RECENT DEVELOPMENT

OF SLIPPERY SLOPES AND PIGS: IMPACTS OF THE PRUDHOE BAY SHUT-IN

I. INTRODUCTION

In the spring of 2006, a leaky pipe led to a flood of problems for the world's third largest oil company. British Petroleum ("BP") owns a 26% interest in Alaska's Prudhoe Bay oil field and operates the property on behalf of itself and the other owners, ExxonMobil, Chevron, ConocoPhillips, and Forest Oil.[1] On March 2, 2006, more than 200,000 gallons of crude oil—"the largest spill" on record in the North Slope of Alaska—leaked from a corroded transit pipeline maintained by BP.[2] Following this disaster and the discovery of a second leak in its transit pipeline, BP partially shut-in production of the Prudhoe Bay field.[3] In both cases, the culprit was a dangerously corroded length of transmission pipe entrusted to the care of BP.[4]

Section I of this Recent Development explains the events leading to the March spill, the subsequent discovery of pipeline corrosion, and the gap, if any, between what BP was obligated to do and what it actually did to try to prevent this catastrophe. Section II considers the potential effects BP's curtailment of Prudhoe Bay crude production might have on domestic oil supply and whether or not some early forecasts of doom and gloom are accurate assessments of the supply picture or simply hyperbole.[5]

1. Wesley Loy & Richard Mauer, *Prudhoe Bay: Prudhoe Owners Face Subpoenas*, ANCHORAGE DAILY NEWS, Aug. 19, 2006, at A1, *available at* http://dwb.adn.com/money/industries/oil/prudhoe/story/8096656p-7989108c.html.

2. *Alaska Oil Spill Was Largest Ever on North Slope*, MSNBC, Mar. 10, 2006, http://www.msnbc.msn.com/id/11743346/.

3. Loy & Mauer, *supra* note 1; *see also* ENERGY INFO. ADMIN., EIA REPORT ON ALASKA PRUDHOE BAY CRUDE OIL SHUT-IN, http://tonto.eia.doe.gov/oog/special/eia_sr_alaska.html (last visited Mar. 10, 2008).

4. *See BP Denies Rigging Pipeline Data*, GREENWIRE, Aug. 22, 2006, *available in* LEXIS, News & Business Library, Environment File [hereinafter GREENWIRE].

5. *See id.* (quoting Matthew Simmons, chairman of energy investment bank Simmons & Co. International in Houston, saying "[w]e'll look back on this event as the Pearl Harbor Day in energy").

II. BRIEF HISTORY OF BP'S PRUDHOE BAY OPERATIONS

BP's involvement on Alaska's North Slope dates back to the late 1950s and the aftermath of the Suez Canal Crisis.[6] BP, Sinclair (later ARCO), and Standard Oil of New Jersey (later Exxon) engaged for some years in tentative exploration activities in frigid northern Alaska.[7] Christmas came one day later than expected for the as-yet unlucky explorers because, on December 26, 1976, ARCO's Prudhoe Bay State Number 1 wildcat well became a bona fide gusher.[8] The surprise of the discovery is best summarized in the words of ARCO Chief Robert O. Anderson: "It was more [of] a decision not to cancel a well already scheduled than to go ahead."[9] Estimates at the time hovered around ten billion barrels for the entire Prudhoe Bay formation.[10]

Production began in earnest a decade later, following several setbacks owed in equal parts to an unforgiving Arctic climate and a hotly contested regulatory procedure, as well as the construction of the revolutionary 749 mile long, forty-eight inch Trans-Alaska Pipeline System, which delivered the oil from Prudhoe Bay to terminals at the port of Valdez, Alaska.[11] By 1999, BP operated thirteen separate North Slope oil fields including Prudhoe Bay,[12] which produced approximately 400,000 barrels of oil per day ("bpd").[13]

Federal law requires that pipeline operators adhere to a rigorous reporting and maintenance program.[14] However, "gathering lines," including the section of pipeline blamed for the Prudhoe Bay incident, are exempt from this regulation.[15] Further, there is an exemption for "rural" pipelines located away from population centers and commercially navigable waters.[16] Alaska state law requires that operators maintain their pipelines in an "adequate, efficient, and safe" manner and also provides for

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6. DANIEL YERGIN, THE PRIZE: THE EPIC QUEST FOR OIL, MONEY, & POWER 569 (1991).

7. *Id.* at 570.

8. *Id.* at 571.

9. *Id*.

10. Mary Pemberton, *Major Alaska Oil Field Shut Down*, ASSOCIATED PRESS, Aug. 7, 2006 [hereinafter *Major Alaska Oil Field Shut Down*].

11. YERGIN, *supra* note 6, at 572; Alexander J. Black, *Legal Principles Surrounding the New Canadian and American Arctic Energy Debate*, 23 ENERGY L.J. 81, 83 (2002).

12. BP, Alaska: A Business as Big as the State, http://www.bp.com/sectiongenericarticle.do?categoryId=9004517&contentId=7009038 (last visited Mar. 10, 2008).

