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Via Email: *pubcomment-ees.enrd@usdoj.gov* ***&***
United States Postal Service

John C. Cruden
Assistant Attorney General
U.S. DOJ—ENRD
P.O. Box 7611
Washington, D.C. 20044-7611

Re: United States v. ExxonMobil Pipeline Company
D.J. Reference Number 90-5-1-1-10862
Comments to Proposed Consent Decree

Dear Mr. Cruden:

Central Arkansas Water (CAW), together with support of the City of Little Rock, the City of North Little Rock, the City of Sherwood, the City of Cabot, the City of Bryant, the City of Hot Springs, Pulaski County, Searcy Waterworks, Cabot WaterWorks, and Malvern Waterworks (collectively, the "Water Users"), as evidenced by the signatures of their duly authorized representatives below, by and through C. Tad Bohannon, Chief Legal Counsel for Central Arkansas Water, submit these comments to the proposed Consent Decree filed in the above referenced matter.

All of the Water Users obtain water from source at risk from contamination from the aging Pegasus pipeline. Collectively, the Pegasus pipeline jeopardizes the water supply for over 750,000 Arkansans. Approximately 400,000 of these individuals reside in the central Arkansas region and they are provided drinking water through CAW. CAW's primary water source is Lake Maumelle, a 9,000 acre surface reservoir located several miles west of Little Rock. The watershed of Lake Maumelle is traversed by the Defendants' Pegasus pipeline for approximately 13.6 miles. The Lake Maumelle watershed is an Unusually Sensitive Area drinking water resource within the meaning of 49 C.F.R. §195.6, because CAW's alternative water supply, Lake Winona, can only supply approximately 38 percent of CAW's average daily consumption of water. In summary, a rupture of the Pegasus pipeline in the Lake Maumelle watershed would have drastic implications to the health and welfare of the 400,000 individuals that rely on CAW for drinking water as well as the central Arkansas economy. The example of the sensitivity of CAW's water supply to the Pegasus pipeline is but one of many examples of the risks that the presence and operation of the Pegasus pipeline poses to the citizens of the State of Arkansas.

The Water Users, for the record, state:

1. The injunctive relief contained within the proposed Consent Decree:

   (a) does little, if anything, to assure the Defendants future compliance with the Clean Water Act and provisions of Arkansas law; and

   (b) does not provide for adequate protection of the water supply sources for over 750,000 citizens of the United States of America and the State of Arkansas; and

2. The proposed Consent Decree should be withdrawn or renegotiated by the United States because it is inadequate.

I. Introduction

The Arkansas Department of Health believes that "the aging Pegasus [pipeline] . . . poses an unacceptable risk to the health and well-being of a large number of Arkansans." *Letter from Arkansas Department of Health to ExxonMobil Pipeline Company and the Pipeline and Hazardous Materials Safety Administration (PHMSA)* dated June 3, 2013, attached hereto as **Exhibit A**. "Similar leaks to that which occurred at Mayflower could potentially impact as many as 18 drinking water sources in the state which provide a source of water to approximately 750,000 Arkansans." *Id.*

The Arkansas Department of Environmental Quality (ADEQ) also noted "concern for the integrity of the pipeline and safety of its operation" that stems from

> the age of the pipeline, the type of welding used . . . , the reversal of flow in the pipeline, the number of seam failures . . . during hydrostatic testing in 2005-2006 . . . , the recent failure . . . and the potential hazards to human health and the environment posed by any release [from the pipeline].

Letter from Arkansas Department of Environmental Quality to PHMSA dated May 17, 2013, attached hereto as **Exhibit B**. Furthermore, ADEQ requested

> where the pipeline's integrity and safety cannot be verified for any portion of the pipeline located in the vicinity of any population centers, ecologically sensitive areas, or drinking water supplies, then that portion of the pipeline should be removed and relocated using new pipe that meets all integrity and safety requirements. *Id.*

For reasons set forth in greater detail below, the Water Users contend that the injunctive relief outlined in the proposed Consent Decree does nothing to protect the vital water resources within the State of Arkansas from harm when the next segment of the Pegasus pipeline ruptures, whether from another longitudinal seam failure, operational error, or other cause. Moreover, despite what has been stated in many public announcements, the proposed Consent Decree does not require the Defendants to perform any corrective

measures or take additional precautionary measures to prevent future spills from the Pegasus pipeline. The proposed Consent Decree merely requires two years of training for the Defendants' personnel and provision of inadequate spill response materials in one Arkansas and two Texas locations.

The Water Users, therefore, request that the United States of America, the United States Department of Justice and the United States Environmental Protection Agency, withdraw or renegotiate the proposed Consent Decree as it is inadequate to protect the citizens of the United States of America and the State of Arkansas and is therefore not fair, reasonable or in the public interest.

II. Factual Background

1. Construction and changing operations of the Pegasus pipeline

The Pegasus pipeline was constructed in the late 1940's and runs from Patoka, Illinois to the Texas Gulf Coast (approximately 850 miles). The pipeline is an electrical resistance welded (ERW) oil pipeline with average thickness of .312 inches. A low frequency ERW process was used as a primary means of pipe manufacturing until it was superseded in the 1970's by a high frequency ERW process which produced a higher quality weld. The Pegasus pipeline, constructed in the 1940's, is a low frequency ERW pipeline (LF-ERW).

From the late 1940's to 2002 the Pegasus pipeline was used to transport light crude oil and refined petroleum products from the Texas Gulf Coast to locations within the mid-western United States. The Pegasus pipeline was purged and idled with nitrogen in December 2002. When the pipeline was restarted in 2006, the flow of the pipeline was reversed with an accompanying increase in pipeline pressure to at least 700 psig and the pipeline was used, for the first time, to transport diluted Wabasca heavy crude oil (also referred to as diluted-bitumen or dilbit) produced in Canada from the Midwestern United States to the Texas Gulf Coast. According to a Material Safety Data Sheet revised by the Defendants effective January 9, 2013, this Wabasca heavy crude is a "hazardous" substance based on its extreme flammability, human health risk and toxicity to aquatic organisms. The MSDS lists numerous potential medical disorders resulting from exposure.

Flow reversals and pressure increases, particularly in LF-ERW pipe, are subjects of concern raised by PHMSA in its recent *"Pipeline Safety: Guidance for Pipeline Flow Reversals, Product Changes and Conversion to Service"* notice issued September 12, 2014, attached hereto as **Exhibit C**. As stated in the PHMSA Advisory (ADB-2014-04):

> product changes or flow reversals [from original direction and product] may not be advisable for LF-ERW pipe . . . . Pipelines that have had a history of failures and leaks most especially those due to stress corrosion, cracking, internal/external corrosion, selective seam corrosion or manufacturing defects [which the Pegasus has] . . . and Pipelines that operate above 72% SMYS [specified minimum yield strength, or the overall strength of the pipeline].

2. Mayflower rupture and subsequent testing results

Following the March 29, 2013 rupture of the Pegasus pipeline in Mayflower, Arkansas (the Mayflower rupture), the Defendants retained Hurst Metallurgical Research Laboratory, Inc. (Hurst) to conduct metallurgical tests of the failed section of the Pegasus pipeline to determine the cause of the rupture. Hurst found a 22 foot long fracture along the weld seam, which traversed diagonally, approximately 3 inches in length, into the base metal. The Hurst report found that hook cracks had been present in the seam prior to the rupture since the pipe's manufacture. Hurst concluded that the rupture occurred because of a reduction of the wall thickness in the seam caused by the

> presence of manufacturing defects, namely the upturned bands of brittle martensite, combined with localized stress concentrations at the tips of the hook cracks, low fracture toughness of the material in the upset/HAZ, excessive residual stresses in the pipe from the initial forming and seam and girth welding processes, and the internal pressure creating hoop stresses.

The report went on to state that

> it is highly probable that some micro-cracking within the upset/heat-affected zones might have occurred immediately following the pipe manufacturing. The micro-cracks then likely would have merged by further cracking through the adjacent areas in the localized upset/HAZ zones during service, forming a continuous hook crack in each of the localized areas to the critical depths, at which point the remaining wall thickness, combined with the localized stress concentration and the residual stresses, could no longer support the internal hoop stresses and resulted in the final failure.

Following subsequent analysis by Hurst, the Defendants noted in their remedial work plan submission to PHMSA for the northern segment of the Pegasus pipeline (the section that runs from Corsicana, Texas, to Patoka, Illinois, as defined by the Defendants in their remedial work plan submission and summaries) that "atypical pipe properties when compared to pipe of similar vintage and manufacture" also played a contributing role in the rupture. The Defendants further claim in their remedial work plan summary for the northern segment of the Pegasus pipeline (attached hereto as **Exhibit D**) that "[i]nvestigation points to the atypical pipe properties as the most significant contributing factor that led to the original manufacturing defects to grow to rupture" and that "the combination of extreme metallurgical properties detected in the ruptured joint of pipe has not been detected anywhere else on the Pegasus pipeline or other ExxonMobil pipelines with similar manufacturing methods and specifications." This conclusion, however, was reached after 12 months of intensive testing on a single length of pipeline. Absence of detection does not mean absence of presence; it simply means absence of sufficient testing and analysis. We are doubtful that the Defendants have the capability of completing detailed metallurgical analyses of the approximately 650 miles of buried pipeline of the northern section of the Pegasus to determine if these properties are present when it took

over 12 months of laboratory testing to determine that they were present in the failed pipe in Mayflower. In short, the Defendants' statement that these qualities "have not been detected anywhere" is grossly misleading because sufficient testing has not been completed to determine their presence or absence. Accufacts addresses this issue directly in its July 16, 2014 letter to PHMSA, attached hereto as **Exhibit E**, noting:

> the notion that the atypical properties of the ruptured section of the pipe in combination with ERW-related manufacturing defects were somehow unique to this one section cannot withstand scrutiny unless every section of the pipeline is analyzed. Further, even if this section of pipeline is shown to be one-of-a-kind, that does not mean that other sections of the pipeline are not at risk.

3. Susceptibility to longitudinal seam failure in this type of pipe in general

The welds of LF-ERW pipe have been found to be susceptible to selective seam corrosion, hook cracks, and inadequate bonding of the seams. As a result, LF-ERW is no longer used to manufacture pipe. In addition, the integrity of ERW pipe manufactured before 1970 has been called into question by PHMSA on numerous occasions. *See*, Pipeline Safety Alert Notices ALN-88-01 and ALN-89-01 issued by the U.S. Department of Transportation in January, 1988 and March, 1989. The 1988 Alert Notice stated that ERW seams had been involved in 145 service failures in both hazardous liquid and natural gas pipelines since 1970 and all but two of those failures occurred on pipe manufactured prior to 1970. The Alerts noted that 12 hazardous liquid pipeline failures during 1986 and 1987 involved ERW pipe seams manufactured prior to 1970 and that an additional 8 such failures had occurred between January 1988 and March 1989. As stated previously, PHMSA Advisory ADB-2014-04 identifies flow reversals and pressure increases as ongoing safety and integrity concerns for LF-ERW pipelines.

4. Indications of susceptibility to longitudinal seam failure in prior test results of the Pegasus pipeline

Prior to the Mayflower rupture, the Defendants conducted a hydrostatic pressure test of the Pegasus pipeline in 2006 (prior to the 2006 restart with accompanying flow reversal, pressure increase, and change to Wabasca heavy crude). Seam failures occurred in the Pegasus pipeline at two locations within the Lake Maumelle watershed, the drinking water supply for the 400,000 Arkansans served by CAW, during the 2006 hydrostatic test as well as at 9 other locations on the northern portion of the pipeline outside of the Lake Maumelle watershed. Neither the Defendants nor PHMSA reported these ruptures to CAW or any of the other Water Users.

In a November 6, 2013 Notice of Probable Violation (NOPV) to the Defendants, PHMSA stated that:

> [The Defendants] experienced multiple hydrostatic test failures on the Pegasus Pipeline as a result of ERW long seam failures in 1991 hydrotesting and subsequent 2005-2006 hydrotesting. The pipe manufacturing information, fracture toughness, and

> hydrostatic testing failure history of the Youngstown pre-1970 low frequency ERW pipe . . . provided more than adequate information for the pipe to be considered susceptible to seam failure . . . .

5. The Defendants' prior lack of compliance and acceptance of responsibility.

The Water Users have a complete lack of confidence in the Defendant's ability to thoroughly and correctly abide by both the letter and intent of the Consent Decree. The Defendants have demonstrated a clear record of non-compliance and disregard for regulatory compliance as well as integrity management best practices. For example, prior Exxon pipeline rupture that spewed tens of thousands of gallons of crude oil into the Yellowstone River, regulators had warned the Defendants of seven safety violations along the line. Two of the warnings noted the Defendants' lax emergency response training. Yet, the Defendants kept the line operating after deciding the risk was low.

CAW identified numerous deficiencies regarding the Defendants' operation of the pipeline and integrity management efforts in a July 2010 letter to PHMSA. *See*, July 19, 2010 letter from CAW to PHMSA attached hereto as **Exhibit F**. CAW received no response from PHMSA with respect to these items and little to no follow-up actions were completed by the Defendants after they were brought to their attention.

Furthermore, CAW identified an additional 6 violations of the Pipeline Safety Act and notified the Defendants and PHMSA of these items in its September 19, 2013 Notice of Intent to File Citizen Suit Pursuant to the Pipeline Safety Act, attached hereto as **Exhibit G**. To our knowledge, these violations have yet to be addressed and the Defendants refuse to acknowledge responsibility for these violations.

PHMSA identified a number of areas of non-compliance with federal safety and integrity management standards and cited these in the November 6, 2013, NOPV to the Defendants. In the NOPV, PHMSA stated that:

> The integrity assessment schedule established by the operator did not include consideration of certain manufacturing information in their determination of risk factors as required. Specifically, the operator failed to include the susceptibility of its . . . pipe seam to failures as a risk factor for the Pegasus pipeline system . . . .
>
> The operator failed to establish a five-year re-assessment interval for the [northern] Patoka to Corsicana segment of the Pegasus Pipeline after the hydrostatic test of 2005 and 2006 identified a susceptibility to seam failures. The operator failed to consider all risk factors for establishing an assessment schedule for continual integrity assessments when they did not consider the pipeline's manufacture and results of the previous integrity assessments to conclude that the pipeline was susceptible to seam failure . . . .

> The baseline assessments (hydrostatic tests) were performed in 2005 and 2006. Therefore, this re-assessment was more than 68 months after the baseline assessments were performed, and exceeded the maximum re-assessment intervals required by 195.452(j)(3) . . . .
>
> The operator failed to follow its procedure 5.1 (4) (Continual Evaluation and Assessment Process) . . . .
>
> The operator extended the inspection timing . . . without providing notice to PHMSA . . . .
>
> The operator failed to prioritize the Corsicana to Conway segment higher than the Patoka to Conway segment . . . . The Corsicana to Conway segment [including the Lake Maumelle Watershed] had more hydrotest failures in 2006 than the Conway to Patoka segment, including the test failures that were at lower pressures than previous test levels.

6. Experience with other water contamination from pipeline failures in or near water supply sources

It is estimated that over 210,000 gallons of diluted bitumen spilled into Lake Conway as a result of the Mayflower rupture. Lake Conway is not used as a public drinking water supply and, therefore, no public drinking water supplies were directly affected by the March 29, 2013 spill. However, the type and vintage of pipeline, the pipeline's susceptibility to seam failure, and the Defendants' lack of compliance with integrity management requirements present a clear and continuing risk to any and all watersheds through which the Pegasus pipeline traverses. The Pegasus pipeline traverses the watersheds of 18 public water suppliers that collectively serve over 750,000 individuals within the State of Arkansas. *See,* the Pegasus pipeline route map attached hereto as **Exhibit H**.

On July 25, 2010, Line 6B of Enbridge Energy Partners ruptured near Marshall, Michigan, causing one of the largest oil spills in recent history. The complex cleanup is still ongoing. Approximately one million gallons of diluted-bitumen spilled into a wetland that feeds Talmadge Creek, and from there into the Kalamazoo River. The spill affected wetlands, farmlands, residential areas, and businesses, raising health concerns and leading to evacuations and warnings about swimming, fishing and drinking water. Eventually the spill contaminated thirty (30) miles of the Kalamazoo River. The impacts of the pipeline rupture continue to be felt.

The Tesoro High Plains Pipeline rupture on or about September 29, 2013, leaked an estimated 20,000 barrels of crude oil in a North Dakota field. Similar pipeline accidents have occurred in Salt Lake City, Utah; Allentown, Pennsylvania; and the Yellowstone River near Billings, Montana.

In 2011, an ExxonMobil pipeline ruptured, pouring 42,000 gallons of oil into the Yellowstone River in Montana. Then, on January 17, 2015, another pipeline burst, sending

as much as 50,400 gallons of Bakken crude oil gushing into the Yellowstone River, prompting the governor to declare a state of emergency and requiring area residents to drink bottled water after cancer-causing components of the free flowing oil were detected in the local drinking water supply systems.

A report prepared by the Pipeline Safety Trust in July 2012, entitled "*Pipeline Safety in the Salt Lake Valley,*" notes that 35.8% of all pipeline failures in the country are caused by material, weld or equipment failure. This is the largest cause of pipeline failures. "At least 1,984 pipeline incidents from 2002 to early this year — or about a quarter of all reported incidents — involved failed parts installed before 1970, according to a POLITICO analysis of federal data." http://www.politico.com/story/2015/04/the-little-pipeline-agency-that-couldnt-117147.html. "Incidents caused by equipment failure, including the welds on aging pipelines that the safety board has warned about for decades, have risen by more than 60 percent since their low point in 2007." *Id.*

On May 19, 2015, an estimated 21,000 gallons of crude oil was dumped into the Pacific Ocean from a broken pipeline in central California. The spill was detected due to a "foul smell"; not any sophisticated leak detection equipment. By the time oil was smelled by the public and then the leak found by county firefighters (not pipeline personnel), the pipeline had been leaking for several hours and the escaped oil had already found its way to a drainage ravine and reached the coast. According to news reports, it took an additional three hours for the pipeline company to shut down the ruptured pipeline. It was reported Thursday morning, May 21, 2015, that the oil slick was over 9 miles long (almost the entire length of Lake Maumelle). Fishing and shellfish harvesting have been halted. The company that operates the ruptured pipeline has accumulated 175 safety and maintenance infractions since 2006.

Under the terms of the currently proposed Consent Decree, the existence and operation of the Pegasus pipeline poses a significant and ongoing threat to the safety and welfare of the citizens of Arkansas and the United States. **The Consent Decree should do more; the Consent Decree should eliminate, or at least lessen, the ongoing threat posed by the Pegasus pipeline.** PHMSA's primary role is to establish minimum safety standards for pipeline operations. Yet, the United States of America can require so much more than minimum compliance in the face of the Defendants' frequent and flamboyant disregard of pipeline safety standards and sound integrity management principles.

III. Additional Powers Available

Unfortunately, the remedies available under Arkansas law are limited. Likewise, the protections available under Arkansas law are reactive (post spill), rather than proactive to prevent spills. Based on our limited research, the monetary fines to be paid by the Defendants to the State of Arkansas under the proposed Consent Decree are the largest ever recovered by the State for a hazardous spill of this type.

Yet, the United States of America could do more. Federal law has declared "that it is the policy of the United States that there should be no discharges of oil or hazardous substances into or upon navigable waters of the United States . . . ." Section 311(b)(1) of the Clean Water Act. This is a zero tolerance pronouncement, but PHMSA has not adopted zero tolerance standards for pipeline operations.

