IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

THIRD JUDICIAL DISTRICT AT ANCHORAGE

THE STATE OF ALASKA, Plaintiff, v. BP EXPLORATION (ALASKA) INC., a Delaware Corporation, Defendant.	Case No. 3AN-09- __________CI

COMPLAINT FOR COMPENSATORY AND PUNITIVE DAMAGES, CIVIL PENALTIES UNDER AS 46.03.759, CIVIL ASSESSMENTS UNDER AS 46.03.760, AND OTHER APPROPRIATE RELIEF

Plaintiff, by and through its attorneys, the State of Alaska Department of Law and K&L Gates LLP, brings this action and states as follows:

THE PARTIES

1. The State of Alaska (the "State" or "Plaintiff") is a sovereign state of the United States. The State of Alaska appears on its own behalf as the owner of lands, waters and resources of the State, on behalf of its administrative departments and agencies including its Departments of Natural Resources and Environmental Conservation, and as *parens patriae* and public trustee for the citizens of the State of all lands, waters and resources within the jurisdictional boundaries of the State. The Department of Natural Resources ("DNR") administers State public lands; issues and administers State oil and gas leases on State lands; and performs other duties and responsibilities prescribed by Title 38.

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The Department of Environmental Conservation ("DEC") administers the State's environmental laws, including the Alaska Environmental Conservation Act (AS 46.03), the Oil and Hazardous Substance Pollution Control statutes (AS 46.04), and other pertinent provisions of Titles 44 and 46 regarding Defendant's oil and gas production activities in Alaska.

2. Defendant BP Exploration (Alaska), Inc. ("BPXA" or "Defendant") is a Delaware corporation that maintains its principal place of business in Alaska, where it has its headquarters, and where it engages in extensive oil and gas production activities on State lands pursuant to oil and gas leases. BPXA is a wholly owned subsidiary of BP America, Inc. BP America, Inc. is a wholly owned subsidiary of BP, p.l.c.

JURISDICTION AND VENUE

3. This is a civil action for compensatory and punitive damages as well as for statutory assessments, penalties, costs and other remedies for losses incurred by Plaintiff as a result of wrongful discharges of crude oil from oil transit pipelines operated by the Defendant within the Prudhoe Bay Unit ("PBU") on Alaska's North Slope, and wrongful corrosion monitoring and control practices engaged in by Defendant.

4. The superior court has jurisdiction over this matter pursuant to AS 22.10.020(a) and AS 22.15.030(a) because it involves claims for damages and penalties in excess of the jurisdictional minimum of $100,000.

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5. Personal jurisdiction is proper under AS 09.05.015 and the common law because Defendant is headquartered in Alaska, is engaged in substantial oil and gas production activities in Alaska, and because the events which give rise to the lawsuit occurred in Alaska.

6. Venue is proper in the Third Judicial District pursuant to AS 22.10.030 and Alaska Rule of Civil Procedure 3(c) because Defendant is headquartered in, and otherwise is present and doing business in, the Third Judicial District.

FACTS REGARDING OIL SPILLS, CORROSION PRACTICES, AND RESULTING IMPACTS ON PIPELINES AND PRODUCTION

General Background

7. The Prudhoe Bay oil field was discovered in 1968 by the Atlantic Richfield Company ("ARCO"). It is located on State lands and has been developed by BPXA and other North Slope producers pursuant to State oil and gas leases.

8. The State oil and gas leases were unitized (*i.e.*, the PBU was established) in April 1977 with the execution of the Prudhoe Bay Unit Agreement ("PBUA") by the State and the PBU working interest owners ("WIOs"). Commercial production from the PBU began in June 1977 with the start up of the Trans Alaska Pipeline System ("TAPS") which transports oil and natural gas liquids ("NGLs") produced from the PBU and other fields on the Alaska North Slope ("ANS") to Valdez, Alaska.

9. The PBU was divided into an Eastern Operating Area ("EOA") and a Western Operating Area ("WOA") for management purposes. Pursuant to the terms of the

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PBUA, Defendant BPXA was authorized by the State to operate the WOA on behalf of all of the PBU WIOs. ARCO Alaska, Inc. was authorized by the State to operate the EOA on behalf of all of the PBU WIOs. The relationship between each operator and the nonoperating WIOs is set forth in the Prudhoe Bay Unit Operating Agreement ("PBUOA") which was also executed in April 1977.

10. In April 2000, the three principal WIOs (BPXA, ARCO Alaska, Inc., and ExxonMobil Corporation) executed the Prudhoe Bay Unit Alignment Agreement in which the parties agreed to align their proportional interests in the oil and gas reservoirs subject to development within the PBU. The WIOs also agreed that BPXA would become the sole operator of the PBU. BPXA has continued to act as sole operator since 2000.

11. In 2000, ARCO merged with BP Amoco p.l.c. and ARCO's Alaska assets were sold to Phillips Petroleum Company pursuant to a divestiture order of the Federal Trade Commission. Phillips Petroleum Company eventually merged with Conoco, Inc. and therefore, the name of the current subsidiary corporation holding the Alaska assets is ConocoPhillips Alaska, Inc.

12. At all times relevant during 2006, BPXA held a 26.36% working interest in the PBU leases. The other working interest owners of the PBU and their respective ownership interests during 2006 were Exxon Mobil Corporation (36.39%), ConocoPhillips Alaska, Inc. (36.07%), Chevron U.S.A Inc. (1.16%), and Forest Oil Corporation (0.02%).

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13. WOA and EOA operations are focused primarily on the development of the Permo-Triassic oil and gas reservoirs. Each operating area has similar facilities and parallel operations.

14. In the WOA, three-phase pipelines bring oil mixed with gas and water from various well pads to gathering centers where the impurities are separated and removed and processed crude oil is injected into an oil transit line ("OTL"). The OTL transports processed crude oil to Skid 50 for tender into Pump Station 1 of TAPS ("PS 1"). Skid 50 is a facility where the processed crude oil from the WOA and EOA OTLs is blended together for transport to PS 1 through another OTL segment. At the time of the 2006 oil spills, the entire WOA OTL was approximately 7.9 miles long from Gathering Center 2 to Skid 50, and was constructed of 34-inch nominal diameter, 0.375-inch wall thickness pipe manufactured between 1975 and 1977. *See* Attachment A to this Complaint (pipeline schematics). In addition to processed crude oil from the PBU itself, the WOA OTL also carries processed crude oil produced from PBU satellite fields known as Aurora, Borealis, Orion, Polaris and Midnight Sun.

15. In the EOA, three-phase pipelines bring oil mixed with gas and water from various drill sites to flow stations where the impurities are separated and removed and processed crude oil is injected into an OTL. A well pad and a drill site are functionally equivalent. They are referred to by different names only because BPXA, as the original WOA operator, used the term "well pad," and ARCO Alaska, Inc., the original EOA

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operator, used the term “drill site.” Similarly, a flow station (“FS”) and a gathering center (“GC”) are functionally equivalent. They are referred to by different names only because BPXA, as the original WOA operator, used the latter term (GC) and ARCO Alaska, Inc., the original EOA operator, used the former term (FS).

16. The EOA OTL transports processed crude oil from the flow stations to Skid 50 for tender into PS 1. At the time of the 2006 oil spills, the entire EOA OTL was approximately 7.9 miles long from FS 2 to Skid 50. *See* Attachment A. Unlike the WOA OTL, which was one long pipeline, the EOA OTL consisted of two distinct pipeline segments. The FS 2-FS 1 segment of 30-inch nominal diameter pipe was the furthest upstream portion of the EOA OTL, and extended approximately three miles. The next segment (from FS 2 to Skid 50) was 4.9 miles long and was constructed of 34" nominal diameter pipe. Both segments were constructed with 0.344-inch wall thickness pipe manufactured between 1976 and 1979.

