ex. SOA-104 at 2. The number of buildings removed from operations was reduced from 77 to 40 in AFE Supplement 2. Ex. SOA-65 at 16.

<sup>100</sup> Carriers Brief on Exceptions at 33 n.41.

<sup>101</sup> Ex. SOA-172 at 1; Ex. SOA-295 at 2.

<sup>102</sup> Ex. ATC-233 at 21.

<sup>103</sup> Ex. ATC-279; Ex. ATC-281; Ex. ATC-284; Ex. ATC-285. *See also* Carriers Brief on Exceptions at 33 n.41. The Carriers state that these electrification costs for pump station 1 and 9 were incorporated into their pre-sanction evaluation of the SR Project. Carriers Brief on Exceptions at 33 n.41. However, the Carriers were required to include additional supplemental funding in AFE S020 Supplement 1, and the uncertainties regarding power sources contribute to the serious doubts regarding the pre-sanction planning and engineering of the SR Project.

<sup>104</sup> Carriers Brief on Exceptions at 62-63, 65.

could or should have known had they acted with reasonable diligence.<sup>105</sup> As demonstrated above, the Carriers' brief on exceptions provides little explanation as to how the actions here amounted to reasonable diligence, because reasonable diligence would surely have rectified such fundamental design misconceptions prior to sanction. Ignorance of such fundamental design misconceptions is evidence that the Carriers failed to act prudently when planning the SR Project.

e. **Carriers' Internal Assessments**

30. Serious doubt regarding the SR Project's prudence is further supported by the Carriers' own critique of the cost estimates in AFE S020 and the cost estimates used in subsequent funding requests. A repeated pattern emerges in which the Carriers themselves conclude that they failed to sufficiently plan, engineer, and manage the SR Project, and, as a result, the Carriers nevertheless proceeded, knowing full well the inaccurate conception of SR Project costs. The poorly defined scope and incomplete engineering continued to cause ever mounting overruns, as the SR Project's costs escalated by hundreds of millions of dollars.

31. Carriers' own analysis demonstrates that the Carriers "should have known" that the SR Project's preliminary engineering cost estimates were inaccurate. When evaluating the cost estimates in AFE S020, the funding request which sanctioned the SR Project, the Carriers themselves concluded that "insufficient upfront planning" and "inadequate scope definition" resulted "in an original AFE [cost] estimate that was never realistic or achievable."<sup>106</sup> The Carriers noted that the inadequacy of the initial engineering and planning required scope and design changes.<sup>107</sup> The Carriers' internal

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<sup>105</sup> *Panhandle E. Pipe Line Co. v. FERC*, 777 F.2d 739, 745 (D.C. Cir. 1985) (upholding finding of imprudence based on facts that the pipeline "knew or should have known"); *Violet*, 800 F.2d at 282 ("The prudence of the investment must be judged by what a utility's management knew, or could have known, at the time the costs were incurred.").

<sup>106</sup> Ex. SOA-65 at 3. *See also* Ex. SOA-174 at 10 (ExxonMobil's October 2005 review of AFE S020 Supplement 2); Ex. SOA-11 at 26 (BP review stating that cost overruns are among other things associated with poor preliminary engineering estimates, changes in design during detailed engineering, and lifecycle scope increases); Ex. SOA-292 at 2 (ExxonMobil determining, among other reasons for increasing costs, that project scope changes caused by incorrect regulatory and operation assumptions); Ex. ATC-321 (stating that "preliminary design phase of the project was completed poorly").

<sup>107</sup> Ex. SOA-174 at 10; Ex. SOA-11 at 26; Ex. ATC-321 at 3 (describing a "river of drawings" due to revisions).

documents further concluded that the project was sanctioned based upon “less detailed engineering than would normally be prudent.”<sup>108</sup> As a consequence, the originally projected \$242 million cost proved to be a mere third of the total SR Project costs. The failure to adequately plan and prepare the engineering and cost estimates supporting AFE S020 supports a finding of imprudence. Moreover, once the Carriers approved AFE S020, any reappraisal of the project would need to consider cancellation costs,<sup>109</sup> and the imprudent initiation of the project at sanction would taint subsequent decisions with still further costs as design flaws were corrected after, rather than before, the project was sanctioned.

32. Notwithstanding the problems with cost estimates in AFE S020, the Carriers continued to sanction additional SR Project funding based upon incomplete engineering and a poorly defined project scope.<sup>110</sup> After the Carriers approved AFE S020 Supplement 1 for \$26.5 million<sup>111</sup> and the Carriers approved AFE S020 Supplement 2 authorizing an additional \$168.1 million,<sup>112</sup> the Carriers once again reached the conclusion that incomplete engineering and poor planning were compounding the inaccuracy of initial and subsequent cost estimates. On September 2006, Alyeska submitted AFE S020 Supplement 3 for an additional \$80.3 million dollars, explaining as follows:

This supplement is primarily required because engineering progress was overestimated in the previous request (based on vendor information). Completion of the remaining engineering resulted in the identification of additional work, and the additional work resulted in extended project duration. In addition, insufficient engineering quality has resulted in an unusual amount of field engineering corrections, which also has impacted both cost and duration.<sup>113</sup>

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<sup>108</sup> Ex. SOA-166 at 1. *See also* Ex. SOA-308 (stating that the original estimate was based on conceptual engineering, not the preliminary engineering that the Carriers claim was necessary prior to sanction); Ex. SOA-11 at 26 (typically a project of this size would not move forward until a larger percentage of detailed engineering was complete).

<sup>109</sup> Ex. ATC-21 at 25; Ex. SOA-65 at 17.

<sup>110</sup> Ex. SOA-225 at 2; Ex. SOA-371 at 1.

<sup>111</sup> Ex. ATC-279.

<sup>112</sup> Carriers Brief on Exceptions at 34 (citing Ex. ATC-327; ATC-328).

<sup>113</sup> Ex. SOA-63 at 2; *see also* Ex. SOA-121 at 9 (stating that engineering was only 50-70 percent complete, not 90 percent complete as originally believed); Ex. SOA-308 (same); SOA-371 (same).

The supplemental funding request identified incomplete design and design inadequacies as the reason for the need for yet another funding request.<sup>114</sup>

33. However, the cost estimates at the time of AFE Supplement 3 were *still* raising internal concerns. ExxonMobil's TAPS coordinator Jeff Ray did "not put a lot of faith" in the evolving SR Project cost estimates.<sup>115</sup> Carriers' employees were evaluating the SR Project "as a train wreck from a cost and schedule performance perspective."<sup>116</sup> Moreover, in addition to inaccurate engineering and scope definition, actual progress in the field was also subject to materially misleading reports.<sup>117</sup>

34. In place of the inaccurate estimate of \$60 million in AFE S020 Supplement 3, starting in 2007, the Carriers proceeded to approve \$112 million in additional funds via pump station specific funding requests for pump station 3 (AFE S320), pump station 4 (AFE S420) and pump station 9 (AFE S920). In May 2007, Alyeska recognized the ongoing planning problems:

Additional pipeline electrification program funding is required primarily because engineering progress was overestimated in the previous request, resulting in an understated forecast of total cost. Completion of engineering design in 2006 resulted in the identification of additional work, and the additional work resulted in extended project duration.<sup>118</sup>

The Carriers' own documents also surmised that the project fell off track, once again, due to incomplete engineering and inadequate project management.<sup>119</sup>

35. On exceptions, the Carriers do not disavow the conclusions of the numerous internal documents that the SR Project was sanctioned based upon a fundamentally

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<sup>114</sup> Ex. SOA-63 at 5.

<sup>115</sup> Ex. SOA-327.

<sup>116</sup> Ex. SOA-3.

<sup>117</sup> For example, an October 2006 project status report claimed that pump station 1 was 71 percent complete, when a follow-up inspection by Carriers' staff indicated that the completion was closer to 20-30 percent. Ex. SOA-367.

<sup>118</sup> Ex. SOA-121 at 2.

<sup>119</sup> Ex. SOA-209 at 9.

flawed cost estimate, and, as costs continued to escalate, that incomplete engineering continued to thwart attempts by the Carriers to evaluate the SR Project costs. However, the Carriers simply argue that their own internal conclusions are “hindsight” which cannot be considered under the prudence standard.<sup>120</sup>

36. The Commission rejects this “hindsight” argument.<sup>121</sup> The Commission’s prudence determination is based upon what the Carriers “knew or *should have known*” at the time of sanction.<sup>122</sup> The “no hindsight rule” recognizes that pipelines are not required to be “clairvoyant” and that prudent planning cannot predict every market shift<sup>123</sup> or regulatory change.<sup>124</sup> However, if a pipeline fails to conduct the appropriate inquiries prior to beginning a project and thus “*should have known*” about a potential problem, then the pipeline has acted imprudently. The Carriers’ internal documents support a finding that they “should have known” the SR Project cost estimates were inaccurate. The Carriers’ ignorance that resulted from “insufficient upfront planning” or “incomplete engineering” provides no defense against an imprudence allegation. The Carriers, as the owners of TAPS, were responsible for investment decisions and ensuring that the likely

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<sup>120</sup> Carriers Brief on Exceptions at 64 (citing *New England Power*, 31 FERC ¶ 61,047 at 61,084).

<sup>121</sup> The Initial Decision only relied upon post-sanction documents “to corroborate” the finding that the SR Project was imprudent. *E.g.*, Initial Decision, 146 FERC ¶ 63,091 at PP 1085, 1091, 1106. The Commission concludes that the post-sanction documents provide more than mere corroboration and support a finding of imprudence.

<sup>122</sup> *Panhandle*, 777 F.2d at 745 (upholding finding of imprudence based on facts that the pipeline “knew or should have known”); *Violet*, 800 F.2d at 282 (stating “The prudence of the investment must be judged by what a utility’s management knew, or could have known, at the time the costs were incurred.”).

<sup>123</sup> *Entergy*, 130 FERC ¶ 61,023 at P 58 (noting that utility acted prudently given the position of the market at the time of the challenged decision). Similarly, a pipeline cannot be expected to anticipate the business mistakes of its negotiating partners. *NW. Pipeline Corp.*, 92 FERC ¶ 61,287, at 61,996-97 (2000) (stating that a decision was not imprudent because it was reasonable to assume that purchaser of pipeline capacity was capable of utilizing the capacity).

<sup>124</sup> *Ky. Utils. Co.*, 62 FERC ¶ 61,097, at 61,701 (1993) (holding that the pipeline acted prudently because the utility reasonably relied upon the plain language of the regulations existing at the time).

costs of the SR Project were properly evaluated.<sup>125</sup> As subsidiaries of major international energy companies, the Carriers were aware of the obvious – that proper engineering and a well-defined scope were fundamental pre-requisites to any economic analysis of the project’s costs and benefits.<sup>126</sup> Moreover, the Carriers themselves concluded that they failed to complete the engineering and planning necessary to provide a defined scope and a valid understanding of costs. The prudence standard exists to protect ratepayers from such improvident expenditures. The Carriers’ own conclusion that they sanctioned and then repeatedly authorized more expenditure based upon incomplete engineering and a poorly defined project creates “serious doubt” regarding the SR Project’s prudence.<sup>127</sup>

#### **f. Conclusions**

37. The record supports a finding of serious doubt regarding the SR Project’s prudence. Significant evidence supports a finding that the Carriers did know or should have known that the SR Project cost estimates were inaccurate, and thus, the Carriers failed to perform a reasonable cost-benefit analysis of the SR Project prior to sanction.

#### **2. The Carriers Have Not Satisfied Their Burden**

38. Because Trial Staff, Alaska, and Anadarko have raised serious doubt regarding the prudence of the SR Project, the Carriers have the burden to demonstrate that the SR Project was prudent. The Carriers advance several arguments to support their decision to proceed with the SR Project. First, the Carriers assert that they reasonably relied upon SNC-Lavalin’s preliminary engineering, including SNC-Lavalin’s representation that the original SR Project cost estimate of \$242 million was within 15 percent. Second, the Carriers assert that the prudence of the project was validated by third parties. In particular, the Carriers argue that a report issued by IPA “may be the most important

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<sup>125</sup> *E.g.*, *Entergy*, 130 FERC ¶ 61,023 at P 52 (explaining the prudence inquiry is based upon “whether [the regulated entity] acted imprudently in failing to consider the costs and benefits of that action before undertaking it”).

<sup>126</sup> *E.g.*, Ex. SOA-286 at 2 (recognizing scope creep as an issue which could cause cost escalation); Ex. SOA-287 at 2 (third party evaluation of the SR Project emphasized that scope changes could invalidate the economic and engineering analysis).

<sup>127</sup> The Commission rejects Carriers’ argument that the Commission cannot consider documents created after sanction or other funding decisions. The mere fact that a document was created after sanction does not render it irrelevant to a prudence analysis. To the extent that later-created documents bear on what the Carriers knew or should have known at the time they committed to SR Project expenses, it is fully consistent with the prudence standard to consider those documents.

evidence in the case relating to the adequacy of engineering at sanction.”<sup>128</sup> Third, the Carriers assert that they internally evaluated SNC-Lavalin’s original cost estimates prior to sanction. Fourth, the Carriers state that although the original cost estimates proved to be incorrect, the projected personnel and maintenance savings were reasonable and have materialized. The Carriers also assert that, notwithstanding inaccuracies in the initial cost estimates, subsequent expenditures in AFE Supplement 2 and thereafter were prudent. As further discussed below, the Commission finds that the Carriers have failed to rebut the serious doubts, so as to demonstrate that the SR Project was prudent.