As discussed further in Sections IV and V below, the Water Users do not believe the proposed Consent Decree represents an efficient use by the United States of America of the power available to it for the protection of the public interest. Previous Consent Decrees have required "Statements of Work to be Performed" which include pipeline relocation, closure, monitoring after restart (not during a period the pipeline remains shut down), and additional pipeline integrity management. *See, e.g., United States of America v. Pacific Pipeline Systems, LLC*, CV08-5768 DFS, Consent Decree. Numerous other Consent Decrees have required court-enforced environmental management systems; system-wide operational changes; injunctive relieve well-beyond compliance with existing regulatory controls; and increased operating standards. *See, e.g.,*

- *ASARCO, Inc. Mining Corporation Multimedia Settlement*, Consent Decree dated April 15, 1999 (environmental management systems);

- *Alpha Natural Resources, Inc. Settlement*, Consent Decree dated March 5, 2014 (system-wide upgrades);

- *BP North Slope Clean Water Act Settlement*, Consent Decree dated May 3, 2011 (system-wide pipeline integrity management program);

- *Home Builders Clean Water Settlement*, Consent Decree dated June 11, 2008 (implement company-wide compliance programs that go beyond current regulatory requirements);

- *Magellan Clean Water Settlement*, Consent Decree dated June 16, 2008 (must take steps to minimize potential spills);

- *Patriot Coal Corporation Clean Water Act Settlement*, Consent Decree dated February 5, 2009 (heightened operating standards which should serve as a model);

- *Sterling Suffolk Racecourse LLC Clean Water Act Settlement*, Consent Decree dated August 22, 2012 (additional protection effort for more than 123 square miles of watershed); and

- *Transocean Settlement*, Consent Decree dated January 3, 2013 (substantial injunctive relief).

IV. Objections to Proposed Consent Decree

1. Susceptible to longitudinal seam failure (¶ 17)

Paragraph 17 of the proposed Consent Decree states:

> Defendants will henceforth treat the northern segment of the Pegasus Pipeline (Patoka, Illinois to Corsicana, Texas) as "susceptible to longitudinal seam failure," within the meaning of PHMSA regulations, for all risk assessment and operational purposes. This paragraph does not address whether Defendants were required to make such a determination prior to the Mayflower oil spill under existing regulations applicable to the Pegasus Pipeline.

As stated in Section II, Paragraph 4, the Defendants knew the Pegasus pipeline was subject to seam failures no later than 2006, and likely as early as 1991. In 2006, the Pegasus pipeline suffered multiple seam failures during testing, and the Defendants did nothing to prevent future seam failures – as evidenced by the Mayflower spill. PHMSA has clearly stated that the longitudinal seams failures that occurred during testing *"provided more than adequate information for the pipe to be considered susceptible to seam failure."* The Defendants, knowing the Pegasus pipeline was subject to seam failures, put the pipeline back into operation, and refused to treat the pipeline as "susceptible to longitudinal seam failure" thereby putting the water supply sources for three-quarters of a million people in Arkansas in serious jeopardy.

As a result of the Mayflower spill, PHMSA has already required the Defendants to treat the Pegasus pipeline as "susceptible to longitudinal seam failure," within the meaning of PHMSA regulations. Therefore, paragraph 17 of the proposed Consent Decree accomplishes nothing; it is a throw away, mere fluff. The Consent Decree should require the Defendants to acknowledge that they knew the Pegasus pipeline was "susceptible to longitudinal seam failure" no later than 2006, and possibly earlier – PHMSA cites "long seam failures" in 1991 hydrostatic testing that indicated the presence of susceptibility to seam failure. In addition, the Defendants should agree that their failure to treat the pipeline as "susceptible to longitudinal seam failure," and failure to modify their pipeline integrity management efforts accordingly in 2006 constitutes gross negligence under 33 U.S.C. § 1321(b)(7).

2. Supplemental spill response training (¶ 18)

Paragraph 18 of the proposed Consent Decree states:

> By the end of 2015, and continuing at least every other year thereafter through 2017, Defendants will provide supplemental spill response training for all of Defendants' designated Pegasus Pipeline first responders or their replacements. This supplemental training of designated first responders will include at least one employee at or responsible for each pump station along the Pegasus Pipeline. This supplemental

> training will be in addition to other, regularly scheduled training under existing protocols or requirements. The supplemental training will include participation in hands-on spill response field activities and strategies. From 2016 through 2018, Defendants will submit to EPA by January 31st of each year a summary letter report documenting the supplemental spill response training described in the Paragraph for the year prior, including the number of attendees, the dates and locations of the training, and a summary of the training session.

The proposed Consent Decree requires the Defendants to train the Defendants' employees, who will not be the first responders, in expectation of a spill from a pipeline that will most likely not be in use during the period of required training. The Pegasus pipeline is empty. The Defendants are not planning to restart the pipeline anytime soon. So, the proposed Consent Decree requires the Defendants to provide supplemental training in the event of a spill from an empty pipeline.

Assuming the pipeline is not relocated, the proposed Consent Decree should require additional training for all first responders, including local, county and state emergency responders, and affected water suppliers whose water supply the Pegasus pipeline traverses. Local first responders were first on the scene for the Mayflower spill and are expected to be first responders for any future spill along the Pegasus pipeline. The additional training should be coordinated through the Arkansas Department of Emergency Management (ADEM), and it should include both table top and field exercises. The Defendants should be required to guarantee that all work will conform to the ADEM requirements and the 2014 Report 14 from PHMSA titled "Guide for Communicating Emergency Response Information for Natural Gas and Hazardous Liquid Pipelines." In addition, the additional training should continue annually at minimum so long as any pipe "susceptible to longitudinal seam failure" remains in the ground and is utilized for the transportation of hazardous materials.

3. Caches of spill response supplies and equipment at strategic locations (¶ 19).

Paragraph 19 of the proposed Consent Decree states:

> By the end of 2015, Defendants will assemble and place three caches of spill response supplies and equipment at three strategic locations for their use in the event of future oil spill response needs along the Pegasus Pipeline. The caches will be placed at the flowing locations (1) Cedar Creek reservoir near Dallas, Texas, (2) Richland Chambers Reserve near Corsicana, Texas, and (3) in Mayflower, Arkansas. The equipment and supplies in the caches will be similar in quantity and type to the equipment and supplies currently maintained at other existing locations along the Pegasus Pipeline. Attachment 1 to this Consent Decree provides a list of minimum equipment and supplies that will be included in each cache. Defendants will coordinate this activity with state and local government

> emergency response agencies. For two years thereafter, Defendants annually will check the inventory of each cache and confirm each cache is in place and complete. From 2016 through 2018, Defendants will submit to EPA by January 31st of each year a summary letter report documenting the performance of the measures required by this Paragraph.

The requirements of paragraph 19 of the proposed Consent Decree are not acceptable for at least three reasons: (1) the locations of the caches are of no benefit to the 750,000 potentially affected citizens in the State of Arkansas served by the Water Users; (2) the materials in the caches are insufficient to assist with containment or removal of oil products and hazardous materials that were most recently transported through Pegasus pipeline; and (3) an obligation to maintain the caches for two-year period when the pipeline will most likely be empty is absurd.

The proposed Consent Decree requires the Defendants to put caches of equipment near the Cedar Creek Reservoir, and the Richland Chambers Reserve (both in Texas), and in Mayflower, Arkansas. None of the caches place equipment at or near any drinking water supply in Arkansas. The one location in Arkansas is located near a water body where hopefully all pipe susceptible to longitudinal seam failure has been removed during the clean-up and repair following the Mayflower spill.[1] The 18 public water supplies in Arkansas whose watershed the Pegasus traverses, however, remain at risk to another rupture of the decrepit pipeline without the benefit of any additional equipment, training or support to combat the flow of diluted-bitumen and other hazardous materials.

Moreover, the equipment to be included in the caches is totally inadequate to protect any water supplies from the hazardous materials the Defendants have transported through the Pegasus pipeline. Not only did the Mayflower rupture clearly demonstrate the inadequacy of the Defendants' integrity management efforts, that the integrity of the pipeline is flawed, and that the pipeline is susceptible to longitudinal seam failure without any warning, but it also proved that the materials transported through the pipeline sink upon escape from the pipeline and entry into water bodies.

Undiluted Wabasca heavy crude is reported to have the consistency of peanut butter and must be diluted with chemicals, including the human carcinogen benzene, so that the crude oil will flow through a pipeline. According to the Defendants' MSDS as revised January 9, 2013, the relative density of Wabasca heavy crude ranges from 0.661 to 1.013 at 15 degrees Celsius (a relative density greater than 1.0 indicates that a substance will sink in water). When diluted Wabasca heavy crude (also called diluted-bitumen) spills into the environment, it may sink due to evaporation or separation of the dilutant from the Wabasca heavy crude as well as from the mixing of the crude oil with sediment and organic matter which would increase its relative density. Again, this tendency to sink was proven by the

[1] We have no evidence that the Defendants have done more than replace the single section of ruptured defective pipe, but trust that PHMSA, the United States Department of Justice and the Arkansas Attorney General's office would have required the Defendants to replace all of the pipe segments susceptible to longitudinal seam failure within the Lake Conway watershed as part of the clean-up operations.

Mayflower spill as well as the Enbridge diluted-bitumen pipeline spill into the Kalamazoo River at Marshall, Michigan in 2010.

Yet, the materials specified for the caches only work to contain hazardous materials that remain on the surface of the water. In other words, the materials required by the Consent Decree are ineffective. It appears that there was not much thought put into determining what materials should be required in the caches. Even if the hazardous materials floated, rather than sank, there is no boat available to deploy the booms.

The proposed Consent Decree's requirement that the Defendants check and confirm the inventory and location of the caches is equally illogical. As discussed in Section IV, Paragraph 2, the proposed Consent Decree requires the Defendants to make sure the caches are in place and improperly equipped to handle a rupture when there will not be any hazardous materials within the pipeline; the cache requirement is window dressing.

V. Matters That Should Be Included In The Proposed Consent Decree

1. The Pegasus pipeline should be removed from critical watersheds where it is clear that any leak from or rupture of the pipeline would reach the water supply body

Given PHMSA's concerns about reversed flow though this type of pipe, the extremely vulnerable nature of the Lake Maumelle watershed, and the proximity of the pipeline to Lake Maumelle (*see*, Exhibit 1 to **Exhibit G**), the Pegasus pipeline should be removed from the Lake Maumelle watershed. Moreover, the pipeline should also be removed from other watersheds within Arkansas when it can be shown that the Defendants could not prevent the released hazardous materials from reaching the intakes or any rupture would put the source of any water system at risk, and relocation of the pipeline is physically possible.

The Water Users acknowledge that the northern segment of the pipeline will have to cross some creeks, streams and rivers at various locations during its 650 miles journey from Corsicana, Texas, to Patoka, Illinois, but the pipeline does not have to parallel the entire 13.6 miles of the northern shore of Lake Maumelle, which is the primary source of drinking water for approximately fifteen percent (15%) of the state's population. In many areas the Pegasus pipeline is within several hundred feet of the critical water supply lake, and any materials leaked from the pipeline will quickly flow, without any interruptions, into the lake – thereby shutting down this important water supply source. Removal of the pipeline from Lake Maumelle's watershed is possible and the Consent Decree should require the Pegasus pipeline to be moved outside of the Lake Maumelle watershed.

In those instances where the pipeline cannot be relocated, such as river and stream crossings, the Defendants should be required to provide additional protection such as replacement of all pipes susceptible to longitudinal seam failure with safer pipe and additional redundancy or reinforcement at these critical sites. In addition, additional leak detection equipment and valves should be installed to greatly reduce the amount of hazardous materials that could escape from a future rupture or leak.

2. The United States, with the assistance of CAW and other Water Users, should develop a "work plan" that the Defendants must follow before the Defendants are permitted to put any type of hazardous material into the pipeline and operate it.

Other protection elements outlined in Accufacts June 17, 2014, letter attached hereto as **Exhibit I**, should be required as part of the Consent Decree. This includes remotely operated valves, as well as shutdown and isolation procedure updates. PHMSA advisory ADB-2014-04 also recommends that sectionalizing valves and leak detection systems are important facility components to reduce the consequences of failure. Special precautions should be taken with regard to the above ground stream crossing sections of the pipeline.

As noted by Accufacts in the June 2014 letter:

> A new SCADA remotely operated block valve should be installed at approximate milepost 295.8, south of the Maumelle River, along with the check valve that [the Defendants have] proposed at this site. Given the extreme elevation profile, the potential spill volume drainage associated with this segment, and the very high potential to reach Lake Maumelle if a rupture occurs in this area, I see a remotely operated block valve at this location as a "safety critical" device, given my extensive experience in valve installation on liquid pipelines in highly sensitive areas.
>
> CAW also raised the possibility of installing either a remotely operated block valve or a check valve in the vicinity of the inside eastern boundary of the watershed. Given the steep terrain in this area, a remotely operated block valve or a check valve may be appropriate but further information regarding potential release flow is needed from [the Defendants].
>
> A requirement to timely install specific remotely operated valves should be made a condition of startup. I place little merit in [the Defendants']statement that it is having trouble timely acquiring remotely operated mainline valves and, therefore, will not be able to install such critical valves prior to restart.

In addition, the United States, with the assistance of CAW and other Water Users, should develop an integrity management plan that would be incorporated into the Consent Decree. The Defendants' strict compliance with the integrity management plan should be required. The integrity management plan should require additional aerial inspections, in-line inspections, and on-the-ground inspections. The integrity assessment should also include a review of the adequacy of the number, location and time for closure of existing valves and its leak detection capability.

3. The Pegasus pipeline and its rupture should be made a standing annex for the emergency response plan of the ADEM, similar to other manmade or natural disasters.

The Arkansas Department of Emergency Management's current Arkansas Comprehensive Emergency Management Plan (http://www.adem.arkansas.gov/aem/wp-

content/uploads/2015/01/2014-ARCEMP-Final.pdf) lays out the responsibilities for state assistance from the various Emergency Support Functions (ESF's). Under the current plan, there are a number of annexes which outline actions for more specific types of emergencies, including:

- Radiological Support Annex;
- Biological Incident Support Annex;
- Catastrophic Incident Annex;
- Food and Agricultural Incident Annex;
- Mass Evacuation Incident Annex; and
- Terrorism Incident Law Enforcement and Investigation Annex.

If the Pegasus pipeline should rupture again, ADEM will have to be involved in the cleanup, a huge effort judging from the Mayflower rupture and other crude oil spills across the United States; particularly if it is in a location that would contaminate one of the 18 Arkansas drinking water sources. At a minimum, ADEM will have to assist in mobilizing a significant response to provide advanced water treatment systems and emergency water supplies to the affected communities. Responsibilities and ESF functions for a Pegasus pipeline spill should be a separate annex to the Comprehensive Emergency Management Plan or, at a minimum, a subsection of the Catastrophic Incident Annex.

4. Compliance with PHMSA's Corrective Action Order should be required by the Consent Decree.

Contrary to the press announcements about the proposed Consent Decree that say the Defendants are required to take additional precautionary measures to prevent future spills, the proposed Consent Decree does no such thing. The Defendants "represent" in the proposed Consent Decree that they will perform an assessment and any follow-up work on the pipeline required by the Corrective Action Order, but failure to do so does not constitute breach of the Consent Decree. These representations should be made an enforceable condition of the Consent Decree in the injunctive relief section.

5. The Defendants should be required to perform real, sustainable, beneficial, effective, and credible hydrotests, monitored and reviewed by independent third parties and the Water Users.

The Defendants "represent" in the proposed Consent Decree that they will "conduct a 'spike' hydrotest as part of an 8-hour 'sustained-pressure' test and complete an analysis of the 2010 and 2013 in-line inspection results with a process that can help detect anomalies related to long-seam failure (e.g., 'KMAP' analysis)." Again, failure to follow through with the representations does not constitute a breach of the Consent Decree.

In addition, the parameters of the spike hydrotest referred to in the Consent Decree and submitted by the Defendants to PHMSA as part of its proposed remedial work plan are inadequate. *See,* March 28, 2104 letter from the Defendants to PHMSA and the Defendants' summary of the remedial work plan attached hereto as **Exhibits J and D**.

As noted in Accufacts June 2014, letter to PHMSA regarding the proposed hydrostatic test:

> [The Defendants'] proposed hydrotest approach is still inadequate as is relates to vintage ERW seam-weld manufacturing risks. . . .
>
> [The Defendants'] proposed approach to limit hydrotest pressures to a maximum of 100 percent SMYS is neither technically sound nor appropriate given the seam risks present in the pipeline segments within the watershed . . . . The purpose of a higher percentage SMYS hydrotest is to remove various larger risk ERW seam-related anomalies that can grow to rupture/failure from operation over a reasonable period of time following restart, or to identify pipe segments, through numerous higher-pressure hydrotest failures, as not fit for hydrocarbon service. Quite simply, [the Defendants']proposal to go to all the trouble and expense of a new hydrotest and leave an important segment tested to insufficient percent of SMYS instills little confidence in [the Defendants'] integrity or risk management approach.
>
> A pipeline is no better than its weakest link. Therefore, PHMSA should require [the Defendants] to perform minimum 90 percent SMYS spike hydrotests (or higher), compelling [the Defendants] to either:
>
> (1) further segment the test sections to reduce elevation changes within the test segment to yield higher percentage of SMYS if an upper limit of 100 percent SMYS is imposed; or
>
> (2) test above 100 percent SMYS using special testing protocols well known in the industry and by PHMSA to increase the minimum percent SMYS realized on a segment undergoing significant elevation changes.

In short, the proposed spike hydrotest does not achieve a sufficiently high pressure to adequately test the integrity of the pipeline at numerous sections. Particularly, under the proposed parameters, one section in the Lake Maumelle watershed will only be tested to 83% of SMYS. The spike hydrotest should be performed at minimum pressures equal to or exceeding 90% SMYS at all locations in the watersheds of public drinking water supplies. The pipeline ruptured at 54% SMYS and it had been hydrotested at approximately 83% SMYS in 2006, demonstrating that prior pressure tests and subsequent integrity management efforts were insufficient to prevent a rupture. The Water Users fail to see the purpose of allowing the Defendants to once again perform hydrotests at lower pressures than recommended when recent history shows that such testing is inadequate and results in pipeline failures. As the old adage says "the definition of insanity is doing the same thing over again and expecting a different result." Allowing the Defendants to complete an

insufficient hydrotest and expecting safe operation of the pipeline without another rupture is insane. PHMSA Pipeline Safety: Guidance for Pipeline Flow Reversals, Product Changes and Conversion to Service (ADB–2014–04) also recommends "[a] spike test 30 minutes in duration at 100 to 110 percent specified minimum yield strength . . . as it is the best method for evaluating cracking threats at this time."

Furthermore, in the work plan proposal submitted to PHMSA outlining the "represented" spike hydrotest parameters, the Defendants state that "If a significant number of pressure-reversal failures occur [during the spike hydrotest], [the Defendants] may decide to reduce the target test pressures [in the remaining test segments] in order to complete the testing in [a] more efficient manner." As noted by Accufacts in its July 2014 letter:

> This statement indicates [the Defendants'] disregard or lack of understanding of the purpose of a hydrotest, i.e. to remove various larger risk ERW seam-related cracks that can grow to rupture from operation over a reasonable period of time following restart or to identify pipe sections that are not fit for hydrocarbon service. By reducing the pressure to make the tests "more efficient," the Defendants are willfully sacrificing adequate integrity testing/evaluation in the name of "efficiency." The result of reducing the pressure will be that the at-risk cracks will not be eliminated and the pipe segments not fit for service will not be identified.