17. The Lisburne, and a portion of the Point McIntyre oil and gas reservoirs are also developed as part of the PBU through separate drilling and production operations located generally in the northeast section of the PBU. Three-phase common lines deliver crude oil mixed with gas and water from various drill sites to the Lisburne Production Center (“LPC”) where the impurities are separated and removed, and processed crude oil is injected into a separate LPC OTL. This OTL transports the processed crude oil directly to PS 1. *See* Attachment A.

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18. The Milne Point Unit ("MPU") is also located on State lands and is comprised of State oil and gas leases. The Milne Point Unit Agreement was executed in 1979. The boundary of the MPU touches the northwestern edge of the PBU.

19. During 2006, BPXA owned virtually 100% of the working interests in the MPU leases. From 2006 through the present, BPXA has served as the sole operator of the MPU.

20. Operations in the MPU include wells tapping into the Kuparuk formation that are drilled from a well pad known as K-Pad and wells tapping into the Schrader Bluff pool that are drilled from a well pad known as S-Pad. Production of oil mixed with gas and water moves from these well pads to a Milne Point Central Processing Facility ("CPF") via three phase flow lines. *See* Attachment A.

21. BPXA also has extensive holdings on the North Slope in addition to its interests in the PBU and the MPU. For example, BPXA is the operator for the Endicott oil field where it owns approximately 68% of the working interest. BPXA is also a working interest owner in the Kuparuk River Unit (where BPXA holds approximately a 39% interest) and other fields operated by ConocoPhillips Alaska, Inc.

22. BPXA's affiliate, BP Pipelines (Alaska), Inc., owns 46.93% of TAPS, 38% of the Kuparuk Transportation Co., 68% of the Endicott Pipeline Co., 100% of the Milne Point Pipeline LLC, 99% of the Northstar Pipeline System, and 100% of the Badami Pipeline System.

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The March 2, 2006 Oil Spill in the WOA

23. On March 2, 2006 at 5:30 a.m., a BPXA employee noticed a hydrocarbon smell and, upon investigation, discovered an oil spill at approximately Mile 1.0 between GC 2 and GC 1 from a segment of the WOA OTL known as OT-21. BPXA has admitted that oil had been spilling from the OT-21 segment of the WOA OTL for five days before the oil spill was discovered.

24. Pursuant to AS 46.04.200 and other law, an incident command system was established to respond to the oil spill. This incident command system, known as the Unified Command, consisted of the United States Environmental Protection Agency as the federal on-scene coordinator, DEC as the state on-scene coordinator, and BPXA as the "person responsible for the discharge."

25. After completion of the spill response and oil recovery operations, the Unified Command determined that the final volume of crude oil discharged from OT-21 was 212,252 gallons.

26. The oil spilled over approximately two acres of tundra and a frozen lake known as the Q-Pad Lake. *See* Attachment B to this Complaint (spill area during clean up). The oil spill was the largest in the history of ANS oil and gas production operations. In May 2006, when the ice on Q-Pad Lake melted, EPA representatives observed and collected samples from several oil sheens on the lake.

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27. The immediate point of failure was determined to be a hole in the pipeline approximately the size of an almond, in an underground section of pipe seventeen feet from the downstream edge of a pipe casing at a "caribou crossing." A caribou crossing is a section of a pipeline that runs through an underground culvert, with a drop in elevation at the upstream end, and a rise in elevation at the downstream end.

28. Low spots in a pipeline (such as occur at caribou crossings) are well known as potential locations of internal corrosion problems because sediment and water settle at these locations. Sediment and water inside pipelines create an environment where corrosion occurs because they allow bacteria to exist. When too much sediment builds up, it forms an environment in which acid producing bacteria can corrode all the way through the pipe, undisturbed by the flow of oil in the pipe or the addition of chemicals intended to protect the pipe from corrosion. This process, referred to as Microbial Induced Corrosion ("MIC"), was the primary cause of the corrosion in the WOA OTL (as well as in the EOA OTL).

29. BPXA's post-spill inspections revealed at least twenty-five locations on the OT-21 segment of the WOA OTL which failed BPXA's pipeline fitness for service criteria, in addition to the original hole from which the oil leaked. At these locations, the wall thickness of the pipeline had been so corroded by MIC that the WOA OTL was not suitable for further operation without repair.

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30. Prior to the March 2006 oil spill, the WOA OTL had not been "smart" or "maintenance" pigged since 1998. A "smart pig" is a high-resolution magnetic flux leakage tool that measures wall thickness as it travels through the length of a pipeline. It is the most effective and commonly used method for examining the thickness of the entire wall of a pipeline along its full length. A "maintenance pig" is primarily a scraping and brushing tool that is used to clean the interior walls of a pipeline of wax, scale, rust and other debris and to remove sediment accumulation and stagnant water as it travels through the length of a pipeline. It is the only effective method for removing sediment accumulations and it typically is used on a periodic basis in pipelines that have substantial risks of sediment deposits.

31. While BPXA had performed ultrasonic testing ("UT") of various portions of the WOA OTL since 1998, no UT inspection data existed for the section of the OTL that leaked. A UT inspection consists of a snapshot of a single one-foot section of pipe. The 1998 smart pig run had indicated a 9% wall loss in the approximate area where the 2006 leak occurred as well as three other locations at 30-40% (which had progressed to 80-90% by 2006).

The August 6, 2006 Oil Spill in the EOA

32. In the aftermath of the March 2006 oil spill from the WOA OTL, BPXA asserted that it was confident that its other OTLs were fit for continued operation. However, as a result of the March spill, BPXA was ordered by the US Department of

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Transportation Pipeline and Hazardous Materials Safety Administration ("PHMSA") to smart pig the entire WOA and EOA OTL systems.

33. Although the WOA OTL had been maintenance and smart pigged in 1998, the EOA OTL had not been maintenance pigged since 1990 and had never been pigged by BPXA. While ARCO Alaska, Inc. had attempted to smart pig the EOA OTL in 1991, technical issues with the smart pigging tool used in 1991 did not produce reliable test results. Therefore, when it took over operatorship in 2000, BPXA knew that it did not have sufficient data from the 1991 test to reasonably assess the condition of the entire EOA OTL.

34. On July 22, 2006, BPXA performed smart pigging of the segment of the EOA OTL between FS 2 and FS 1 ("FS 2-FS 1 segment") and received initial reports of the smart pig data on August 4, 2006. These reports identified sixteen anomalies (representing wall loss in excess of 70 percent, including two over 80 percent) at twelve separate areas on the FS 2-FS 1 segment. The data indicated that each of the sixteen anomalies was approximately 1.5 by 1.5 inches in size and that the anomalies were located in the lower quadrant of the pipe.

35. BPXA began performing direct visual and ultrasonic inspection of the locations identified by the smart pig data as having significant wall loss. During the course of that work, BPXA discovered a location where crude oil apparently had leaked through the pipe wall and onto the insulation material. On the basis of that discovery, BPXA

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initiated shut down of the FS 2-FS 1 segment at approximately 6:00 a.m. on August 6, 2006.

36. Later that morning, BPXA personnel discovered crude oil leaking from a different location on the FS 2-FS 1 segment, resulting in a spill onto the tundra which was ultimately estimated at 23 barrels (966 gallons). Field inspection of this spill site revealed multiple holes in the pipe wall.

37. On the afternoon of August 6, 2006, BPXA notified PHMSA of the EOA OTL oil spill and advised that BPXA had decided to shut down substantially all of its PBU production pending further investigation.

38. On August 7, 2006, BPXA announced that it had decided unilaterally to replace the entire WOA and EOA OTL systems. Eventually, BPXA also made the decision to replace a common line that brings heavy crude oil from drill sites 16 and 17 to FS 2.

39. After August 6, 2006, BPXA discovered leaks in at least four additional locations on the FS 2-FS 1 segment of the EOA pipeline.

40. The WOA and EOA production shut-ins in response to the oil spills, along with BPXA's determination that the OTLs would be shut down and replaced on an emergency basis, resulted in a substantial shortfall of ANS oil and NGL production from 2006 through 2008.