**a. SNC-Lavalin**

39. The Carriers assert that they prudently sanctioned the SR Project because they reasonably relied upon SNC-Lavalin’s preliminary engineering. They emphasize that in November 2003, SNC-Lavalin provided an eight volume preliminary engineering design report,<sup>129</sup> as well as a project execution plan, project schedules, and cost estimates.<sup>130</sup> They contend that these reports supported their decision to proceed with electrification, and the Carriers state that SNC-Lavalin represented that preliminary engineering estimates were within 15 percent of final costs.<sup>131</sup> The Carriers state that a 15 percent cost window is consistent with industry standards.<sup>132</sup> Carriers also state that sanctioning the SR Project based upon 30 percent complete detailed engineering was consistent with industry standards.<sup>133</sup>

40. The Carriers also defend the selection of SNC-Lavalin.<sup>134</sup> They state that SNC-Lavalin is a well-known international engineering firm. The Carriers emphasize that SNC-Lavalin was the highest-ranked bidder on the electrification portion of the project.<sup>135</sup> They claim that their selection of SNC-Lavalin followed standard industry

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<sup>128</sup> Carriers Brief on Exceptions at 116.

<sup>129</sup> *Id.* at 112 (citing Ex. ATC-208-Ex. ATC-216).

<sup>130</sup> *Id.* (citing Ex. ATC-2006; Ex. ATC-242; Ex. 439).

<sup>131</sup> *Id.* (citing Ex. ATC-24 at 17).

<sup>132</sup> *Id.* at 114 (citing Ex. SOA-1 at 136; Tr. 1122-1124, 1128-1129, 1137-1141).

<sup>133</sup> *Id.* at 113.

<sup>134</sup> *Id.* at 108-112.

<sup>135</sup> *Id.* at 110 (citing Ex. ATC-182 at 4-5). The Carriers explain that the Initial Decision incorrectly criticized their selection of SNC-Lavalin based upon criteria used  
(continued...)

practice.<sup>136</sup> The Carriers explain that they evaluated bidders based upon several factors, each of which was considered and weighed.<sup>137</sup> The Carriers note that this review emphasized the “[o]utstanding correlation” of SNC-Lavalin’s “previous experience with [the SR] project.”<sup>138</sup> They assert that the Initial Decision unduly emphasizes SNC-Lavalin’s lack of arctic and Alaska experience.<sup>139</sup> While acknowledging that SNC-Lavalin had only one Alaska-licensed engineer,<sup>140</sup> the Carriers stress that Anadarko witness and former Alyeska Chief Operating Officer Dan Hisey also testified that he “had no reason to believe SNC-Lavalin wasn’t up to the task when it was retained for preliminary engineering.”<sup>141</sup> Further, the Carriers state that problems with SNC-Lavalin’s work product did not become apparent until after sanction, and at that time, the Carriers assert they responded prudently with a series of escalating steps.<sup>142</sup>

41. The Commission finds that SNC-Lavalin’s engineering report provides little support for the Carriers’ claim that they acted prudently. As discussed above, Larkspur had warned the Carriers that the cost estimates were inaccurate and likely *not* within 15 percent of final costs. Carriers presented no evidence that they addressed these concerns after the warnings persisted in Larkspur’s second report. Moreover, although Carriers claim that industry practice supported sanctioning the SR Project based upon 30 percent complete detailed engineering, Carriers’ own documents suggest that a project of this magnitude required more detailed engineering prior to sanction.<sup>143</sup>

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for the automation and controls portion of the SR Project (performed by Hintz) as opposed to the electrification portion assigned to SNC-Lavalin. *Id.* at 109-110 (comparing Ex. SOA-217 to Ex. ATC-182 at 4-5).

<sup>136</sup> *Id.* at 109 (citing Ex. ATC-31 at 27-29, 32-33; Ex. ATC-30 at 63-68).

<sup>137</sup> *Id.* at 110 (citing Ex. ATC-182 at 4 (criteria for electrification), 6 (criteria for control systems upgrade)).

<sup>138</sup> *Id.* at 110 (citing Ex. ATC-182 at 5).

<sup>139</sup> *Id.* at 111-112.

<sup>140</sup> *Id.* at 111 (citing Initial Decision, 146 FERC ¶ 63,091 at P 660; Ex. ATC-180).

<sup>141</sup> *Id.* at 48 (citing Tr. 3704).

<sup>142</sup> *Id.* at 146 n.149.

<sup>143</sup> Ex. SOA-11 at 26 (citing “[t]ypically, a program of this size would not move forward until a larger percentage of detailed engineering was complete...”); Ex. SOA-  
(continued...)

42. Regarding the Carriers' claim that all involved believed that SNC-Lavalin was performing well during preliminary engineering,<sup>144</sup> internal emails show that Alyeska employees expressed concerns about SNC-Lavalin during the preliminary engineering process. For example, Mr. DeHaas stated in October 2003, "[i]n regard to SNC Edmonton competence, I am not overly impressed."<sup>145</sup> These concerns are consistent with the Carriers' internal conclusions that SNC-Lavalin "turned out to be largely incompetent at managing fabrication, forecasting costs (engineering, fabrication, construction)."<sup>146</sup>

43. Moreover, Carriers had additional reasons to closely monitor SNC-Lavalin's cost estimates. The Carriers knew that SNC-Lavalin lacked Alaska experience, and this lack of Alaska experience contributed to the cost escalation and delays resulting from poor preliminary engineering.<sup>147</sup> Subsequently, the Carriers concluded that it was their error to select a contractor with such minimal Alaska and United States experience.<sup>148</sup> As subsidiaries of major energy companies, the Carriers should have appreciated beforehand

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166 at 1. Although the cited document was produced after the SR Project experienced problems, given that oil pipelines frequently involve large infrastructure projects, it would be remarkable if the SR Project was so disastrous that it completely changed "typical" engineering standards. In their briefs on exceptions, the Carriers cite to the Bailey report from the 1990s for the position that more "detailed design" was not necessary (Carriers Brief on Exceptions at 115 (citing Ex. ATC-102 at 69)), but, in addition to being contradicted by other Carriers documents, the Bailey report did not contemplate the full electrification option adopted by the Carriers here.

<sup>144</sup> Carriers Brief on Exceptions at 111-12, n.118 (citing Ex. ATC-24 at 22-23; Ex. ATC-25 at 11-14; Ex. ATC-30 at 67; Ex. ATC-31 at 29; Tr. 3268-73, 3704).

<sup>145</sup> Ex. SOA-284 at 2.

<sup>146</sup> Ex. SOA-383.

<sup>147</sup> Ex. SOA-277 at 1 (in June 2005, noting weak Alaskan engineering has contributed significantly to the unexpected costs experienced); *see also* Ex. SOA-11 at 28 (attributing expense increases to a contractor without sufficient Alaska experience).

<sup>148</sup> Ex. SOA-277 at 1 (stating "[f]uture major projects should limit their engineering contractors to companies with a breadth of Alaskan regulatory and Alaskan design criteria experience."); Ex. SOA-166 (Referring to cost increases as of February 2005, BP concluded that the key learning was "that a contractor with more Alaskan experience could have anticipated these cost uncertainties....").

the importance of understanding the local regulatory environment. The Carriers were aware of SNC-Lavalin's lack of Alaska experience and they failed to compensate for it.

44. Notwithstanding SNC-Lavalin's acknowledged weaknesses, the Carriers criticize the Initial Decision for not discussing the details of SNC-Lavalin's analysis. The Carriers emphasize that the report contained an eight volume appendix which they allege the Initial Decision ignored.<sup>149</sup> Yet, the Carriers in their brief on exceptions also ignore the contents of these appendices and fail to explain how the details of the SNC-Lavalin analysis support their position. Once serious doubts regarding prudence are established, the Carriers have the burden of proof regarding the prudence of the SR Project, and their burden is not satisfied by merely pointing to the number of pages or appendices in an engineering analysis. Moreover, the Commission is not persuaded by the Carriers' citation to a preliminary engineering report, which Carriers themselves concluded was extremely flawed.<sup>150</sup>

**b. Third Party Analysis**

**i. IPA Report**

45. The Carriers state the February 2004 report done by IPA (IPA Report) "may be the most important evidence in the case relating to the adequacy of engineering at sanction."<sup>151</sup> Prior to sanctioning the SR Project in AFE S020, the Carriers hired IPA, a construction consulting company, to evaluate the project. The Carriers state that IPA is well known and well-regarded in the industry.<sup>152</sup> When evaluating a project, IPA issues a report assessing a project based upon "how the decisions of other companies in similar situations have worked out in practice."<sup>153</sup> Using statistical models, the IPA analysis compares parameters of a project with other projects in the IPA's database.<sup>154</sup>

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<sup>149</sup> Carriers Brief on Exceptions at 114-115.

<sup>150</sup> *E.g.*, Ex. SOA-65 at 3.

<sup>151</sup> Carriers Brief on Exceptions at 116.

<sup>152</sup> *Id.* (citing Ex. ATC-18 at 29-30).

<sup>153</sup> Ex. ATC-258 at 2.

<sup>154</sup> *Id.*

46. Although a previous November 2003 IPA report concluded that the SR Project's status was "poor,"<sup>155</sup> the Carriers state that they addressed these concerns and that the IPA Report elevated its evaluation of the front-end loading<sup>156</sup> of the project to "good."<sup>157</sup> The Carriers state this meant there was a high probability of completion within budget and on schedule.<sup>158</sup> The Carriers emphasize that the IPA Report also concluded that the project's "engineering definition and project execution planning" were at the "Best Practical level."<sup>159</sup> They emphasize that the IPA Report further stated that "[i]n all, the team has defined the project to a level that positions it to attain its set objectives."<sup>160</sup> The Carriers state that the Initial Decision improperly emphasizes "boilerplate" in the IPA Report's preface that "any scope changes to the project may alter or invalidate the analysis results discussed in this report." They argue that this should not be used to minimize the report's specific findings related to the SR Project.

47. The Commission finds that the IPA Report provides limited support for the prudence of the SR Project sanction. The significance accorded to the IPA Report is diminished by the nature and quality of the analysis supporting its conclusions. As the

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<sup>155</sup> Initial Decision, 146 FERC ¶ 63,091 at P 585 (citing Ex. SOA-287). This report concluded that projects of similar complexity authorized with poor level of project definition have much more variable costs. *Id.* Paragraphs 585-589 of the Initial Decision contain a more extensive discussion of the first report.

<sup>156</sup> As explained by the IPA Report, front end loading (FEL) is defined thus:

FEL is a process by which a company translates its marketing and technology opportunities into capital projects. The objective of FEL is to gain a detailed understanding of the project to minimize the number of changes during later phases of project execution. FEL proceeds until the "right" project is selected and is not finished until a full design-basis package has been completed. FEL includes project definition and process design, such as the development of flowsheets and the first set of piping and instrumentation diagrams (P&IDs).

Ex. ATC-258 at 10.

<sup>157</sup> *Id.* at 3.

<sup>158</sup> Carriers Brief on Exception at 117 (citing Ex. ATC-258 at 3).

<sup>159</sup> *Id.*

<sup>160</sup> Ex. ATC-258 at 2.

Carriers' internal documents concluded, the IPA Report was a mere "checklist" that failed to provide a genuine quality measurement.<sup>161</sup>

48. The limits of the Independent Project Analyst Report are readily apparent. First, the IPA Report elevated the front-end loading assessment to good based upon a one-day interview on January 14, 2004,<sup>162</sup> not an in-depth analysis of the SR Project's preliminary engineering. Second, the IPA Report's findings were based upon comparing answers it collected in this one-day interview to information in two project data sets. However, the projects in these two data sets differed significantly from the SR Project. The data set of 27 similarly sized projects did not include any pipeline projects.<sup>163</sup> The data set of 13 pipeline projects involved boosting/metering projects with an average cost of \$3.8 million, far below any cost estimates for the SR Project.<sup>164</sup> Third, while the IPA Report's review ostensibly assessed whether proper management procedures were being applied, it incorrectly stated the SR Project Team was following Alyeska's standard project management process, AMS-003.<sup>165</sup> In reality, as the Carriers explain in their brief, this is untrue because AMS-003 is for small projects.<sup>166</sup>

49. Moreover, the IPA Report contained express warnings to the Carriers of its limitations. The IPA Report qualifies its findings with a statement that "any scope changes to the project may alter or invalidate the analysis results discussed in this report."<sup>167</sup> The Carriers characterize this particular statement as boilerplate, but this caveat places the report's assessment in necessary context. To the extent that there were

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<sup>161</sup> Ex. SOA-202 at 11, 40; *see also* Initial Decision, 146 FERC ¶ 63,019 at P 913. ConocoPhillips concluded the IPA Report and other third party reviews failed to identify the problems with the SR Project because "the primary driver for the overrun, incomplete and/or inaccurate specification of the project requirements with regard to the new/existing facilities interface, were not reviewed by outside parties at the level of detail necessary to detect errors." Ex. SOA-292 at 5; Initial Decision, 146 FERC ¶ 63,019 at P 1008.

<sup>162</sup> Ex. ATC-258 at 3.

<sup>163</sup> *Id.* at 9.

<sup>164</sup> *Id.*

<sup>165</sup> *Id.* at 18.

<sup>166</sup> Carriers Brief on Exceptions at 116 n.112.

<sup>167</sup> Ex. ATC-258 at 2.

scope changes that the Carriers should have anticipated, this undercuts the significance of the IPA Report.

