



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety Administration**

Administrator

400 Seventh Street, S.W.
Washington, D.C. 20590

JUL 26 2006

The Honorable John D. Dingell
Ranking Member
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515-6115

Dear Congressman Dingell:

I am writing to provide answers to your June 15 letter regarding PHMSA's March 15 Corrective Action Order (CAO) issued to BP Exploration (Alaska), Inc. (BP) and BP's failure to meet deadlines for completing cleaning and inspection operations under the CAO. This letter follows our interim response dated June 23.

I share your concern about the condition of BP's three low-stress oil pipelines in the Prudhoe Bay Operating Area and the need to understand and address the volume of solids in those lines in a safe and expeditious manner. Our March 15, CAO requires BP to conduct cleaning and smart pigging operations on the lines in order to prevent and detect further corrosion. As you know, the presence of significant volumes of sediment or sludge in the lines poses a risk of further corrosion and interferes with internal inspection operations that are useful in detecting pipe anomalies. We have insisted that BP clean its lines without undue delay, and any plan for doing so must provide for safe handling of solids that will be removed in the process. We are insisting that BP obtain reliable information about the volume and nature of the solids in its lines and that it handle them in a way that does not pose unacceptable downstream risks to the connecting operations or facilities of the Trans Alaska Pipeline System (TAPS).

Earlier this month I visited the North Slope to review BP's operations first-hand and to discuss the engineering challenges and safety concerns directly with BP, Alyeska, and Joint Pipeline Office officials. PHMSA's Chief Safety Officer and the Regional Director for our Western Region Pipeline Safety Office accompanied me. We came away with perspective on the engineering challenges BP faces, but also with significant concern about BP's progress in measuring, planning for, and addressing the sediment that had accumulated in its pipelines. I was disappointed by the lack of progress BP had made in addressing risks to TAPS operations and by BP's failure to plan for and more promptly invest in bypass solutions. I shared my observations with BP officials, both in the Alaska meetings and in a follow-up meeting in Washington, D.C.

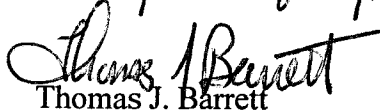
On the basis of these conclusions and the results of our ongoing investigation into the March 2 spill and conditions in the low-pressure lines, we have issued an amendment to the March 15 CAO, requiring BP to provide specific information and promptly provide specific plans with respect to handling of the accumulated solids in its low-stress pipelines, including the cleaning of the Eastern Operating Area using cleaning pigs. The Amendment also requires BP to drain the idled segment of its Western Operating Area line and to report to PHMSA concerning its plans for replacing, abandoning or restoring that pipeline segment. I am enclosing a copy of this Amendment, issued July 20.

PHMSA also placed BP on notice that we intend to hold BP to additional integrity management requirements pending completion of the smart pigging required by the March 15 CAO. We are reviewing the measures voluntarily implemented by BP and will incorporate those requirements, along with any necessary modifications or additions, into a further amendment to the CAO.

My priority is ensuring that BP addresses all safety risks on these lines, including resolving related engineering challenges, in a safe and expeditious manner. In the meantime, PHMSA is reserving all enforcement options with respect to its March 15 CAO.

I am enclosing responses to the specific questions posed in your June 15 letter. Most of the information you have requested is included in the findings and corrective action items included in the enclosed CAO Amendment. For your convenience, we have summarized the information in the attached responses, which also set forth the text of your questions. To the extent that my answers are not specific as to the agency's future enforcement plans, I trust that you understand my interest in avoiding statements that could compromise ongoing enforcement or limit future options.

I truly appreciate your interest and support. If I can provide further information or assistance now or in the future, please do not hesitate to contact me at (202) 366-4433.

Sincerely,
and Very Respectfully,

Thomas J. Barrett

Enclosures

cc: The Honorable Joe Barton, Chairman
Committee on Energy and Commerce

ENCLOSURE: Responses to the June 15 Letter to the Administrator

1. It is my understanding that BP Alaska contends they cannot meet Item 7 in your CAO because of "factors outside its control." It is my understanding that those "factors" are mainly attributed to the amount of sludge that has been allowed to build up in those lines over the past decade or more. Nevertheless, BP staff suggested to Committee staff that a much smaller amount of sludge exists in those lines than was previously believed. What is PHMSA's understanding at this time as to why BP Alaska cannot meet Item 7 in the CAO?