Further, a 2013 Battelle report on ERW longitudinal seam failures states the following regarding pressure-reversals associated with hydrotests:

> In some instances, defects may grow during the test itself leading to a phenomenon referred to as a 'pressure reversal'. Experience and analysis indicate that the possibility of a pressure reversal causing a failure in service [after a pipeline returns to operation] is so remote that it need not be considered a seam integrity threat as long as the test-pressure-to-operating-pressure ratio is equal to or greater than 1.25. 'Spike' testing where the pressure level is raised above the code-required hydrostatic test level of 1.25 times the [Maximum Operating Pressure] for a few minutes contributes to increased confidence that no pressure reversal could threaten seam integrity, and it increases the minimum time to failure for any defect that might grow by fatigue in service after the test.

Battelle Memorial Institute, *Final Summary Report and Recommendations for the Comprehensive Study to Understand Longitudinal ERW Seam Failures – Phase One* (Final Report – Task 4.5) (October 23, 2013) page 17.

In short, the Defendants' non-binding "representation" contained within the Consent Decree is meaningless. There is no benefit to the citizens of Arkansas and the United States from the Defendants' "representation" that they will perform a hydrotest with insufficient parameters to adequately test the safety and integrity of the Pegasus pipeline.

The "representation" is even more flawed because, as part of the parameters for the testing proposed to PHMSA, the Defendants reserved the right to reduce the already inadequate parameters in the name of "efficiency"; a practice that is not supported by integrity management literature and best practice. The "represented" spike hydrotest, therefore, flies in the face of sound integrity management principles and prioritizes "efficiencies" (which we assume refers to both cost and time) over rigorous safety and integrity testing. The preference for "efficiency" over rigorous testing demonstrates not only the Defendants' lack of understanding regarding integrity management principles but also their flagrant disregard for the integrity of the pipeline and its safe operation.

6. The results of the 2010 and 2013 in-line inspection analysis "represented" in the Consent Decree (pg. 2) should be made available to Central Arkansas Water and the other Water Users for review and transparency as well as additional third-party review.

As evidenced by the discovery disputes surrounding the existing civil cases brought by property owners following the Mayflower rupture and Central Arkansas Water's own difficulties in obtaining information from the Defendants, the lack of transparency demonstrated by the Defendants is well documented. Transparency is critical to the safety of future operations.

7. The Defendants should consent to third-party enforcement of injunctive provisions by any of the Water Users, and payment of the third-party's costs and expenses, including attorneys' fee, if successful.

The Water Users have little to no confidence in the ability of PHMSA to independently and thoroughly enforce the requirements of the Corrective Action Order or the remedial work plan. Furthermore, the Water Users have no confidence in the Defendants' ability or intent to comply with the letter or intent of the Consent Decree given the Defendants' history of non-compliance as discussed in Section II, Paragraph 7.

According to information available from the United States Department of Transportation, the Defendants have had 87 "incidents" involving the escape of hazardous liquids from their pipelines since 2006. Of the 87 incidents, 25 of them (28.7%) were seam related with "manufacturing defect" or "unspecified" other causes. In total, more than 12,656 barrels (506,240 gallons) of hazardous materials were poured from the Defendants' leaking pipelines into the environment, resulting in at least $234,742,148 in property damage.

PHMSA is clearly not up to the task of enforcing the Consent Decree or any restart parameters it might establish for the Pegasus pipeline, or enforcement of existing regulations for the safe operation of pipelines. For example,

> Congress also gave PHMSA 18 months to write a regulation that would require pipeline operators to notify the National Response Center of an accident within an hour . . . . More than three years later, PHMSA's rules only refer to notification at 'the earliest practicable moment . . . . Congress also sought to eliminate the so-called grandfather clause, which exempts lines built before federal safety regulations first took effect from current rules for record-keeping and pressure tests . . . . Lawmakers gave PHMSA 18

> months to close that loophole by requiring that previously untested larger gas lines in sensitive areas undergo strength testing. But the agency has not even proposed a rule. http://www.politico.com/story/2015/04/the-little-pipeline-agency-that-couldnt-117147.html.
>
> Former [National Transportation Safety Board] Chairman Jim Hall...said [PHMSA] officials are "underfunded and understaffed and do not really have the political culture to be effective at what they're doing . . . . They're understaffed to provide adequate oversight of the industry, but I don't believe they're understaffed to move a regulatory framework," he added. "They've just lacked the will to do so." *Id.*

PHMSA's lax oversight on integrity management efforts led to the violations of the Pipeline Safety Act cited in the 2014 NOPV. In addition, PHMSA's Director, Jeffrey Wiese, stated that the regulatory process that his agency oversees is "kind of dying" and that it has "very few tools to work with" and that, in response, the agency will create a YouTube channel to persuade pipeline operators to voluntarily improve their safety and integrity management efforts by "trying to socialize these concepts long before we get to regulation." *See,* http://insideclimatenews.org/news/20130911/exclusive-pipeline-safety-chief-says-his-regulatory-process-kind-dying. Others have not been so kind in their comments about PHMSA's regulatory inability to improve safety and integrity management of the nation's pipelines. Inspired by an April 21 *Politico* piece outlining extensive concerns over PHMSA's oversight and objectivity, Rep. Jackie Speier of California recently "doubled down on her criticisms of the agency" in a House floor speech, stating: "It was wrong to call PHMSA a toothless tiger. PHMSA is actually a toothless kitten — a fluffy industry pet that frightens absolutely no one." *See,* https://www.snl.com/InteractiveX/Article.aspx?cdid=A-32324299-11313. Agency records show that "PHMSA started fewer civil penalty cases in 2014 than it had in almost a decade and proposed 73 percent fewer fines than a year earlier, even as the number of total pipeline incidents increased." http://www.politico.com/story/2015/04/the-little-pipeline-agency-that-couldnt-117147.html.

VI. Conclusion

The proposed Consent Decree is inadequate because it requires short term measures when the pipeline is a long term hazard and the risk of harm increases each year the pipeline ages. Therefore, we believe the United States of America should require injunctive relief in the Consent Decree that includes real and meaningful measures to protect the citizens and water supplies from further damage cause by rupture in the Pegasus pipeline. Without replacement of every section of defective pipe susceptible to longitudinal seam failure, the pipeline will rupture again. The United States of America should require the Defendants to take all necessary steps and precautions the prevent the contamination of critical sources of water supply for over three-quarters of a million Arkansas residents.

Relief Sought

At a minimum, the injunctive relief contained in the Consent Decree should require that the Defendants shall:

1. Remove of the Pegasus pipeline from the Lake Maumelle watershed;

2. Replace all pipe sections at all river, stream or creek crossing up-stream from a potable water supply system's in-take sites with additional redundancy and reinforcement and install automatic valves on both sides of the water body that close upon detection of a leak;

3. Complete a spike hydrotest of the Pegasus pipeline at minimum pressures equal to or exceeding 90% SMYS at all locations in the watersheds of public drinking water supplies and allow the test and results to be monitored and reviewed by independent third parties and the Water Users;

4. Acknowledge that they should have treated the pipeline as susceptible to longitudinal seam failure since no later than 2006 and that their failure to modify their pipeline integrity management efforts accordingly in 2006 constitutes gross negligence under 33 U.S.C. § 1321(b)(7);

5. Place additional caches of equipment in meaningful locations, including, but not limited to, the Lake Maumelle watershed, and include equipment applicable to the clean-up of the materials to be transported in the pipeline prior to restart;

6. Inspect all additional caches of spill response equipment located within drinking water supply areas on an annual basis for as long as the pipeline in operation contains any segments of pipe susceptible to longitudinal seam failure;

7. Provide spill response training for all first responders, including local, county and state emergency responders, and affected water suppliers whose water supply the Pegasus pipeline traverses on an annual basis for as long as the pipeline in operation contains any segments of pipe susceptible to longitudinal seam failure;

8. Maintain any additional enhanced training, inspection and operational improvements for as long as the pipeline in operation contains any segments of pipe susceptible to longitudinal seam failure;

9. Agree to abide by a "work plan" approved by the Water Users that includes the installation of remotely operated valves, shutdown and isolation procedure updates, and installation of leak detection systems as recommended in PHMSA advisory ADB-2014-04 as well as all improvements identified in prior Accufacts correspondence to the Defendants and PHMSA (included as **Exhibits E and I**);

10. Agree to abide by an integrity management plan approved by the Water Users that includes additional aerial inspections, in-line inspections, and on-the-ground inspections, and a review of the adequacy of the number, location and time for closure of existing valves and its leak detection capability;

11. Agree to and support the inclusion of the emergency response plan for the Pegasus pipeline as a standing annex in the ADEM Comprehensive Emergency Management Plan;

12. Agree that a violation of the PHSMA's Corrective Action Order constitutes violation of the Consent Decree;

13. Make the results of the 2010 and 2013 in-line inspection analysis "represented" in the Consent Decree available to any Water User, or their agents, who request it;

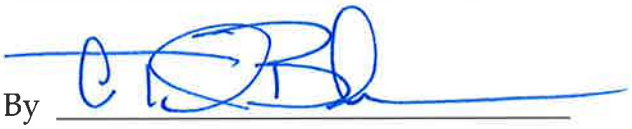
14. Agree to third-party monitoring of compliance with and enforcement of the Consent Decree by the Water Users, and the Defendants should be responsible for payment of all Water Users' attorneys' fees and costs in any action brought to enforce the Consent Decree; and

15. Make annual payments to the Water Users of a sufficient amount to be used for third-party monitoring of compliance with the Consent Decree.

Thank you for the opportunity to comment on the proposed Consent Decree.

Respectfully submitted by Central Arkansas Water on its own behalf and on behalf of each of the Water Users whose signature appears below:

CENTRAL ARKANSAS WATER

By 

C. Tad Bohannon
Chief Legal Counsel
for Central Arkansas Water

By my signature below, I hereby affirm that the below named city, county or water provider is in support of and in agreement with the comments contained in this **Comments to Proposed Consent Decree**. Moreover, I affirm that a rupture of the Pegasus pipeline in the watershed of our water supply source would be devastating to the public health, welfare and safety of the citizens we represent and serve.

Central Arkansas Water

Graham W. Rich, CEO

Date: May 27, 2015

By my signature below, I hereby affirm that the below named city, county or water provider is in support of and in agreement with the comments contained in this **Comments to Proposed Consent Decree**. Moreover, I affirm that a rupture of the Pegasus pipeline in the watershed of our water supply source would be devastating to the public health, welfare and safety of the citizens we represent and serve.

City of Little Rock

Mark Stodola, Mayor

Date: 5-27, 2015

By my signature below, I hereby affirm that the below named city, county or water provider is in support of and in agreement with the comments contained in this **Comments to Proposed Consent Decree**. Moreover, I affirm that a rupture of the Pegasus pipeline in the watershed of our water supply source would be devastating to the public health, welfare and safety of the citizens we represent and serve.

City of North Little Rock

Joe Smith, Mayor

Date: 5/27, 2015

By my signature below, I hereby affirm that the below named city, county or water provider is in support of and in agreement with the comments contained in this **Comments to Proposed Consent Decree**. Moreover, I affirm that a rupture of the Pegasus pipeline in the watershed of our water supply source would be devastating to the public health, welfare and safety of the citizens we represent and serve.

City of Sherwood

Virginia Hillman-Young, Mayor

Date: May 27, 2015

By my signature below, I hereby affirm that the below named city, county or water provider is in support of and in agreement with the comments contained in this **Comments to Proposed Consent Decree**. Moreover, I affirm that a rupture of the Pegasus pipeline in the watershed of our water supply source would be devastating to the public health, welfare and safety of the citizens we represent and serve.

City of Cabot

Bill Cypert, Mayor

Date: 5/26, 2015

By my signature below, I hereby affirm that the below named city, county or water provider is in support of and in agreement with the comments contained in this **Comments to Proposed Consent Decree**. Moreover, I affirm that a rupture of the Pegasus pipeline in the watershed of our water supply source would be devastating to the public health, welfare and safety of the citizens we represent and serve.

City of Bryant

Jill Dabbs, Mayor

Date: 5-27, 2015

By my signature below, I hereby affirm that the below named city, county or water provider is in support of and in agreement with the comments contained in this **Comments to Proposed Consent Decree**. Moreover, I affirm that a rupture of the Pegasus pipeline in the watershed of our water supply source would be devastating to the public health, welfare and safety of the citizens we represent and serve.

City of Hot Springs

David Watkins, City Manager

Date: 05/22, 2015

By my signature below, I hereby affirm that the below named city, county or water provider is in support of and in agreement with the comments contained in this **Comments to Proposed Consent Decree**. Moreover, I affirm that a rupture of the Pegasus pipeline in the watershed of our water supply source would be devastating to the public health, welfare and safety of the citizens we represent and serve.

Pulaski County, Arkansas

Barry Hyde, County Judge

Date: May 21, 2015

By my signature below, I hereby affirm that the below named city, county or water provider is in support of and in agreement with the comments contained in this **Comments to Proposed Consent Decree**. Moreover, I affirm that a rupture of the Pegasus pipeline in the watershed of our water supply source would be devastating to the public health, welfare and safety of the citizens we represent and serve.

Searcy Waterworks

Daniel Dawson, General Manager

Date: May 21, 2015

By my signature below, I hereby affirm that the below named city, county or water provider is in support of and in agreement with the comments contained in this **Comments to Proposed Consent Decree**. Moreover, I affirm that a rupture of the Pegasus pipeline in the watershed of our water supply source would be devastating to the public health, welfare and safety of the citizens we represent and serve.

Cabot WaterWorks

Gary Walker, Chairman

Date: 5-22, 2015

By my signature below, I hereby affirm that the below named city, county or water provider is in support of and in agreement with the comments contained in this **Comments to Proposed Consent Decree**. Moreover, I affirm that a rupture of the Pegasus pipeline in the watershed of our water supply source would be devastating to the public health, welfare and safety of the citizens we represent and serve.

Cabot WaterWorks

Tim Joyner, Manager

Date: May 22ND, 2015

By my signature below, I hereby affirm that the below named city, county or water provider is in support of and in agreement with the comments contained in this **Comments to Proposed Consent Decree**. Moreover, I affirm that a rupture of the Pegasus pipeline in the watershed of our water supply source would be devastating to the public health, welfare and safety of the citizens we represent and serve.

Malvern Waterworks

David Coston

David Coston, Manager

Date: May 31, 2015

Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000
Governor Mike Beebe
Nathaniel Smith, MD, MPH, Interim Director and State Health Officer

CERTIFIED

June 3, 2013

Ms. Caroline Henderson
Central North Area Manager
ExxonMobil Pipeline Company
800 Bell Street, Room 691-J
Houston, TX 77002

Mr. Rodrick Seeley, Director
PHMSA Pipeline Safety
Southwest Region Office
8701 S. Gessner Road, Suite 1110
Houston, TX 77074

RE: ExxonMobil Pegasus Pipeline Safety
Arkansas Drinking Water Resources

Dear Ms. Henderson and Mr. Seeley:

The Arkansas Department of Health (ADH) has been actively monitoring the recent oil pipeline spill and remediation efforts located at Mayflower, Arkansas. The oil that spilled resulted in the evacuation of residents of that area. The released oil also impacted local water bodies. This incident has raised the Arkansas Department of Health's awareness of both the route that the Pegasus pipeline takes through the state of Arkansas in relation to drinking water supply sources and the apparent increasing potential for harm that could result from a spill at other points along this aging pipeline. The Arkansas Department of Health is the primacy agency for the federal Safe Drinking Water Act in the state of Arkansas. A component of Safe Drinking Water Act related activities includes source water assessment and protection.

Based upon our general knowledge of the route of the Pegasus pipeline through the state of Arkansas, it would appear that similar leaks to that which occurred at Mayflower could potentially impact as many as 18 drinking water sources in the state which provide a source of water to approximately 750,000 Arkansans. In addition, information readily available from the Pipeline and Hazardous Materials Safety Administration (PHMSA) clearly indicates that the safety of older pipelines utilizing pipe manufactured with now obsolete welding techniques is a concern. The Pegasus pipeline was constructed at a time when older techniques were utilized according to information obtained by our office.

The aging Pegasus pipeline that traverses vital drinking water source areas poses an unacceptable risk to the health and well-being of a large number of Arkansans. As a result, the Arkansas Department of Health requests that PHMSA ensure the following steps are taken prior to resumption of crude oil through this line.

Short Term Actions:

- ExxonMobil should conduct a thorough inspection and analysis of the integrity of the pipeline in Arkansas and provide documentation to water utilities potentially affected by another possible spill. All potential weaknesses in the pipeline located in their source water areas should be identified and corrected. The ADH will provide assistance in identifying all water sources at risk from any additional failures of the pipeline.
- ExxonMobil should install an adequate number of remotely operated valves and monitoring systems in order to minimize the amount of oil that would be released in the event of a spill in these critical areas around Arkansas.
- ExxonMobil should conduct appropriate maintenance of the pipeline in all areas in Arkansas where soil erosion, etc. has left the pipe unintentionally exposed and at greater vulnerability to damage.
- ExxonMobil should install isolation valves and protective encasement of the pipeline at all stream crossings in Arkansas.
- ExxonMobil should pre-stage adequate resources such as equipment and supplies in order to promptly and thoroughly respond to any spill in these Arkansas areas.
- ExxonMobil should provide each affected drinking water utility with updated emergency response plans that clearly detail the efforts that would be taken, in coordination with the local water utilities, to prevent impairment of drinking water sources in the event of another spill in Arkansas.

Medium Term Actions[1]:

- ExxonMobil should undertake planning for the replacement and removal of this pipeline from critical drinking water source areas in Arkansas. ExxonMobil shall provide opportunity for comments from the ADH concerning proposed relocation routes, so that critical drinking water source areas are accurately identified. The planning of an alternate route will incorporate the goal of minimizing the number of Arkansans that could be put at risk from an oil spill near drinking water sources.
- ExxonMobil will relocate the portions of this pipeline that pose risks to drinking water sources utilizing a route that will minimize the number of spill-related hazards to potentially exposed Arkansans.

Given the responsibility of all concerned to protect public safety, I request a response to this letter within 30 days indicating a willingness to take these reasonable and prudent actions.

Sincerely,

Nathaniel Smith, M.D., M.P.H.
Interim Director and State Health Officer

[1] Medium Term Actions shall be taken after PHMSA approval of resumption of crude oil through the Pegasus pipeline.

ADEQ
ARKANSAS
Department of Environmental Quality

May 17, 2013

Mr. Jeffrey D. Weisse
Associate Administrator for Pipeline Safety
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, D.C. 20590

Re: ExxonMobil Pipeline Company
Pegasus Pipeline

Dear Mr. Weisse:

I am writing to express our concerns about the integrity of the Pegasus Pipeline in Arkansas. As you are aware, this pipeline released crude oil in a Mayflower, Arkansas neighborhood, and the resulting spill has significantly impacted residents and the environment. The cause of the pipeline failure is unknown. Although the Pegasus Pipeline is currently out of service, the Pipeline and Hazardous Materials Safety Administration (PHMSA) Corrective Action Order, confirmed on May 10, 2013, clearly anticipates the pipeline returning to service after certain actions are approved and implemented. The Arkansas Department of Environmental Quality (ADEQ) asks PHMSA to require ExxonMobil Pipeline Company (EMPCO), the owner of the pipeline, to verify through a third party the integrity of the entire pipeline traversing the state. The integrity of the pipeline should be confirmed using the most rigorous assessment methodologies available. Further, the pipeline's integrity throughout the state and the safety of operating the pipeline in or near any population centers, ecologically sensitive areas or drinking water supplies must be confirmed before the pipeline is allowed to return to service.