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BPXA's Failure To Reasonably and Prudently Monitor and Control Internal Corrosion in the OTLs

BPXA Admits That Its Attempted Corrosion Control Practices Were Negligent

41. In October 2007, BPXA entered into a Plea Agreement with the federal government admitting that its corrosion monitoring and control practices resulted in criminal behavior. Specifically, BPXA pled guilty to a Class A misdemeanor violation of the federal Clean Water Act based on the negligent discharge of oil from the WOA. Further, BPXA admitted in the Plea Agreement that it "was required to operate the OTLs as a reasonable operator" and that it "acted negligently by failing to adequately inspect and clean the OTLs." BPXA also admitted that it "knew that the EOA OTL also had sediment collecting in the pipe," and that "it knew that it had insufficient inspection data on the EOA OTL." *See* Attachment C to this Complaint (October 2007 Plea Agreement).

42. Additionally, in its Sentencing Memorandum accompanying the Plea Agreement, BPXA admitted that it "did not adequately assess the lines and thus did not identify and timely mitigate the development of the pitting-type corrosion that led to the leaks" and "acknowledge[d] that it acted negligently in connection with the particular events that led to the March 2006 spill …"

43. BPXA's admitted failures were part of a pattern and practice of unlawful behavior in its oil and gas operations. In January 2000, BPXA pled guilty to a felony for failing to report repeated releases of a hazardous waste (solvent) which was unlawfully reinjected in ANS oil wells at Endicott from 1993-1995, even though BPXA had repeatedly

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been notified of the unlawful releases. Additionally, a federal judge is currently considering whether to approve a plea agreement in which another BP subsidiary (BP Products North America, Inc.) has agreed to plead guilty to a felony for its lack of adequate maintenance, failure to follow numerous safety procedures, and other outrageous conduct over a several year period, which culminated in a March 2005 refinery explosion in Texas in which fifteen people were killed and at least another one hundred and seventy people were injured.

44. BPXA's admitted negligent corrosion monitoring and control practices on the WOA and EOA OTLs occurred over several years. In addition, BPXA's poor maintenance practices have continued to have adverse effects on its Alaska operations, with several spills and releases occurring even after the March and August 2006 spills, including but not limited to a spill reported to ADEC on February 18, 2009 as a result of a hole in Flowline 9A; the January 15, 2009 release of a large volume of natural gas near Pump Station 1; the spill reported to ADEC on January 12, 2009 involving the failure of an automated flow control system at Milne Point; the seawater spill reported to ADEC on November 3, 2008 as a result of a pipeline rupture at Drillsite 11; the spill reported to ADEC on October 2, 2008 as a result of a pressure gauge rupture at Y Pad Well #1; the high pressure gas pipeline rupture occurring on or about September 29, 2008 near Y Pad which was apparently caused by improperly controlled external corrosion; the spill reported to ADEC on October 15, 2007 caused by a puncture in DS-16 Flowline D; and the

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spill reported to ADEC on December 19, 2006 resulting from a hole in the bottom of GC-2 Tank 8511.

Overview of BPXA's Negligence Regarding The WOA and EOA OTLs

45. The WOA OTL had not been maintenance or smart pigged since 1998. Instead, BPXA relied upon UT inspections and other techniques which it has admitted were inadequate to detect or prevent the corrosion which led to the March 2006 spill and resulting production shut-ins.

46. Before the March 2006 spill occurred, BPXA knew that corrosion enhancing conditions increased significantly when it increased production of viscous oil from wells that produce into the WOA OTL system and experienced an increase in production upsets. As BPXA admitted in the Plea Agreement:

> . . . production upsets allow water and sediment to leave the separation facility and enter the [WOA] OTL which increases the likelihood of internal corrosion in a low velocity line such as the [WOA] OTL. *BPXA was aware by 2004 that production upsets were occurring frequently as a result of processing heavier, more viscous oil at gathering center 2 (GC2).*

See Attachment C (emphasis added). Viscous oil flowing through pipelines creates factors associated with increased risk of corrosion, such as an increase in sediment and water, especially when coupled with a decrease in velocity from reduced oil production overall.

47. Chemicals that are injected into the flow of oil to inhibit corrosion are known as "corrosion inhibitors." BPXA added corrosion inhibitor to oil produced at the wellhead, but did not use additional inhibitors in the OTLs themselves before the March 2006 oil spill

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from the WOA OTL. Thus, BPXA unjustifiably assumed that adequate amounts of corrosion inhibitor would still remain in the oil flow by the time that it reached the OTLs (hence the label "carryover inhibitor") and did not add any supplemental corrosion inhibitor into the OTLs themselves.

48. A sample of the WOA OTL close to where the leak occurred contained approximately six inches of sediment build up. Such significant sediment build up increased the likelihood of corrosion due to MIC, and decreased the likelihood that corrosion inhibitors (especially those carried over from as far away as the wellhead) would work because they would have to penetrate through the substantial sediment build up to reach the pipeline wall.

49. As with the WOA OTL, BPXA also failed to inspect, discover, adequately address, or control a serious and widespread corrosion problem in the EOA OTL until the pipe had actually corroded through even though BPXA was aware of sediment build up on the EOA OTL prior to the spills. The EOA OTL had not been pigged for sixteen years before the August 2006 spill. BPXA took operational responsibility from ARCO Alaska, Inc. for the EOA in 2000, yet never took steps to acquire a comprehensive understanding of the conditions along the entire EOA OTL. BPXA never conducted an EOA field wide risk assessment of the facilities and equipment when it took over sole operator responsibility in 2000 nor did it obtain such an assessment from ARCO Alaska, Inc. either before or after 2000.

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50. In addition to its admission in the Plea Agreement that it "knew that it had insufficient inspection data on the EOA OTL," BPXA also had memos from ARCO Alaska, Inc. employees setting out the need for some kind of baseline survey of the EOA OTL as long ago as 1990, and BPXA knew that this plan had been abandoned after a 1991 smart pig run yielded inaccurate results. Despite BPXA's lack of comprehensive information, its knowledge that ARCO Alaska Inc.'s data quality was poor, and that ARCO Alaska Inc.'s prior corrosion management had been inadequate and unreasonable, BPXA nevertheless chose to rely on a very small number of UT inspection results that reported minimal corrosion in particular one foot pipe segments to incorrectly decide that the EOA OTLs did not have a serious corrosion problem.

51. Employees in BPXA's Corrosion, Inspection and Chemicals Group ("CIC") concluded that flow rates of one meter per second "should be avoided if [corrosion] inhibitors are to provide satisfactory protection and this will be critical in lines containing solids" to avoid solids and water falling out of the main oil stream and adhering to the pipe wall. However, BPXA knew that the EOA OTL had flow rates of six inches per second, a flow rate so slow that virtually any bend in the pipe has the potential to become a corrosion-causing water and sediment trap. Yet BPXA failed to take reasonable measures to verify the conditions in the EOA OTLs or to control the internal corrosion that existed in them.

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BPXA's Failure to Adopt Reasonable And Prudent Pigging Practices

52. BPXA's failure to use maintenance and smart pigs at sufficiently frequent intervals led to the growth of the MIC which was the substantial cause of the oil spills and production shut-ins. Upon information and belief, ConocoPhillips Alaska, Inc. runs smart pigs through the ANS OTLs it operates every three years, and Alyeska subjects TAPS to maintenance pigging every two weeks and smart pigging every three years. BPXA manuals also require that smart pigging be scheduled on recurring five year intervals on equipment "that has a considerable consequence should loss occur," specifically including OTLs as examples of these high consequence lines. In January 2004, BPXA recognized the need to smart pig even more frequently on high consequence lines, noting that a five year smart pigging interval "is the maximum interval for 'old equipment' not the minimum to manage [external corrosion] prone pipelines."

53. Nonetheless, as BPXA admitted in the Plea Agreement, it "did not recognize the need to pig the oil transit lines more frequently" and "should have run cleaning pigs through the OTLs to ensure the integrity of the leak detection system as well as to prevent internal corrosion." *See* Attachment C. BPXA knew or should have known that the PBU OTLs required maintenance and smart pigging on a much more frequent basis than sixteen years (EOA OTL) or eight years (WOA OTL), and knew or should have known that it was unreasonable and imprudent to maintenance and smart pig them so rarely.