Answer: Item 7 of the March 15 Corrective Action Order (CAO) requires BP to conduct cleaning and smart-pigging operations on its Lisburne and Eastern Operating Area (EOA) pipelines. As modified in response to BP's earlier extension requests, Item 7 required BP to complete those operations by June 15. BP missed its deadline, but remained under a continuing obligation to complete the prescribed operations thereafter. By June 30, BP had completed cleaning and smart pigging the Lisburne line. BP began cleaning the EOA pipeline during the week of July 3 and completed cleaning of the 30-inch segment of the line, from FS2 to FS1, on July 20. The 30-inch segment was smart pigged on July 21. Results from this inspection are pending.

As you know BP filed a petition with PHMSA on June 6 stating that it would be unable to comply with the deadlines in Items 3, 4, and 7 of the CAO for "reasons outside [BP's] control." The first reason cited by BP – an intervening Grand Jury subpoena – relates only to Items 3 and 4 (concerning the Western Operating Area (WOA) pipeline). As to Item 7 (covering the Lisburne and EOA pipelines), BP blamed the "refusal of Alyeska Pipeline Company to allow pigging due to concerns of receiving high volumes of solids." BP explained that it was ready to begin pigging of EOA and Lisburne pipelines but could not proceed because it had not reached agreement with Alyeska "for a mutually acceptable way forward." BP stated that it was

“working to determine the volume of solids likely to be encountered.”

The following week, BP announced that its earlier sludge estimates were overstated and revised them downward, explaining that errors were made in interpreting the gamma scan results. At that point, BP began making the public statements that prompted your question, asserting that the sludge “no longer posed an ‘obstacle’ to pigging.”

Your question picks up on the inconsistency between the positions BP took in its June 6 petition and later public statements. PHMSA has not ruled on BP’s request for extension of the deadline in Item 7 and, in particular, has not determined that factors beyond BP’s control prevented compliance. Nor are we prepared to treat BP’s unilateral declaration as conclusive of either the volume of sludge or the risk to TAPS. As of your June 15 letter, BP had not made arrangements to remove excess solids before the oil moved into TAPS, and it was not authorized to make unilateral decisions about risks to TAPS.

In any case, BP’s new data did not settle concerns about the risk to Alyeska. The use of gamma scan technology to estimate the volume of solids within pipelines is a relatively new technique, and standards for reading and interpreting scan results are not yet well developed or validated. The degree of inconsistency with BP’s earlier estimates is reason alone for a cautious approach. Our most recent order, Amendment #1 to the CAO, issued July 20, requires BP to perform additional gamma ray scans and submit sludge volume estimates and supporting field data to PHMSA and Alyeska.

2. What is PHMSA's understanding of the amount of sludge in each of these lines? Is the amount de minimus? If so, can BP meet the CAO deadline requiring it to smart pig these lines?

Answer: BP began running cleaning pigs through the Lisburne line on June 9 and has since performed smart pigging. We understand that approximately one cubic yard of sludge

was collected in the cleaning process and that this volume was consistent with BP's most recent estimate based on gamma scan results. Now that the Lisburne line has been cleaned, we would not expect that line to contain more than a de minimus amount of sludge.

We do not know the volume of sludge in the entire EOA pipeline at this point. In May, BP estimated sludge levels in the range of 9 to 12 inches in parts of the EOA. In mid-June, BP reported sharply lower estimates: an average of 1-inch on the 30-inch segment from FS2 to FS1 and 0.6-inch on the 34-inch segment from FS 1 to Skid 50. Those estimates have not been confirmed, however, and there is some evidence that the first few pig runs may have pushed sludge from the 30-inch segment into the 34-inch segment. PHMSA does not assume that the amount of sludge is de minimus.

Accordingly, PHMSA is requiring BP to perform additional gamma ray scans of the 34-inch segment within two weeks of receipt of Amendment #1. BP is also required to provide sludge volume estimates and supporting field data to PHMSA and Alyeska.

3. What is PHMSA's understanding of when BP Alaska will fully comply with all aspects of the CAO? Specifically, what is BP's plan to smart pig all its lines and is this plan adequate? More specifically, does this plan detail an approach to this problem with specific dates and milestones and has PHMSA been provided with this plan? If so, please provide it.