ADEQ's concern for the integrity of the pipeline and the safety of its operation in Arkansas stems from the recent release in Mayflower and information gathered in the wake of the Mayflower release. The bases for our concern include the age of the pipeline, the type of welding used in constructing the pipeline, the reversal of the flow in the pipeline (which according to the original Corrective Action Order "can affect the hydraulic and stress demands on the pipeline"), the number of seam failures detected in the Northern Section of the pipeline during hydrostatic testing in 2005-2006 and seam assessment in 2010, and the recent failure of the pipeline in Mayflower, the cause of which remains unknown. Additionally, the material safety data sheet for the crude oil obtained through a link in PHMSA's electronic reading room for the Pegasus Pipeline clearly shows the potential hazards to human health and the environment posed by any release of this material. Given all these factors, ADEQ asks PHMSA to ensure that the safety and integrity of the pipeline in Arkansas is confirmed before the Pegasus Pipeline is returned to service. Where the pipeline's integrity cannot be confirmed through the

most stringent assessment methods, then that portion of the pipeline should be replaced with new pipe that meets all integrity and safety requirements. And, where the pipeline's integrity and safety cannot be verified for any portion of the pipeline located in the vicinity of any population centers, ecologically sensitive areas, or drinking water supplies, then that portion of pipeline should be removed and relocated using new pipe that meets all integrity and safety requirements. For example, the Pegasus Pipeline is located within the Lake Maumelle watershed. Lake Maumelle is the drinking water source for a significant portion of the population residing in Central Arkansas. Any release from the pipeline within the Lake Maumelle watershed will pose a significant threat of contamination to this important public drinking water supply and a significant threat to human health and safety. If EMPCO cannot confirm the integrity and safety of the pipeline in the Lake Maumelle watershed using the most stringent assessment methods, then EMPCO should remove the Pegasus Pipeline from Lake Maumelle's watershed before the pipeline can be returned to service.

Thank you for considering this request. If ADEQ can provide any assistance with this matter, please call me at (501) 682-0959.

Sincerely

Teresa Marks
Director

cc: Karen Tyrone
Graham Rich
Judge Allan Dobson
Ron Curry, Regional Administrator for EPA Region 6
Attorney General Dustin McDaniel
Governor Mike Beebe

EXHIBIT C

Dated: September 9, 2014.

Julie P. Agarwal,

Secretary, Maritime Administration.

[FR Doc. 2014–22284 Filed 9–17–14; 8:45 am]

BILLING CODE 4910–81–P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

[Docket No. PHMSA–2014–0040]

Pipeline Safety: Guidance for Pipeline Flow Reversals, Product Changes and Conversion to Service

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

ACTION: Notice; issuance of advisory bulletin

SUMMARY: PHMSA is issuing this advisory bulletin to alert operators of hazardous liquid and gas transmission pipelines of the potential significant impact flow reversals, product changes and conversion to service may have on the integrity of a pipeline. Failures on natural gas transmission and hazardous liquid pipelines have occurred after these operational changes. This advisory bulletin describes specific notification requirements and general operating and maintenance (O&M) and integrity management actions regarding flow reversals, product changes and conversion to service. This advisory bulletin also recommends additional actions operators should take when these operational changes are made including the submission of a comprehensive written plan to the appropriate PHMSA regional office regarding these changes prior to implementation.

FOR FURTHER INFORMATION CONTACT: Julie Halliday by phone at 202–366–0287 or by email at *julie.halliday@dot.gov.* Information about PHMSA may be found at *http://www.phmsa.dot.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

Two recent pipeline failures occurred on hazardous liquid pipelines where the flow had been reversed. The Tesoro High Plains Pipeline rupture was discovered on September 29, 2013, after leaking an estimated 20,000 barrels of crude oil in a North Dakota field. The location of pressure and flow monitoring equipment had not been changed to account for the reversed flow. The Pegasus Pipeline failed on March 29, 2013, releasing about 5,000 barrels of crude oil into a neighborhood in Faulkner County, Arkansas. The pipeline flow had been reversed in 2006. Due to these recent accidents and other information PHMSA has become aware of as a result of the large number of recent or proposed flow reversals, product changes and conversion to service projects, PHMSA is alerting operators to the potential significant impact these changes may have on the integrity of a pipeline.

In response to shifts in the supply of and demand for various products transported by gas and hazardous liquid pipelines, operators may consider making operational changes to their pipelines including flow reversal, product change (e.g., crude oil to refined product) and/or conversion to service (e.g., convert from natural gas to crude oil) (49 CFR 192.14 and 195.5). Flow reversals, product changes and conversions to service may impact various aspects of a pipeline's operation, maintenance, monitoring, integrity management and emergency response. Pressure gradient, velocity, and the location, magnitude, and frequency of pressure surges and cycles may change. Operators may also consider increasing the throughput capacity of the pipeline. Increasing throughput may also impact the pressure profile and pressure transients. Product changes may warrant a material compatibility and corrosion susceptibility review. Leak detection and monitoring systems may be affected. Significant additions, removal or modifications of pump stations, compressor stations, tank farms and In-Line Inspection (ILI) launching/receiving facilities may be required. Appurtenances such as flow meters, strainers, liquid separators, corrosion control devices, leak detection devices, control valves and sectionalizing valves may need to be altered.

II. Advisory Bulletin (ADB–2014–04)

To: Owners and Operators of Onshore Oil Pipeline Systems.

Subject: Guidance for Pipeline Flow Reversals, Product Changes and Conversion to Service.

Advisory: This advisory bulletin describes specific notification requirements and general O&M and integrity management requirements as well as additional actions operators should consider taking before, during and after flow reversals, product changes, and conversion to service. PHMSA refers operators to detailed guidance published in the document, *Guidance to Operators Regarding Flow Reversals, Product Changes and Conversion to Service,* which provides operators with PHMSA's expectations with respect to complying with existing regulations and also contains recommendations that operators should consider prior to implementing these changes. The document addresses flow reversals, product changes and conversion to service individually. The document is located at: *http://phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Pipeline/Regulations/GORRPCCS.pdf.*

Notification Requirements & Consideration

Pipeline operators are required to notify PHMSA when the cost to make these changes exceeds $10 million per §§ 191.22(c) and 195.64(c). While not common, pre-existing special permits or state waivers may require the operator to contact PHMSA prior to significant operational changes such as flow reversal, product changes or conversion to service. Operators should contact PHMSA regarding changes to pipelines with a special permit irrespective of specific language requiring it.

Per § 192.909, operators of gas transmission pipelines must notify PHMSA if these changes will substantially affect their integrity management program, its implementation, or modify the schedule for carrying out the program elements. Under § 194.121, operators of onshore oil pipelines must submit a modified response plan within 30 days of making a change in operating conditions that substantially affects its implementation. Operators will need to reflect changes due to conversion to service and product changes on subsequent Annual Report (required by §§ 191.17 and 195.49) and National Pipeline Mapping System submissions (required by The Pipeline Safety Improvement Act of 2002). Interim NPMS submissions reflecting the changes are not required; operators should wait until their next scheduled NPMS submission. Operators are strongly encouraged to submit a comprehensive written plan to the appropriate PHMSA regional office prior to performing flow reversals, product changes and conversions to service.

O&M and Integrity Management Requirements and Considerations

Requirements to address O&M and integrity issues inherent with flow reversals, product changes and conversions to service are embedded in many parts of the code. While review of O&M and integrity management plan aspects are carried out during regular compliance and verification activities, these matters may be reviewed to the extent that the incremental increase in

risk as a result of these changes may be relevant. Operators should be prepared to demonstrate how they addressed impacts to O&M, emergency plans, control room management, operator qualification training, emergency responder training, public awareness, spill response, maps and records, and integrity management programs and plans for the affected pipeline facilities. Integrity management requires operators to proactively anticipate hazards, evaluate risks and identify preventative and mitigative actions to manage operational changes that have the potential to increase the risk of failure or the increase in potential consequences of a failure. Flow reversal, product change or conversion to service meet these criteria. Operators must document the reason for, and resulting changes to, their integrity management program prior to implementation. The safe operation of an existing pipeline for use under these proposed operating conditions is dependent on the integrity of the pipeline. Facilities built under older versions of the code may need additional assessment to determine whether they remain safe to operate under these changed conditions. The integrity assessments are done in accordance with the most recent version of the code.

Operators should review past integrity assessments, assessment tools and inspections. As a result of these changes, the location of certain threats may change. Previous assessments may not have evaluated the integrity of the pipeline at the location where the threat will be after these operational changes have been implemented. Reassessment may be in order. Operators should incorporate applicable findings from PHMSA's research and development program into their integrity management program. For low frequency electric resistance welded (LF–ERW) pipe, operators should review Project #390, *Comprehensive Study to Understand Longitudinal ERW Seam Failures.* These reports review findings from seam cracking issues from many failures such as: Pressure tests, predictive model accuracies for crack type and fracture mode, ILI and in-the-ditch evaluation tool findings. The reports are located on PHMSA's Web site *http://primis.phmsa.dot.gov/matrix/PrjHome.rdm?prj=390.*

Conversion to service allows previously used steel pipelines to qualify for use without meeting the design and construction requirements applicable to new pipelines, but the regulations require the pipeline be tested in accordance with 192 subpart J or 195 subpart E per §§ 192.14(a)(4) and 195.5(a)(4) respectively. This includes the requirement to perform a new pressure test. The procedure to carry out the pressure test must be included in the written procedure required in §§ 192.14(a) and 195.5(a). Operators should consider performing ILI and hydrostatic pressure with a spike test prior to implementing any of these changes especially if historical records have indications of previous in-service or hydrostatic pressure test failures, selective seam corrosion, stress corrosion cracking, other cracking threats or other systemic concerns. A spike test 30 minutes in duration at 100 percent to 110 percent specified minimum yield strength or between 1.39 to 1.5 times the maximum allowable operating pressure for gas and the maximum operating pressure for hazardous liquids is suggested as it is the best method for evaluating cracking threats at this time.

Integrity depends on accurate records to make suitable decisions. Operators should validate material and strength test records for all affected segments of pipe as reminded in an advisory bulletin (ADB 12–06) published on May 7, 2012; 77 FR 26822 titled: Pipeline Safety: Verification of Records. If the operator is missing records, they should create and implement a plan to obtain material documentation. If mechanical and/or chemical properties (mill test reports) are missing, the plan should require destructive tests to confirm material properties of pipeline. Certain high risk pipelines merit a greater level of due diligence. While a new hydrostatic pressure test with a spike test is an important part of confirming the integrity of a pipeline, it may not be advisable to perform flow reversals, product changes or conversion to service under the following conditions:

- Grandfathered pipelines that operate without a Part 192, Subpart J pressure test or where sufficient historical test or material strength records are not available.
- LF–ERW pipe, lap welded, unknown seam types and with seam factors less than 1.0 as defined in §§ 192.113 and 195.106.
- Pipelines that have had a history of failures and leaks most especially those due to stress corrosion cracking, internal/external corrosion, selective seam corrosion or manufacturing defects.
- Pipelines that operate above Part 192 design factors (above 72% SMYS).
- Product change from unrefined products to highly volatile liquids.

Sectionalizing valves and leak detection systems are important facility components to reduce the consequences of failure. The integrity assessment should also include a review of the adequacy of the number, location and time for closure of existing valves and its leak detection capability. Operators should enhance their communication with affected stakeholders concerning the changes with supplemental messages per API RP 1162 (incorporated by reference §§ 192.7 and 195.3). Public awareness communication should start in the projects planning stage, continue into the operations phase, provide project specific information and be responsive to the concerns of potentially affected persons. Operators should use the information in *Guidance to Operators Regarding Flow Reversals, Product Changes and Conversion to Service* and develop a comprehensive written plan when performing flow reversals, product changes and conversions to service. Operators are strongly encouraged to submit their plan to the appropriate PHMSA regional office.

Authority: 49 U.S.C. Chapter 601 and 49 CFR 1.53.

Issued in Washington, DC, on September 12, 2014.

Alan K. Mayberry,

Deputy Associate Administrator for Policy and Programs.

[FR Doc. 2014–22201 Filed 9–17–14; 8:45 am]

BILLING CODE 4910–60–P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

[Docket No. PHMSA–2014–0124]

Pipeline Safety: Meeting of the Technical Pipeline Safety Standards Committee and the Technical Hazardous Liquid Pipeline Safety Standards Committee

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

ACTION: Notice of advisory committee meeting.

SUMMARY: This notice announces a public meeting of the Gas Pipeline Advisory Committee (GPAC), also known as the Technical Pipeline Safety Standards Committee, and the Liquid Pipeline Advisory Committee (LPAC), also known as the Technical Hazardous Liquid Pipeline Safety Standards Committee. The committees will meet in joint session to discuss a variety of topics to keep committee members up-to-date on DOT's pipeline safety program.

EXHIBIT
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Pegasus pipeline: northern segment remedial work plan

We take our responsibility to communities in which we operate very seriously. After a thorough review of all the factors that contributed to the Mayflower incident, we are ready to submit a remedial work plan that includes multiple layers of integrity verification measures.

Pipeline Facts

- The northern segment of the Pegasus pipeline:
  - runs 648 miles from Patoka, Illinois - through Missouri and Arkansas - to Corsicana, Texas
  - primarily contains pre-1970 low-frequency electric resistance welded pipe
  - was manufactured by the Youngstown Sheet and Tube Company, which was one of the largest manufacturers of electric resistance welded pipe in the 1940s when the northern segment was built

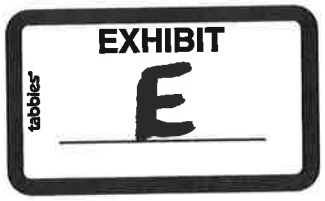
Detailed Investigation

- Investigation and analysis is now complete and incorporates input from a wide range of leading technical experts in the pipeline industry and global expertise across our corporation
- The root cause of the pipeline failure was original manufacturing defects in the low-frequency electric resistance weld seam
- Investigation points to the atypical pipe properties as the most significant contributing factor that led the original manufacturing defects to grow to failure
- The combination of extreme metallurgical properties detected in the ruptured joint of pipe has not been detected anywhere else on the Pegasus pipeline or other ExxonMobil pipelines with similar manufacturing methods and specifications

Multiple Layers of Integrity Verification

- The remedial work plan includes multiple layers of integrity verification measures to address the entire northern segment in a manner that ensures the safety of all communities along the segment:
  - Conduct integrity excavations using proven, industry best practices to test and/or repair anomalies identified
  - Incorporate other safety improvements, such as an additional remotely controlled valve, in certain locations along the pipeline
  - Conduct a spike hydrostatic test - in addition to a standard hydrostatic test - along the entire northern segment
  - Proposed spike hydrostatic test is designed to test the pipeline significantly beyond its maximum operating pressure, intentionally stressing the pipe to remove or prove the absence of critical defects
- We expect this process to take more than a year to complete and we will only restart the pipeline once we are convinced it is safe to do so and have the approval of PHMSA

ExxonMobil Pipeline



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July 16, 2014

TO: **R.M. Seeley**
Director, Southwest Region
Pipeline and Hazardous Materials Safety Administration
rodrick.m.seeley@dot.gov
Via email and, hardcopy to addressee

FROM: **Richard B. Kuprewicz (President, Accufacts Inc.)**

RE: **Additional Comments on ExxonMobil's Proposed Remedial Work Plan for the Pegasus Pipeline**

At the time I forwarded to you my comments of June 18, 2014, neither Central Arkansas Water nor I had been provided with a copy of ExxonMobil's ("EOM") proposed remedial work plan. Now that the proposed plan has been posted on PHMSA's website, I submit the following additional comments.

First, the notion that the atypical properties of the ruptured section of pipe in combination with ERW-related manufacturing defects was somehow unique to this one section cannot withstand scrutiny unless every section of the pipeline is analyzed. Further, even if this section of pipeline is shown to be one-of-a-kind, that does not mean that other sections of the pipeline are not at risk.

Second, I find it troublesome that EOM has not determined the root cause of the rupture after more than 15 months for investigation. EOM rules out eight potential causes of the rupture, including pressure cycle induced fatigue. Yet EOM then goes on to state that accelerated crack growth mechanisms may include a combination of the following: brittle pipe properties, residual stress within the pipe/seam, contribution from adjacent defects, environmental induced cracking, and pressure cycle induced fatigue (after having earlier excluded pressure cycling).

Third, in order to minimize the risk of hook crack growth leading to the rupture, EOM proposes to spike hydrotest the pipeline to a maximum of 100 percent of SMYS at the low point of the Lake Maumelle watershed, yielding a test pressure of approximately 83 percent of SMYS at the highest point in the watershed. For the reasons stated in my comments of June 18, the proposal is inadequate as it applies to the watershed. Yet in its proposed remedial work plan, EOM states that if a "significant" number of "pressure-reversal" failures occur, EOM may reduce the targeted pressure tests in the remaining test segments in order to complete the testing

in a more "efficient manner." This statement indicates EOM's disregard or lack of understanding of the purpose of a hydrotest, *i.e.* to remove various larger risk ERW seam-related cracks that can grow to rupture from operation over a reasonable period of time following restart, or to identify pipe segments that are not fit for hydrocarbon service. By reducing the pressure to make the tests more "efficient," EOM is willfully sacrificing adequate integrity testing/evaluation in the name of "efficiency." The result of reducing the pressure will be that the at-risk cracks will not be eliminated and the pipe segments not fit for service will not be identified.

Further, if EOM is suggesting that hydrotests at a sufficiently high pressure can lead to the accelerated growth of cracks following resumption of normal operation of the pipeline, then the literature defies the suggestion, as quoted below.

> "In some instances, defects may grow during the test itself leading to a phenomenon referred to as a 'pressure reversal'. Experience and analysis indicate that the possibility of a pressure reversal causing a failure in service is so remote that it need not be considered a seam integrity threat as long as the test-pressure-to-operating-pressure ratio is equal to or greater than 1.25. 'Spike' testing where the pressure level is raised above the code-required hydrostatic test level of 1.25 times the MOP for a few minutes contributes to increased confidence that no pressure reversal could threaten seam integrity, and it increases the minimum time to failure for any defect that might grow by fatigue in service after the test."

Battelle Memorial Institute, *Final Summary Report and Recommendations for the Comprehensive Study to Understand Longitudinal ERW Seam Failures – Phase One* (Final Report – Task 4.5) (October 23, 2013) at page 17. The same report concludes that "to be most effective, hydrostatic testing should involve pressurizing the pipe to stress levels greater than 90% of the specified minimum yield stress (SMYS) and preferably higher." Battelle Report 4.5 at page 16.

Please feel free to call me if you have any questions or comments.