50. Moreover, the IPA Report also acknowledged limits specific to its evaluation of the SR Project. The IPA Report emphasized that it “does not possess a model that can credibly benchmark costs for projects” with the unique characteristics of the SR Project.<sup>168</sup> Moreover, speaking specifically of the SR Project, the IPA Report emphasizes:

A remaining risk is that of significant changes to the design after the start of execution. Late design changes lead to cost growth and schedule slip. In order to maintain objectives, the team should remain aligned on the project objectives and adhere to a strict no-change policy.<sup>169</sup>

Ultimately, the Carriers characterization of the IPA Report as “most important evidence” of the “adequacy of engineering at sanction”<sup>170</sup> only serves to emphasize the lack of support for the prudence of the SR Project at sanction.

## ii. The Argonne Report

51. The Carriers state that the November 2003 Argonne National Laboratories’ Report (Argonne Report) supports their decision to sanction the SR Project. Issued prior to the February 2004 sanction of the SR Project, the Argonne Report was commissioned by the JPO<sup>171</sup> to compare the SR Project to industry practices.<sup>172</sup> Among other sources, the Argonne Report used interviews with regulatory authorities and personnel from various pipeline companies to compare the SR Project upgrades with other pipeline projects.<sup>173</sup>

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<sup>168</sup> Ex. ATC-258 at 3. Although an examination of some project cost ratios concluded that the project’s “overall costs were in line with industry,” this finding is subject to the aforementioned qualification. *Id.*

<sup>169</sup> *Id.*

<sup>170</sup> Carriers Brief on Exceptions at 116.

<sup>171</sup> The JPO is a consortium of state and federal agencies that have regulatory oversight for TAPS. Ex. ATC-18 at 13. It is co-managed by the Alaska Department of Natural Resources and the federal Bureau of Land Management.

<sup>172</sup> Ex. ATC-204 at 9.

<sup>173</sup> *Id.*

52. The Carriers emphasize that the Argonne Report concluded that the SR Project was “consistent with current pipeline industry practices for automation of pump stations and electrification of pump stations to include utilization of variable frequency drives (VFDs), electric motors, and drivers.”<sup>174</sup> They quote from the report that “as an industry practice, very few crude or product pipeline companies currently utilize gas turbines in their systems.”<sup>175</sup> They add that the “replacement of turbine drives with electric motors has been an accepted industry practice for decades.”<sup>176</sup>

53. The Commission is not persuaded by these arguments. Much like the IPA report, reliance on the Argonne Report cannot substitute for careful planning and engineering. The Argonne Report merely examined industry trends and practices. The standard practices identified in this survey did not necessarily apply to the specific circumstances of the TAPS pipeline. Moreover, this type of comparative survey does not address the core concerns regarding the poor planning and incomplete engineering prior to the sanctioning of the SR Project.

54. The Carriers also overstate the findings of the Argonne Report. The Carriers rely upon a statement in the Argonne Report that “as an industry practice, very few crude or product pipeline companies currently utilize gas turbines in their systems.”<sup>177</sup> However adding the next sentence substantially alters the meaning of the quoted sentence with respect to TAPS:

It appears that as an industry practice, very few crude or product pipeline companies currently utilize gas turbines in their systems. The exception to this practice occurs when there is no electrical power available or where electrical power supplies are unreliable.<sup>178</sup>

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<sup>174</sup> Carriers Brief on Exceptions at 136 (citing Ex. ATC-204 at 10).

<sup>175</sup> *Id.* (citing Ex. ATC-204 at 21).

<sup>176</sup> *Id.* (citing Ex. ATC-204 at 28).

<sup>177</sup> *Id.* (citing Ex. ATC-204 at 28).

<sup>178</sup> Ex. ATC-204 at 21 (emphasis added). A similar caveat is included in the testimony of Carrier witness Dick Rabinow. Ex. ATC-204 at 8-9 (stating “[s]o long as electric power was accessible, virtually all pumps on other pipelines were driven by electric motors for reasons of cost effectiveness, simplicity of operation and enhanced controllability.”) (emphasis added).

This particular exception applies to the circumstances of the TAPS pipeline where there is a lack of reliable electric power.

55. The Argonne Report thus does little to establish the prudence of the SR Project. The Argonne Report was a compilation from surveys of oil companies, not a justification for knowing use of a flawed economic and engineering analysis to justify the decision to spend hundreds of millions of dollars on new pipeline infrastructure that was arguably infeasible as projected.

### iii. JPO Report

56. The Carriers emphasize that the December 2003 JPO<sup>179</sup> report (JPO Report) conditionally approved the decision to proceed with the SR Project. They characterize this conditional approval as a “major accomplishment.”<sup>180</sup> They emphasize that if JPO had been concerned about the project’s adherence to engineering or other regulatory requirements, it could have withheld approval and stopped the project. Instead, the JPO found the project definition adequate, approved the core project components, and in May 2004, the JPO determined that additional information provided by Alyeska resolved the prior concerns.<sup>181</sup> The Carriers emphasize that Alaska witness Mr. Thompson (the State Pipeline Coordinator and chief state representative within the JPO), testified that the JPO Report did alert the Carriers that the SR Project was fundamentally flawed.<sup>182</sup>

57. The Commission finds that JPO Report and the subsequent approval of the SR Project provide minimal support the SR Project’s prudence. As Mr. Thompson testified, JPO had limited engineering expertise available to assess the SR Project.<sup>183</sup> Moreover, the SR Project’s economics were outside the scope of the JPO review.<sup>184</sup> Further, the

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<sup>179</sup> As noted previously, JPO is a consortium of state and federal agencies that have regulatory oversight for TAPS, co-managed by the Alaska Department of Natural Resources and the federal Bureau of Land Management (BLM). Ex. ATC-18 (Ray) at 13. JPO’s oversight stems from the fact that approximately 90 percent of the pipeline is built on land owned by state or federal governments.

<sup>180</sup> Ex. ATC-917 at 39-43.

<sup>181</sup> Ex. ATC-276.

<sup>182</sup> Tr. 2576.

<sup>183</sup> Tr. 2600.

<sup>184</sup> Ex. SOA-544 at 11-12.

JPO Report identified issues regarding regulatory misconceptions that afflicted the SR Project planning and the ambitious schedule adopted for the SR Project. Although JPO later concluded that its conditions had been met, to the extent that these issues afflicted the later stages of the SR Project, the JPO Report is relevant to show that (a) the Carriers were once again warned regarding potential problems with the SR Project, and (b) ultimately failed to resolve them.

**iv. Approval from Alaska Authorities**

58. The Carriers also state that the Initial Decision unfairly dismissed as irrelevant the Alaska governor and Alaska state attorney general's favorable response to the SR Project after they were briefed by the Carriers in 2003.<sup>185</sup> An Alaska Assistant Attorney General told the Carriers in October 2003 that "[b]ased on the materials that you have shown us and the projected benefits you anticipate, the administration supports the proposed strategic reconfiguration of TAPS."<sup>186</sup>

59. The Carriers overstate the support provided by Alaska officials and the relevance of that support. The Carriers provide no evidence that these officials conducted any in-depth analysis, or were experts in pipeline engineering and design issues. The Carriers cite a letter from an Alaska Assistant Attorney General, but this letter specifically states that the support was *based upon the representations made by the Carriers*. The letter also requested answers to several questions because the Attorney General's office did not "yet have a clear understanding" of the SR Project.<sup>187</sup> The briefings of state officials and this letter thus do little to establish the SR Project's prudence.

**v. GE and JTG Conceptual Engineering Studies**

60. The Carriers state that the Initial Decision did not accord adequate weight to the 2002 GE and JTG conceptual engineering reports. The Carriers hired GE and JTG to evaluate the conceptual engineering of electrification so that it could be compared with an alternative using the legacy equipment. The Carriers emphasize that GE<sup>188</sup> and JTG<sup>189</sup>

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<sup>185</sup> Carriers Brief on Exceptions at 32, 133, 136.

<sup>186</sup> *Id.* at 136 (citing Ex. ATC-198 at 1).

<sup>187</sup> Ex. ATC-198 at 1-2.

<sup>188</sup> Carriers Brief on Exceptions at 80 (citing Ex. ATC-47).

<sup>189</sup> *Id.* (citing Ex. ATC-48).

presented cost estimates for electrification that were within ten percent of each other.<sup>190</sup> They state that the record lacks evidence of contemporaneous criticism, and that no witness criticized either of these studies.<sup>191</sup> The Carriers emphasize that GE and JTG were highly rated engineering firms.<sup>192</sup> They assert that there is no evidence that GE or JTG's analysis was impaired by the three month time frame for completion.

61. The GE and JTG reports (and other conceptual engineering documents) have little relevance for the ultimate issue in this case, which is whether the Carriers were prudent in sanctioning the SR Project. Because conceptual engineering studies are high level, no party claims that a conceptual level of engineering provided sufficiently thorough analysis to justify sanction of the SR Project. The Commission notes that GE was instructed not to "spend large amounts of time analyzing [the TAPS pipeline] and trying to examine the actual complexity of the pipeline."<sup>193</sup> The GE and JTG reports, much like other conceptual engineering documents considered by the Carriers, provide little support for the cost estimates used by the Carriers to sanction the SR Project.

**c. Carriers' Internal Evaluations**

62. The Carriers claim that the Initial Decision incorrectly accuses them of sanctioning the SR Project without adequate independent analysis of AFE S020.<sup>194</sup> The Carriers assert each owner reasonably considered "the costs and benefits" of the SR Project prior to sanction.<sup>195</sup> The Carriers add that these reviews were conducted according to industry standards,<sup>196</sup> and followed each company's procedures for similarly-sized projects.<sup>197</sup>

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<sup>190</sup> *Id.* (citing Ex. ATC-19 at 51-52)

<sup>191</sup> *Id.* at 41.

<sup>192</sup> *Id.* at 80.

<sup>193</sup> Ex. SOA-17 at 13.

<sup>194</sup> *E.g.*, Initial Decision, 146 FERC ¶ 63,019 at PP 752, 866.

<sup>195</sup> Carriers Brief on Exceptions at 139 (citing *Entergy*, 130 FERC ¶ 61,023 at P 52).

<sup>196</sup> *Id.* at 138 (citing Tr. 793, 797-98, 1184).

<sup>197</sup> *Id.* at 139-140.

63. The Carriers state that the BP, ExxonMobil, and ConocoPhillips reviews all included some provision for delays and cost increases. They state that ConocoPhillips analyzed the economics of the project using four different proposed capital costs<sup>198</sup> and accounted for contingencies related to some aggressive assumptions in the SR Project plans.<sup>199</sup> They state that ExxonMobil increased the cost contingency by 20 percent for internal review.<sup>200</sup> Similarly, Carriers note that BP assumed \$20 million in additional costs and an incremental \$4 million in additional net capital expenditures.<sup>201</sup> The Carriers add that BP conducted tariff analysis, showing reduced tariff rates for all shippers beginning in 2007.<sup>202</sup>

64. The Carriers argue that the Initial Decision wrongly criticized individual Carriers for using information from AFE S020 as inputs in their own internal analysis.<sup>203</sup> They state that it would be absurd for the Carriers to have “started from scratch” when AFE S020 was submitted for their approval. Prior to AFE S020, the Carriers state that they actively monitored how the SR Project was progressing and created an owner pipeline planning team in February 2003 which interacted with the SR Project Team . They stated that members of this team participated in two-day-long peer review meetings in June, July and October 2003 as well as January 2004.<sup>204</sup> The Carriers emphasize that the Owners Pipeline Team had reviewed the project development as it unfolded in 2003 and early 2004, including various reports from Alyeska,<sup>205</sup> SNC-Lavalin,<sup>206</sup> the IPA Report, and the Larkspur report.

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<sup>198</sup> *Id.* at 139 (citing Ex. ATC-255 at 2).

<sup>199</sup> *Id.* (citing Ex. ATC.-255 at 8).

<sup>200</sup> *Id.* at 141 (citing Ex. ATC-27 at 31-32).

<sup>201</sup> *Id.* (citing Ex. ATC-261).

<sup>202</sup> *Id.* at 140 (citing Ex. ATC-261 at 2).

<sup>203</sup> *Id.*

<sup>204</sup> *Id.* at 135 (citing Ex. ATC-18 at 31, Ex. ATC-21 at 17, Ex. ATC-185).

<sup>205</sup> *Id.* at 140 (citing Ex. ATC-236 - Ex. ATC-238; Ex. ATC-243 - Ex. ATC-245, Ex. ATC-859).

<sup>206</sup> *Id.* (citing Ex. ATC-206, Ex. ATC-208 – Ex. ATC-216).

65. The Commission holds that the Carriers' reviews prior to sanction provide little support for the prudence of the SR Project. These reviews were so limited that they provide minimal affirmative support for the decision to sanction the SR Project. As Mr. Flood testified, if the inputs into AFE S020, including the scope, were not correct, then ConocoPhillips' statistical risk analysis was invalid. In his words, "garbage in, garbage out."<sup>207</sup> The imprudence of the underlying scope and cost estimates were not (and could not have been) addressed by the Carriers' limited review at sanction. Thus, the Carriers' review does little to counter the findings of imprudence relating to the underlying scope and cost estimates associated with the SR Project in AFE S020. To the extent the Carriers claim that more review was unnecessary due to their ongoing monitoring of preliminary engineering, this only emphasizes their responsibility for the insufficient planning, incomplete engineering, and inaccurate cost estimates prior to sanction.