Answer: BP remains subject to all unmet requirements of the CAO, including the deadlines in Items 3, 4, and 7. As you know, BP submitted a pigging plan, including target dates, with its June 12 petition for extension. Under its "worst case scenario," BP projected that it could take nearly two years to complete all requirements of the CAO. PHMSA is reviewing BP's pigging plan, along with the additional integrity assurance measures voluntarily undertaken by BP. Moreover, Amendment #1 to the March 15 CAO order requires BP to perform additional testing of the EOA and WOA pipelines before conducting further pigging operations.

PHMSA is still reviewing the elements of BP's voluntary plans and will issue further requirements as necessary.

PHMSA has reserved all enforcement prerogatives with respect to Items 3, 4, and 7 of the CAO.

BP has a continuing responsibility to complete all of the actions required by the March 15 CAO, including all maintenance and smart pigging operations on each of the specified lines. BP is obligated to explore all available options for overcoming any engineering issues that might complicate or delay those operations and putting in place appropriate contingency plans.

4. Finally, what sanctions will BP face if it continues to operate its pipelines without meeting Item 7 of the CAO? Is there an agreed-upon date certain where DOT will require that BP adhere to the strict language of the Order, specifically that which requires smart pigging? If so, what is that date and what happens if BP Alaska still cannot adhere to the Order at that point in time?

Answer: PHMSA has statutory authority to order injunctive relief and to impose administrative civil penalties for violations of its regulations and orders, including corrective action orders. Administrative penalties are capped at \$100,000 per violation per day, up to a total of \$ 1 million per violation. PHMSA also has discretion to refer violations to the Attorney General for civil enforcement in appropriate cases. All enforcement options remain open to PHMSA.



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**Pipeline and Hazardous
Materials Safety Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

JUL 20 2006

Via Federal Express and Facsimile To: (907) 564-5000

Ms. Maureen L. Johnson
Senior Vice President & Greater
Prudhoe Bay Performance Unit Leader
BP Exploration (Alaska), Inc.
P.O. Box 196612
Anchorage, AK 99519-6612

**RE: CPF #5-2006-5015H
Amendment No.1 to Corrective Action Order**

Dear Ms. Johnson:

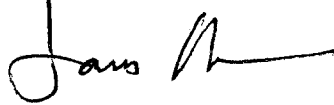
Enclosed is Amendment No. 1 to the March 15, 2006 Corrective Action Order (CAO) issued by the Associate Administrator for Pipeline Safety to BP (Alaska) Inc. (BP). Amendment No. 1 requires you to take additional actions based on the results of our continuing investigation into the failure on BP's pipeline discovered March 2, 2006.

It has been and remains BP's continuing responsibility to complete all of the actions required by the March 15 CAO, including all maintenance and smart pigging operations on each of the specified lines. BP is obligated to explore all available options for overcoming any engineering issues that might complicate or delay those operations and put in place appropriate contingency plans. Based on additional information and in light of the current state of the pipeline system, we are setting forth additional requirements to assess readiness for internal inspection and to plan for measures to execute our order in a safe manner that will minimize risk to Trans Alaska Pipeline System (TAPS). The additional requirements include removing the crude oil in the section of the Prudhoe Bay Western Operating Area Oil pipeline that is now idle, and enhanced measures to monitor and handle the sediments from the pipelines. Amendment No. 1 does not waive, alter or supplant the original terms and requirements of the March 15 CAO, including the deadlines imposed by Items 3, 4 and 7.

PHMSA will issue a separate amendment (Amendment No. 2) to address additional integrity requirements.

Your receipt of the enclosed document constitutes service of that document under 49 C.F.R. §190.5. The terms and conditions of this Amendment are effective upon receipt.