Richard B. Kuprewicz
President,
Accufacts Inc.

cc Linda Daugherty, Deputy Associate Administrator for Field Operations, PHMSA, linda.daugherty@dot.gov
Alan Mayberry, Deputy Associate Administrator for Policy and Programs, PHMSA, alan.mayberry@dot.gov
Jeffrey D. Wiese, Associate Administrator for Pipeline Safety (PHMSA), jeff.wiese@dot.gov
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Lawrence White, Senior Attorney, PHMSA, lawrence.white@dot.gov

EXHIBIT
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CENTRAL ARKANSAS WATER
Depend on us – today and tomorrow.

July 19, 2010

Mr. Rodrick M. Seeley
Pipeline Safety Office
PHMSA Southwest Region Office
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
8701 S. Gessner Rd., Suite 1110
Houston, TX 77074

Re: Relevance of 49 CFR Part 194 – Response Plans for Onshore Oil Pipelines and 49 CFR Part 195 - Transportation of Hazardous Liquids by Pipeline in Relationship to the ExxonMobil Pipeline and its proximity to Lake Maumelle, the Primary Surface Public Water Supply Reservoir for Central Arkansas

Dear Mr. Seeley:

We are writing you to express our concern regarding the ExxonMobil Pipeline that traverses the Lake Maumelle Watershed, to insure the pipeline is in compliance with all applicable Federal Regulations under the purview of the Pipeline and Hazardous Materials Safety Administration (PHMSA), and that the pipeline poses no unreasonable threat to the largest Public Water Supply (PWS) utility in Arkansas, Central Arkansas Water.

Lake Maumelle, constructed exclusively as a water supply reservoir in the late 1950's, is a 9,000 acre surface reservoir that is the principle reservoir for our utility. We have another, smaller reservoir in our system, and the two together service approximately 400,000 customers in central Arkansas. Lake Maumelle supplies over 60% of system demand.

The watershed of Lake Maumelle is approximately 137 square miles, and the pipeline diagonally traverses the watershed from the southwest to the northeast (see attached map). The pipeline enters the Lake Maumelle watershed from the southwest at approximate pipeline mile *MP 293.0* and exits the lake's watershed at *MP 306.5* for a distance of approximately 13.5 miles. It crosses the main tributary to Lake Maumelle, the Maumelle River, in three places just a few miles upstream of the lake at *MPs 295.9*, *296.85*, and *297.65*. The pipeline then traverses just north of the lake, crossing a number of tributaries including Bringle Creek, the second largest tributary, Yount Creek, and Reece Creek, another large tributary to the lake. The pipeline is less than a quarter mile to the lake at places, and is roughly five miles as the crow flies from the actual water intake structure. Based on information in our files and supplied by ExxonMobil, we understand the pipeline was built in the late '40's early '50's, is 20 inches in diameter, and carries about 4,200 bbls per hour of crude from Canada to Texas.

Upon review of the requirements of 49 CFR Part 195 – *Transportation of Hazardous Liquids by Pipeline,* it is our opinion that the following sections of the Regulation pertain to the ExxonMobil Pipeline and Lake Maumelle:

> **195.6 Unusually Sensitive Areas (USAs).**
> An USA drinking water resource is: (1) The water intake for a Community Water System (CWS) ...that obtains its water supply primarily from a surface water source and does not have an adequate alternative drinking water source;

Since the pipeline crosses the main tributary to Lake Maumelle in three places just a few miles upstream of the lake, is in close proximity (less than a ¼ mile in some places) to the lake for over seven miles of pipe length on the north side of the lake, we are of the opinion that Lake Maumelle is a USA drinking water resource. ***Please advise.***

> (c) As used in this part—*Adequate Alternative Drinking Water Source* means a source of water that currently exists, can be used almost immediately with a minimal amount of effort and cost, involves no decline in water quality, and will meet the consumptive, hygiene, and fire fighting requirements of the existing population of impacted customers for at least one month for a surface water source of water.

Since our average daily consumption is approximately 60 mgd, and Lake Winona can only supply about 23 mgd, we do not have an adequate alternative if Lake Maumelle is impacted.

> **195.260 Valves: Location**.
> Section (e) requires that valves must be located: "On each side of a water crossing that is more than 100 feet (30 meters) wide from high-water mark to high-water mark unless the Administrator finds in a particular case that valves are not justified."

Based on recent observations of the Maumelle River at high flows, the distance between high water marks is much greater than 100 feet. The pipeline crosses the Maumelle River in three locations (MP 295.90, MP 296.85, and MP 297.65). None of these crossings appear to have valves at these crossings. We feel this portion of the regulation applies. ***Please advise.***

> Section (f) requires that valves must be located "On each side of a reservoir holding water for human consumption".

There are valves on each side of the reservoir, but the pipeline also crosses just north of Lake Maumelle. A rupture in the line between these valves could result in all the volume of the pipeline between these valves draining. This approximate volume would be over 600,000 gallons of crude oil (about 14,300 bbls) that could be released.

> **Subpart F- Operation and Maintenance**
> **195.402 Procedural manual for operations, maintenance, and emergencies.**
> General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies.
> (b) The administrator ...may require the operator to amend its plans and procedures as necessary to provide a reasonable level of safety.
> (c) (4) The manual must include procedures for "Determining which pipeline facilities are located in areas that would require an immediate response by the operator to prevent hazards to the public if the facilities failed or malfunctioned."

We would like assurance that this has been or will be done to protect Lake Maumelle and the PWS. ***Please advise.***

(e) Emergencies. This section states the manual must include procedures to provide safety when an emergency condition occurs. All of the items in this section should be addressed, but in particular: (e)(3) "Having personnel, equipment, instruments, tools, and material available as needed at the scene of an emergency"

Since the spill response plan indicates ExxonMobil only have 50 feet of boom at Conway, it seems they should do more to get adequate equipment, etc. to meet this requirement. ***Please advise.***

195.412 Inspection of rights-of-way and crossing under navigable waters.
Each operator shall, at intervals not exceeding 3 weeks, but at least 26 times each calendar year, inspect the surface conditions on or adjacent to each pipeline right of way. Methods of inspection include walking, driving, flying or other appropriate means of traversing the right of way.
(b) Except for offshore pipelines, each operator shall, at intervals not exceeding 5 years, inspect each crossing under a navigable waterway to determine the condition of the crossing.

The Maumelle River may be "navigable", if so, 195.412 (b) would apply.

195.440 Public Awareness
(a) Each pipeline operator must develop and implement a written continuing public education program that follows the guidance provided in the API Recommended Practice 1162.
(d) The operator's program must specifically include provisions to educate the public, appropriate government organizations, and person engaged in excavation related activities on:
(d)(2) Possible hazards associated with unintended releases from a hazardous liquid ...pipeline facility
(d)(4) Steps that should be taken for public safety in the event of a hazardous liquid...pipeline release
(e) The program must include activities to advise affected municipalities, etc
(h) Operators... must have completed their written program no later than June 20, 2006. Upon request, operators must submit their completed programs to PHMSA...

Have these items been adequately addressed by ExxonMobil? ***Please advise.***

High Consequence Areas

Note that all of this section under High Consequence Areas seems applicable to our Utility. Please advise if that is the case.

195.450 Definitions:
The definition of "High Consequence Areas", per item (4) of the definition includes **unusually sensitive areas**, as defined in 49 CFR 195.6. Unusually sensitive areas include water supplies, therefore Lake Maumelle and the PWS should come under the "High Consequence Areas" section of this Regulation.

195.452 Pipeline integrity management in high consequence areas.
This section applies to each ...pipeline... that could affect a high consequence area, including any pipeline located in a high consequence area unless the operator effectively demonstrates by risk assessment that the pipeline could not affect the area.

195.452 (c)
This section outlines what must be in the baseline assessment plan including methods to assess the integrity of the line pipe, a schedule for completing the integrity assessment, etc.

195.452 (d)
This section sets out the time for the assessments to be done. We appear to be in Category 2, so the assessment should have been done by Feb 17, 2009. However, if it is a Newly-Identified area, then the operator must incorporate a new unusually sensitive area into its baseline assessment plan within one year from the date the area is identified. We may have not been previously identified, in which case we would come under the Newly Identified area section (195.452(d)(3)).

195.452 (f)
This section provides for the elements of an integrity management program, including evaluation of consequences of a failure on the high consequence area. Some of the elements that must be in a written integrity management program include: (1) A process for indentifying which pipeline segments could affect a high consequence area; (3) An analysis that integrates all available information about the integrity of the entire pipeline and the consequences of a failure; (6) Identification of preventive and mitigative measures to protect the high consequence area; (7) Methods to measure the program's effectiveness

195.452 (g)
This section states what must be in an information analysis..."An operator must analyze all available information about the integrity of the entire pipeline and the consequences of a failure, including (195.452 (g)(4)) information about how a failure would affect the high consequence area, such as location of the water intake.

195.452 (i)
This section states what preventive and mitigative measures must be taken by an operator. Under general requirements,195.452 (i)(1) "An operator must take measures to prevent and mitigate the consequences of a pipeline failure that could affect a high consequence area." These measures include conducting a risk analysis of the pipeline segment to identify additional actions to enhance public safety or environmental protections. Under Risk Analysis, 195.452(i)(2)..."an operator must evaluate the likelihood of a pipeline release occurring and how a release could affect the high consequence areas... One of the items that must be considered is: 195.452(i)(2)(i) "Terrain surrounding the pipeline segment, including drainage systems such as small streams and other smaller waterways that could act as a conduit to the high consequence area".

Please advise if these items in 195.452 are relevant to the ExxonMobil Pipeline (we think they are), and if so, if they have been adequately addressed by ExxonMobil. If not, please take whatever appropriate steps PHMSA deems necessary to comply with these sections of the regulation.

Per 49 CFR 194 – Response Plans for Onshore Oil Pipelines
ExxonMobil Pipeline Emergency Response Plan Concerns

We have reviewed the emergency response plan entitled *"ExxonMobil Pipeline Company & Mobil Pipe Line Company, Emergency Response Plan, Corsicana Response Zone, Appendix Manual, PHMSA Sequence Number 103, Volume 2"* and have concerns that it fails to mention anywhere in the document that Lake Maumelle is a Public Water Supply Surface Reservoir. This omission regarding Lake Maumelle as a PWS appears to be contrary to the requirements of 49 CFR 194.103,*Significant and substantial harm; operators statement*, specifically 49 CFR 194.103(c)(4).

Does 49 CFR 194.130 apply to Lake Maumelle? If it does, please ensure that the requirements of the regulation are met.

We also have the following additional comments regarding the referenced Response Plan:

Under Section 12, Notifications

- Suggest the Arkansas Department of Health and the Arkansas Department of Environmental Quality be added to that portion of Section 12 of the plan regarding state agencies to contact in the event of a spill.

- Under the heading "Local Agencies/Assistance", there is no mention at all of any Arkansas agencies. Regarding that portion of the pipeline that traverses the Lake Maumelle watershed, appropriate contacts should be added, such as the Pulaski County, Perry County, and Saline County sheriff's office, as well as the relevant fire departments.

- Under the heading "Medical Facilities and Personnel for each Pipeline Segment", there is no mention of any of the numerous Little Rock, Ark. facilities, even though Little Rock is the largest metropolitan area the pipeline passes in Arkansas. The only location near Little Rock that is provided is Conway, Ark. The relevant Little Rock hospitals and fire department/s should be added.

- Under the heading "Company Equipment", only the Conway Station is mentioned, and the only equipment listed is 50 feet of 4"x 8" Slick Bar Boom. ***This is grossly inadequate to handle a spill in the Lake Maumelle area.***

- Under the heading "Contractors and Suppliers"
    - There is no listing under "Cleaning and Oil Containment" for Arkansas companies. This should be addressed by adding Arkansas companies, or companies that can provide service in Arkansas.
    - There is only one listing for Arkansas under "General Contractors". This list should be expanded to include Arkansas providers, or companies that can provide service in Arkansas.
    - There is no listing under "Plane and Helicopter Services" for Arkansas. This list should be expanded to include Arkansas providers, or companies that can provide service in Arkansas.

- In Section 15 "Highly Sensitive Areas", there is no mention at all that Lake Maumelle is a PWS. Furthermore, in Section 15:

    - Reece Creek is not specifically listed, even though it has a larger watershed than Yount Creek. Reece Creek should be listed.

    - Action to be taken in the case of a spill is general in character, for example "*CP's (control points) along Big Maumelle Lake shall be determined by Incident Commander and Commander on Scene. CP's will vary according to size and location of spill. Unforeseen weather such as rain and wind direction shall be a major determining factor.*"
      More specific instructions should be provided, since the Lake is a PWS.

    - Yount Creek is misspelled as "Young Creek" (MP 300.7)

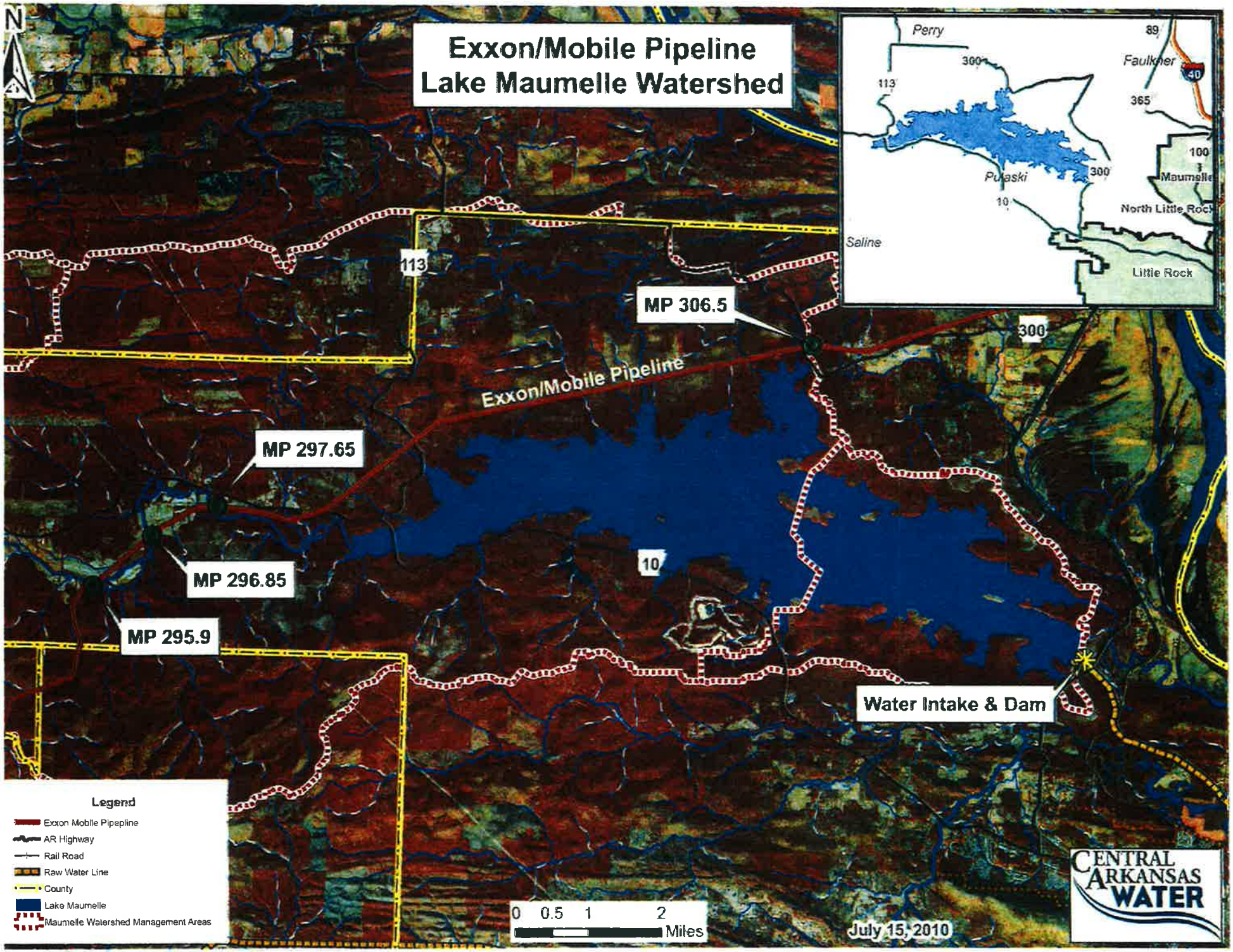
    - Lake Maumelle is listed as "Big Maumelle Lake" instead of the correct name "Lake Maumelle"

Thank you for considering our concerns. We would like assurance that the ExxonMobil Pipeline is in compliance with all the relevant federal regulations applicable to the pipeline due to its close proximity to Lake Maumelle, the water supply source for approximately 400,000 individuals in central Arkansas.

Central Arkansas Water

Graham Rich, P.E.
Chief Executive Officer

Cc: John W. Dunn, III, ExxonMobil
Martin Maner, P.E., CAW
Jonathan Long, P.E., CAW
John Jacobi, P.E., PHMSA, SW Region
Jeffrey D. Wiese, PHMSA, HDQTRs
Rod Dyck, PHMSA, HDQTRs
Alan Mayberry, PHMSA, HDQTRs
Robert Hart, P.E., Arkansas Department of Health
Steve Drown, Arkansas Department of Environmental Quality


Exxon/Mobile Pipeline
Lake Maumelle Watershed
Perry
89
Faulkner
300
113
40
365
100
Maumelle
Pulaski
300
10
North Little Rock
Saline
Little Rock
113
MP 306.5
300
Exxon/Mobile Pipeline
MP 297.65
MP 296.85
MP 295.9
10
Water Intake & Dam
Legend
Exxon Mobile Pipepline
AR Highway
Rail Road
Raw Water Line
County
Lake Maumelle
Maumelle Watershed Management Areas
0 0.5 1 2
Miles
July 15, 2010
CENTRAL ARKANSAS WATER

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September 19, 2013

Federal Express

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U.S. Department of Transportation
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PHMSA Pipeline Safety
Southwest Region Office
8701 S. Gessner Road, Suite 1110
Houston, TX 77074

Federal Express

Gary W. Pruessing, President
ExxonMobil Pipeline Company
800 Bell St., Room 741-D
Houston, TX 77002

RE: Notice of Intent to File Citizen Suit Pursuant to the Pipeline Safety Act

Dear Gentlemen:

We are attorneys for Central Arkansas Water ("CAW"). The purpose of this letter is to notify ExxonMobil Pipeline Company, Mobil Pipe Line Company, ExxonMobil Corporation (collectively, "Exxon Mobil") and the Pipeline and Hazardous Materials Safety Administration ("PHMSA") that unless PHMSA is diligently pursuing an administrative proceeding for the violations set forth below, CAW intends to file suit in sixty (60) days under 49 U.S.C. §60121 against ExxonMobil in the United States District Court for the Eastern District of Arkansas for

violations of the Pipeline Safety Act, 49 U.S.C. §60101 *et seq.*, and regulations promulgated thereunder. PMHSA also will be named as an additional defendant in the lawsuit.

CAW is a consolidated public water authority that supplies drinking water for approximately 400,000 individuals residing in Central Arkansas. CAW's primary water source is Lake Maumelle, a 9,000 acre surface reservoir located several miles west of Little Rock, Arkansas. The watershed of Lake Maumelle is approximately 137 square miles and is traversed by ExxonMobil's Pegasus pipeline (the "Pipeline") for approximately 13.6 miles. The northeast corner of the watershed is located approximately 8 pipeline miles from the site of the March 29, 2013 rupture of the Pipeline at Mayflower, Arkansas (the "Mayflower rupture"), resulting in the release of at least 5,000 barrels of heavy crude oil into the environment.