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BPXA's Imprudent and Unreasonable Use of, and Reliance Upon, Corrosion Coupons, Ultrasonic Testing, and Carryover Inhibitor

54. BPXA's reliance on coupon testing, a limited number of UT inspections, and carryover corrosion inhibitor to insure the integrity of the OTLs was not reasonable or prudent. Coupon testing involves the insertion of a specimen of test material, usually a metal strip or ring shaped to fit, into a testing cell along the pipeline. The rings, or coupons, are weighed before and after exposure, and weight loss is measured. They are also examined for pits and cracks. These tests are used to provide a leading indicator of the potential for corrosion in a particular section of pipe as well as information as to what type of corrosion may be occurring in the pipeline.

55. Before admitting that it "failed to adequately inspect and clean the OTLs" in the criminal Plea Agreement, BPXA repeatedly pointed to its use of coupon testing, and the fact that the OTL coupons uniformly met the requirement that corrosion rates be measured at less than 2 mils per year (mpy), as evidence that it reasonably believed that corrosion was not a significant problem on the OTLs.

56. However, BPXA's coupon testing did not generate reliable evidence because the coupons were not placed in representative locations known to be most susceptible to corrosion. For example, the coupons used to measure general corrosion rates on the WOA OTL were not in fact placed on the WOA OTL. Instead, they were placed on short connections of 24" pipe between the processing centers and the main 34" OTL line at the far ends of the line. Smaller pipe diameter causes oil to travel at a higher velocity, and oil

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close to the processing center is likely to be more "mixed" and suffer less drop-out of sediment and water than what would occur further down the line in a much larger pipe, particularly at an elevation change. Second, the coupons that were used were strip coupons inserted into the flow, rather than flush mounted disc coupons resting directly on the bottom of the pipe, making the coupons even more unrepresentative of actual conditions along the pipeline wall at the places most susceptible to corrosion damage.

57. In a 2005 published paper, employees of BPXA's corrosion control group, CIC, acknowledged the importance of choosing the proper location for corrosion monitoring coupons, and the difficulties of relying on limited data points:

> The number of monitoring locations, their location, and orientation on the equipment as well as the choice between intrusive and flush mounted probe designs are important decisions for the corrosion engineer which can depend on many factors…: *The choice of monitoring location(s) is therefore one of the most important decisions a corrosion engineer has to make and the phrase location, location, location from the real estate business is therefore very appropriate for corrosion monitoring.*

Emphasis added.

58. BPXA not only knew that it was generally important to place the coupons in representative locations, it knew that the coupons that were supposed to measure corrosion on the WOA OTL were not representative eleven years before the 2006 spills. In November, 1995, CIC discussed concerns over the integrity of the OT-21 segment of the WOA OTL:

> Thermography suggested that 3" of solids were at the bottom of the pipe. The line was smart pigged about 5 yrs ago. It was decided that maintenance pigging was required ASAP although it was likely that a large amount of

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> solids would arrive at Pump 1. Chuck indicated that the corrosion coupons at Pump 1 were in good condition, with the latest showing some etching (a rare occurrence). *The team agreed that these coupons would not likely be representative of the active corrosion in the bottom of the GC2/1 transit line due to differences in geometry and flow condition.*

Emphasis added.

59. BPXA also relied upon limited UT testing to control corrosion on the OTLs. A UT inspection is an ultrasonic snapshot of the thickness of a single one-foot section of pipe. It is insufficient to judge the extent of corrosion along the length of an entire pipeline. Unless the operator has somehow located all of the likely spots where corrosion might occur, it cannot reasonably be inferred from the fact that a particular one foot section is not corroded that the rest of the line is corrosion-free.

60. BPXA conducted a very small number of UT inspections on the WOA OTL in the years prior to the leaks, and an even smaller number of inspections on the EOA OTL. The WOA inspections were largely concentrated on an area identified as a corrosion problem in the 1998 smart pigging run, with the majority of inspections taking place over a 150 foot section located within 265 feet of GC 2. Other than the 1998 smart pig run, no inspections of any kind occurred within 800 feet of the March 2006 leak location.

61. In the absence of a similar baseline for the EOA OTL, the selection process for, and number of, inspection sites on the EOA was even more unreasonable. In the six years prior to the March 2006 spill, BPXA only collected information on approximately 45 different one-foot sections of the approximately three miles of the EOA OTL segment that failed in August 2006.

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62. The leak locations on the EOA OTL were above ground, and were therefore detectable if a UT inspection had serendipitously been done at precisely the right place. However, the number of actual points being inspected represented a tiny fraction of the line length. As the damage was occurring in discrete pits, rather than as an overall degradation of a large section of pipe, a UT inspection one foot away from a dangerous pit might not indicate any problems. Indeed, BPXA's own Incident Investigation Report concluded that the number of UT points "were not sufficient to accurately represent the true condition of the line."

63. Chemicals known as corrosion inhibitors were added at the wellhead. BPXA relied on this corrosion inhibitor added at the wellhead to carry over to the OTLs in order to treat corrosion in the OTLs far down stream from the wellheads. BPXA did not add any supplemental corrosion inhibitor directly into the OTLs themselves.

64. In approximately 2002, BPXA decided to start injecting additional inhibitor in the produced water system. The produced water system consists of lines that carry water away from the three phase oil lines and back to the wellhead for injection. However, BPXA did not add additional inhibitor to the OTLs.

65. BPXA noted in May 2005 that the produced water taken off at GC 2 had only 30% of the average downstream concentration of corrosion inhibitor remaining as compared to other lines, that bacteria had increased at GC 2, and that GC 2 produced water had the lowest toxicity to bacteria in the system. BPXA concluded that GC 2 therefore had

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the highest potential for corrosion because it was getting the smallest concentration of corrosion inhibitor. As no additional inhibitor was being added, BPXA knew or should have known that the product coming out of GC 2 and into OT-21 similarly had a higher potential to cause increased internal corrosion. Upon information and belief, BPXA did nothing to bring corrosion inhibitor levels on OT-21 in line with other OTLs.

BPXA Knew That Its Overly Aggressive Cost Cutting
Prevented Reasonable and Prudent Corrosion Control Measures

66. From the 1990s up to the time of the 2006 oil spills, aggressive cost cutting at BPXA's ANS operations occurred, and therefore, BPXA did not provide sufficient resources to control corrosion in the OTLs or elsewhere throughout the aging PBU or MPU infrastructure. BPXA's objective was to maintain "flat lifting costs" in its PBU and MPU operations. In other words, BPXA wanted to keep the cost of producing each barrel of oil and NGLs the same as it had been in previous years. Since the amount of production was declining, "flat lifting costs" resulted in a reduction in CIC's overall budget for the entire North Slope, even though its aging oil fields were more expensive to maintain. BPXA knew or should have known that its long term efforts to impose "flat lifting costs" on its corrosion monitoring and control program were unreasonable and imprudent in light of the age of the PBU facilities and the consequent need for more, rather than less, corrosion control.

67. In May 2002, a top CIC official stated that the flat lifting cost approach would not result in a "level of performance/cost savings [that] was achievable or realistic."

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Long before that, in 1999, elimination of an EOA corrosion control microbiologist position was prophetically described as "not justified on a technical basis but was a result of management pressure to cut costs alone … one can expect that these corrosion events will not be detected until the damage has progressed to a large extent or the line leaks …"

68. The danger of allowing flat lifting costs to control a corrosion management program was expressly recognized in an internal audit finalized almost a year before the March 2006 spill: "The BPXA strategy to maintain flat lifting costs is *driving behaviors counterproductive to ensuring integrity and the delivery of effective corrosion management* systems. Leadership should therefore consider the full lifecycle implications of the single minded focus on flat lifting costs." Emphasis added.