Sincerely,

A handwritten signature in black ink, appearing to read "James Reynolds". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

James Reynolds
Pipeline Compliance Registry,
Office of Pipeline Safety

Enclosure

cc: Chris Hoidal, P.E., Director
Western Region
Pipeline and Hazardous
Material Safety Administration

**DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
OFFICE OF PIPELINE SAFETY
WASHINGTON, DC 20590**

In the Matter of)
)
)

BP Exploration (Alaska) Inc.,)

CPF No. 5-2006-5015H

BP)
_____)

AMENDMENT No.1 TO CORRECTIVE ACTION ORDER

Background & Purpose

On March 15, 2006, under authority of 49 U.S.C. §60112, the Associate Administrator for Pipeline Safety, Pipeline and Hazardous Materials Safety Administration (PHMSA) issued a Corrective Action Order (CAO) to BP Exploration (Alaska) Inc. (BP), finding that the continued operation of BP's Prudhoe Bay Western Operating Area (WOA), Eastern Operating Area (EOA) and Lisburne crude oil pipelines, would be hazardous to life, property, or the environment without the implementation of corrective measures. The CAO was issued in response to a failure on BP's WOA pipeline that caused the discharge of an estimated 201,000 gallons of crude oil on the North Slope tundra.

Additional Preliminary Findings

Prudhoe Bay Transmission Pipelines (EOA, WOA, and Lisburne)

1. BP has been on notice since at least May 2006 that cleaning of the WOA, EOA, and Lisburne pipelines could dislodge sediments and solids that had accumulated in the pipelines over a period of years.
2. In 1992, BP's predecessor suspended cleaning of the EOA oil transmission pipeline when residues, waxes, and calcium carbonate deposits clogged the strainers maintained by Alyeska Pipeline Service Company (Alyeska) at Pump Station-1 on the Trans Alaska Pipeline System (TAPS). The calcium carbonate was primarily encountered between Flow Station-3 and Skid 50.

3. In May 2006, BP performed gamma ray scans to determine the volume of sludge inside the EOA and WOA oil transmission pipelines. BP advised PHMSA that sediment levels in some areas in the EOA oil transmission pipeline were in the range of 9 to 12 inches.
4. On May 22, 2006, PHMSA received a copy of a report by Alyeska entitled *TAPS Impact Assessment of BPXA Pigging -Interim Report*. Alyeska performed this study to understand the potential risk to TAPS if the sludge volumes estimated by BP were pushed into the TAPS pipeline in the process of performing cleaning operations on the pipelines. The report concluded that the solids from the WOA and EOA pipelines could adversely impact the operations of TAPS.
5. Alyeska's analysis was based on anecdotal evidence and results from the last time the EOA and WOA pipelines were pigged, and reports of the gamma ray surveys performed by BP in May 2006.
6. In June 2006, BP informed PHMSA that it had overestimated the volume of solids detected by the May 2006 gamma ray scans and that, upon reinterpretation of the scans, it estimated average sediment levels as follows:
 - a. Lisburne pipeline: 0.4-inch from LS 1 to TAPS Pump Station-1;
 - b. EOA pipeline: 1-inch from FS2 to FS1 and 0.6-inch from FS 1 to Skid 50;
 - c. WOA pipeline: 2.8-inches from GC 2 to GC 1; 0.8-inch from GC1 to GC3, and 1.9-inches from GC3 to Skid 50;
 - d. Skid 50 to TAPS Pump Station-1: 1-inch.
7. BP began cleaning and maintenance pigging of the Lisburne pipeline on or about June 9, 2006, and ending on or about June 22, 2006. Approximately one cubic yard of sediment was removed from the Lisburne oil transmission pipeline. That amount is consistent with the predicted volume from the gamma ray scan conducted in May 2006.
8. BP inspected the Lisburne oil transmission pipeline with an instrumented in-line inspection device on or about June 30, 2006. The inspection results are still pending.
9. BP launched the first cleaning pig in the outer segment of EOA from FS-2 to FS-1 during the week of July 3, 2006. BP has advised PHMSA that these cleaning operations are ongoing.
10. Based on reported cleaning results to date, it appears that additional scale, debris or sediment may have been pushed from the 30-inch EOA segment into the 34-inch segment during these cleaning operations.
11. Strainers on TAPS Pump Station -1 meter runs have an approximately 1 barrel capacity, and a $\frac{3}{4}$ inch mesh size.

12. BP does not currently have large volume facilities to sequester solids displaced by cleaning pigs.
13. TAPS has two 210,000 BBL storage tanks located at Pump Station-1. Beginning in August, these breakout tanks are expected to have excess capacity for the remainder of 2006.
14. BP has not reached an agreement or arrangement with Alyeska concerning handling of the solids in the WOA and EAO pipelines and has not made arrangements for capturing and removing sediments from the pipelines without the use of Alyeska facilities.