The Pipeline runs from the northeast corner of the watershed to the southwest corner. It traverses the watershed near the north shore of Lake Maumelle for approximately five miles. It crosses numerous tributaries of the lake during this stretch and is less than a quarter mile from the lake at places. Most of the Pipeline is located in rugged, difficult-to-access terrain where it could take hours to simply reach the site of a Pipeline break. The Pipeline then swings toward the southwest at the west end of the lake and crosses the principal tributary to Lake Maumelle, the Maumelle River, in three places. A copy of a map of the watershed with the location of the Pipeline is enclosed as Exhibit "1."

The Pipeline was constructed in the late 1940's and runs from Patoka, Illinois to the Texas Gulf Coast (approximately 850 miles). The Pipeline is an electrical resistance welded ("ERW") oil pipeline with average thickness of .312 inches. ERW pipe is manufactured by cold-forming a sheet of steel into a cylindrical shape. Current is then passed between the two edges of the steel to heat the steel to a point at which the edges are forced together to form a bond without the use of welding filler material. Initially this manufacturing process used low frequency electrical current to heat the edges. This low frequency process was used until it was superseded in the 1970s by a high frequency ERW process which produced a higher quality weld. Over time, the welds of low frequency ERW pipe have been found to be susceptible to selective seam corrosion, hook cracks, and inadequate bonding of the seams, so low frequency ERW is no longer used to manufacture pipe.

From the late 1940's to 2002 the Pipeline was used to transport light crude oil and refined petroleum products from the Texas Gulf Coast to the midwestern United States. The Pipeline was purged and idled with nitrogen in December 2002. When the Pipeline was restarted in 2006, the flow of the Pipeline was reversed with an accompanying increase in pipeline pressure to at least 700 psig and was used, for the first time, to transport Wabasca heavy crude oil produced in Canada from the midwestern United States to the Texas Gulf Coast. We believe that this heavy crude oil is diluted with lighter hydrocarbons (commonly referred to as "diluted bitumen") to decrease its resistance to flow. According to a Material Safety Data Sheet revised by ExxonMobil effective January 9, 2013, this Wabasca heavy crude is a "hazardous" substance based on its extreme flammability, human health risk and toxicity to aquatic organisms. The MSDS lists numerous potential medical disorders resulting from exposure.

A change in the direction of flow in a pipeline can affect the hydraulic and stress demands on the pipeline. Additionally, the integrity of ERW pipe manufactured before 1970 has been called into question. (See Pipeline Safety Alert Notices issued by the U.S. Department of Transportation in January, 1988 and March, 1989). The 1988 Alert Notice stated that ERW seams had been involved in 145 service failures in both hazardous liquid and natural gas pipelines since 1970 and all but two of those failures occurred on pipe manufactured prior to 1970. The Alerts noted that 12 hazardous liquid pipeline failures during 1986 and 1987 involved ERW pipe seams manufactured prior to 1970 and that an additional 8 such failures had occurred between January 1988 and March 1989.

Following the Mayflower rupture, ExxonMobil retained Hurst Metallurgical Research Laboratory, Inc. ("Hurst") to conduct metallurgical tests of the failed section of the Pipeline to determine the cause of the rupture. Hurst found a 22 foot long fracture along the ERW weld seam, which traversed diagonally, approximately 3 inches in length, into the base metal. The Hurst report found that hook cracks had been present in the ERW seam prior to the rupture for an unknown period of time. Hurst concluded that the rupture occurred because of a reduction of the wall thickness in the ERW seam caused by the "presence of manufacturing defects, namely the upturned bands of brittle martensite, combined with localized stress concentrations at the tips of the hook cracks, low fracture toughness of the material in the upset/HAZ, excessive residual stresses in the pipe from the initial forming and seam and girth welding processes, and the internal pressure creating hoop stresses." The report went on to state that "it is highly probable that some micro-cracking within the upset/heat-affected zones might have occurred immediately following the pipe manufacturing. The micro-cracks then likely would have merged by further cracking through the adjacent areas in the localized upset/HAZ zones during service, forming a continuous hook crack in each of the localized areas to the critical depths, at which point the remaining wall thickness, combined with the localized stress concentration and the residual stresses, could no longer support the internal hoop stresses and resulted in the final failure."

Prior to the Mayflower rupture, ExxonMobil conducted a hydrostatic pressure test of the Pipeline in 2006 (prior to the 2006 restart with accompanying flow reversal, pressure increase, and change to Wabasca heavy crude), and in the Lake Maumelle section of the Pipeline, an in-line magnetic flux leakage and caliper tool inspection in 2010 and an in-line transverse flux inspection in 2013. As reported by ExxonMobil, neither the 2010 nor 2013 in-line tests revealed an anomaly in the failed Mayflower pipe section. However, as recently discovered by CAW, the Pipeline seam ruptured at two locations within the watershed (mile posts 294.1 and 298.1) during the 2006 hydrostatic test. Neither Exxon Mobil nor PHMSA reported these ruptures to CAW.

The Lake Maumelle watershed is an Unusually Sensitive Area drinking water resource within the meaning of 49 C.F.R. §195.6, because the sole alternative water supply, Lake Winona, can only supply approximately 38 percent of CAW's average daily consumption of water. As such, the watershed qualifies as a High Consequence Area under 49 C.F.R. §195.450.

The violations of the Pipeline Safety Act include, but are not limited to, the following:

(1) Failure to maintain and implement an adequate integrity management

program for that portion of the Pipeline within the Lake Maumelle watershed, as required by 49 C.F.R. §195.452 for a High Consequence Area. 49 C.F.R. § 195.452(b)(1) requires an operator to develop a written integrity management program ("IMP") for each segment in a High Consequence Area, including a baseline assessment plan, 49 C.F.R. § 195.452(c), considering, among other factors, results of previous integrity assessments. 49 C.F.R. § 195.452(e). After completing the baseline assessment plan, the operator must continue to assess and evaluate the integrity of each pipeline segment that could affect a High Consequence Area. 49 C.F.R. § 195.452(j). The continuing assessment must include selecting an assessment method capable of assessing seam integrity and detecting anomalies in low-frequency ERW pipe. 49 C.F.R. § 195.452(c)(i). ExxonMobil has failed to maintain and implement an adequate IMP as demonstrated by the following facts: (i) the pipeline was operating at a pressure of 708 psig at the time of rupture, well below its maximum operating pressure of 820 psig at the failure site and well below the 2006 hydrostatic test pressure of 1091 psig; (ii) the 2006 hydrostatic pressure test and the 2010 and 2013 in-line inspections detected no anomalies in the failed pipe section; and (iii) the well-documented history of failures of ERW pipe manufactured before 1970;

(2) Failure to select a pipeline assessment method capable of assessing seam integrity and determining the existence of hook cracks and other anomalies in low-frequency ERW pipeline as required by 49 U.S.C. § 60109(c)(3) and 49 C.F.R. § 195.452. Specifically, the 2006 hydrotest appears to have been structured solely to establish the maximum operating pressure for the pipeline. The portion of the pipeline in the Lake Maumelle watershed (Sections 14 and 15) were tested at pressures ranging from 83 percent of specified minimum yield strength ("SMYS") at the low elevation point to 66 percent of SMYS at the high elevation point. Testing at such low pressure was woefully inadequate for a test which should have been structured for an integrity management program. See B.N. Leis and J.B. Nestleroth, *Batelle's Experience with ERW and Flash Weld Seam Failures: Causes and Implications*, Final Interim Report – Task 1.4 at page 64. (September 20, 2012);

(3) Failure to change its integrity management program to respond to the results of the 2006 hydrotest and to continually evaluate the consequences of a failure in the Lake Maumelle watershed, as required by 49 C.F.R. § 195.452(f) (requiring an operator to continually change its integrity management program to reflect experience, assessments and data), 49 C.F.R. § 195.452(g) (requiring an operator to periodically analyze all available information about a pipeline), 49 C.F.R. § 195.452(h)(1) (requiring an operator to take prompt action to address all anomalous conditions "discovered" through integrity assessment or information analysis), 49 C.F.R. § 195.452(h)(2) (defining "discovery of condition" and requiring operator take steps within 180 days to obtain information about a condition that could present a potential threat to the integrity of the pipeline), 49 C.F.R. § 195.452(h)(4)(iii)(G) (requiring an operator to repair a crack condition

within 180 days of discovery) and 49 C.F.R. § 195.452(j) (calling for a continual process of evaluation and assessment to maintain a pipeline's integrity). ExxonMobil knew or should have known from its analysis of the ruptures which occurred along the Pipeline during the 2006 hydrotest that the pipeline seam was at high risk of failure due to the presence of manufacturing cracking threats, such as hook cracks; yet it failed to conduct subsequent in-line inspections in the watershed with tools designed for the purpose of determining the existence of such manufacturing cracking threats. Instead, in 2010 ExxonMobil used a High Resolution Magnetic Flux Leakage tool ("MFL"), with a caliper that is only capable of detecting corrosion and dents. See PHMSA Fact Sheet: *In-Line Inspections (Smart Pig)* (last revised 12/01/2011). Since the 2010 inspection could not determine the existence of such manufacturing cracking threats, ExxonMobil also violated 49 C.F.R. § 195.452(j) (requiring an operator to inspect a pipeline at intervals of no less than five years for defects discovered from the previous integrity assessment inspection or other sources of information), 49 C.F.R. 195.452(k) (requiring an operator to use methods to measure whether an integrity management program is *effective* in assessing and evaluating pipeline integrity and protecting a high consequence area) and Appendix C IV to 49 C.F.R. Part 195 (providing guidance on the use of crack detection tools for detecting hook cracks);

(4) Failure to take adequate measures to mitigate the consequences of a pipeline failure that could affect the Lake Maumelle watershed, including the failure to place a sufficient number of pipeline valves in the watershed as required by Section 195.452(i)(1) and (4) (requiring the installation of an adequate number of emergency flow restricting devices). The only valve station on the Pegasus Pipeline in the watershed is located at the western end of the lake near Highway 10. This valve station includes a check valve as well as two manually operated shutoff valves. Manual operation of this valve station would require at least one ExxonMobil representative to drive to the site and manually close it. We estimate that the time from the rupture to the time of the shut off would be two hours at an absolute minimum. Up to 800,000 to 1,200,000 gallons of diluted bitumen could potentially escape into the watershed during this two hour period, depending on the location of the break and speed of detection and pipeline shutdown. Further, the check valve is intended to stop the backflow of oil from the southwest should a break occur upstream of the valve. However, due to the location of the valve, the check valve would not prevent the loss of significant quantities of diluted bitumen from entering the Maumelle River if a rupture occurred downstream of the valve near the Maumelle River. This is due to the fact that the river is downstream of the valve station and at an elevation lower than approximately 6 miles of pipeline within the watershed (see draft pipeline profile developed by CAW attached as Exhibit "2"), indicating that approximately 6 miles of pipeline could drain unimpeded into the Maumelle River. Exxon has recognized this locational deficiency and has discussed installation of an additional valve in a more appropriate location. The inadequate number of valves and inadequate

locations of valves shows that ExxonMobil has failed to consider all relevant risk factors, including the fact that the pipeline crosses three main tributaries and many smaller tributaries on the north side of Lake Maumelle in rugged, hard to reach terrain. 49 C.F.R. § 195.452(i)(2) (requiring assessment of risk factors presented by terrain, including small streams and elevation profile);

(5) Failure to prepare and modify its oil response plans for the Lake Maumelle watershed to take into account that ExxonMobil began transporting diluted bitumen in the Pipeline for the first time in 2006. See letter from ExxonMobil to United States Environmental Protection Agency dated April 10, 2013, Response #3, a copy of which is attached as Exhibit "3." Undiluted Wabasca Heavy crude is reported to have the consistency of peanut butter and must be diluted with chemicals, including the human carcinogen benzene, so that the crude oil will flow through a pipeline. According to ExxonMobil's MSDS as revised January 9, 2013, the relative density of Wabasca Heavy crude ranges from 0.661 to 1.013 at 15 degrees C. When diluted bitumen spills into the environment, it may sink due to evaporation or separation of the diluting chemicals and the mixing of the crude oil with sediment and organic matter. This tendency to sink was proven by the Enbridge diluted-bitumen pipeline spill into the Kalamazoo River at Marshall, Michigan in 2010 when the oil sank to the river bed. The failure of ExxonMobil to so modify its oil response plans violates 49 C.F.R. §194.121 (requiring an operator to modify its response plans to address changes in operating conditions, including changes in "the type of oil transported") and 49 C.F.R. §195.452(e)(iv) (requiring assessment of the "product transported"); and

(6) Failure to install adequate leak detection technology along the pipeline route capable of detecting releases in the watershed, and failure to create an emergency notification protocol providing for cross-platform monitoring by CAW's staff in violation of 49 C.F.R. §195.452(i)(1) (requiring modification of systems that monitor pressure and detect leaks), §195.408(b)(4) (requiring an operator to provide communications to appropriate public officials during emergencies), and §195.402(e)(7) (requiring procedures for notification to public officials of the need to respond to an emergency).

In addition to these violations, this notice covers all violations of the Pipeline Safety Act, and regulations promulgated thereunder, evidenced by information which becomes available to CAW after the date of this Notice of Intent to Sue.

Unless PHMSA diligently pursues an enforcement proceeding to address the violations discussed above, CAW will file a citizens suit against ExxonMobil under 49 U.S.C. §60121 in sixty (60) days for these violations. Pursuant to the Pipeline Safety Act, CAW will seek an injunction to prevent restart or continued operation of the Pipeline until ExxonMobil corrects existing violations within the Lake Maumelle watershed and to require relocation of the Pipeline outside the Lake Maumelle watershed within a time established by the Court. Alternatively, CAW will ask the Court to direct PHMSA to order ExxonMobil to take corrective actions

deemed appropriate by the Court. CAW reserves the right to seek additional remedies.

Please feel free to contact the undersigned at 501-372-0110 if you require further information or wish to discuss this matter. Thank you for your cooperation.

Sincerely,

James M. McHaney, Jr.

JMM/ejc
cc: Vanessa Sutherland
Chief Counsel
Pipeline and Hazardous Materials
Safety Administration
U.S. Department of Transportation
1200 New Jersey Ave., SE
Washington D.C. 20590
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Ron Curry
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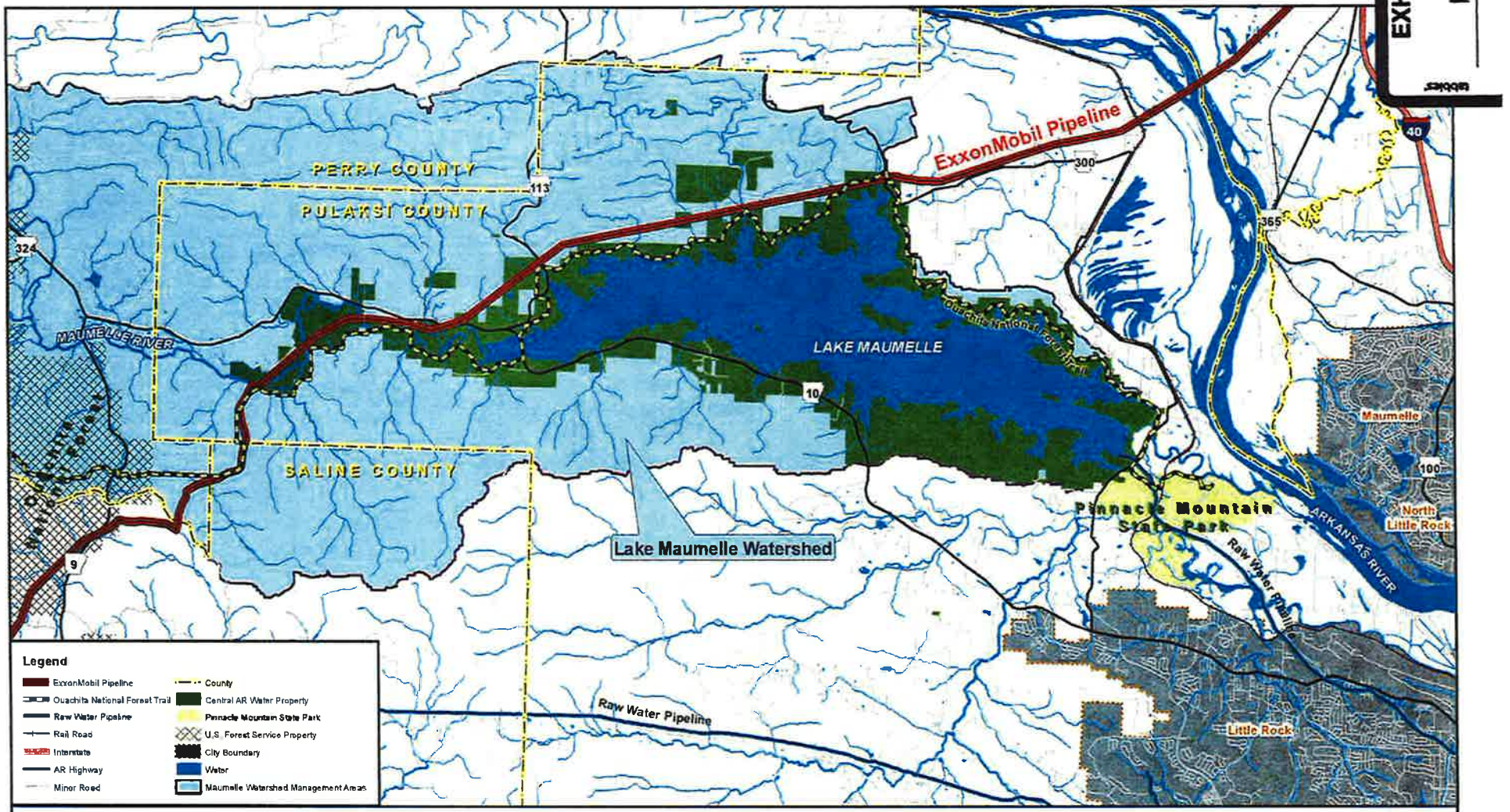
EXHIBIT



ExxonMobil Pipeline in the Lake Maumelle Watershed

Print Date: 9/18/2013

N

0 7,500 15,000 Feet

0 1.5 3 Miles

Disclaimer of Warranties: This map has been provided as a convenience without guarantees or warranties of any kind, express or implied, arising by law or otherwise. Any improvements, facilities, and other information shown on this map may not be factually, dimensionally or graphically correct. The size and location of all improvements and facilities should be field verified.