13. Loy & Mauer, *supra* note 1 (noting that "Prudhoe produces an average of 400,000 barrels of crude per day, or almost 8 percent of U.S. production"); *see* Press Release, BP, BP to Shutdown Prudhoe Bay Oil Field (Aug. 7, 2006), http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7020563 [hereinafter BP to Shutdown Prudhoe Bay Oil Field].

14. *See generally* 49 C.F.R. § 195 (2006). The regulation explicitly includes petroleum as a hazardous liquid. *Id.*

15. *Id.* § 195.2.

16. *See id.* § 195.1.

remedial action in the event that a carrier is found to have unreasonably failed to uphold its obligations.[17] Following the March spill, Alaska issued subpoenas to BP and, later, to the rest of the Prudhoe Bay operation.[18] Unfortunately, this measure came too late to prevent the release of over 200,000 gallons of crude onto the Alaskan tundra.[19]

Though BP may not have been under any legal requirements to maintain its pipelines in a specific manner, it could have instituted better preventative measures. "Smart-pigging" sections of pipe in Prudhoe Bay represents one maintenance option BP could have employed. Smart pigs are devices placed into a pipeline to measure the thickness of the wall of the pipe and produce a record of its measurements.[20] The smart pigging process is useful for detecting areas of the pipe where the wall of the pipe has thinned and weakened due to corrosion.[21] However, BP neglected to perform pig maintenance on at least some portion of its transit lines for "several years."[22] Around the time of the shut-in, BP had pigged 40% of its twenty-two mile Prudhoe Bay pipeline complex.[23]

Another preventative option, one less disruptive than pigging, is the periodic injection of anticorrosive chemicals into the pipeline.[24] Although chemical injection seemed to be a part of BP's routine maintenance process, former BP employees now allege that the company deliberately curtailed anticorrosive chemical injections in the Alaskan pipeline systems in order to cut costs.[25]

The immediate environmental result of BP's pipeline maintenance practices is well-known: 267,000 gallons of oil escaped the confinement of a pipeline and flowed directly onto Alaskan soil.[26] The legal response from both federal and state authorities appeared swift and severe. Grand juries convened; Congress probed;[27] and the company itself began a rigorous

17. ALASKA STAT. § 42.06.310 (2006).

18. *See* Loy & Mauer, *supra* note 1.

19. *See id.*

20. Paul Biancardi, *From "Command and Control" to Risk Management: The Evolution of the Federal Natural Gas Pipeline Safety Program*, 16 ENERGY L.J. 461, 489 n.89 (1995).

21. *See* Mary Pemberton, *BP Increases Production at Prudhoe*, ASSOCIATED PRESS, Sept. 26, 2006 [hereinafter *BP Increases Production at Prudhoe*]; *see also* Deborah Schoch, *Pipeline Experts Probe BP Spill*, L.A. TIMES, Sept. 14, 2006, at B5.

22. Loy & Mauer, *supra* note 1.

23. BP to Shutdown Prudhoe Bay Oil Field, *supra* note 13.

24. *See* DR. A.K. SAMONT, OIL AND NATURAL GAS CORP. LTD, CORROSION PROBLEMS IN OIL INDUSTRY NEED MORE ATTENTION (2003), http://www.ongcindia.com/techpaper1.asp?fold=techpaper&file=techpaper7.txt.

25. GREENWIRE, *supra* note 4.

26. *Major Alaska Oil Field Shut Down*, *supra* note 10.

27. *See* Megan Baldino, *BP Faces New Charges in Corrosion*, KTUU.COM, Feb. 7, 2007, http://www.ktuu.com/Global/story.asp?S=6042880 (describing allegations that former head of pipeline maintenance, Richard Woolam, was compensated by the company for money saved by cutting corners on corrosion prevention); *see also* Robert Campbell, *BP Faulty in Alaska's Biggest Oil Spill*, REUTERS, Mar. 6, 2007, http://www.alertnet.org/thenews/newsdesk/N06370463.htm (noting that "[v]arious state

internal audit and policy revision.[28] BP executives revealed a number of unpleasant facts regarding their pipeline maintenance program and the havoc wrought thereupon by company cost-cutting measures during Congressional hearings in May 2006.[29] A ranking member of the House Energy and Commerce Subcommittee juxtaposed BP's profits with the apparently budget-driven decisions made by BP officials to curtail pipeline safety practices.[30] Though perhaps made in a dramatic fashion, the Congressman's point was clear: BP took enormous safety risks on the North Slope in order to save money.

For many regulators, the immediate regulatory response, composed primarily of multiple grand jury inquiries into BP's allegedly criminal failure to maintain safe transit lines on Alaska's North Slope, seemed promising.[31] However, by May of 2007, some regulators were beginning to question the progress that the criminal probes were making.[32] U.S. Representative Charlie Melancon remarked that "[t]here were no fines, no penalties, and as a matter of fact, it almost sounded like, poof, it went away."[33] Following Representative Melancon's assessment, it may be overly optimistic to characterize the criminal inquiry into the 2006 spill as simply "in limbo." On the other hand, the immediate economic impacts of the spill and the ensuing production shut-in likely exceeded expectations.