**d. Savings**

66. The Carriers state "[a]lthough SR had multiple goals, its principal aim was to reduce personnel and major maintenance expenses by \$1.1 to \$1.4 billion over a 20 year period."<sup>208</sup> The Carriers state that prior to sanction they reasonably estimated the personnel and maintenance cost reductions. As discussed below, the Commission rejects these arguments and finds that the Carriers have failed to demonstrate that they prudently estimated the SR Project's likely benefits.

**i. Personnel Savings**

67. The Carriers state that Jim Johnson, Alyeska Pipeline Manager, employed reasonable methods to calculate the SR Project cost savings. They state that Mr. Johnson was in charge of the TAPS maintenance plan and derived the work force estimates by examining each pump station and coordinated his efforts with other Alyeska employees.<sup>209</sup> The Carriers state that given Mr. Johnson's TAPS-specific experience, he was capable of making the estimates without being familiar with automation or consulting with manufactures of automation systems.<sup>210</sup> They emphasize that Mr. Johnson and the other employees estimating the personnel savings from electrification had a combined 150 years of experience. Moreover, the Carriers state that

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<sup>207</sup> Tr. 5303.

<sup>208</sup> Carriers Brief on Exceptions at 1, 28.

<sup>209</sup> *Id.* at 85 nn.85, 88 (citing Tr. 8229-8230).

<sup>210</sup> *Id.* at 88-89 (citing Initial Decision, 146 FERC ¶ 63,091, at PP 465-469)

a review was performed by Alyseka. Mr. Howitt confirmed that the cost savings were eventually realized.<sup>211</sup> The Carriers state that “by the end of 2010 Alyeska had eliminated 263 out of the 285 positions that were originally projected to be eliminated as a result of the electrification and automation of pump stations 1, 3, 4 and 9.”<sup>212</sup>

68. The Commission holds that Mr. Johnson’s personnel savings estimates provide minimal support for the prudence of the Carriers’ investment in the SR Project. The Carriers’ imprudently relied upon incomplete conceptual and preliminary engineering, and Mr. Johnson’s personnel estimates were based upon the same flawed engineering designs. Moreover, contrary to the Carriers’ argument, Mr. Johnson could not have reviewed each piece of equipment for electrification because, as he later conceded, this information was not available during conceptual engineering when he developed his personnel reduction estimates.<sup>213</sup> Given the quality of data used in his analysis, Mr. Johnson’s estimates provide little support for the prudence of the SR Project.<sup>214</sup>

69. The Commission is also unpersuaded by the Carriers’ claim that actual realization of personnel cost savings supports the prudence of the SR Project. The Carriers state that “by the end of 2010 Alyeska had eliminated 263 out of the 285 positions that were originally projected to be eliminated as a result of the electrification and automation of pump stations 1, 3, 4 and 9.”<sup>215</sup> However, the total Alyeska headcount reveals a far more muddled narrative. The total headcount declined slightly from 818 in 2005 to 801 in 2009, before precipitously dropping to 763 in 2010. Notably, this is the last year covered

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<sup>211</sup> *Id.* at 36.

<sup>212</sup> *Id.* at 36-37.

<sup>213</sup> Tr. 8229-8230. *See also* Initial Decision, 146 FERC ¶ 63,019, at P 1389 (citing Tr. 6789 for proposition that staffing done prior to preliminary engineering). For example, Mr. Johnson was not aware of the ancillary equipment necessary to support the electric motors and generators. Tr. 8219.

<sup>214</sup> For example, when distinguishing between electrification and the hybrid methodology, Mr. Johnson’s personnel estimates for the hybrid model depended upon a detailed understanding of the existing system. Ex. ATC-891 at 14-15. The Carriers argue that this detailed understanding was fundamental to Mr. Johnson’s analysis of the staffing required for the hybrid alternative. In contrast, the evidence considered by Mr. Johnson for electrification was based on a deeply flawed and high level conceptual design.

<sup>215</sup> Carriers Brief on Exceptions at 36-37, 171.

by Mr. Howitt's analysis.<sup>216</sup> Almost immediately after this drop, the employment numbers returned to prior levels, reaching 789 in 2011 and 813 in 2012.<sup>217</sup> Carriers do not explain this return except to note that "there is no evidence tying any of the reductions" to the rehires.<sup>218</sup> This defense is inadequate given that it is Carriers' burden to show that the SR Project provided personnel savings. Given the personnel increases in 2011 and 2012, any reductions associated with the SR Project appear to have been ephemeral due to the hiring of replacement employees.

70. Carriers also argue that savings can be shown by comparing projected O&M costs to the actual O&M costs under the SR Project.<sup>219</sup> Carriers derive their projected O&M costs from a draft Alyeska 2002 Long Range Plan (2002 LRP).<sup>220</sup> Carriers' expert argued that this is the fairest comparison point because it was the last such plan that assumed legacy equipment would be used.<sup>221</sup> In fact, such a comparison would show material savings of about \$305 million over an eight year period.<sup>222</sup> However, as noted by the Initial Decision, the 2002 LRP was a draft document circulated months before it was scheduled to be finalized.<sup>223</sup> As such, the 2002 LRP reflects 2001 data that was never vetted by Carriers, and which included unusual non-recurring expenses and limited 2002 data.<sup>224</sup> Thus, the information in it is unreliable and will not be afforded significant weight, especially in light of competing evidence suggesting the reduction in headcount that was intended to create the projected SR Project savings were not sustained.

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<sup>216</sup> Ex. ATC-19.

<sup>217</sup> Initial Decision, 146 FERC ¶ 63,091 at 1346, 1534 (citing Ex. AT-492 at 1-2).

<sup>218</sup> Carriers Brief on Exceptions at 173.

<sup>219</sup> Carriers Brief on Exceptions at 173.

<sup>220</sup> *Id.*; Ex. AT-437.

<sup>221</sup> Ex. ATC-960 at 4.

<sup>222</sup> Ex. ATC-961; Ex. ATC-962; Ex. AT-437.

<sup>223</sup> Initial Decision, 146 FERC ¶ 63,091 at P 1332; Tr. 7785:7-11.

<sup>224</sup> *Id.* P 1332; Tr. 7816:5-7817:13.

**ii. Maintenance Costs**

71. The Commission affirms the Initial Decision's conclusion that the Carriers imprudently estimated major maintenance savings resulting from the SR Project. The fundamental question in a prudence challenge relates to the regulated entity's decision at the time a financial commitment was made.<sup>225</sup> The Carriers do not challenge the Initial Decision's holdings that when evaluating the SR Project prior to sanction, the Carriers overestimated the SR Project major maintenance savings (a) by making baseless assumptions such as electrification requiring no major maintenance costs for a 20 year window,<sup>226</sup> and (b) by adding an unidentified maintenance component which assumed that legacy maintenance costs would increase by 10 percent in year one, 30 percent in year two and 50 percent each year thereafter.<sup>227</sup> These multipliers were included despite admissions by Alyeska engineering staff that legacy equipment was running adequately and spare parts were abundant.<sup>228</sup> Thus, the Carriers acted imprudently by not using reasonable estimates of SR Project maintenance savings over the continued use of the legacy equipment.

**e. AFE S020 Supplement 2 Cost Benefit Analysis**

72. The Carriers also contend that they re-evaluated the cost-benefit analysis of the SR Project in 2005 when approving AFE S020 Supplement 2, and that this cost-benefit analysis supported proceeding with the SR Project.<sup>229</sup> The Carriers state that prior to approving AFE S020 Supplement 2, they took several steps to improve the work on the SR Project: major reduction in SNC-Lavalin's responsibilities, changes to the Project Management Team, revision to the project construction plans, and new cost and schedule estimates.<sup>230</sup> The Carriers emphasize that, in addition to the Carriers' own analysis, an

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<sup>225</sup> *New England Power Co.*, 31 FERC at 61,084.

<sup>226</sup> Initial Decision, 146 FERC ¶ 63,091 at 678 (citing Tr. 6981:5-10).

<sup>227</sup> *Id.* at 1404 (citing Tr. 6978:24-6979:10); *see also* Exs. SOA-13 at 9; ATC-245; Ex. ATC-19 at 14.

<sup>228</sup> Initial Decision, 146 FERC ¶ 63,091 at 1404.

<sup>229</sup> Carriers Brief on Exceptions at 146 (citing Ex. ATC-27 at 42, 47, Ex. ATC-292).

<sup>230</sup> *Id.* at 147 (citing Ex. ATC-18 at 38-41; Ex. ATC-27 at 42-47; Ex. ATC-30 at 50-60; Ex. ATC-31 at 31).

Alyeska team headed by Pete Flonas, a former BP executive, performed an additional re-evaluation of the project.<sup>231</sup>

73. The Carriers state that in AFE S020 Supplement 2, the SR Project was expected to cost \$434 million and to take until September 2006 to complete – nine months beyond the initial December 2005 deadline. Despite these changes, the Carriers emphasize that the full-cycle economics of the SR Project remained strong – estimated by Alyeska to be \$31 million net present value and a 13 percent internal rate of return.<sup>232</sup> They also state that project completion was better than cancellation, which they state at least BP concluded would be “negative.”<sup>233</sup>

74. The Commission holds that the additional analysis at AFE S020 Supplement 2 neither establishes the prudence of the overall SR Project nor supports the expenditures contained within AFE S020 Supplement 2. To the extent that any cancellation costs factored into the Carriers’ analysis at this stage, this only shows how the imprudent sanction tainted further decisions related to the SR Project.

75. More fundamentally, Carriers failed to do the cost-benefit analysis that the prudence standard requires.<sup>234</sup> An obvious prerequisite to any cost-benefit analysis is the use of cost estimates based upon sufficiently complete engineering, planning, and scope assessments to make the cost-benefit analysis meaningful. After the cost estimates at SR Project sanction proved to be grossly inaccurate, the Carriers should have been keenly aware of the importance of ensuring appropriate planning, complete engineering, and a defined project scope at the time of AFE S020 Supplement 2.

76. Yet, once again, the Carriers failed to adequately fulfill their obligations as prudent managers of the TAPS pipeline. As the Carriers themselves concluded, cost estimates in AFE S020 Supplement 2 were inaccurate because “engineering progress was

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<sup>231</sup> *Id.* at 148 (citing Ex. ATC-321).

<sup>232</sup> *Id.* (citing Ex. ATC-326 at 11-12; Ex. ATC-36 at 50-51; Ex. ATC-24 at 32). The Carriers concede that ExxonMobil’s internal net present value was negative. However, the Carriers emphasize that BP and ConocoPhillips calculated a positive full cycle net present value. Moreover, the Carriers state that a negative NPV only indicates that the project would lead to a return less than the assumed discount rate, not that the project would lose money.

<sup>233</sup> *Id.* at 151 (citing Ex. ATC-323 at 22).

<sup>234</sup> *Entergy Servs., Inc.*, 130 FERC ¶ 61,023 at P 52; *Iroquois*, 87 FERC at 62,170 (prudence inquiry involves comparing *ex ante* savings to *ex ante* costs).

overestimated in the previous request”<sup>235</sup> and “insufficient engineering quality has resulted in an unusual amount of field engineering corrections, which also has impacted both cost and duration.”<sup>236</sup> Whereas the Carriers assumed in AFE S020 Supplement 2 that engineering was 90 percent complete, it was in fact 50-70 percent complete.<sup>237</sup> In the next major funding request approved by the Carriers, it was explained, “[c]ompletion of engineering design in 2006 resulted in the identification of additional work, and the additional work resulted in extended project duration.”<sup>238</sup> The Carriers stated that “[o]ver 100 [percent] of the project’s drawings have been issued or revised since the last funding request.”<sup>239</sup> Because the AFE S020 Supplement 2 request was not based upon complete engineering, the cost estimates were deeply flawed and failed to support a meaningful cost-benefit analysis.<sup>240</sup> As a result, whereas AFE S020 Supplement 2 projected the SR Project to cost \$434.5 million,<sup>241</sup> the estimates at the close of the record estimated SR Project costs of \$786 million.

**f. Additional Funding Requests**

77. Carriers assert that the expenditures in AFE S920, AFE S320, and AFE S420 were prudent “due to the facts and circumstances” existing in 2007 and 2008. The funding requests totaled approximately \$111 million.<sup>242</sup> The Carriers emphasize that at that time

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<sup>235</sup> Ex. SOA-63 at 2; Ex. SOA-121 at 2.

<sup>236</sup> Ex. SOA-63 at 2.

<sup>237</sup> Ex. SOA-121 at 9 (stating that engineering was only 50-70 percent complete, not 90 percent complete as originally believed); Ex. SOA-308 (same); SOA-371 (same).

<sup>238</sup> Ex. SOA-121 at 2.

<sup>239</sup> Ex. SOA-121 at 9.

<sup>240</sup> In making this finding, the Commission need not rely upon State witness Sullivan’s testimony modifying the assumptions at AFE Supplement 2 to show that the Carriers should have realized that the net present value was negative.

<sup>241</sup> Ex. SOA-65 at 3.

<sup>242</sup> Submitted in February 2007, AFE S920 provided an additional \$6.3 million to complete construction to complete pump station 9. Ex. ATC-378 at 1. Submitted in May 2007, AFE S320 provided \$39.3 million to complete construction of pump station 3. Ex. ATC-404 at 2. AFE S420 provided \$66.5 million to complete construction of pump station 4. Ex. ATC-384 at 1.

the project economics were strong on a point forward basis, which accounts for the sunk costs associated with the SR Project.