Central Arkansas Water

DRAFT

Pegasus Oil Pipeline Elevation Profile From Conway to Jessieville, Arkansas

Legend

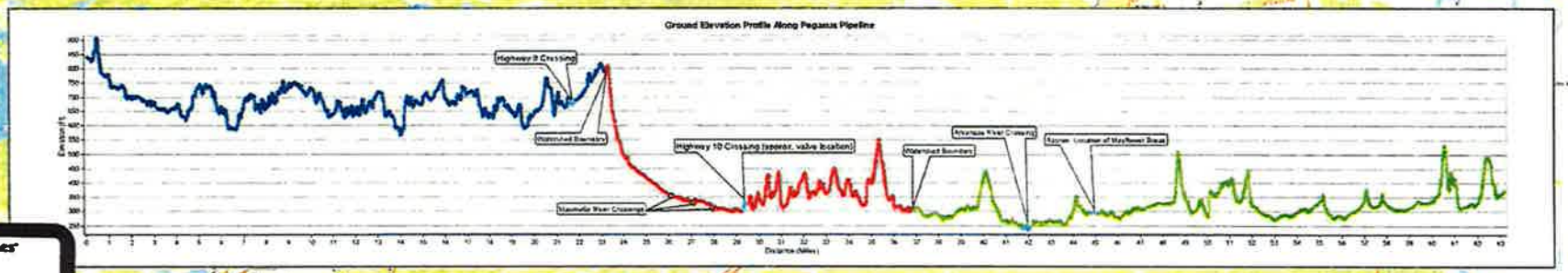
- Profile Distance Refrences***
- Pipeline Mile Markers**
- Pump Station
- Approx. Location of Mayflower Break

Pegaus Pipeline*

- Northeast of Watershed
- Northeast of Watershed (Approx. Location)
- Within Watershed
- Southwest of Watershed
- Southwest of Watershed (Approx. Location)
- Lake Maumelle Watershed

Central Arkansas Water

N



*Pegasus Pipeline layer was originally produced by the U.S. Geological Survey on the 1:100,000 scale Digital Line Graph data. Where data did not exist an approximate location was digitized from visual reference on aerial photos.

**Pipeline Mile Markers were derived from coordinates provided by ExxonMobil in the Lake Maumelle Watershed.

***Profile Distance Refrences were created by starting up the pipeline from the Nolanville Pump Station and creating a point at 1 mile intervals.

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EXHIBIT

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Email: richard.e.byrne@exxonmobil.com

Richard E. Byrne
Assistant Chief Attorney
Environmental & Safety Law

ExxonMobil

April 10, 2013

Mr. Edwin Quinones, Esq.
U.S. EPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: EPA Information Request Dated April 5, 2013 (NRC Report No. 1042466)

Dear Mr. Quinones:

I write on behalf of ExxonMobil Pipeline Company ("EMPCo") in response to the above referenced Information Request. Assistance in responding to this request was provided by EMPCo's parent company and affiliates (collectively "ExxonMobil"). This letter augments my letter dated April 8, 2013.

1. **At the beginning of this response, Exxon provided EPA a Material Safety Data Sheet (MSDS) on WABASCA CRUDE OIL, which was revised in January, 2013. Does that MSDS sheet accurately describe all materials released/discharged from the pipeline in Mayflower, Arkansas on March 29, 2013?**

Response #1: On April 8, 2013, EMPCo provided additional MSDS sheets reflecting the corrosion additives which it injected into the Pegasus pipeline as the Wabasca Heavy crude transited for downstream delivery. One of these same additives, Baker Hughes WAW3049 Water Treatment Additive, was injected by the operators of the Mustang pipeline from which the Wabasca Heavy crude was received at the Patoka, Illinois terminal. ExxonMobil has been advised that the two Canadian producers from whom the Wabasca Heavy crude is purchased add condensate to the Wabasca Heavy crude as diluent to meet pipeline specifications. Attached to this response is an additional MSDS from Cenovus Energy, Inc. for its Wabasca Heavy crude. To the extent EMPCo receives further information as to any other additives or diluents which may have been contained in the crude oil released on or about March 29, 2013 in Mayflower, Arkansas, EMPCo will supplement this response.

2. **Identify the origin of the crude oil and describe in detail what changes, if any were made to the crude from the wellhead until it entered the pipeline and was released/discharged on March 29, 2013?**

EXHIBIT
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Response #2: As set out in my April 8th letter, an affiliate of EMPCo purchases Wabasca Heavy crude from two major Canadian producers, Canadian Natural Resources Limited and Cenovus Energy, Inc. Prior to its arrival at the Patoka terminal, Wabasca Heavy crude transits a number of pipelines, including the Pembina Nipisi pipeline, pipelines owned or operated by Enbridge, Inc., and a pipeline owned by Mustang Pipe Line LLC, a joint venture between Enbridge and Mobil Illinois Pipe Line Company. Beyond the information contained in my April 8th letter, and the additional information set forth in Response #1 above, should EMPCo receive further information regarding what other changes were made to the Wabasca Heavy crude from the wellhead to the point of release, EMPCo will supplement this response.

3. **Can the oil accurately be described as tar sand oil, or a type of diluted bitumen (dilbit)? If not, how would Exxon accurately describe the oil released/discharged from the pipeline on March 29, 2013?**

Response #3: The terms "tar sand oil" and "diluted bitumen (dilbit)" are subject to colloquial uses and varying understandings. ExxonMobil considers the oil released on March 29, 2013 to be conventionally produced Wabasca Heavy crude. ExxonMobil was advised today by the Government of Alberta's Energy Resources Conservation Board that Canadian producers report their production of Wabasca Heavy as bitumen. As referenced in Response #1 above, the two Canadian producers add condensate as a diluent to the Wabasca Heavy crude in order to meet pipeline specifications.

4. **Identify any additional materials, including but not limited to solvents, additives or other diluents, that were mixed with this crude prior to and/or at the time of release/discharge on March 29, 2013.**

Response #4: Please see EMPCo's Response #1 above, together with the information contained within my April 8th letter, along with the MSDS sheets provided therein.

5. **Identify any potentially unique environmental and/or ecological impacts from the oil and/or any additives released/discharged on March 29, 2013.**

Response #5: EMPCo is unaware of any environmental and/or ecological impacts from the oil and/or any additives released/discharged on March 29, 2013, other than those impacts which the Unified Command for the Mayflower Pipeline Incident, under the direction of the EPA Federal On-Scene Commander ("Unified Command"), have been addressing since the time of the release.

6. **Provide any unique oil spill cleanup strategies implemented by Exxon or its response contractors due to the constituents of the material released/discharged on March 29, 2013.**

Response #6: All oil spill cleanup strategies that have been implemented since March 29, 2013 have been made under the direction of the Unified Command. EMPCo has not implemented any

unique oil spill cleanup strategies due to the constituents of the material released/discharged on March 29, 2013, but has employed oil spill cleanup strategies that would ordinarily be done for a crude oil release of this nature and scope.

7. **Provide any environmental monitoring and/or sampling strategies implemented by Exxon or its response contractors due to the constituents of the material released/discharged on March 29, 2013.**

Response #7: EMPCo has not implemented any environmental monitoring and/or sampling strategies that are specifically due to the constituents of the material released/discharged on March 29, 2013, other than environmental monitoring and/or sampling strategies that would ordinarily be done for a crude oil release of this nature and scope.

8. **Provide all analytical results of any samples collected from the pipeline after the release/discharge on March 29, 2013.**

Response #8: On March 31, 2013, EMPCo took an oil/water sample from one of the vacuum trucks involved in the clean-up efforts. This sample has been preserved but was not sent for testing in light of how it was obtained. On April 5, 2013, split samples of the crude oil in and around the vicinity of the release point were taken by EMPCo and EPA. EMPCo will provide the analytical results of this April 5 sample upon receipt from the lab.

As mentioned previously, to the extent EMPCo receives further information responsive to the above requests, EMPCo will supplement this response. Please do not hesitate to call me with any questions. Thank you for your consideration and professionalism.

Very truly yours,

Richard E. Byrne

Enclosure

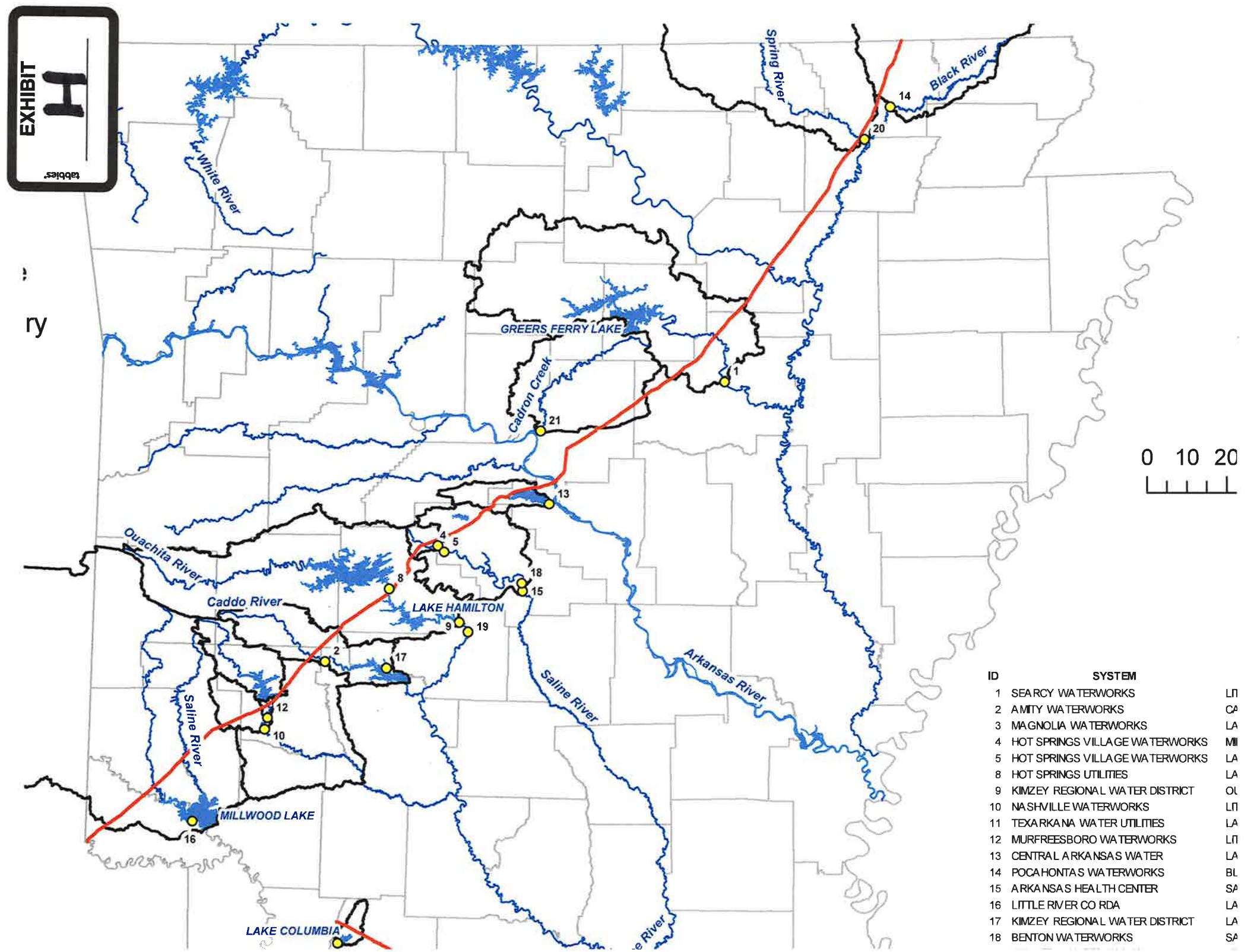
EXHIBIT H
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White River
Spring River
Black River
GREERS FERRY LAKE
Cadron Creek
Ouachita River
Caddo River
LAKE HAMILTON
Saline River
Arkansas River
MILLWOOD LAKE
LAKE COLUMBIA
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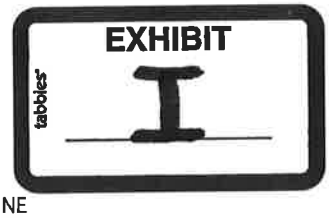
ID SYSTEM
1 SEARCY WATERWORKS
2 AMITY WATERWORKS
3 MAGNOLIA WATERWORKS
4 HOT SPRINGS VILLAGE WATERWORKS
5 HOT SPRINGS VILLAGE WATERWORKS
8 HOT SPRINGS UTILITIES
9 KIMZEY REGIONAL WATER DISTRICT
10 NASHVILLE WATERWORKS
11 TEXARKANA WATER UTILITIES
12 MURFREESBORO WATERWORKS
13 CENTRAL ARKANSAS WATER
14 POCAHONTAS WATERWORKS
15 ARKANSAS HEALTH CENTER
16 LITTLE RIVER CO RDA
17 KIMZEY REGIONAL WATER DISTRICT
18 BENTON WATERWORKS



Accufacts Inc.
"Clear Knowledge in the Over Information Age"

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June 17, 2014

TO: **R.M. Seeley**
Director, Southwest Region
Pipeline and Hazardous Materials Safety Administration
rodrick.m.seeley@dot.gov
Via email and, hardcopy to addressee

FROM: **Richard B. Kuprewicz (President, Accufacts Inc.)**

RE: **Major Safety Issues Related to Operation of the Pegasus Pipeline Within the Lake Maumelle Watershed**

Following a meeting between ExxonMobil ("EOM") and representatives of Central Arkansas Water ("CAW") in Houston, Texas on March 28, 2014, several major safety issues related to the operation of the Pegasus Pipeline within the Lake Maumelle Watershed still remain and need to be addressed by PHMSA in its consideration of EOM's proposed remedial work plan. While neither CAW nor I have been provided with a copy of the proposed plan, I assume that it follows the proposals set forth by ExxonMobil at the March 28 meeting and in later public announcements, *i.e.*:

- Conduct spike hydrotests to 100 percent of specified minimum yield strength (SMYS) at the lowest point in the watershed, yielding a test pressure of approximately 83 percent of SMYS at the highest point in the watershed. These hydrotests would be part of a series of 27 hydrotests conducted along 27 test sections of the northern segment of the pipeline.

- Remotely actuate one valve at an existing valve station (presently consisting of a check valve and two manually operated shutoff valves at approximate milepost 299.4 just north of Highway 10) to permit remotely controlled valve shutoff via SCADA.

- Add a check valve on the south side of the Maumelle River near to the most upstream pipeline crossing of the river at approximate milepost 295.8.

- Hire an outside firm to review the raw data from the 2012-2013 TFI tool run in order to double check the interpretation of that data by EOM's vendors.

- Conduct numerous validation digs along the segment of the pipeline from Patoka, Illinois to Corsicana, Texas and repair/replace sections as needed.

- Test selected sections of the pipeline for the atypical metallurgical properties found in the ruptured segment at Mayflower.

Accufacts believes that the March 28 meeting was highly constructive and moved many important issues in the right direction. However, several important technical issues/details were not resolved or agreed to by EOM at the meeting. These remaining issues could have a serious impact on the risks associated with operation of the pipeline in the Lake Maumelle watershed, upon which 400,000 individuals in central Arkansas rely for their water supply. Furthermore, EOM's recent announcement that atypical chemical properties of the ruptured pipe section were somehow "the most significant contributing factor" in the hook cracks growing to failure does not explain why the pipeline ruptured some 65 years after it was put into service at pressures well below MOP and well below the 2006 hydrotest pressure of approximately 83 percent of SMYS. Nor does it take into account the well-documented propensity of LF-ERW to rupture. Further, EOM's implication that this particular pipe section was the only atypical section of the Pegasus pipeline (i.e. an outlier) does not withstand scrutiny, given the fact that EOM had only examined the two adjoining sections at the time of the announcement. Accufacts thus has the following recommendations:

I. **Spike hydrotests should be performed at minimum pressures equal to or exceeding 90% SMYS at all locations in the watershed.**

EOM's proposed hydrotest approach is still inadequate as is relates to vintage ERW seam-weld manufacturing risks. EOM has suggested to CAW that EOM will use approximately the same two test segments that were used for the 2006 hydrotests affecting the Maumelle Watershed (approximately milepost 293.7 to 307), but perform the new hydrotests at higher pressures than the 2006 tests. EOM has proposed limiting the maximum hydrotest pressure to 100 percent of SMYS. This approach, however, will result in some higher-elevation mileage of the tested pipe in the Lake Maumelle watershed (south of approximate milepost 295.8) being tested at pressures of approximately 83 percent SMYS, because of steep elevation changes. As a point of critical reference, the segment of pipeline that ruptured in Mayflower, ruptured at approximately 54 percent SMYS (well below MOP) and had been hydrotested at approximately 83 percent SMYS in 2006, according to hydrotest documents available on PHMSA's website and Pegasus Pipeline elevation profiles. The lower percentage SMYS hydrotests performed in 2006 did not prevent the Mayflower LF-ERW seam rupture at operating pressures representing a very low percentage of SMYS and well below previous hydrotest pressures.

EOM's proposed approach to limit hydrotest pressures to a maximum of 100 percent SMYS is neither technically sound nor appropriate given the seam risks present in the pipeline segments within the watershed. The conclusions of a recent Batelle Report produced for PHMSA on the effectiveness of higher pressure, higher percentage

SMYS, hydrotests come as no surprise to Accufacts.[1] The purpose of a higher percentage SMYS hydrotest is to remove various larger risk ERW seam-related anomalies that can grow to rupture/failure from operation over a reasonable period of time following restart, or to identify pipe segments, through numerous higher-pressure hydrotest failures, as not fit for hydrocarbon service. Quite simply, EOM's proposal to go to all the trouble and expense of a new hydrotest and leave an important segment tested to insufficient percent of SMYS instills little confidence in EOM's integrity or risk management approach.

A pipeline is no better than its weakest link. Therefore, PHMSA should require EOM to perform minimum 90 percent SMYS spike hydrotests (or higher), compelling EOM to either:

(1) further segment the test sections to reduce elevation changes within the test segment to yield higher percentage of SMYS if an upper limit of 100 percent SMYS is imposed; or

(2) test above 100 percent SMYS using special testing protocols well known in the industry and by PHMSA to increase the minimum percent SMYS realized on a segment undergoing significant elevation changes.

Part of the Pegasus pipeline, especially in the section that could effect the southern portion of the Lake Maumelle watershed, undergoes significant and rapid elevation changes that are most likely to drive a pipeline oil spill into Lake Maumelle. The spike hydrotest can be followed by the regulatory-required hydrotest to validate the MOP.

II. Remotely operated valves should be added to the Pegasus Pipeline system before startup.

In addition to the valves identified above, at the March 28 meeting, EOM and CAW also discussed the installation of two possible additional remotely operated valves to assure prudent protection of the high consequence Lake Maumelle watershed:

1. A new SCADA remotely operated block valve should be installed at approximate milepost 295.8, south of the Maumelle River, along with the check valve that EOM has proposed at this site. Given the extreme elevation profile, the potential spill volume drainage associated with this segment, and the very high potential to reach Lake Maumelle if a rupture occurs in this area, I see a remotely operated block valve at this location as a "safety critical" device, given my extensive experience in valve installation on liquid pipelines in highly sensitive areas.

[1] Battelle Memorial Institute, *Final Summary Report and Recommendations for the Comprehensive Study to Understand Longitudinal ERW Seam Failures—Phase One* (Final Report – Task 4.5) (October 23, 2013 at pages 16-17 (hereinafter "Battelle Report 4.5")).

2. CAW also raised the possibility of installing either a remotely operated block valve or a check valve in the vicinity of the inside eastern boundary of the watershed. Given the steep terrain in this area, a remotely operated block valve or a check valve may be appropriate but further information regarding potential release flow is needed from EOM.

A requirement to timely install specific remotely operated valves should be made a condition of startup. I place little merit in EOM's statement that it is having trouble timely acquiring remotely operated mainline valves and, therefore, will not be able to install such critical valves prior to restart.