Idled OT-21 Section of WOA pipeline

15. After the failure on BP's WOA pipeline, the segment that failed extending from Gathering Center two (GC2) to Gathering Center one (GC1) and is known as the OT-21 Segment (OT-21) was idled. The approximately three-mile long OT-21 segment was not drained after it was idled and still contains crude oil. BP has not run cleaning and maintenance pigs on the OT-21 segment or on the connecting segments of WOA, as required by Items 3 and 4 of the March 15, 2006 CAO.
16. According to information provided by BP, OT-21 currently contains approximately 17,000 barrels (BBL)¹
17. At this time, BP theorizes that OT-21 leaked because of "enhanced corrosion." BP's theory of this corrosion is based on the aggregate effect of several likely factors:²
 - a. Although corrosion inhibitor was injected at the production stage, none was being injected at GC2 for an extended period prior to the pipeline failure.
 - b. The OT-21 crude oil stream contained a reduced level of corrosion inhibitor.
 - c. This resulted in a corresponding decrease in the toxicity of the water in the pipeline and a corresponding increase in the bacterial activity in the pipeline.
18. PHMSA has preliminarily determined that these conditions created an environment in which extensive corrosion occurred. Although the ultimate cause of failure cannot be determined until a metallurgical analysis to determine the root cause of failure and the contents of OT-21 from the failure is analyzed, the postulated corrosive environment that existed inside OT-21 and led to the failure most likely remains in existence today and the pipeline may still be corroding OT-21, even at the current lower temperatures (40 to 50 degrees Fahrenheit) of the idled oil.
19. The stagnant environment inside OT-21, in combination with other risk factors, including the presence of water in the pipeline, poses an ongoing leak threat. In the aggregate, the

¹ 1 BBL = 42 US gallons. 17,000 BBL = 714,000 gallons.

² BP's June 6, 2006 Request for Extension, Appendix G, OT-21 Leak Failure Theory and Application, 1-2.

risk factors warrant corrective action to remove the contents of OT-21 before the onset of winter weather conditions on the North Slope.

20. The oil in OT-21 will become more viscous and difficult to extract as temperatures drop. All other factors being equal, conducting the de-oiling operation before the onset of winter weather will minimize engineering complications and associated risks.

DETERMINATION OF NECESSITY FOR AMENDMENT OF CORRECTIVE ACTION ORDER AND RIGHT TO A HEARING

Section 60112 of Title 49, United States Code, provides for the issuance of a corrective action order, after reasonable notice and the opportunity for a hearing, requiring corrective action, which may include the suspended or restricted use of a pipeline facility, physical inspection, testing, repair, replacement, or other appropriate action. The basis for making the determination that a pipeline facility is hazardous, requiring corrective action, is set forth in the above-referenced statute and in 49 C.F.R. §190.233.

Section 60112(e) and the regulations promulgated there under (49 C.F.R. §190.233(b), provide for the issuance of a corrective action order without prior opportunity for notice and hearing upon a finding that failure to issue the order expeditiously will result in likely serious harm to life, property or the environment. In such cases, an opportunity for a hearing will be provided as soon as practicable after the issuance of the order.

Based upon the preliminary and additional findings, I continue to find that the presence of hazardous conditions on the specified pipelines, including the OT-21 segment, without the implementation of corrective measures, would result in likely serious harm to life, property or the environment. BP has failed to meet its continuing responsibility to pursue all available options for meeting the requirements of Items 3, 4, and 7 of the March 15, 2006 CAO, and to address the risks associated with idling of OT-21, including simultaneous preparation of contingency plans, risk analyses, and engineering plans for alternative options and timely acquisition of necessary information and materials. The lack of sufficient progress towards completing items 3, 4, and 7 of the CAO necessitates a permanent solution that is not dependent on, and does not pose a risk to, TAPS.

Additionally, after considering the circumstances surrounding the failure discovered on March 2, 2006, the hazardous nature of the liquids remaining in OT-21, the immediate proximity of the pipeline to environmentally sensitive areas, the extensive corrosion and wall thinning found in OT-21, the potential for additional corrosion and wall thinning due to current idle conditions, the presence of water, and the safety and environmental threats posed by those conditions, I find that failure to expeditiously issue this Amendment would result in likely serious harm to property and the environment.