78. The Carriers state that in 2007 and 2008, they improved the work processes for the SR Project. In 2006, the Carriers decided to move forward on a sequential basis for construction and funding.<sup>243</sup> The Carriers state that the sequential approach “allowed available resources to be more effectively concentrated, and also provided the Carriers the ability to evaluate the merits of the project completion one pump station at a time in light of the experience on the previous pump stations.”<sup>244</sup> The Carriers also state that they completely removed SNC-Lavalin from the project.

79. Although not relevant to the prudence of the original sanction, the Carriers state that additional SR Project expenditures were justified by changing operating conditions in 2007.<sup>245</sup> The Carriers state that by AFE Supplement S420 in December 2007, it was apparent that the legacy TAPS pumping equipment would need to be replaced in seven years due to (a) increasing difficulty in finding spare parts and (b) inability to function at lower throughput levels.<sup>246</sup> The Carriers state that these issues justified their decisions in 2007 and 2008 to complete the SR Project.

80. The Commission rejects the Carriers’ position that the expenditures in AFE S320, AFE S420, and AFE S920 were prudent “due to the facts and circumstances” existing in 2007 and 2008. By the time the Carriers approved the addition funding requests in AFE S320 (\$39.3 million) and AFE S420 (\$66.5 million), the Carriers had already begun construction and made substantial financial commitments to the SR Project. For example, when AFE S320 was authorized, pump station 3 was reported to be 75 percent complete<sup>247</sup> and when AFE S420 was authorized, pump station 4 was described as 45 percent complete.<sup>248</sup> As discussed previously, these prior commitments were based upon inaccurate cost estimates resulting from insufficient planning, incomplete engineering,

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<sup>243</sup> Carriers Brief on Exceptions at 153-154 (citing Ex. ATC-18 at 43; Ex. ATC-26 at 18, 24-25; Ex. ATC-28 at 5-10; Ex. ATC-375).

<sup>244</sup> *Id.* at 154.

<sup>245</sup> *Id.* at 156.

<sup>246</sup> *Id.* at 155 (citing Ex. ATC-384 at 8-9; Ex. ATC-18 at 48-50; Ex. ATC-28 at 12-13; Ex. AT-429 at 48; Ex. AT-459 at 7; Ex. AT-432 at 19-20).

<sup>247</sup> Ex. ATC-404 at 5.

<sup>248</sup> Ex. ATC-384 at 7.

and poor management.<sup>249</sup> These additional expenditures to complete the SR Project were a direct consequence of the originally imprudent sanctioning decision in 2003 and 2004.<sup>250</sup> The Carriers' 2007-2008 use of an improved process does little to justify the overall prudence of the SR Project and, thus, does not inoculate the 2007 and 2008 expenditures from a prudence challenge.

81. The Commission also rejects the Carriers' argument that supervening events rendered SR Project expenditures prudent. Carriers cite testimony from Alyeska personnel that spare parts were difficult to find for the legacy equipment.<sup>251</sup> However, it is unclear what effort was made after SR Project sanction to stockpile sufficient spare parts for the legacy facilities. Only five years earlier, Alyeska staff stated that ample spare parts were available.<sup>252</sup> The record also contains evidence that Rolls-Royce and other companies are still supporting the Avon engines,<sup>253</sup> and that spare parts could be

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<sup>249</sup> Ex. SOA-63 at 2; Ex. SOA-121 at 2. In footnote 157 of their Brief on Exceptions, the Carriers claim that "labor shortages" were a "major factor" contributing to costs increases after AFE S020 Supplement 2. However, the Carriers' own documents still continue to identify correctives to the previously flawed cost estimates as the primary reason for the additional funding requests.

<sup>250</sup> As ConocoPhillips explained, the point forward economics "are positive in large part due to the sunk project costs and negative consequences of the cancellation/delay alternatives." Ex. SOA-218 at 12. (emphasis added).

<sup>251</sup> Carriers Brief on Exceptions at 156-157 (citing Ex. AT-429 at 48; Ex. AT-459 at 7; Ex. AT-432 at 19-20). Moreover, the Carriers cite to Tommy Turnipseed's particular testimony about "age-related fatigue" was in response to a question about 2004. Ex. AT-429 at 48. This is directly contrary to the other evidence in the record that the turbines functioning well during the 2003-2004 period. *E.g.*, Ex. SOA-473 at 1; Ex. SOA-21 at 1; Ex. SOA-282 at 1; Ex. ATC-19 at 109; Ex. ATC-147 at 22; Tr. 7980-7981; Ex. SOA-17 at 16; Ex. ATC-898 at 11-12.

<sup>252</sup> As recently as 2002, Alyeska personnel represented that spare parts were readily available. Ex. SOA-19.

<sup>253</sup> Tr. 8080; Tr. 5599.

purchased.<sup>254</sup> The record does not support Carriers' claim that they needed to replace the legacy equipment due to a lack of spare parts.<sup>255</sup>

82. The Commission also questions the Carriers' argument that by 2007 the Avon pumps were worn-out and breaking down. The Carriers concede that at the time they committed to the SR Project, the legacy equipment was expected to continue functioning reliably for the foreseeable future.<sup>256</sup> The Carriers' argument that three or four years later in 2007 the equipment became suddenly dysfunctional lacks credibility.<sup>257</sup> On the contrary, as late as 2009, the SR Project Team was contemplating cancelling electrification at pump station 1 and retaining the legacy equipment.<sup>258</sup>

83. The Commission also questions Carriers' claim that by 2007, the legacy Avon engines could not handle the decreased flow on TAPS. The Carriers rely upon witnesses, which, in some cases, lacked experience with oil pipeline turbines.<sup>259</sup> The Carriers also concede that "there was conflicting evidence on exactly the [flow level] at which the Avon turbines would cease to function reliably."<sup>260</sup> For example, in 2009, an Alyeska subject matter expert stated that the Avon turbines could be made to function at 150,000

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<sup>254</sup> Ex. SOA-595; Ex. SOA-597; Tr. 5599.

<sup>255</sup> In addition, the Carriers concede that two-thirds of Avon turbines remain in operation. Carriers Brief on Exceptions at 85 n.84 (Ex. ATC-763 at 1). If this representation is true, it is implausible that spare parts would not be available.

<sup>256</sup> Ex. SOA-19; Ex. ATC-20 at 22; Ex. SOA-473 at 1; Ex. SOA-21 at 1; Ex. SOA-282 at 1; Ex. ATC-19 at 109; Ex. ATC-147 at 22; Tr. 7980-7981; Ex. SOA-17 at 16; Ex. ATC-898 at 11-12.

<sup>257</sup> Carriers Brief on Exceptions at 156-57.

<sup>258</sup> Ex. SOA-574 at 4-5. This particular proposal was dismissed only because failure to finish electrification at pump station 1 would lead to a \$91 million write-off which could not be included in the tariff rate. *Id.*

<sup>259</sup> Although still relying upon his testimony, the Carriers do not attempt to rebut the Initial Decision's findings that Gilles Orioux was not credible because he lacked experience with turbines used in pipelines. Initial Decision, 146 FERC ¶ 63,019 at P 1368. As the Initial Decision noted, Mr. Orioux's testimony stated that his only experience with turbines was that he worked on a turbine used to power a "refrigeration" compressor, not a pipeline pump station. Ex. ATC-32 at 2.

<sup>260</sup> Carriers Brief on Exceptions at 157.

bpd, well below the current or anticipated future flow levels on TAPS.<sup>261</sup> In addition, Carrier witness John Scott testified that recirculation on the legacy equipment could have addressed issues associated with the declining throughput.<sup>262</sup> The Carriers have the burden to establish prudence, and “conflicting evidence” does not satisfy that burden.

84. Moreover, assuming *arguendo* that the legacy equipment would experience operational difficulties handling the declining TAPS throughput, this does not demonstrate that the SR Project was prudent. The Carriers had bound themselves to the SR Project in 2003 and early 2004 based upon poor planning and incomplete engineering. By the Carriers’ own account, this decision did not consider the lower throughput levels which were being projected by 2007.<sup>263</sup> Thus, by 2007, the Carriers were in no position to investigate possible superior alternatives to the SR Project for addressing the reduced throughput levels. Supervening events did not cure the Carriers’ imprudence.

#### **g. Conclusions**

85. The Commission finds that the Carriers imprudently authorized expenditures for the SR Project. To be prudent, the pipeline must act as a “reasonable manager,”<sup>264</sup> and a reasonable manager performs a meaningful evaluation of the costs and benefits prior to committing expenditures.<sup>265</sup> The record demonstrates that the Carriers’ decisions were not those of a “reasonable manager”<sup>266</sup> because, prior to sanction and subsequently as costs escalated, the Carriers should have known that their estimates of the costs and

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<sup>261</sup> Ex. SOA-559 (noting that Ayeska’s ability to operate the legacy pumps at low throughput levels had improved).

<sup>262</sup> Tr. 5642.

<sup>263</sup> As the Carriers concede the Initial Decision’s holding that AFE S420 cannot be used as the basis for a prudence analysis of the sanctioning decision. Carriers Brief on Exceptions at 156 (citing Initial Decision, 146 FERC ¶ 63,019 at P 1249). Carriers must also concede that the statements in AFE S420 are similarly not available to support the prudence of the authorizations in AFE S320 and AFE S920 because those requests were authorized *prior* to the submission of AFE S420 in December 2007.

<sup>264</sup> *New England Power Co.*, 31 FERC at 61,084.

<sup>265</sup> *Entergy Servs., Inc.*, 130 FERC ¶ 61,023, at P 52; *Iroquois*, 87 FERC at 62,170 (prudence inquiry involves comparing *ex ante* savings to *ex ante* costs).

<sup>266</sup> *New England Power Co.*, 31 FERC at 61,084.

benefits of the SR Project were inaccurate. As a result, the Carriers failed to perform a reasonable cost-benefit analysis.<sup>267</sup> As discussed above:

- (a) The Carriers received warnings from Larkspur that the AFE S020 SR Project cost estimates were unrealistic, and, when Larkspur requested a meeting after its second report, there is no evidence such a meeting occurred;
- (b) Internal company emails raised concerns regarding poor quality preliminary engineering and poor utilization of Alyeska expertise;
- (c) The Carriers mismanaged the SR Project, adopting an unnecessarily accelerated schedule that increased the risk of inaccurate preliminary engineering, and selecting an ill-prepared SR Project manager to oversee preliminary engineering;
- (d) Fundamental misconceptions regarding the complexity and character of the SR Project should have been readily apparent to the Carriers;
- (e) The Carriers' internal assessments concluded that they sanctioned the SR Project based upon "insufficient upfront planning" and "inadequate scope definition" that led to a cost estimate that was "never realistic or achievable;"
- (f) Moreover, once the errors in AFE S020 became apparent, incomplete engineering and undefined scope continued to plague the SR Project at AFE S020 Supplement 2 and thereafter; and
- (g) The Carriers proceeded with an inaccurate assessment of the SR Project personnel and maintenance savings.

The Carriers failed in their managerial responsibility to ensure reasonable planning and engineering prior to sanctioning the largest project on TAPS since the pipeline's construction. The Carriers' improvident management caused them to commit to the SR Project based upon an unrealistic cost estimate (which was a mere third of the final cost) and<sup>268</sup> and similarly unsubstantiated estimates of the benefits. Such improvident expenditures should not be borne by ratepayers.

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<sup>267</sup> *Entergy Servs., Inc.*, 130 FERC ¶ 61,023 at P 52 (2010); *Iroquois Gas Transmission Sys., L.P.*, 87 FERC at 62,170.

<sup>268</sup> The Commission's holding is based upon the conclusion that the Carriers had an obligation to weigh the cost of benefits of the SR Project and that the Carriers should have known that their cost benefit analysis was based upon flawed assumptions. Thus, (continued...)

86. The Commission's holding is the correct application of the prudence standard. The Commission rejects the Carriers' argument that an imprudence finding is inconsistent with the Carriers' managerial discretion.<sup>269</sup> The Commission acknowledges that the prudence standard allows regulated entities broad discretion in conducting their business affairs. However, as the Initial Decision concluded, "discretion is not limitless" and "a regulated utility must act in a reasonable manner."<sup>270</sup> The prudence standard does not empower the Carriers to impose hundreds of millions of dollars of costs upon ratepayers due to (a) insufficient planning, (b) incomplete engineering, and (c) poor management. The prudence standard exists to protect ratepayers from such improvident decisions.<sup>271</sup> The record demonstrates that the Carriers failed to prudently exercise their managerial discretion when sanctioning the SR Project.<sup>272</sup>

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the Commission does not affirm the Initial Decision's assertion that the booking of additional reserves by a BP affiliate tainted the Carriers' decision-making. *E.g.*, Carriers Brief on Exceptions at 55-56 (citing Initial Decision, 146 FERC ¶ 63,019 at P 912). BP could not have authorized the SR Project without the agreement of at least one other Carrier, and these additional reserves did not factor into the net present value analysis of Alyeska or any Carrier, including BP. *See, e.g.*, Ex. ATC-23 at 8-9 (stating that BP's net present value analysis of the SR Project did not assign a single dollar to the booking of additional reserves). Second, given that the Carriers are 95 percent of the throughput on TAPS, it is not plausible that they originally sanctioned the SR Project to inflate the rate base used to determine TAPS rates. Carriers Brief on Exceptions at 51 (citing Initial Decision, 146 FERC ¶ 63,019 at PP 1472, 1508). To the extent concern involving recovery in rate base affected Carriers' decisions, this would have been after there had already been significant SR Project sunk costs.