69. By the time of the 2006 spills, cost cutting continued to severely limit CIC's corrosion control and inspection efforts. For example, just a few weeks before the March spill, a CIC manager commented that he wanted to pig the WOA OTL in 2006 but was not sure he would have the money to do so: "End of the day – I don't control the purse strings so not really sure what we can accomplish." A post 2006 oil spill report commissioned by BPXA concluded that corrosion program budgets were determined by the aggressive cost cutting mentality instead of necessity, and without an analytical process that prioritized risk. As BPXA admitted in the Plea Agreement, it "did not expend sufficient resources to address the complex issue of corrosion control in the OTLs." *See* Attachment C.

70. At the same time that it was engaging in such destructive cost cutting, BPXA

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experienced annual net profits (after taxes) for PBU of approximately $2 billion from 2004 through 2006, or $6 million per day. BP p.l.c. reported approximately $7 billion in profit for the quarter prior to the March oil spill.

The Production Shut-In at Lisburne to Replace a Three Phase Common Line on an Emergency Basis

71. A corroded three-phase 24" common line feeding into the LPC was shut-in shortly after the March 2006 spill from the WOA OTL, leading to severe curtailment of production at the LPC.

72. The 24" three-phase common line transported fluids from two drill sites in the Lisburne field (L1 and L2) and from two drill sites (PM 1 and PM 2) in the Point McIntyre field ("Point Mac") to the LPC. *See* Attachment A (Lisburne schematics).

73. Since at least 2002, BPXA knew of significant corrosion problems with this line. BPXA knew it needed to increase corrosion inhibitor, but because of budgetary concerns, did not follow the recommendation of its internal corrosion experts to do so.

74. BPXA was also aware that the LPC common line was rapidly deteriorating for many years prior to March 2006, yet BPXA failed to adequately address the corrosion problem that was the cause of the rapid deterioration. In January 2006, the condition of the line was described by a BPXA employee as "*[d]esperate* – little material allowance left before repair/replace." Emphasis added. Budgetary concerns remained paramount, and contributed to the lack of action. There was no plan to smart pig the line until 2007, despite the "desperate" condition of the line. At the same time, CIC recognized that it "*may have*

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passed the opportunity for a planned replacement without significant loss of production."

Emphasis added. Further:

> These are difficult decisions that cannot be taken lightly nor made in isolation. There is an argument for both cases. *In the shadow of Texas City and the new Integrity Management Standard, one leak resulting from internal corrosion coupled with uncertainty of line wide mechanical integrity, may just get this pipeline shut-in until integrity can be proven or replacement occurs. That could take a very long time.* On the other hand, if the pipeline is only needed for ~ 10 years and we could confidently mitigate through inhibition and localized repair, it is the smart thing to do.
>
> … I have included a report for another pipeline that was recommended for replacement. *In this case the data suggested not replacing the pipeline (unfortunately – I cannot make the same case for the Pt. Mac line).*

Emphasis added. These comments – made weeks before the March 2006 spill – presaged actual events. Because BPXA did not properly plan to replace the pipeline, the LPC common line was shut in on an emergency basis, which substantially increased the loss of production and resulting injury to the State.

75. After the March 2006 spill, BPXA smart pigged the Lisburne common line. The results of that inspection confirmed what BPXA already knew, *i.e.*, that the corrosion levels within the line had reached critical levels.

76. BPXA made the decision to shut-in the L2 to LPC segment of the line in mid-April, 2006. Shortly thereafter it decided to shut-in and replace the entire 5 mile line from L1 to LPC on an emergency basis.

77. In announcing its shut-in and replacement decision to the public, BPXA made a conscious effort to portray its actions as the next logical step in an already planned

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maintenance and replacement program for the pipeline. BPXA attempted to publicly deny the fact that the emergency had any connection with the March 2, 2006 spill and BPXA's belated acknowledgment that it had allowed the integrity of this line to deteriorate to the point of near catastrophic failure. Shutting in production at the LPC, at the same time as the other massive production curtailments from the WOA and EOA OTLs, was the collective result of long term unreasonable and imprudent corrosion control practices.

The Production Shut-In at the MPU to Replace a Three Phase Common Line on an Emergency Basis

78. Following the March 2006 spill, in early May 2006, BPXA decided to shut-in the MPU 14" three phase common line carrying oil, gas, and water from the K Pad to the S Pad junction leading to the MPU CPF due to known internal corrosion. BPXA smart pigged the entire K Pad common line in August-September 2006, in order to determine whether to leave in service the portion of the line that had not been shut-in. Approximately 10,000 corrosion features were identified, with an average depth of approximately 40% wall loss along the line. In at least three areas, wall loss was 70%.

79. The 14" three phase common line was built in 1990. Since at least 2001, BPXA had been aware of significant corrosion problems with this line. BPXA knew that the line would need continuous corrosion inhibitor injections, that it was not possible to keep the line clean, and that not enough was known about the corrosion mechanism to determine the effectiveness of the inhibitor at that time.

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80. By January 2002, the K Pad common line was reported to be badly corroded. BPXA employees recommended smart pigging and extensive inspection and monitoring of the line, and considered replacing it. Smart pigging was scheduled for 2002, but due to budgetary concerns, was abandoned in favor of radiographic testing ("RT"), a technology that was not sufficient to detect the corrosion at issue with this line.

81. Ironically, a March 2002 CIC presentation on the problem stated as its objective to "[m]ake MPU the first North Slope field to avoid the expensive denial and panic stages of the corrosion process," and recommended extensive inspection and monitoring. However, a month later, BPXA rejected prudent measures such as smart pigging since there was not money in the budget to replace the line if warranted from the smart pigging results. The decision to smart pig was therefore abandoned in favor of the less effective RT method.

82. By May 2004, BPXA considered the K Pad common line to have significant internal corrosion. Although the line was scheduled to be pigged on a monthly basis due to its "critical" condition, at least two pigging cycles were missed during the period between January and July 2004.

83. Although a one mile long section (approximately 20%) of the K Pad common line was replaced in March 2005, plans to smart pig the remainder of the line were once again put off from 2005 until 2006 for budgetary reasons.

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84. By December 2005, it was recommended that additional replacement of pipeline segments beyond the one mile segment be evaluated and that the line be smart pigged in 2006. Budgetary concerns were again noted as a barrier to dealing adequately with corrosion in the line.

85. In April 2006, after the WOA OTL spill, CIC noted again that the K Pad common line was significantly degraded, in poor condition, and unlikely to meet BPXA's pipeline fitness for service criteria. BPXA was aware that some known locations of corrosion had not yet been evaluated even though the smart pig run that identified those locations had been conducted more than four years earlier. In fact, certain CIC employees were congratulated for keeping this line "off the 'radar'" despite its serious condition.

86. In May 2006, CIC advised that it could no longer assure the mechanical integrity of the line and BPXA made the decision to shut it in on an emergency basis. After finally smart pigging the line in August and September 2006, it was determined that the line needed to be replaced.

87. As with the LPC common line, in announcing the May 2006 shut-in decision to the public, BPXA made a conscious effort to portray the decision as the next logical step in an already planned maintenance and replacement program for the pipeline. BPXA attempted to publicly deny the fact that the emergency had any connection to the March 2006 spill and BPXA's belated acknowledgment that it had allowed the integrity of this line to deteriorate to the point of near catastrophic failure. However, as a CIC employee

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acknowledged in August 2006, "[w]e have part of the K Pad pipeline shut-in and *just cannot tolerate another leak*." Emphasis added.

88. As with the LPC common line, it was not until after the March 2006 incident that BPXA decided to shut down and replace the K Pad pipeline. It was therefore shut down and repairs were done on an emergency basis with no opportunity to adequately plan the project in a way that would minimize the production impact by sheltering the replacement with other projects, or through some other means. As with the LPC common line, shutting in production in the MPU, at the same time as the other massive production curtailments from the WOA and EOA OTLs, was the collective result of long term unreasonable and imprudent corrosion control practices with respect to both lines.