Accordingly, this Amendment ordering immediate corrective action is issued without prior notice and opportunity for a hearing. The terms and conditions of this Amendment are effective upon receipt.

Within 10 days of receipt of this Amendment, BP may request a hearing, to be held as soon as practicable, by notifying the Associate Administrator for Pipeline Safety in writing, delivered personally, by mail or by facsimile at (202) 366-3666. A hearing, if requested, will be held in Lakewood, CO or Washington, DC on a date that is mutually convenient to PHMSA and BP. A hearing requested on this Amendment may be consolidated with the hearing BP has already requested on this CAO.

In the course of this investigation, PHMSA has identified and may identify additional measures that need to be taken to ensure the safety of BP's pipelines covered by the CAO. Such measures will be embodied in subsequent amendment(s) to the March 15, 2006, CAO and will impose additional requirements pending BP's completion of cleaning and smart pigging operations required by the March 15, 2006 CAO. The terms of the March 15, 2006 CAO and the additional terms added by this Amendment and subsequent amendment(s) will remain in place for as long as the Associate Administrator deems necessary to ensure that the specified pipelines are operated in a safe and environmentally sound manner.

AMENDMENTS TO REQUIRED CORRECTIVE ACTION

Pursuant to 49 U.S.C. §60112, I hereby order BP to immediately take the following additional corrective actions with respect to BP's Prudhoe Bay oil transmission pipeline system:

The following items are added to the Corrective Action Order:

Item 11. Within fourteen (14) days from receipt of this Amendment No. 1, BP shall conduct and provide to PHMSA additional gamma ray scans of the EOA 34-inch (FS-1 to Skid 50) segment, at the same locations scanned with gamma ray technology in May 2006. BP shall conduct the gamma ray scans in a manner sufficient to ensure that the results are accurate and representative of the sediment loads throughout the EOA 34-inch segment of the oil transmission pipeline. Following each successive run, BP shall provide PHMSA an estimate of the volume of sediment removed and supporting field data for that estimate.

Item 12. At least 30 days prior to beginning cleaning operations on any segment of the WOA oil transmission pipeline, BP shall conduct and provide to PHMSA gamma ray scans at all elevation change locations on those segments. BP shall conduct the gamma ray scans in a manner and at locations sufficient to ensure that the results are accurate and representative of the sediment loads throughout the inspected segments. Following each successive run, BP shall provide PHMSA an estimate of the volume of sediment removed and supporting field data for that estimate. BP shall complete all requirements of the March 15 CAO with respect to all segments of the WOA, EOA, and Lisburne pipelines that BP is operating or intends to restore to operations.

Item 13. Within seven (7) days of receipt of this Amendment, BP shall submit a plan for approval by the Western Region Director to extract and analyze representative samples from

the pipe wall of the EOA 34-inch pipeline. The plan shall be designed to ensure that the sampling and analysis is sufficient to enable BP to determine the amount of calcium carbonate deposits present in this section of the EOA oil transmission pipeline. These representative pipe samples will be taken from locations in the pipe wall to avoid disrupting the cleaning pig operations. BP shall implement the plan within seven (7) days of approval.

Item 14. Within 48 hours of receiving the contractor report, BP shall report to Alyeska the information collected in accordance with Items 11, 12, and 13, so that Alyeska can revise its *Impact Assessment of BPXA Pigging-Interim Report* and evaluate the downstream risks to TAPS of permitting BP to move sediments, deposits, or other materials dislodged in cleaning operations into the TAPS pipeline.

Item 15. No later than August 8, 2006, BP shall develop, and submit for approval by the Western Region Director, preliminary engineering design and implementation plans to install permanent facilities for handling solids that may result from cleaning pig operations on the specified pipelines. BP shall ensure the facilities do not impair or pose a risk to the operations of TAPS and do not allow large amounts of solids to be moved into the TAPS metering and station piping facilities. Furthermore, these plans shall demonstrate to PHMSA and Alyeska that the oil will meet transit quality specifications. In addition to any facilities that BP proposes, BP shall also concurrently develop a contingency plan, including preliminary engineering design and implementation plans, to create a by-pass around TAPS PS-1 facilities, so solids can be delivered directly into TAPS storage tanks. Upon approval by the Western Region Director, BP shall commence construction in accordance with the plans, unless it has earlier demonstrated to the satisfaction of the Western Region Director that it is implementing or immediately prepared to implement an alternative method for handling solids dislodged in cleaning operations or that such construction is otherwise unnecessary.