<sup>269</sup> Carriers Brief on Exceptions at 57-61. Carriers emphasize that under the prudence standard, "managers have broad discretion in conducting their business affairs." Carriers Brief on Exceptions at 8 (citing *Ky. Utils. Co.*, 62 FERC at 61,695).

<sup>270</sup> Initial Decision, 146 FERC ¶ 63,019 at P 1464.

<sup>271</sup> *New England Power Co.*, 31 FERC at 61,084.

<sup>272</sup> Along similar lines, the Carriers assert the prudence standard does not require them to evaluate every conceivable alternative. Carriers Brief on Exceptions at 66 (citing *Entergy Servs., Inc.*, 130 FERC ¶ 61,023 at P 57; *Dakota Gasification Co.*, 77 FERC 61,271, at 62,154 (1996)). However, the Commission's imprudence finding is based upon the Carriers' failure to evaluate the costs and benefits of the SR Project itself. In

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87. Likewise, the Commission rejects the assertions that this holding must be more specific when identifying the imprudent costs associated with the SR Project. The record raised serious doubts regarding the Carriers' decision to sanction the SR Project. Once those serious doubts were raised, it was the Carriers' burden of proof to establish which portion of SR Project expenditures, if any, were prudent.<sup>273</sup>

88. The Commission also rejects the Carriers' broad policy assertions that this holding will dissuade pipeline investment. Any prudence determination, including this one, is highly fact-specific and based upon the record and circumstances presented by a particular record.<sup>274</sup> The primary purpose of this project was to create a net cost savings.<sup>275</sup> Thus, the failure to thoroughly analyze the costs and savings likely to result from the project was imprudent. The Commission has carefully considered the particular specific facts of this proceeding, and the outcome of this proceeding is both dictated and circumscribed by its particular facts. Upon consideration of the arguments raised by the Carriers' brief on exceptions, the Commission affirms the Initial Decision's holding that the SR Project was imprudent.<sup>276</sup>

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addition, the inaccurate cost and estimates caused by poor planning and incomplete engineering made it impossible for the Carriers to conduct meaningful comparisons between the SR Project and any other viable alternatives.

<sup>273</sup> The Carriers' reliance upon *Union Electric* is misplaced. In that case the Presiding Judge specifically held that the sanctioning of the project in that proceeding was prudent given the facts the utility faced at that time, and, thus, the Presiding Judge proceeded to evaluate specific aspects of the project. *Union Electric*, 35 FERC ¶ 63,076, at 65,239 (1986). In this proceeding, the Commission has found that the decision to sanction the SR Project was imprudent, and, thus, it is appropriate to consider the project as a whole.

<sup>274</sup> *New England Power Co.*, 31 FERC ¶ 61,047 at 61,084.

<sup>275</sup> *E.g.*, Carriers Brief on Exceptions at 1-2. The SR Project neither increased capacity nor enabled access to new markets and supplies. The SR Project was not primarily intended to satisfy safety requirements or environmental regulations.

<sup>276</sup> The Carriers also claim that the Initial Decision contained several other errors which they did not address on exceptions. *Id.* at 75. The Commission accords no weight to such sweeping and unsubstantiated statements, and the Carriers have waived the right to challenge any determinations by the Initial Decision not raised in their brief on exceptions. 18 C.F.R. § 385.711(d)(2) (2015). The Carriers also raise broad criticisms of the Initial Decision's findings related to the credibility of its witnesses. Carriers Brief on Exceptions at 39-50. The Commission need only entertain such an assertion to the extent  
(continued...)

### 3. Prudence Remedies

#### a. Initial Decision

89. The Initial Decision held that all aspects of the SR Project were imprudent, including both sanction and execution.<sup>277</sup> However, the Initial Decision also concluded that it would permit the pipeline to recover some of the SR Project investment costs as a matter of equity.<sup>278</sup> Thus, the Initial Decision permitted Carriers to flow through rates the costs associated with SR AFE S020 and Supplement 1, a total of \$229.2 million.<sup>279</sup> The Initial Decision held that this sum was to be amortized over the remaining life of the pipeline and that the pipeline would not earn a rate of return on this sum during the period of amortization.<sup>280</sup>

#### b. Briefs on Exceptions

90. The Carriers do not challenge disallowance of \$153.6 million due to imprudent execution of the SR Project.<sup>281</sup> However, the Carriers advocate permitting recovery of \$421.5 million in rate base for the completed portions of the SR Project at pump stations 3, 4, and 9.<sup>282</sup> The Carriers state that the \$421 million is based upon estimates by Alaska witness Adams who estimated that the cost for pump stations 3, 4, and 9 would have been \$421.5 million had the project been “prudently *executed*.”<sup>283</sup> Claiming that they prudently sanctioned the SR Project but conceding a disallowance for imprudent

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it is tied to the specific facts and arguments raised by the Carriers Brief on Exceptions. To the extent that there were facts raised by the Carriers in pages 39-50 that are not otherwise addressed by this order, we are not relying upon those disputed facts.

<sup>277</sup> Initial Decision, 146 FERC ¶ 63,019 at PP 1451-1464.

<sup>278</sup> *Id.* PP 1458-1459.

<sup>279</sup> *Id.* P 1673.

<sup>280</sup> *Id.*

<sup>281</sup> Carriers Brief on Exceptions at 4 (citing Initial Decision, 146 FERC ¶ 63,019 at P 1461), 197.

<sup>282</sup> *Id.* at 201-203.

<sup>283</sup> *Id.* (citing Ex. SOA-275 at 157; Ex. SOA-546 at 14; Ex. SOA-398).

implementation, the Carriers now seek to recover \$421.5 million as opposed to the \$229 million awarded by the Initial Decision.

91. The Carriers assert that even if they were imprudent in sanctioning the SR Project, the project is nonetheless part of the system used to transport oil over TAPS today. The Carriers state that although the benefits provided to shippers have come at a higher cost than originally anticipated, this provides no basis for ignoring them.

92. The Carriers analogize to the Commission's abandonment policies, which they state permit regulated entities to recover half the costs of projects that are never completed.<sup>284</sup> In contrast to an abandoned project, the Carriers state that much of the SR Project has been completed, and the SR Project infrastructure is currently being used. The Carriers argue that it is arbitrary to base a disallowance of recovery "solely" on an early estimate of anticipated project costs.

93. The Carriers also assert that they should earn a "return on" the investment in the SR Project. The Carriers state that they are entitled to recover all their expenses, including a reasonable return on the capital invested in the SR Project.<sup>285</sup> The Carriers assert that the Initial Decision's statements that the allowed recovery related to the SR Project costs should be amortized implies that the Carriers would earn only a return "of" but not a return "on" their recoverable SR Project costs.

94. In contrast, Anadarko's brief on exceptions "welcomes complete affirmance of the Initial Decision."<sup>286</sup> Anadarko also acknowledges that the Initial Decision's chosen remedy was one that Anadarko itself proposed at hearing, and Anadarko states that it "certainly understands the Presiding Judge's rationale for adopting" this approach.<sup>287</sup> However, given that the Initial Decision states that the SR Project was imprudent and doesn't provide any "discernible benefit to ratepayers," Anadarko urges the Commission to consider eliminating altogether the recovery of SR Project capital costs.<sup>288</sup> Anadarko

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<sup>284</sup> *Id.* at 199 (citing *San Diego Gas & Elec. Co.*, 146 FERC ¶ 61,066, at P 2 (2014)).

<sup>285</sup> *Id.* at 205 (citing *Bluefield Waterworks & Improvement Co. v. Pub. Serv. Comm'n of W. Va.*, 262 U.S. 679, at 692-93 (1923); *FPC v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944); *NEPCO Mun. Rate Comm. v. FERC*, 668 F.2d 1327, 1335 (1981)).

<sup>286</sup> Anadarko Brief on Exceptions at 1.

<sup>287</sup> *Id.* at 7.

<sup>288</sup> *Id.*

also reiterates certain proposals that it advanced in its post-hearing briefs should the Commission decide to alter the Initial Decision's holding. Along similar lines, Trial Staff asserts that the Commission's remedial authority is at its zenith, and urges the Commission to consider all possible remedies, including reducing recovery for the SR Project to zero.<sup>289</sup>

**c. Briefs Opposing Exceptions**

95. Alaska and Anadarko urge the Commission to uphold the remedy directed by the Initial Decision, which would allow the Carriers to recover \$229 million amortized over thirty years. Alaska and Anadarko state that the cases involving abandoned projects are not relevant, because the Commission only permitted any recovery by the regulated entity if the project was prudent.<sup>290</sup> Similarly, they argue that the Carriers are only entitled to recover a return "on" prudently incurred costs. Because the SR Project was not prudent, they state that the Carriers have no legal entitlement to a return associated with the SR Project costs.

96. Alaska and Anadarko emphasize that the \$229.2 million permitted by the Initial Decision represents the estimates upon which the project was sanctioned plus the additional sums in AFE Supplement 1. Thus, they state that the Carriers cannot simply dismiss this sum as a mere early estimate. Anadarko states that the Carriers' characterization of the \$229.2 million as an "early estimate" is "tantamount to an admission that the Carriers were imprudent in sanctioning" the SR Project because they did so without a sufficiently well-developed cost estimate.<sup>291</sup>

97. Opposing Exceptions, the Carriers assert that there is no justification for reducing the SR Project recovery to zero. The Carriers assert that it is undisputed that the SR Project achieved automation of the control systems as one of its major components. They emphasize that the SR Project also replaced the original 1970s-vintage mainline pumping units and other station facilities with state-of-the-art equipment. The Carriers assert that even if they had not pursued electrification, there would have been costs for upgrades.

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<sup>289</sup> Alaska states that they do not challenge the Initial Decision's proposed remedy, but, Alaska states that if the Commission decides to alter the Initial Decision's remedy, the only reasonable alternative is to exclude all SR Project costs.

<sup>290</sup> Alaska Brief on Exceptions at 187 (citing *San Diego Gas & Elec. Co.*, 146 FERC ¶ 61,066 (2014)); Anadarko Brief on Exceptions at 187 (same).

<sup>291</sup> Anadarko Brief on Exceptions at 165.

**d. Discussion**

98. The Commission generally affirms the Initial Decision's remedy; however, the Commission will require the removal of all costs related to pump station 1. The Initial Decision's remedy was derived based upon cost estimates in AFE S020 and AFE S020 Supplement 1 which were to fund the entire SR Project, including pump station 1. However, pump station 1 had not entered into service prior to the end of the test period in this proceeding, and, thus, pump station 1 costs were not a part of the Carriers' proposed rates.<sup>292</sup> Accordingly, pump station 1 related costs should be removed from the Initial Decision's \$229 million remedy.

99. With this modification, the Commission affirms the Initial Decision's remedy. The Carriers have the burden to establish what portion, if any, of the SR Project costs should be recovered. Carriers have not demonstrated that they are entitled to recover any sums exceeding the remedy allowed by the Initial Decision. The Commission rejects Carriers' alternative proposed remedy of \$421.5 million. The Carriers based the \$421.5 million figure upon an assumption that the SR Project was "prudently sanctioned" but "imprudently executed." This is contrary to the Commission's determination affirming the Initial Decision, that the SR Project was imprudently sanctioned, not merely imprudently executed.

100. The Commission also rejects Carriers' argument that they should be permitted to recover 50 percent of the SR Project costs because the Commission has allowed a similar recovery for abandoned projects. The cases cited by the Carriers state that sharing between ratepayers and shareholders of the abandoned project is only permitted "should these costs be found to be *prudently* incurred."<sup>293</sup> In contrast to the abandonment cases cited by Carriers, the Commission has concluded that the Carriers acted imprudently when sanctioning the SR Project. The Carriers are not permitted to increase the Initial Decision's authorized amount in order to recover imprudently incurred costs.

101. Similarly, the Commission rejects the Carriers' argument that they should be permitted to earn a return on the SR Project costs. A pipeline is only entitled to recover a return on *prudently* incurred investments. Consistent with this principle, a just and reasonable remedy potentially *could be* derived that places a portion of the SR Project costs into rate base and allows the Carriers to earn a return on that sum. However, the Carriers have not demonstrated that the ultimate recovery from such a proposal would

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<sup>292</sup> See Tr. 542-43; 570-71; 579.

<sup>293</sup> *San Diego Gas & Elec. Co.*, 146 FERC ¶ 61,066 (2014) (emphasis added).

exceed the amortized recovery authorized by the Initial Decision.<sup>294</sup> Because the Carriers have not demonstrated that they are entitled to recovery exceeding the amount authorized by the Initial Decision, the Commission will not modify the Initial Decision's remedy other than as discussed herein.

102. Likewise, the Commission rejects the Carriers' assertions that the Initial Decision was not sufficiently specific when identifying costs associated with the SR Project for disallowance. A prudence inquiry may consider the investment decision as a whole, or the prudence inquiry may address particular facets of the investment. In this case, the record raised serious doubts regarding the SR Project as a whole. Once those serious doubts were raised, the Carriers had the burden of proof to establish the prudence of the full SR Project costs. The Carriers' Brief on Exceptions provides no basis for a recovery exceeding the sum authorized by the Initial Decision.