DAMAGES RESULTING FROM OIL SPILLS AND PIPELINE SHUT-INS

89. In accordance with the State's PBU and MPU oil and gas leases, the State receives royalties from the WIOs on the oil and NGLs produced from those leases. As a general matter, the royalty payment is equal to one eighth of the value of the production or one eighth of the volume of the oil or NGLs to be delivered to the State in-kind.

90. The State receives production tax revenues under AS 43.55.011 *et seq*., corporate income tax revenues under AS 43.20.072, and conservation surcharges under AS 43.55.201 and AS 43.55.300, with respect to oil and NGLs produced and sold from the PBU and MPU.

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91. The March and August 2006 oil spills, and the subsequent replacement of the corroded OTLs and other pipelines at Lisburne and MPU, resulted in massive production shut-ins of crude oil and NGLs from 2006 through 2008. The State incurred damages from the spills and shut-ins in the form of lost royalties, taxes and surcharges (collectively "lost revenues") that would have been otherwise paid to the State on the volumes of crude oil and NGLs that were not produced from 2006 through 2008.

92. Upon information and belief, the total production shortfall from the PBU and the MPU from 2006 through 2008 is at least 35 million barrels of crude oil and NGLs, with the final amount to be proven at trial.

93. The State has further incurred damages in the form of response costs and investigation costs that have not yet been reimbursed by BPXA, as well as property and natural resource damages in the form of unrestored injury to the tundra, including the pollution of Q-Pad Lake as a result of the March 2, 2006 oil spill.

COUNT I
STRICT LIABILITY FOR DAMAGES AND RESPONSE COSTS UNDER AS 46.03.822

94. Plaintiff realleges and incorporates herein by reference each and every allegation set forth above.

95. Under AS 46.03.822(a), any person "having control over" an "unpermitted release of a hazardous substance" at the time of the release as well as the "owner or operator of the facility" from which the release occurred are strictly liable for all damages

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suffered by the State from the unpermitted release.

96. The March 2, 2006 and August 6, 2006 crude oil spills from the PBU OTLs constituted “unpermitted release[s] of a hazardous substance” under AS 46.03.822(a), 46.03.826(5) and (7), and were otherwise unlawful under AS 46.03.710 and AS 46.03.740.

97. The PBU OTLs constitute “facilities” as defined in AS 46.03.826(3) and BPXA was the “operator” of the facilities from which the releases occurred.

98. BPXA unlawfully discharged or permitted the discharge of crude oil from the PBU OTLs to water and to public land of the state in violation of AS 46.03.710 and AS 46.03.740.

99. Pursuant to AS 46.03.822 and .824, Defendant is strictly liable to Plaintiff for all damages to Plaintiff resulting from the unpermitted releases, including but not limited to, injury or loss to real and personal property, loss of income, loss of the means of producing income, or the loss of an economic benefit.

100. Pursuant to AS 46.03.822, AS 46.03.763, AS 46.03.760(d), and other law, Defendant is strictly liable for the full amount of actual expenses incurred by the State as a result of the releases, including direct and indirect costs of response, containment, removal or remedial action, full reasonable attorneys fees and costs, and incidental administrative expenses incurred by the State.

101. As a direct and proximate result of the unpermitted releases, Plaintiff has incurred substantial unreimbursed response and investigation costs and has suffered

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substantial economic and property damages, including but not limited to, lost revenues from the production shortfall in total amounts to be proven at trial.

COUNT II
NEGLIGENCE WITH RESPECT TO CORROSION MONITORING AND CONTROL PRACTICES

102. Plaintiff realleges and incorporates herein by reference each and every allegation set forth above.

103. BPXA, as operator of the PBU and the MPU, owed the State a duty to use reasonable care in the conduct of its operations and in the maintenance of its pipeline facilities.

104. The corrosion monitoring and control practices that BPXA employed in the management and maintenance of pipeline facilities in the PBU and the MPU were negligent.

105. As a direct result of BPXA's negligence, crude oil was illegally discharged onto State lands, and BPXA shut-in major portions of its PBU and MPU operations from 2006 to 2008, while it replaced many miles of pipeline in both the PBU and the MPU.

106. As a direct and proximate result of BPXA's failure to exercise the degree of care of a reasonably prudent person under the same or similar circumstances, BPXA in its own right, as well as by and through its officers, agents, servants and employees, caused Plaintiff to suffer substantial economic and property damages, both general and special, including but not limited to lost revenues from the volumes of crude oil and NGLs that

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were not produced from 2006 through 2008.

COUNT III
BREACH OF PRUDENT OPERATOR REQUIREMENTS OF STATE OIL AND GAS LEASES AND UNIT AGREEMENTS

107. Plaintiff realleges and incorporates herein by reference each and every allegation set forth above.

108. At all times relevant, BPXA has owned a proportionate working interest of approximately 26.36% in all of the State's oil and gas leases that comprise the PBU. The terms of these State oil and gas leases are identical and included in State form lease DL-1.

109. Paragraph 20 of DL-1, entitled "Diligence; Prevention of Waste," imposes express obligations on BPXA, as lessee, in return for the right to develop the lease and obtain a working interest in oil and gas produced from the lease:

> (a) "Lessee shall exercise reasonable diligence in drilling, producing and operating wells on said land…;"
>
> (b) lessee "shall carry on all operations hereunder in a good and workmanlike manner in accordance with approved methods and practices, having due regard for the prevention of waste of oil and gas and the entrance of water to the oil and gas bearing sands or strata to the destruction or injury of such deposits and the preservation and conservation of the property for the future productive operations;"
>
> (c) lessee "shall use reasonable care and all proper safeguards to prevent the pollution of water;" and
>
> (d) lessee "shall, abide by and conform to valid applicable rules and regulations of the Alaska Oil and Gas Conservation Commission and the regulations of Lessor relating to matters covered by this paragraph in effect on the effective date hereof or hereafter in effect if not inconsistent with any specific provisions of this lease", including, without limitation, 20 AAC

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> 25.526 that requires an operator to "carry on all operations and maintain the property in a safe and skillful manner in accordance with good oil field engineering practices…."

110. Pursuant to the terms of the PBUA, BPXA has been the sole operator of the PBU since 2000. BPXA is required by Section 4.2 of the PBUA to develop the Unit Area "in accordance with good engineering and production practices."

111. At all times relevant, BPXA has owned virtually 100% of the working interest in all of the leases that were unitized to comprise the MPU. These leases include some leases that used the DL-1 form and some that utilized later variants of the State's lease form that, unlike DL-1, contained net profits leasing provisions. The latter lease forms contained substantially identical operational duties and standards as those imposed by the DL-1 form set forth above.

112. Pursuant to the terms of the MPUA, BPXA has been the sole operator of the MPU at all times relevant herein.

113. Section 10 of the MPUA requires BPXA "to develop the Unit Area as a reasonably prudent operator in a reasonably prudent manner."

114. In addition to the express contractual language of the oil and gas lease agreements and the unit agreements, the PBU and MPU oil and gas leases contain a number of covenants implied by law, including, without limitation, the obligation of the lessee to act as a reasonably prudent operator with respect to the development of the lease or unit.

115. BPXA's imprudent corrosion monitoring and control practices with respect to

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the PBU OTLs and the Lisburne three-phase 24" common line breached the express provisions and implied covenants of the PBU leases and the PBUA including, without limitation, the obligation to operate the field as a reasonably prudent operator, the obligation to carry on operations in a "good and workmanlike manner," and the obligation to carry on all operations and maintain the property "in a safe and skillful manner in accordance with good oil field engineering practices."

116. BPXA's imprudent corrosion monitoring and control practices with respect to the MPU common line breached the express provisions and implied covenants of the MPU leases and the MPUA including, without limitation, the obligation to operate the field as a reasonably prudent operator, the obligation to carry on operations in a "good and workmanlike manner," and the obligation to carry on all operations and maintain the property "in a safe and skillful manner in accordance with good oil field engineering practices."