III. EOM needs to update the Pegasus Pipeline emergency shutdown and isolation procedure for control room personnel.

Despite the excellent open and frank discussion during the tour of EOM's SCADA facility on March 28, I have an obligation to report that EOM control room shutdown procedures may still not be adequate. I found that utilization of similar inadequate control room shutdown procedures on other pipelines that have experienced rupture significantly increased oil spill volume, such as on the Enbridge Line 6B 2010 pipeline rupture at Marshal, Michigan and the EOM 2011 Silvertip Pipeline rupture into the Yellowstone River. An open discussion of liquid pipeline rupture-hydraulics (which are not well understood by most pipeline operators) between EOM and PHMSA should result in an agreement to a relatively simple updated Control Room Emergency Pipeline shutdown procedure calling for rapid closure of remotely operated valves if a rupture is suspected.

IV. The development of ILI technology in ERW seam risk evaluation needs to be encouraged without overstating or misrepresenting ILI technical capabilities.

While I appreciate the industry's attempts to improve in-line-inspection ("ILI") tool development in the identification of vintage ERW seam risks, the fact remains that such highly specialized ILI tools are still in development and are currently not capable of providing the level of confidence needed to reliably verify the integrity of vintage seam threats such as LF-ERW seams. In fact, we understand that the 2012-2013 TFI test found no anomalies in the area of the Mayflower seam rupture and that validation digs conducted after the rupture were likewise negative. The NTSB reached the same conclusion following a tragic liquid pipeline LF-ERW seam rupture with loss of life on November 1, 2007.[2] PHMSA needs to continue to encourage efforts of ILI advancement, but it is clear to many parties that a proper higher percentage SMYS hydrotest is still the only method at this time that can reliably prove the integrity of

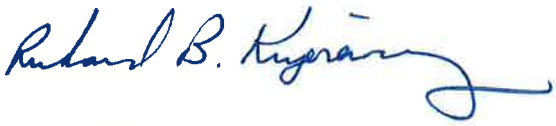
[2] PHMSA website, phmsa.dot.gov/pipeline/regs/ntsb/open, "P-09-01 Electric Resistance Welded (ERW) Pipe Study," to PHMSA 10/27/09. NTSB Safety Recommendations P-09-1 through 3 (October 27, 2009) on page 3. ("The NTSB concludes that current inspection and testing programs are not sufficiently reliable to identify features associated with longitudinal seam failures of ERW pipe prior to catastrophic failure in operating pipelines.").

vintage pipe at risk to original manufacturing threats, such as those associated with LF-ERW.[3] A proper high pressure high percentage SMYS hydrotest will demonstrate either that the existing pipe is seriously flawed and should not be authorized for restart in its current condition, or will be fit for near-term service while, hopefully, further advancements in ILI technology and application are made in this challenging area. Field dig information should be gathered to further the understanding of ILI seam evaluation tool tolerances, both in POD and in POI, as well as tool technical approach biases and limitations for the various types of threats associated with vintage ERW seams.

V. EOM needs to make its Pegasus pipeline oil spill response plan, especially as it may relate to the shipment of diluted bitumen (aka dilbit), available to CAW for its review and comment.

CAW has made clear to EOM that its oil spill response plan must take into account the fact that diluted bitumen may sink and formulate procedures to be followed if such an eventuality occurs.[4] Our general impression following the March 28, 2014 meeting with EOM is that EOM's oil response plan as represented by these two files are deficient in this regard. Further, EOM should update this plan, complete training for adequate implementation and stage equipment/materials necessary to implement the plan.

Please feel free to call me if you or your staff would like to continue the conversation or need further information.



Richard B. Kuprewicz
President,
Accufacts Inc.

cc Linda Daugherty, Deputy Associate Administrator for Field Operations, PHMSA, linda.daugherty@dot.gov
Alan Mayberry, Deputy Associate Administrator for Policy and Programs, PHMSA, alan.mayberry@dot.gov
Jeffrey D. Wiese, Associate Administrator for Pipeline Safety (PHMSA), jeff.wiese@dot.gov
Vanessa Sutherland, Chief Counsel, PHMSA, vanessa.sutherland@dot.com
Lawrence White, Senior Attorney, PHMSA, lawrence.white@dot.gov

[3] Battelle Report 4.5, pp. 19 - 20 and 37 - 39.
[4] EOM provided CAW with two files: (1) "Maumelle River – Lake Maumelle Tactical Response Plan," and (2) a 2013 oil spill response plan posted on PHMSA's web site "ExxonMobil Pipeline Company & Mobil Pipe Line Company Emergency Response Plan, Corsicana Response Zone Appendix Manual PHMSA Sequence Number 103, Volume 2."

EXHIBIT
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J

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March 28, 2014

Mr. Rodrick M. Seeley
PHMSA Southwest Region, Director
8701 S. Gessner Road, Suite 1110
Houston, TX 77074

Re: CPF No. 4-2013-5006H; *Correction Action Item No. 4*
Part I of the Integrity Verification and Remedial Work Plan

Dear Mr. Seeley:

Pursuant to the requirements of *CPF No. 4-2013-5006H; Correction Action Item No. 4*, ExxonMobil Pipeline Company (EMPCo) on behalf of Mobil Pipe Line Company, hereby submits Part I of the Remedial Work Plan. Part I of this plan specifically covers the Pegasus Pipeline segment from Patoka, IL to Corsicana, TX. Part II of this Work Plan for those sections south of Corsicana, TX will be submitted in a separate proposal.

EMPCo proposes to further assess the integrity of the Patoka to Corsicana segments of the pipeline through completion of examinations/repairs resulting from the 2010/2013 TFI tool runs and subsequent third-party data analyses, followed by hydrostatic pressure testing 648 miles of 20" mainline piping, including a spike test. Upon completion of a successful hydrostatic test, EMPCo proposes to return the line to operation at the re-established (or newly established) Maximum Operating Pressure (MOP) as described in the attached documents.

EMPCo proposes to divide the pipeline into 27 hydrostatic test sub-segments (as depicted in the attached package) and will keep PHMSA informed of the completion of a successful hydrostatic test for each sub-segment.

To meet the requirements of CAO No. 4, EMPCo's Remedial Work Plan Part I will include the following:

A. Threat Identification; failure analysis summary;
B. Hydrostatic testing overview/scope
C. Pre-test procedures
D. Documentation plans
E. Proposed data integration timeline
F. Continual assessment process

For reference only *CPF No. 4-2013-5006H; Correction Action Item No. 4* provided the following:

4. *Within 90 days after completing the metallurgical testing and analysis, submit a Remedial Work Plan to the Director for approval. The Work Plan must provide for the verification of the integrity of the*

Affected Pipeline and must address all factors known or suspected in the failure, including but not limited to:

- *Integration of the results of the failure analysis and other actions required by this Order with all relevant operating data including all historical repair information, results of past in-line inspections, construction, operating, maintenance, testing, metallurgical analysis, or other third party consultation information, and assessment data for the pipeline*
- *Performance of additional field testing, inspections, and evaluations to determine whether and to what extent the conditions associated with the failure or any other integrity-threatening conditions are present elsewhere on the affected pipeline. The results of the inspections, field excavations, and evaluations must be made available to PHMSA or its representative*
- *Performance of repairs or other corrective measures that fully remediate the identified risk conditions associated with the failure and any other integrity-threatening condition everywhere along the affected pipeline. Based on the known history and condition of the pipeline, the plans for repairs must include continuing long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of the pipeline considering the results of the analyses, inspection, and corrective measures undertaken pursuant to the Order*
- *Proposed schedule for completion of the three items listed in this section 4*

Based upon previously approved extensions, the current deadline for EMPCo submittal of the Remedial Work Plan is April 7, 2014.

EMPCo requests PHMSA review these documents and approve this Part I of the Integrity Verification and Remedial Work Plan for the portion of the Pegasus Pipeline from Patoka IL to Corsicana TX. Please contact Thad Massengale (thad.massengale@exxonmobil.com or 832-624-7880) if you have questions or comments.

Sincerely,

BT Magee for MD Weesner

Mark D Weesner
Safety, Health and Environment Department Manager

Attachment: North Pegasus – Remedial Work Plan

PEGASUS NORTH SEGMENT
(North of Corsicana)
REMEDIAL WORK PLAN
PART I

A. THREAT IDENTIFICATION; FAILURE ANALYSIS SUMMARY
B. HYDROSTATIC TESTING OVERVIEW/SCOPE
C. PRE-TEST PROCEDURES
D. POST TESTING DOCUMENTATION PLANS
E. PROPOSED DATA INTEGRATION TIMELINE
F. CONTINUAL ASSESSMENT PROCESS

ATTACHMENTS

I. Schematic of Test Sub-segments
II. Trunk Line Charts
    A. S-110-1 – Patoka to Doniphan
    B. S-110-2 – Doniphan to Conway
    C. S-110-3 – Conway to Foreman
    D. S-110-4 – Foreman to Corsicana
III. Google Earth Maps – Hydrostatic Test Segments
IV. Pipe Information Tables
    A. Patoka to Doniphan
    B. Doniphan to Conway
    C. Conway to Foreman
    D. Foreman to Corsicana
V. API Recommended Practice 1110 (2013): Pressure Testing of Steel Pipelines for the Transportation of Gas, Petroleum Gas, Hazardous Liquids, Highly Volatile Liquids or Carbon
VI. EMPCo FIMMS Document: Hydrostatic Pressure Testing
VII. EMPCo Global Practice 87-87-17: Hydrostatic Pressure Testing of Pipeline Facilities

Pegasus Integrity Testing Plan

This plan serves as "Part I" of EMPCo's response to CPF No. 4-2013-5006H requirement #4. The purpose of this plan is to obtain PHMSA review/endorsement of the approach to integrity verification of the Pegasus Northern Segment (North of Corsicana).

ExxonMobil Pipeline Company intends to meet CAO requirement # 4 using these steps:

1. *Submit an integrity verification plan (hydrostatic test plan) to PHMSA for endorsement for the Northern segment (this submission).*
2. *Complete excavation, examination, evaluation, and repair (as required) of anomalies identified from 2010 and 2013 tool runs and those identified by third-party analysis of the 2010 and 2013 TFI tool runs. (In progress)*
3. *Hydrostatically test Segment 1 (Patoka to Doniphan). Complete any necessary repairs. Segment 1 is 175.2 miles in length and will require 7 separate hydrostatic test segments.*
4. *Hydrostatically test Segment 2 – (Doniphan to Conway) Complete any necessary repairs. Segment 2 is 142.4 miles in length and will require 5 separate hydrostatic test segments.*
5. *Hydrostatically test Segment 3 (Conway to Foreman). Complete any necessary repairs. Segment 3 is 163.6 miles in length and will require 8 separate hydrostatic test segments.*
6. *Hydrostatically test Segment 4 (Foreman to Corsicana). Complete any necessary repairs. Segment 4 is 166.5 miles in length and will require 7 separate hydrostatic test segments.*
7. *Confirm system MOPs/define new MOPs based upon the results of the hydrostatic testing*
8. *Request PHMSA endorsement to restart Segments 1, 2, 3, and 4 under the re-established/ new MOPs.*

Additional "Parts" of the Remedial Work Plan for those segments south of Corsicana Station will be submitted under a separate proposal.

A. THREAT IDENTIFICATION; FAILURE ANALYSIS SUMMARY

A metallurgical analysis was performed by Hurst Metallurgical Laboratories as part of CAO Item #2 (provided to PHMSA under separate submission). Hurst identified the failure mechanism as an original manufacturing hook crack defect. The degradation mechanism of the hook crack defect to failure was undetermined. Through its metallurgical investigation, Hurst found no evidence of the following possible threat mechanisms:

1. External Corrosion (general, pitting, or selective seam corrosion)
2. Internal Corrosion (microbial or selective seam corrosion)
3. Stress Corrosion Cracking
4. Welding or fabrication related defect
5. Equipment failure

6. Third Party Damage
7. Weather related or outside force damage
8. Pressure Cycle Induced Fatigue

Subsequent additional analysis eliminated operator error and/or incorrect operating procedure (i.e. overpressure) as a causal factor, since the failure pressure was well below the Maximum Operating Pressure (MOP) at normal operating conditions and the MOP was correctly verified from the hydrostatic pressure test records.

The failure analysis concluded that the primary/root cause of the pipeline failure was original manufacturing defects in the DC-ERW seam, including upturned bands of brittle martensite (precursors to hook cracks), hook cracks, and atypical pipe properties when compared to pipe of similar vintage and manufacture. The atypical properties for the failed pipe joint include: very high local hardness in the areas of the seam; very low fracture resistance/toughness; very high yield strength for X-42 pipe; and unique chemical properties (namely for Carbon, Manganese, and Sulfur concentrations). The combination of the manufacturing defects and atypical pipe properties rendered the pipe seam susceptible to many different crack growth mechanisms, resulting in relatively unpredictable crack growth rates. Accelerated crack growth mechanisms may include a combination of the following:

- Brittle pipe properties (i.e. toughness)
- Residual stress within the pipe/seam (e.g. hoop stress, bending stress, longitudinal tensile stress);
- Contribution from adjacent defects;
- Pressure Cycle induced fatigue (although pressure cycling was light); and
- Environmental Induced Cracking (e.g., Hydrogen Stress Cracking).

Other potential crack growth accelerators were analyzed, but eliminated as potential contributory factors. These included: pressure pulsations beyond measured/assumed; mechanical damage; H_2S in crude (eliminated due to crack propagation from outside diameter to inside diameter). In addition, there was no evidence of contribution from external or internal corrosion; stress corrosion cracking; girth welding or field fabrication-related defects; equipment failure; weather-related or outside force damage; operator error and/or incorrect operating procedure.

B. HYDROSTATIC TESTING OVERVIEW / SCOPE

EMPCo proposes to assess integrity of the northern portions of the Pegasus pipeline system through hydrostatic pressure testing. Individual hydrostatic pressure tests will be performed

for 27 sub-sections. The attached documents describe the physical segmentation and piping of each section and sub-section.

- Attachment I – Schematic of Test Sub-segments
- Attachment II – Trunk Line Charts
- Attachment III – Google Earth (Arial and Street Map) views of each test segment
- Attachment IV – Pipe Information Tables

EMPCo proposes to hydrostatically test 647.7 miles of 20" mainline piping (Sections 1, 2, 3, & 4) to return the pipeline to operation at the re-established/ newly established MOPs for each sub-segment upon conclusion of the successful tests.

The hydrostatic test will be performed AFTER completion of excavation, examination, evaluation, and repair (as required) of anomalies identified from 2013 TFI tool run (Conway to Corsicana) and those identified by third-party analysis of the 2010 and 2013 TFI tool runs (Patoka to Corsicana). Additionally, in the ditch nondestructive examination and metallurgical testing will be performed to determine if excavated segments may exhibit similar properties to the failed pipe.

The hydrostatic tests will be spike test (139% of MOP) followed by and an eight hour (125% of MOP) sustained pressure test for each sub-segment per EMPCo and Industry standards. The initial target for each sub-segment will be a spike test to 100% of the specified minimum yield strength of the limiting pipe at the low point elevation of the test section. See Attachment I for a listing of target test pressures. If a significant number of pressure-reversal failures occur, EMPCo may decide to reduce the targeted test pressures in order to complete the testing in more efficient manner. Should this become necessary, the resulting MOPs will be at the same ratio of test pressure to MOP, i.e. MOP will not be more than 72% of the peak spike test pressures obtained in each test section.

C. PRE-TEST PROCEDURES

Prior to the start of the hydrostatic in-field testing activities, EMPCo will perform the following activities:

- Notify all affected public (i.e. any inhabited structures) within 75' feet of the pipeline of the planned pressure test. Flyers describing the proposed hydrostatic test, including emergency notification numbers, will be left at each residence/business contacted.
- Ensure that public officials and Local Emergency Planning Councils (LEPC) in each parish/county along the line are advised that testing will be taking place.

- Provide written instructions and a copy of the test procedures to all test personnel supervision and leadership.
- Install barriers (ropes, warning tape, and/or signs) at above ground testing facilities.
- Check all equipment, instrumentation, test headers, valves and connection to verify in good working order for the test.
- Perform daily tailgate safety meeting for all EMPCo and third party contracted workers prior to the beginning of the hydrostatic testing activities and on a regular basis throughout the hydrostatic testing operation. As appropriate, all workers will be qualified according to 49 CFR Part 195 "Operator Qualifications" requirements for the safety related tasks on the pipeline.
- Ensure that EMPCo SHE personnel (Pipeline Safety Advisor) is notified so that appropriate PHMSA notifications are made regarding test timing and progress.

D. POST-TEST DOCUMENTATION

The following documentation will be prepared and maintained for each of the 27 proposed sub-segments

- Test Summary which includes:
  1. Date of test
  2. Description of pipe tested – test site locations
  3. Procedures (summary and detailed)
  4. Weather conditions
  5. Personnel present
  6. Conclusions
  7. Signature of EMPCo's Qualified Individual who certifies the test
- EMPCo PL-709- Hydrostatic Pressure Test Data Sheet
- Pressure and temperature recorder charts
- Equipment calibration test reports
- Hydrostatic test report from contract services provider

E. PROPOSED TIMELINE

EMPCo has initiated excavation, examination, and assessment of anomalies identified from the 2013 TFI tool run of Segments 3 and 4 (Conway to Corsicana). Additionally, EMPCo is in the process of performing a third-party analysis of the data from both the 2010 and 2013 TFI tool runs (Patoka to Corsican) and will also address indications identified by this process prior to initiation of a hydrostatic test on each segment. It is anticipated that EMPCo will initiate

hydrostatic testing activities at the north end of the line (Patoka, IL) in the third or fourth quarter of 2014 and that testing will continue for up to one year to complete the entire 648 miles under this plan.

EMPCo proposes to provide a monthly status update regarding hydrostatic testing progress to PHMSA via electronic mail.

EMPCo will complete preliminary Data Integration one hundred and eighty days (180) from completion of hydrostatic testing for Segments 1,2,3, and 4,—identifying any additional areas of concern to be addressed with follow-up actions consistent with EMPCo IMP timing requirements.

EMPCo will complete Final Data Integration, Updated Risk Assessment, and Preventive and Mitigative Measures analyses consistent with EMPCo IMP timing requirements three hundred and sixty-five (365) days from completion of the hydrostatic testing for Segments 1, 2, 3, and 4.

F. CONTINUAL ASSESSMENT PROCESS

Re-assessments of these segments will be determined based on the following information:

- Results of hydrostatic testing
- Results of additional analyses of failed test segments
- Operational parameters on the line segments
- An analysis that ensures any time dependent defects remaining will not grow to actionable levels before the next integrity assessment (e.g. ILI) with a Factor of Safety = 2.

The reassessment interval will not exceed five (5) years. However, it is premature to specify long-term periodic testing and integrity verification measures prior to the completion of the above specified plan. EMPCo proposes to submit a comprehensive long term plan for both the Northern and Southern Pegasus segments at the conclusion of the testing processes noted above and those addressed in Part I of this plan.

G. FINAL DOCUMENTATION

The following final documentation will be prepared and maintained for Segments 1, 2, 3, and 4:

- EMPCo Form 3.1: IMP HCA Update
- EMPCo Form PL-751: Piping Inspection and Remedial Action Report (for any pipe inspected during repair/cutout processes)

- EMPCo Form PL-0018: Pipeline and Facility Change Diagram
- EMPCo Forms 6.1: IMP P&M Analysis
- EMPCo Form 6.2: IMP EFRD Analysis
- EMPCo Form 6.3: IMP Leak Detection Analysis
- EMPCo Long Seam Failure Susceptibility Analysis
- EMPCo Stress Corrosion Cracking Susceptibility Analysis