103. The Commission also denies Anadarko's and Trial Staff's exceptions. The Initial Decision's remedy was initially proposed by Anadarko, who now states on exceptions that it "would *welcome* complete affirmance" of the Initial Decision.<sup>295</sup> We reject the proposal to reduce the Carriers' recovery to zero; although difficult to quantify, we find it implausible that there are absolutely no benefits from the SR Project, which installed new equipment related to several aspects of the TAPS system. Anadarko and Trial Staff provide no reason to disturb the Initial Decision's holding.

104. Given the lack of more compelling alternatives from Carriers, Anadarko, and Trial Staff, the Commission upholds the Initial Decision's remedy as modified to remove pump station 1 costs. It is extraordinarily difficult to measure any benefit of the SR Project and to quantify a reasonable capital cost for those benefits. However, as the Initial Decision noted, the Carriers' imprudent cost projections in AFE S020 led the Carriers to sanction the SR Project and, given the particular facts in this record, there is equity in limiting the Carriers' recovery to those original estimates.<sup>296</sup>

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<sup>294</sup> This is particularly the case given that the Commission has held that the SR Project was initiated based upon flawed estimate of the SR Project's benefits as well as costs.

<sup>295</sup> Anadarko Brief on Exceptions at 1 (emphasis added).

<sup>296</sup> Because the initial cost estimate in AFE S020 allowed for a 15 percent variation, the inclusion of the additional costs in the relatively modest AFE S020 Supplement 1 is not inconsistent with the Initial Decision's overall reasoning.

**4. Future Carrier Filings to Recover for SR Project Upgrades Not Included in the Rates at Issue in This Proceeding**

**a. Initial Decision**

105. The Initial Decision also barred the Carriers from claiming in any future rate case SR Project upgrades, particularly related to pump station 1, which had not been completed and had not been incorporated into the proposed rates in this proceeding.<sup>297</sup>

**b. Briefs On Exceptions**

106. The Carriers argue that the Initial Decision erred by prohibiting future recovery of costs associated with the yet-to-be completed pump station 1 and other costs not included in the rates at issue in this proceeding.<sup>298</sup> The Carriers emphasize that because pump station 1 was not operational by the end of the adjustment period, the capital costs related to pump station 1 were not included in the rate base of the cost-of-service in this proceeding. The Carriers emphasize that costs cannot be challenged until they are included in rates.<sup>299</sup> The Carriers claim that the ID's assessment of the pump station 1 investment decision violates due process because the Carriers lacked notice that pump station 1 costs would be at issue in this proceeding. They also state that at pre-hearing conference, all parties agreed and the presiding judge stated that the Initial Decision would not cover any costs related to pump station 1.<sup>300</sup>

**c. Briefs Opposing Exceptions**

107. Supporting the Initial Decision, Trial Staff, Alaska, and Anadarko also argue that pump station 1 was an integral part of the SR Project, and, thus was fully litigated in this case.<sup>301</sup> Alaska and Anadarko argue that when the Initial Decision found the SR Project

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<sup>297</sup> Initial Decision, 146 FERC ¶ 63,019 at P 1458.

<sup>298</sup> Carriers Brief on Exceptions at 206 (citing Initial Decision, 146 FERC ¶ 63,019 at PP 4, 1380, 1458).

<sup>299</sup> *Id.* at 207 (citing *City of New Orleans v. FERC*, 67 F.3d 947 (D.C. Cir. 1995); *Duke Power Co.*, 46 FERC ¶ 61,315, at 61,962 (1989); *Minn. Power & Light Co.*, 43 FERC ¶ 61,104, at 61,343 (1988); *Monongahela Power Co.*, 39 FERC ¶ 61,350, at 62,095-96 (1987)).

<sup>300</sup> *Id.* at 208 (citing Tr. 542-43; 570-71; 579).

<sup>301</sup> Trial Staff Brief Opposing Exceptions at 174-175; Anadarko Brief Opposing Exceptions at 169-171; Alaska Brief Opposing Exceptions at 189.

as a whole was imprudent, this finding necessarily included expenditures associated with pump station 1.<sup>302</sup> Alaska and Trial Staff state that collateral estoppel should bar the Carriers from further litigating this issue.<sup>303</sup> Anadarko further noted that its five remedy options included pump station 1 on brief after the first hearing in this case, and the Carriers had the opportunity to submit subsequent testimony.<sup>304</sup> Anadarko further states that the Carriers did not track costs by pump station, further showing the stations could not be treated separately.<sup>305</sup>

**d. Discussion**

108. As discussed at length above, the Commission affirms the Initial Decision's conclusion that the SR Project was imprudent. Further, the Commission agrees that a finding that the SR Project was imprudent as a whole necessarily applies to the electrification at pump station 1. The Commission recognizes that the decision to go forward with the SR Project was made based on a consideration of the upgrades at all pump stations.

109. Nonetheless, the Commission finds that it is premature to address future filings related to pump station 1 costs. Here, all parties agreed that costs related to pump station 1 were not in the challenged rates because construction was still ongoing,<sup>306</sup> and the Commission has adjusted the Initial Decision's remedy accordingly. If the Carriers make a subsequent rate filing to recover pump station 1 costs, the Commission will address the appropriate recovery for pump station 1 costs at the time. Generally, the Commission has been reluctant to exclude imprudently incurred costs until they have been put into rates because the imprudence is not yet having an effect on customers and the speculative nature of the harm.<sup>307</sup> Similarly, Trial Staff, Alaska, and Anadarko's *res judicata*

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<sup>302</sup> *Id.*

<sup>303</sup> Alaska Brief Opposing Exceptions at 189; Trial Staff Brief Opposing Exceptions at 174-175.

<sup>304</sup> Anadarko Brief Opposing Exceptions at 170.

<sup>305</sup> *Id.* at 171 n.759 (citing Ex. SOA-546 at 9).

<sup>306</sup> *See* Tr. 542-43; 570-71; 579.

<sup>307</sup> *City of New Orleans, La. v. FERC*, 67 F.3d 947, 955 (D.C. Cir. 1995).

argument is also premature. Typically, the determination whether *res judicata* bars future litigation is made by the second proceeding examining an issue.<sup>308</sup>

### **III. Base and Test Period**

#### **A. The Initial Decision**

110. In this proceeding, for the 2009 rates, the base period runs from January 2008 through December 2008, and the 9-month adjustment period for test period changes is from January 2009 through September 2009. Thus, the entire 21-month base and adjustment period runs from January 2008 through to September 2009. For the 2010 rates, the base period is from January 2009 through December 2009, and the 9-month adjustment period for test period changes is from January 2010 through September 2010. Thus, the entire 21-month base and adjustment period runs from January 2009 through to September 2010.

111. For calculating the respective costs of service, the Initial Decision adopted actual data from the last 12 months of the 21-month base and adjustment period on the basis that it was the most recent and best available data.<sup>309</sup>

#### **B. Briefs On and Opposing Exceptions**

112. Carriers objected to the use of the actual cost data. They assert that the Commission must use the base period data and as appropriate make adjustments to individual cost-of-service item based upon changes to take place in the 9-month adjustment period.<sup>310</sup>

113. Trial Staff and Anadarko supported the Initial Decision's use of data from the last 12 months of the 21-month base and adjustment period.<sup>311</sup>

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<sup>308</sup> *Underwriters Nat'l Assurance Co. v. North Carolina Life & Accident & Health Ins. Guar. Ass'n*, 455 U.S. 691, 706–07, 709 n.16, 102 S. Ct. 1357, 1366–67, 1368 n.16, 71 L.Ed.2d 558, 571–72, 573 n.16 (1982); *see also Montana v. United States*, 440 U.S. 147, 153, 99 S. Ct. 970, 973, 59 L. Ed. 2d 210 (1979).

<sup>309</sup> Initial Decision, 146 FERC ¶ 63,019 at P 1617.

<sup>310</sup> Carriers Brief Opposing Exceptions at 232-36.

<sup>311</sup> Trial Staff Brief Opposing Exceptions at 187-189; Anadarko Brief Opposing Exceptions at 197.

### C. Commission Decision

114. The Commission affirms the Initial Decision's calculation of the test period data based upon the last 12 months of the 21-month base and adjustment period. The Initial Decision correctly concluded that this more recent data more accurately represents the pipeline's ongoing expenses.<sup>312</sup>

115. Carriers misinterpret Opinion No. 522 as requiring a different result. Carriers read Opinion No. 522 to require that a specific challenge be made to each individual cost-of-service item before actual data can be used.<sup>313</sup> This reading is too broad. In Opinion No. 522, the Commission did not use actual data from the last 12 months of the 21-month base and adjustment period because this data was not in the record.<sup>314</sup> Under those circumstances, the Commission determined that requiring new data to be filed after the hearing would be inefficient.<sup>315</sup> Here, all parties agree that the actual data for the last 12 months of the 21-month base and adjustment period is in the record. Thus, no similar inefficiency will result from using the actual data and Opinion No. 522's reasoning is inapplicable.

116. For the above reasons, the Commission affirms the Initial Decision's decision to use actual cost data in calculating the cost-of-service.

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<sup>312</sup> The Commission has regularly upheld similar conclusions. *See, e.g., SFPP, L.P.*, 134 FERC ¶ 61,121, at PP 27-28 (2011); *Kern River Gas Transmission Co.*, 117 FERC ¶ 61,077, at P 275 (2006); *High Island Offshore System, L.L.C.*, 110 FERC ¶ 61,043, at P 49 (2005); *Enbridge Pipelines*, 100 FERC ¶ 61,260, at P 315 (2002); *Trunkline Gas Co.*, 90 FERC ¶ 61,017, at 61,048-49 (2000); *Northwest Pipeline Corp.*, 87 FERC ¶ 61,266, 62,027, at 62,030 (1999); *Williston Basin Interstate Pipeline Co.*, 72 FERC ¶ 61,074, at 61,360 (1995).

<sup>313</sup> Carriers Brief Opposing Exceptions at 232-236.

<sup>314</sup> *SFPP, L.P.*, 140 FERC ¶ 61,220, at PP 16-19 (2012).

<sup>315</sup> *Id.*

#### IV. Ad Valorem Taxes

##### A. The Initial Decision

117. In May 2010, the Alaska Superior Court determined that Carriers underpaid their 2006 ad valorem taxes by \$113.4 million.<sup>316</sup> The Carriers included \$113.4 to recover these under paid taxes in their 2010 rates.<sup>317</sup> This decision was contested by Carriers until the matter was finally settled when the determinations were affirmed in 2014.<sup>318</sup>

118. The Initial Decision held that including 2006 supplemental ad valorem tax payment in the 2010 rates violated (1) the filed rate doctrine, (2) the rule against retroactive ratemaking, and (3) the intergenerational equity principle.<sup>319</sup> It noted “the rule against retroactive ratemaking prohibits the Commission from adjusting current rates to compensate for previous over- or under-recovery of costs in prior periods.”<sup>320</sup>

119. Further, the Initial Decision found that (1) the 2006 supplemental ad valorem taxes could not be included in the 2010 rates as known and measurable expenses,<sup>321</sup> and (2) the 2006 supplemental ad valorem tax payment could not be included in the 2010 rates as a recurring expense.<sup>322</sup>

##### B. Briefs On and Opposing Exceptions

120. Carriers contend that the Initial Decision improperly found that the 2006 supplemental ad valorem tax payment was impermissibly included in the 2010 rates.<sup>323</sup>

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<sup>316</sup> Initial Decision, 146 FERC ¶ 63,019 at P 1619. In October 2010, the Alaska Superior Court further determined the Carriers liability with interest was \$154 million. *Id.*

<sup>317</sup> *Id.*

<sup>318</sup> March 7, 2014 Errata to Initial Decision, 146 FERC ¶ 63,019; *BP Pipelines (Alaska) Inc. v. State Dep’t of Revenue*, Nos. S-14095, S-14116, S-14125, 2014 WL 685986, at 17 (Alaska, Feb. 19, 2014).

<sup>319</sup> Initial Decision, 146 FERC ¶ 63,019 at P 1653.

<sup>320</sup> *Id.* P 1622.

<sup>321</sup> *Id.* PP 1643-45.

<sup>322</sup> *Id.* P 1652.

<sup>323</sup> Carriers Brief Opposing Exceptions at 213-32.

Carriers suggest that the inclusion was appropriate because tax liability was incurred in the 9-month adjustment period ending on September 30, 2010 as a result of the May 2010 decision.<sup>324</sup> According to Carriers, the full costs of the 2006 ad valorem tax became known and measurable at that point notwithstanding the ongoing appeal.<sup>325</sup>

121. Carriers' brief goes on to state that (1) the filed rate doctrine does not apply because the 2010 shippers had notice of the supplemental ad valorem expenses in their rate filing,<sup>326</sup> (2) the rule against retroactive ratemaking is not implied because the liability and amount was not known until the May 2010 decision,<sup>327</sup> and (3) that the intergenerational equity principle is not implied because the customer profile is similar.<sup>328</sup>

122. With respect to the both the filed rate doctrine and the retroactive ratemaking doctrine, Carriers argue that this case is similar to those in the past where recovery has been allowed in the case of settlements.<sup>329</sup>

123. In the alternative, the Carriers' brief states that if the 2010 inclusion is not permitted then the Carriers should be entitled (1) to amortize the cost over time or (2) to include the tax as a surcharge.<sup>330</sup> They base this request on a line of cases permitting such relief in the case of extraordinary events.<sup>331</sup>

124. Koch adopted the Carriers' brief except with respect to the alternative remedies.<sup>332</sup> Koch argued that these remedies would not be equitable to it because it ceased providing

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<sup>324</sup> *Id.* at 215-216. The Carriers do not dispute that the correct base period for 2010 rates ran from January 1, 2009 to December 31, 2009, and the correct adjustment period ran from January 1, 2010 to September 31, 2010. *Id.* at 215.