117. As a direct and proximate result of BPXA's breach of the leases and unit agreements, Plaintiff has suffered substantial economic and property damages, both general and consequential, including but not limited to lost revenues from the production shortfall, in amounts to be proven at trial.

COUNT IV
LIABILITY FOR WASTE UNDER AS 09.45.740

118. Plaintiff realleges and incorporates herein by reference each and every allegation set forth above.

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119. BPXA's negligent and imprudent corrosion monitoring and control practices constituted unreasonable and unworkmanlike practices that led to crude oil discharges onto State lands, extensive production shut-ins, physical injury to the State's property, and consequent diminution of the value of the State's interest in the oil and gas reserves underlying the oil and gas leases.

120. Pursuant to AS 09.45.740, BPXA is liable to Plaintiff for injury to the State's lands and mineral resources that were lost as a consequence of the discharges and prolonged shut-ins (*i.e.*, the production shortfall).

121. As a direct and proximate result of the Defendant's unreasonable and unworkmanlike corrosion monitoring and control practices, the State has suffered substantial economic and property damages in amounts to be proven at trial.

122. BPXA's actions were reckless and/or willful, and the amount of damages awarded Plaintiff should be trebled in accordance with AS 09.45.740.

COUNT V
CIVIL ASSESSMENTS UNDER AS 46.03.760 FOR VIOLATIONS OF AN APPROVED OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN AND POLLUTION PREVENTION REGULATIONS

123. Plaintiff realleges and incorporates herein by reference each and every allegation set forth above.

124. Under AS 46.04.030(b), an operator of pipelines and oil production facilities is required to have an approved oil discharge prevention and contingency plan in order to operate those pipelines and facilities.

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125. Defendant operates pipelines and oil production facilities within the meaning of AS 46.04.030(b) at the PBU.

126. OT-21 was a pipeline and crude oil transmission pipeline within the meaning of AS 46.04.900 and 18 AAC 75.055.

127. At all times relevant to this Complaint, Defendant operated the pipelines and oil production facilities in the PBU under the terms of an oil discharge prevention and contingency plan approved by DEC on April 29, 2002, and extended on June 25, 2003 (hereinafter BPXA Contingency Plan).

128. 18 AAC 75.425(e)(2) (2002) required an oil discharge prevention and contingency plan to include a detailed description of how the facility's operations complied with the oil pollution prevention regulations at 18 AAC 75.005 – 75.090.

129. At all times relevant to this Complaint, DEC regulations at 18 AAC 75.055 required all crude oil transmission pipelines, including the OTLs, to be "equipped with a leak detection system capable of promptly detecting a leak."

130. 18 AAC 75.007(h) required that BPXA "prepare and maintain records to document training, inspections, tests, maintenance, and repairs required by 18 AAC 75.005 – 18 AAC 75.090."

131. Sections 2.1.9 of the BPXA Contingency Plan contained the following assurances:

> *2.1.9. Leak Detection, Monitoring, and Operating Requirements for Crude Oil Transmission Pipelines [18 AAC 75.055]*

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> GPB [Greater Prudhoe Bay] has installed and is currently operating leak detection systems which meet the requirements of 18 AAC 75.055:
>
> - Continuous capability to detect a daily discharge of not more than 1% of daily throughput
> - Flow verification through an accounting method at least once every 24 hours
> - Weekly aerial surveillance for inaccessible pipelines
> - Incoming flow of oil can be stopped within on[e] [sic] hour after discharge detection
>
> Leak detection distinguishes a signal that is associated with a leak from normal background in a reliable way. In effect, data regarding a change in flow that is visible to the meters are processed and integrated in the leak detection system's accumulators over time, thereby initiating an alarm.
>
> Achieving a balance between sensitive detection, and few false alarms, requires accurate, calibrated meters. To reliably detect 1% of the normal flow leaks, meter balance variations under normal non-leaking conditions at Prudhoe Bay are approximately 0.5% or less. This provides a 2 to 1 margin between leaks and normal variations, or "noise," and ensures that false alarms are infrequent. Process variations come from normal swings in flow, composition, temperature, and pressure.
>
> The leak detection system consists of facility meters, meters between pipe segments where the segments are connected, the data acquisition system, and the Ed Farmer and Associates (EFA), computer program that analyzes data and generates alarms.
>
> Data move from the turbine and ultrasonic meters by means of transmitters and computers to data accumulators. The monthly data accumulator is used to monitor system performance and to tune the system meter factors. The daily accumulator detects smaller leaks, less than 1% of the daily throughput volume. The hourly leaked data accumulator is useful for detecting larger leaks (e.g., more than 3 percent of the normal segment flow) more quickly than the daily accumulator.

132. Section 2.5.8 of BP's Contingency Plan provided that "[l]eaks too small to be detected by an automatic leak detection system would be detected by visual inspection,

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generally within 12 hours."

133. Section 4.7 of BPXA's Contingency Plan explains how its leak detection system on the OTLs meets the best available technology ("BAT") requirements of AS 46.04.030(e) and contains the following assurances concerning operation of the system:

> *4.7 Leak Detection For Crude Oil Transmission Pipelines [18 AAC 75.425(e)(4)(A)(iv)].*
>
> The GPB crude oil transmission pipeline network from the three eastern GPB flow stations and the two Western GPB gathering centers, as well as the oil transmission pipeline from the Greater Point Mac Area (GPMA) will employ any mass balance line pack compensation (MBLPC) leak detection system. BPXA has also installed and will be evaluating a pressure point analysis (PPA) algorithm as a supplement to MBLPC. Both systems use proprietary software from Ed Farmer and Associates (EFA). MBLPC constitutes BAT for leak detection for BPXA pipeline segments. Installation was completed during the fourth quarter of 2000 for GPB overall system and the GPMA pipeline segment.
>
> Integration of a single leak detection system for the combined eastern and western crude oil pipelines is necessary because the two pipelines were joined upstream of pump station one in the fourth quarter of 1999. A combination of turbine meters at three eastern flow stations and orifice meters at the two western gathering centers, with an additional turbine meter at pump station one represent the shipping and receiving measurement instruments for the GPB leak detection system. The GPMA pipeline is also considered a separate leak detection segment with turbine meters installed at both ends: the LPC and PS 1.
>
> . . .
>
> *Leak Detection System Rationale*
>
> In investigating the various leak detection systems available and determining the best application for BPXA's pipelines, it became apparent that each leak detection system has its associated strengths and weaknesses that depend on the specific pipeline operating characteristics. The type of system selected depends on a combination of several technologies including flow

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measurement, instrumentation, communications, computer hardware and software, and, ultimately, experience in operating a system under similar circumstances (i.e., similar pipeline flow conditions). Because of the extreme environmental conditions at GPB and the variable flow conditions in the pipelines; it is essential that the selected system have an established in verifiable track record in the North Slope crude oil pipelines.

The MBLPC augmented by a program of visual surveillance is the best available technology for the following reasons:

- The system is reliable.
- The system has been used in other Arctic applications on similar crude oil production pipelines, including the Badami and Endicott pipeline
- The system provides state-of-the-art leak detection while minimizing false alarms.
- The system provides a low threshold detection capability.
- The system provides a rapid response in detecting large and small leaks.
- The system is commercially available and appropriate for the proposed pipelines.
- The system provides the best cost-benefit balance.

The MBLPC system provides a very accurate method of detecting smaller leaks over a longer period of time or larger leaks over a short period of time. Operational experience at other North Slope oil fields using the MBLPC has verified that it provides the most reliable and accurate method of leak detection on crude oil pipelines and similar oil production service.

Conclusion

In conclusion, a detailed BAT review, presented in Table 4-4, demonstrates that MBLPC leak detection system combined with a visual surveillance program is BAT, and is the most appropriate system for the GPB and GPMA crude oil transmission pipelines. The system has the ability to continuously and promptly detect a leak of 1% of the segments' daily throughput and provide flow verification every 24 hours.