III. IMPACT OF PRODUCTION INTERRUPTION ON OIL SUPPLY

Immediately following the discovery of a second leak on August 6, 2006, BP called a temporary halt to crude oil production in Prudhoe Bay that effectively prevented around 400,000 bpd from reaching distribution terminals in Valdez.[34] A week later, BP restored production and transportation in unaffected areas of Prudhoe Bay to a volume of 150,000 bpd with an eventual partial production target of 200,000 bpd.[35] On a normal production basis, Prudhoe Bay accounts for about 8% of U.S. crude oil production.[36] Simple arithmetic based on BP's cutback figures yields an

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and federal civil and criminal investigations have so far not led to any fines or charges against BP").

28. *See* Jeanette Lee, *BP Ombudsman to Probe Allegations About Poor Maintenance of Prudhoe Bay Pipeline*, CANADIAN PRESS, Feb. 7, 2007 (on file with author).

29. BP President Bob Malone "added that budget issues 'impacted our culture,' noting that safety and corrosion avoidance had not been given significant priorities." Kate Schuler, *House Committee Criticizes BP Over Prudhoe Bay Spill*, CONG. DAILY, May 17, 2006.

30. *Id.*

31. *See generally* Elizabeth Bluemink, *Prudhoe Probe Includes Conoco*, ANCHORAGE DAILY NEWS, Mar. 18, 2007, at A1 (describing the federal grand jury's extensive use of the subpoena to obtain information regarding BP and partner Conoco's Trans-Alaskan Pipeline maintenance programs).

32. David Greising, *BP Accused of 'Whitewash,'* CHICAGO TRIBUNE, May 17, 2007, at C2.

33. *Id*.

34. BP to Shutdown Prudhoe Bay Oil Field, *supra* note 13.

35. Press Release, BP, Prudhoe Bay Alaska Update (Aug. 12, 2006), http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7020798.

36. Alaska Statewide Library Electronic Doorway, Frequently Asked Questions About Alaska:

overall production decrease of 4% in domestic crude oil supply for the affected period.[37]

The cutback announcements were controversial; some industry commentators went so far as to characterize BP's shut-in as the "Pearl Harbor in energy."[38] Fortunately for the energy consuming public, BP's eastern Prudhoe Bay regional production lagged but was not entirely curtailed.[39] Furthermore, the Pipeline and Hazardous Materials Safety Administration agreed to allow BP to begin flowing crude through the previously shut-in eastern Prudhoe Bay pipeline for testing in late September 2006.[40] Following successful tests, BP is gradually bringing the east side complex to full capacity. By the end of September 2006, BP expected production rates of 150,000 bpd, a recovery of 75% of the production lost since August 6 when the field was originally shut-in.[41]

The possible lessons learned from this affair are numerous, but the most obvious recalls an old adage: an ounce of prevention is worth a pound of cure. Had BP been more diligent in its pipeline maintenance and voluntarily policed its transportation network, the March spill likely could have been avoided. Adequately maintained pipelines decrease the frequency of unplanned or required shut-ins. Though oil production may be on the decline, Alaska's North Slope retains its place as a central piece in the United States' crude oil puzzle.[42] While a 4% production cut is never desirable, it is especially problematic in a region that extensively depends on continuous crude oil extraction.[43]

Luckily, the production interruption is slowly easing and freshly-inspected lines are beginning to flow again.[44] With the gradual return to normalcy, BP must not forget the lesson the 2006 Prudhoe Bay shut-in provides: never neglect your pigs.

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Trans Alaska Pipeline History, http://sled.alaska.edu/akfaq/aktaps.html (last visited Mar. 10, 2008).

37. *See* Loy & Mauer, *supra* note 1.

38. *See* GREENWIRE, *supra* note 4.

39. *See BP Increases Production at Prudhoe*, *supra* note 21.

40. Press Release, U.S. Dep't of Transp., U.S. DOT Allows BP to Restart North Slope Pipeline for Cleaning and Testing (Sept. 22, 2006), http://www.dot.gov/ affairs/phmsa0906.htm. The pipeline in question is an important component of eastern region production in the North Slope, and without it, the volume of hydrocarbons produced and delivered to the pipeline system may be substantially but not entirely interrupted.

41. *See BP Increases Production at Prudhoe*, *supra* note 21.

42. ENERGY INFO. ADMIN., EIA REPORT ON ALASKA PRUDHOE BAY CRUDE OIL SHUT-IN, http://tonto.eia.doe.gov/oog/special/eia_sr_alaska.html (last visited Mar. 10, 2008); *see also* ALA. DEP'T OF REVENUE, CRUDE OIL PRODUCTION-HISTORY (2007), *available at* www.tax.state.ak.us/ sourcesbook/AlaskaProduction.pdf (listing annual production figures in bpd, including projections of future production).

43. *See* BP, *supra* note 12.

44. Press Release, U.S. Dep't of Transp. Office of Pub. Affairs, *supra* note 40.