<sup>325</sup> *Id.* at 216-19.

<sup>326</sup> *Id.* at 220-21.

<sup>327</sup> *Id.* at 221-27.

<sup>328</sup> *Id.* at 227-28.

<sup>329</sup> *Id.* at 222-23.

<sup>330</sup> *Id.* at 228-32.

<sup>331</sup> *Id.*

<sup>332</sup> Koch Alaska Pipeline Company, LLC's May 16, 2014 Separate Additional Brief on Exceptions to the Initial Decision at 1-24.

transportation service on TAPS as of August 1, 2012.<sup>333</sup> Thus, to be equitable to Koch, any remedy would need to have an amortization period ending before July 31, 2012.<sup>334</sup>

125. Alaska adopted the Carriers' exceptions regarding the ad valorem taxes.<sup>335</sup>

126. Flint Hills, Anadarko and Trial Staff each filed a brief supporting the ID on this issue.<sup>336</sup>

### C. Commission Decision

127. The Initial Decision correctly determined that the 2006 ad valorem taxes should be excluded from cost-of-service because the taxes were non-recurring. The 2010 cost-of-service is meant to project future costs. The payment of back-taxes from 2006 is a one-time expense that is non-recurring,<sup>337</sup> and does not reflect the pipeline's future ad valorem tax levels. Thus, these back-taxes should not have been included in the Carriers' cost-of-service projections.

128. Moreover, to the extent the Carriers argue that they are entitled to recover their specific 2006 tax liability in going forward 2010 rates, Carriers' recovery is barred because it violates the retroactive ratemaking doctrine. The rule against retroactive ratemaking prohibits the Commission from adjusting current rates to compensate for previous over- or under-recovery of costs in prior periods.<sup>338</sup> The Carriers' 2006 costs,

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<sup>333</sup> *Id.* at 22.

<sup>334</sup> *Id.*

<sup>335</sup> Alaska's July 25, 2014 Brief on Exceptions at 1.

<sup>336</sup> See Flint Hills Brief Opposing Exceptions; Anadarko Brief Opposing Exceptions at 172-97; Trial Staff Brief Opposing Exceptions at 176-184.

<sup>337</sup> See 18 C.F.R. § 346.2(a)(i)(2015).

<sup>338</sup> Initial Decision, 146 FERC ¶ 63,019 at P 1622; see also *Town of Norwood, Mass. v. FERC*, 53 F.3d 377, 381 (D.C. Cir. 1995) (The retroactive ratemaking doctrine prohibits the Commission from authorizing "a utility to adjust current rates to make up for past errors in projections. If a utility includes an estimate of certain costs in its rates and subsequently finds out that the estimate was too low, it cannot adjust *future* rates to 'recoup past losses.'" (emphasis in original)). See also *Pac. Gas & Elec. Co. v. FERC*, 373 F.3d 1315, 1320 (D.C. Cir. 2004) ("[F]ormer customers . . . have already paid the filed rate for this service. Therefore, any imposition of new costs based on these previous transactions is prohibited.").

including their 2006 ad valorem tax liability, were to be recovered in the rates effective at that time. The subsequent litigation regarding Carriers' 2006 ad valorem tax liability does not convert the 2006 ad valorem taxes into a cost which may be recovered in rates in a future period.<sup>339</sup>

129. Similarly, Carriers are not entitled to the requested alternative relief. Carriers cite cases related to various extraordinary events such as Hurricane Katrina and September 11, 2001 in which alternative relief was permitted.<sup>340</sup> The failure to accurately estimate taxes is not an extraordinary event. Moreover, the cases cited by the Carriers related to *future* costs, not a prior period tax liability.

## V. Litigation Expenses

### A. The Initial Decision

130. The Initial Decision found that the ongoing nature of the TAPS litigation warranted normalizing litigation expenses using the average litigation costs from 2007 to 2009 for the 2009 rate period and the average litigation costs from 2008 to 2010 for the 2010 rate period.<sup>341</sup> This results in \$5.4 million for the 2009 rate period and \$7.5 million for the 2010 rate period. The Initial Decision found this period to be most consistent with precedent.<sup>342</sup>

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<sup>339</sup> Precedent relating to take-or-pay settlements does not require a different result. The take-or-pay contracts were considered current costs because they either related to “future service, not past service” or to prepay “gas to be taken in the future.” *See Pub. Utilities Comm'n of State of Cal. v. FERC*, 988 F.2d 154, 157 (D.C. Cir. 1993). Here, by contrast, the costs are for 2006 tax liabilities related to a liability incurred in 2006 and were covered by the then existing rates.

<sup>340</sup> Carriers Brief on Exceptions at 230-231 (citing *Chevron Pipe Line Co.*, 115 FERC ¶ 61,117, at P 31 (2006)).

<sup>341</sup> Initial Decision, 146 FERC ¶ 63,019 at P 1658.

<sup>342</sup> *Id.* (citing *Williston Basin Interstate Pipeline Co.*, 84 FERC ¶ 61,081, at 61,364-66 (1998); *Tarpon Transmission Co.*, 58 FERC ¶ 61,354, at 62,183 (1992)).

## **B. Briefs On and Opposing Exceptions**

131. Carriers argue that adopting a three-year surcharge to recover litigation costs is the most equitable approach.<sup>343</sup> In the alternative, they request that the Commission use a four-year test period rather than the three-year period adopted by the Initial Decision.<sup>344</sup>

132. Trial Staff argues that the surcharge approach is inappropriate because surcharges are only used for good cause – such as efficiency gains – that are not present here.<sup>345</sup> They agree with the Initial Decision’s conclusion that a three-year normalization approach is appropriate.<sup>346</sup>

133. Anadarko Petroleum Corporation filed a brief supporting the Initial Decision on the basis that a surcharge should only be used in “unique circumstances.”<sup>347</sup>

## **C. Commission Decision**

134. The Commission reverses the Initial Decision and finds that the Carriers may recover their reasonable FERC litigation costs for this proceeding through a six-year surcharge. Carriers are entitled to their reasonably-incurred litigation costs.<sup>348</sup> Where unusually high litigation costs have been incurred through protracted litigation and significant uncertainty exists as to whether those litigation costs will continue into future years, “a surcharge based upon actual litigation costs provides an appropriate means to avoid both over-recovery and under-recovery.”<sup>349</sup> This proceeding involves large-scale

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<sup>343</sup> Carriers Brief on Exceptions at 238-39.

<sup>344</sup> *Id.* at 240-41.

<sup>345</sup> Trial Staff Brief Opposing Exceptions at 191-192.

<sup>346</sup> *Id.* at 192-193.

<sup>347</sup> See Anadarko Brief Opposing Exceptions at 198-199.

<sup>348</sup> *Iroquois Gas Transmission System, L.P. v FERC*, 145 F.3d 398, 403 (D.C. Cir. 1998).

<sup>349</sup> *SFPP, L.P.*, 134 FERC ¶ 61121, at PP 35-37 (2011). The Commission disagrees with the Trial Staff’s characterization of *SFPP, L.P.* as being solely concerned with “efficiency.” Trial Staff Brief Opposing Exceptions at 191-92. While avoiding unnecessary rate cases is efficient, *SFPP, L.P.* was unequivocal in its concerns about over- and under-recovery of costs. *SFPP, L.P.*, 134 FERC ¶ 61121 at PP 35-37.

and complex litigation initiated in 2009. Carriers' FERC litigation costs increased sharply following the initiation of this action.<sup>350</sup>

135. Arguments in favor of the three-year averaging of legal fees rather than a surcharge do not require a different result. While there is a tradition of using three-year averages for regulatory expenses, this tradition is rooted in a natural gas line of cases that used the three-year period based on a three-year filing requirement for rate cases.<sup>351</sup> Thus, while a three-year period is still used "in appropriate circumstances," the Commission has approved methods other than three-year averaging.<sup>352</sup> Further, looking at historical data to normalize costs is likely to consistently lead to the underestimation of costs.<sup>353</sup> By contrast, the danger of over-recovery is high if the data period includes peak litigation costs.

136. A six-year surcharge is more appropriate than the three-year charge suggested by Carriers. Typically, the time for the surcharge based on the length of the litigation at issue.<sup>354</sup> The present litigation has lasted six years to date and a six-year surcharge is appropriate.

137. For the above reasons, the Commission reverses the Initial Decision regarding litigation costs and Commission finds that Carriers may include a limited six-year surcharge to recover reasonable legal costs of the proceeding in Docket No. IS09-348-004, *et al.*, that have been incurred by the Carriers. The Carriers must include in their compliance filing the litigation costs they have incurred in this proceeding through their compliance filing and the amount of the surcharge to be charged. The surcharge may be

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<sup>350</sup> Recent FERC litigation expenses were represented as \$11,014,000 in 2005, \$14,283,000 in 2006, \$8,292,000 in 2007, \$2,860,000 in 2008, \$5,080,000 in 2009, *see* Ex. ATC-656 at 43, and \$14,500,000 for 2010; Initial Decision, 146 FERC ¶ 63,019 at P 1655 (citing Ex. S-3 at WP 7).

<sup>351</sup> *See, e.g., Williston Basin Interstate Pipeline Co.*, 84 FERC ¶ 61081, at 61365 (1998).

<sup>352</sup> *Id.*

<sup>353</sup> *Cf. SFPP*, 134 FERC ¶ 61,121 at PP 35-37 ("limiting a pipeline to 12-months of actual data in the base/adjustment period: (1) excludes significant expenditures associated with the costliest phase of the rate litigation, and (2) imposes a 12-month time period of relatively lower expenditures for determining litigation costs.").

<sup>354</sup> *SFPP*, 134 FERC ¶ 61,121 at PP 35-37.

updated to include any changes to the compliance filing required by the Commission and for related pleadings through the completion of the compliance phase.

## **VI. Oil-Spill-Related Cost of Service Issues**

### **A. Initial Decision**

138. For purposes of cost of service, the Initial Decision rejected approximately \$10,000,000 in expenses related to a May 2010 oil spill on the ground that they were nonrecurring expenses.<sup>355</sup> Further, the Initial Decision accepted an upward volume adjustment based on the time that the pipeline was shut down.<sup>356</sup>

### **B. Briefs On and Opposing Exceptions**

139. Carriers objected to the exclusion of these expenses on the basis that oil spills are routinely occurring recurring costs.<sup>357</sup> In the alternative, they argue that the Initial Decision improperly included upward volume adjustment for the time the pipeline was shut down due to the oil spill given that such oil spills are likely to recur.<sup>358</sup>

140. Trial Staff and Anadarko supported the Initial Decision's decision.<sup>359</sup>

### **C. Commission Decision**

141. The Commission affirms the Initial Decision's decision to exclude expenses related to the May 2010 oil spill from the cost of service and to include an upward volume adjustment based on the time that the pipeline was shut down.

142. Although minor oil spills may be included in rates as routine, the cost of high magnitude oil spills should be excluded from the cost of service calculations insofar as these are properly characterized as extraordinary, non-recurring items.<sup>360</sup> The regulated

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<sup>355</sup> Initial Decision, 146 FERC ¶ 63,019 at P 1618.

<sup>356</sup> *Id.*

<sup>357</sup> Carriers Brief Opposing Exceptions at 242-45.

<sup>358</sup> *Id.* at 245-247.

<sup>359</sup> Trial Staff Brief Opposing Exceptions at 194-199; Anadarko Brief Opposing Exceptions at 199.

<sup>360</sup> *See* 18 C.F.R. § 346.2(a)(i)(2015).

entity has the burden of proof. The Carriers provide no evidence as to the magnitude of more common oil spills in relation to the 2010's spill and whether this level of spill was extraordinary or likely to recur. Accordingly, we deny exception.<sup>361</sup>

143. Further, the Commission finds that the Initial Decision has correctly used an upward volume adjustment for TAPS throughput for the time the pipeline was shut down due to the 2010 oil spill. As discussed above, the Commission finds that Carriers failed to show the 2010 oil spill was a routine type of recurring event. Consequently, the Initial Decision's throughput adjustment is more likely to be representative of future throughput levels.<sup>362</sup>

144. For the above reasons, the Commission affirms Initial Decision's decisions with respect to the May 2010 oil spill.

The Commission orders:

(A) The exceptions to the Initial Decision are resolved as stated in the body of this order; to the extent an exception is not discussed, it should be considered denied.

(B) The Carriers shall file revised rates consistent with this order within 30 days after this order issues, including supporting cost of service, workpapers, and any other necessary documentation.

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<sup>361</sup> The Commission notes that the *Amerada Hess Pipeline Corp.*, 117 F.3d 596, 603 (D.C. Cir. 1997) decision relied upon by the parties is inapposite. That case involved a settlement term that incorporated a specific account from the Uniform Statement of Accounts into the settlement rates. The parties cite a similar settlement provision here, and absent such a settlement provision, the classification of a cost under accounting rules does not govern ratemaking. *Consolidated Gas Supply Corp.*, 14 FERC ¶ 61,029, *reh'g denied*, 14 FERC ¶ 61,246 (1981); *SFPP, L.P.*, Opinion No. 522-A, 150 FERC ¶ 61,097, at P 37 (2015).

<sup>362</sup> 18 C.F.R. § 346.2 (a)(ii)(2015).

(C) Comments on the compliance filing are due 45 days after this order issues, and reply comments are due 60 days after this order issues.

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.