134. In the Plea Agreement (Attachment C), BPXA admitted that it failed to maintain its leak detection system on the OTLs as required by BPXA's Contingency Plan

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and 18 AAC 75.055 (1992):

> *Negligence: Leak Detection System Maintenance*
>
> The State of Alaska required all crude oil transmission pipelines to be equipped with a leak detection system. More specifically, 18 AAC 75.055 required leak detection systems capable of detecting a daily discharge equal to not more than one percent of daily throughput. The Alaska Department of Environmental Conservation required the leak detection system to detect leaks on a segment-by-segment basis of the OTL. This means that each segment of the PBU OTLs must be equipped with a leak detection system capable of detecting a daily discharge of 1% or more of the crude oil flow in the OTL segment.
>
> In 2002, BPXA installed external ultrasonic meters along the OTLs. These ultrasonic meters were part of a system designed to meet the one percent leak detection requirement. BPXA believed this system – augmented by a program of visual surveillance – would be reliable, would provide state-of-the-art leak detection, would minimize false alarms, would surpass the regulatory requirements for leak detection thresholds, and would provide a rapid response in detecting large and small leaks.
>
> Nevertheless, BPXA was also aware that the ultrasonic meters it had installed required clean pipe to operate optimally. BPXA should have run cleaning pigs through the OTLs to ensure the integrity of the leak detection system as well as to prevent internal corrosion. BPXA failed to do so.

135. BPXA failed to operate and maintain its leak detection system on the OTLs in compliance with its approved contingency plan and as required by 18 AAC 75.055 (1992).

136. BPXA failed to conduct visual inspections of the OTLs in compliance with its approved contingency plan.

137. BPXA failed to maintain records of its visual inspection of the OTLs in compliance with its approved contingency plan and as required by 18 AAC 75.007(h) (2002).

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138. BPXA failed to maintain records and failed to conduct aerial inspections of the OTLs with forward looking infrared thermal imaging ("FLIR") in compliance with its approved contingency plan and 18 AAC 75.007(h) (2002).

139. In order to fulfill the requirements of 18 AAC 75.425(e)(2)(A), the BPXA Contingency Plan contained in Section 2.1.5 a description of its maintenance programs to assure mechanical integrity of the pipelines in the PBU.

140. Section 2.1.5 of the BPXA Contingency Plan provided that BPXA would monitor the pipelines in the PBU "through a comprehensive inspection process designed and executed by the Corrosion, Inspection and Chemicals group (CIC)."

141. Section 2.1.5 of the BPXA Contingency Plan, entitled "Maintenance Programs," provided that "CIC monitors corrosion rates on pipelines, adjust [sic] corrosion inhibitor rates and identifies areas for repair or decommissioning based upon regular inspections." Section 2.1.5 specifically referenced BPXA's corrosion control program description in Section 2.1.10 of the Contingency Plan incorporated herein by reference (Attachment D to this Complaint).

142. BPXA failed to adequately monitor corrosion rates on the OTLs in compliance with its approved contingency plan.

143. BPXA failed to control internal corrosion on the OTLs in compliance with its approved contingency plan.

144. BPXA failed to adjust the corrosion inhibitor levels in the OTLs so as to

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prevent corrosion as required by its approved contingency plan.

145. BPXA failed to identify the OTLs for repair or decommissioning based on "regular inspections" as required by its approved contingency plan.

146. Pursuant to AS 46.04.030(g), failure of a holder of an approved oil discharge prevention and contingency plan to comply with the plan is a violation of AS 46.04 for purposes of AS 46.03.760(a), AS 46.03.765, and any other applicable law.

147. Pursuant to AS 46.04.030(g) and AS 46.03.760(a), BPXA's violation of its Contingency Plan and violation of a provision of 18 AAC 75.007 or 18 AAC 75.055 subjects it to civil assessments in the amount of $500 to $100,000 for each day of initial violation and up to $5,000 for each day each violation continues.

COUNT VI
CIVIL PENALTIES FOR CRUDE OIL DISCHARGE IN EXCESS OF 18,000 GALLONS UNDER AS 46.03.759

148. Plaintiff realleges and incorporates herein by reference each and every allegation set forth above.

149. AS 46.03.759 imposes strict liability civil penalties on a person who unlawfully discharges, or permits the discharge, of crude oil to the water or public land of the state in an amount exceeding 18,000 gallons.

150. BPXA unlawfully discharged or permitted the discharge of crude oil from the WOA OTL to water and to public land of the state in violation of AS 46.03.710 and AS 46.03.740.

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151. The volume of the crude oil discharged from the WOA OTL was 212,252 gallons, a discharge in excess of 18,000 gallons.

152. Pursuant to AS 46.03.759(a), BPXA is liable to the State for a base civil penalty of $8 per gallon of crude oil unlawfully discharged or $1,698,016.

153. Pursuant to AS 46.03.759(c), BPXA is liable to the State for four times the base penalty under AS 46.03.759(a) for the WOA OTL crude oil discharge, or $6,792,064, because the discharge was caused by gross negligence and/or because BPXA did not act in accordance with its oil discharge prevention and contingency plan approved by DEC under AS 46.04.030.

COUNT VII
CIVIL ASSESSMENTS UNDER AS 46.03.760 FOR OIL DISCHARGES FROM THE EOA OTL

154. Plaintiff realleges and incorporates herein by reference each and every allegation set forth above.

155. Pursuant to AS 46.03.760(a), Defendant is liable to Plaintiff for civil assessments of not less than $500, nor more than $100,000 for each initial violation, plus not more than $5,000 for each day thereafter for each violation, and for all other damages and costs incurred by Plaintiff.

COUNT VIII
NATURAL RESOURCE DAMAGES AND RESTORATION COSTS UNDER AS 46.03.822 AND AS 46.03.780

156. Plaintiff realleges and incorporates herein by reference each and every

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allegation set forth above.

157. The crude oil discharge from the WOA OTL has destroyed and/or damaged approximately two acres of natural tundra in the vicinity of the OTL and along the shoreline of a lake known as Q-Pad Lake.

158. The crude oil discharge from the EOA OTL has destroyed and/or damaged approximately 12,000 square feet of natural tundra in the vicinity of the OTL.

159. BPXA has undertaken efforts to restore the destroyed tundra.

160. BPXA's restoration efforts to date have not returned the tundra to its pre-injury condition. BPXA's restoration efforts will require the passage of many years in order for the tundra to return to its original condition.

161. Pursuant to AS 46.03.822 and AS 46.03.780, BPXA is liable to the State for those sums necessary to restore the tundra and Q Pad Lake to its pre-spill condition, and to compensate the State for the interim loss of the natural resources destroyed or damaged by the spills.

COUNT IX
LIABILITY FOR PUNITIVE DAMAGES UNDER AS 09.17.020

162. Plaintiff realleges and incorporates herein by reference each and every allegation set forth above.

163. The acts and omissions of Defendant with respect to the oil spills and corrosion practices at issue in this Complaint were outrageous and/or undertaken with reckless indifference to the rights and interests of Plaintiff.

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164. Plaintiff is entitled to the maximum award of punitive damages allowed by law.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for a judgment against Defendant as follows:

1. For an award of civil penalties and assessments, response costs, and compensatory, punitive, treble, natural resource, and other damages alleged herein, in amounts to be determined by the finder of fact;

2. For an award of prejudgment interest;

3. For an award of attorneys' fees and the costs of this action as provided by law including AS 46.03.763 and otherwise by court rule; and,

4. For an award of such other and further relief, including equitable relief, as the

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Court deems just and proper.

DATED at Anchorage, Alaska, this 31st day of March, 2009.

WAYNE ANTHONY ROSS
ATTORNEY GENERAL
STATE OF ALASKA DEPARTMENT OF LAW

By:______________________________

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CERTIFICATE OF SERVICE

I hereby certify that on the 31st day of March 2009,
I caused a true and correct copy of the foregoing document
to be served on:

Courtesy Copy:
Jeffrey M. Feldman
Feldman Orlansky & Sanders
500 L Street, Fourth Floor
Anchorage, AK 99501

by hand U.S. Mail fax email

By: ____

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