Item 16. No later than August 1, 2006, BP shall develop, and submit for approval to the Western Region Director, a plan to safely remove the crude oil in the OT-21 line segment by August 22, 2006. The plan shall provide for removal of the crude oil in the OT-21 pipeline segment in a safe and environmentally sound manner, and in compliance with all applicable federal, state and local laws and regulations.

Item 17. Within 30 days from receipt of this Amendment, BP shall submit a report to the Western Region Director, detailing its actions and plans for replacing, abandoning, and/or restoring operation of OT-21. The report shall include preliminary or final engineering and implementation plans and timetables.

Item 18. BP shall carry out the requirements of the CAO, as amended, in accordance with all applicable federal, state and local laws and regulations, including any applicable federal, state and/or local regulations regarding oil transfer procedures, spill prevention and response, the State of Alaska's Oil and Hazardous Substances Control Statutes and Regulations in the Alaska Administrative Code, Title 18, Chapter 75, and the US Environmental Protection Agency's Spill Prevention Countermeasures and Control Regulations found in Title 40 Code

of Federal Regulations, Part 112. These regulations as well as others may contain certain requirements for transfer procedures, spill containment, clean-up and reporting requirements that pertain to operations associated with removal of the crude oil from the pipeline.

Item 19. With respect to each submission that under this Order requires the approval of the Western Region Director, the Director may: (a) approve, in whole or part, the submission, (b) approve the submission on specified conditions, (c) modify the submission to cure the deficiencies, (d) disapprove, in whole or in part, the submission, directing that BP modify the submission, or (e) any combination of the above. In the event of approval, approval upon conditions, or modification by the Western Region Director, BP shall proceed to take all action required by the submission as approved or modified by the Western Region Director. In the event that the Western Region Director disapproves all or any portion of the submission, BP shall correct all deficiencies within the time specified by the Western Region Director, and resubmit it for approval. In the event that a resubmitted item is disapproved in whole or in part, the Director may again require BP to correct the deficiencies in accordance with the foregoing procedure, and/or the Director may otherwise proceed to enforce the terms of this Order.

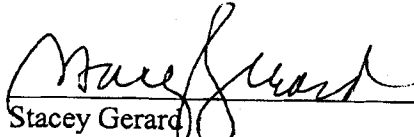
Item 20. BP shall maintain documentation of the safety improvement costs associated with fulfilling the March 15, 2006 CAO and submit to the Western Region Director, Pipeline and Hazardous Materials Safety Administration. Costs shall be reported in two categories: 1) total cost associated with preparation/revision of plans, procedures, studies and analyses, and 2) total cost associated with replacements, additions and other changes to pipeline infrastructure.

Item 21. The requirements of this Amendment may be modified only by written notice of the Associate Administrator for Pipeline Safety. A request for modification of any requirements imposed by this order shall be in writing and include an engineering justification and certification by an authorized officer of the company as to the accuracy of any facts offered in support of the request.

This Amendment does not modify, waive or supplant any requirements imposed under the March 15, 2006 CAO or any requirements that apply to BP's pipeline systems under any other provision of federal, state, or local law, or permit.

With respect to all actions undertaken pursuant to this Amendment, BP is responsible for achieving and maintaining compliance with all applicable federal, state, and local laws, regulations, and permits. This Amendment is not and shall not be construed to be a permit, or a modification of any permit, under any federal, state, or local law or regulation.

In accordance with 49 U.S.C. §60122 and 49 C.F.R. § 190.233, failure to comply with the CAO, as amended, may result in the assessment of administrative civil penalties of up to \$100,000 per violation per day pursuant to 29 U.S.C. §60122, or in the imposition of civil judicial penalties and other appropriate relief pursuant to 49 U.S.C. §60120. The terms and conditions of this Amendment are effective upon receipt.



Stacey Gerard
Associate Administrator
for Pipeline Safety

JUL 20 2006

Date Issued