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# LNG Keeps Gulf Oil's Big Wheels Rolling

By Joseph Markman, Hart Energy



HOUSTON – On the Gulf Coast, Charif Souki of Cheniere Energy Partners LP builds LNG megaprojects to fuel the world. In New England, Jonathan Carroll of Gulf Oil LP builds an LNG plant to fuel his truck.

Make that trucks. Gulf operates a fleet of almost 200 in the Northeast. In 2012, seeking ways to cut both costs and emissions in this operation, the legendary oil company turned its attention to LNG.

"It was this fleet that got us involved with LNG in the first place," Carroll, senior director of market and business development, natural gas, told attendees of Hart Energy's recent World LNG Fuels Conference & Exhibition in Houston. "It is still the cleanest-burning fossil fuel. It is still a domestic and abundant resource, stable over the long term."

### LNG Or CNG? It Depends

Gulf, based in Framingham, Mass., is a major retail player, distributing around 3 billion gallons of fuel a year through 2,000 branded stations and 1,000 private label outlets in 27 states. It has incorporated 44 Peterbilt Model 386 LNG-fueled tractor-trailers into its New England fleet, supported by three LNG fueling stations and four cryogenic support trailers.

How committed is Gulf to LNG as a transportation fuel? In 2017, the company expects to start operations of its 100,000 gallon per day liquefaction plant in the northeast Pennsylvania town of Great Bend, just over the New York state line and a mere 20 minutes south of Binghamton, N.Y.

"LNG gives us the range and fueling experience that we like at Gulf," Carroll said. "There's a lot of debate in the transportation industry—CNG, LNG? Which is better for your fleet? The answer is: It depends."

Variables include the make-up of a truck fleet, the routes to be traveled and payloads. Gulf found that CNG was available in New England, but as a result of a lack of regional infrastructure natural gas prices there were among the highest in the country and the pump price for CNG was quite high. For Gulf, LNG was the better choice.

"So how's the fleet doing? Last year, we traveled over 5 million miles—this is just the LNG fleet," he said. "We were able to displace over 1 million gallons of diesel and an estimated 2,800 metric tons of carbon dioxide. We saved about \$1.8 million in our fuel costs and we're eligible for a federal tax credit of over \$800,000.

"Not too shabby, and we're pretty happy with that."

### **Opportunity Begets Opportunities**

Projects like this tend to engender opportunities, and Gulf moved to exploit them. Its operations personnel soon began sharing expertise on LNG handling and storage with local firefighters, regulatory inspectors and curious owners of fleets in the area. The company opened dialogues with engine manufacturers to discuss ways to improve equipment.

Relationships established with regional suppliers led to hauling contracts. In 2014, Gulf moved more than 3.6 million gallons for customers. Finally, it made sense to take the next step.

"So, we had the means, we had the motive, we had the opportunity to commit the crime, and that's build an LNG liquefaction plant of our own," Carroll said.

"Our primary motivation was to improve the reliability of the LNG supplied for our fleet," he said. "Up in New England, we're surrounded by LNG tanks. There is over 16 Bcf of LNG storage in the region, but really none of it is available for long-term firm purchase. The facilities that do make it available are oftentimes interruptible. We wanted to be in control of our own destiny and take advantage of our close proximity to the Marcellus Shale region." The location also benefits from accessibility to the Laser Northeast Gathering Pipeline, which will transport some of the cheapest natural gas in the country to the plant. In its FERC application, Gulf estimates that the site will store between 600,000 and 3 million gallons and cost about \$45 million.

LNG won't work in every situation. Among the challenges:

- Remote communities, where the population center is disconnected from the pipeline grid;
- Rail and marine operations, which have long life-cycles for equipment and have difficulty fitting major changes into replacement timelines; and
- Customer capability—not everyone can handle the switch and the supplier needs to provide an array of solutions, including transportation, distribution, permitting support, equipment selection, financing, price risk management and technical expertise.

"It all starts with the customer," Carroll said. "You've got to get them savings, you've got to get them a payback that's reasonable, that fits within their parameters."

# Palin: Keystone XLA 'No-Brainer'

By Caroline Evans, Hart Energy



HOUSTON—Onetime vice presidential candidate and former Alaska Gov. Sarah Palin has built her image around buzzwords like "rogue" and "maverick." But to the audience of oil and gas executives at NAPE, her message was right on target.

Chiefly, that meant directed at President Barack Obama.

Palin did not stray from her usual message of "government is part of the problem," although she did say the government could have a positive role in energy development, namely by lifting the export ban. That would incentivize production, she argued.

The Tea Party favorite received a standing ovation and several rounds of applause during the Decision Makers Breakfast at the NAPE conference on Feb. 12. She spoke on energy issues including the Keystone XL pipeline, cap-and-trade and Obama's request that Congress designate a large portion of the Arctic National Wildlife Refuge (ANWR) as a wilderness area.

"Energy is my baby, it's the thing I miss most from my governing responsibilities," Palin said. "I can talk energy all day long."

Palin called the approving the controversial Keystone XL pipeline a "no-brainer," citing the safety of pipelines relative to other means of transportation, such as crude by rail, the use of similar pipelines and the implications of "friendly fuel" from Canada.

"[Keystone's] not an environmental concern of our president and bureaucrats in there in the administration," she said. "It's definitely political, and it's a shame that [Obama has] already taken it off the table with his threat of a veto...It will get to market somehow, America's going to miss out, though."

The president, she said, is against U.S. energy independence because of his threat to veto Congressional approval of the pipeline and his proposal to seal off ANWR.

The proposal to close nearly 12 million acres of ANWR to drilling is a mistake, Palin said.

"All we need to explore is a 2,000-acre swath within that 20 million acres of ANWR," she said.

On the White House's proposal to allow potential lease sales in the Atlantic, Palin was skeptical.

"Atlantic potential has already been tried," she said. "And there's no guarantee of that federal allowance, anyway. It's just potential. It's 'maybe, someday, some years from now, the feds will perhaps allow some activity.'"

The draft plan proposes a potential lease sale in an area offshore of Virginia, North Carolina, South Carolina and Georgia—smaller than what oil and gas industry leaders had pushed. The sale would include an 80 km (50-mile) buffer from the coast to reduce potential conflicts with Department of Defense, fishing, offshore wind and wildlife activities.

Currently, there are no active oil and gas leases in the Atlantic area. Between 1976 and 1983, 10 oil and gas lease sales were held in the Atlantic, according to the Bureau of Ocean Energy Management (BOEM). During that time, 51 wells were drilled. These included five continental offshore stratigraphic test wells, all of which were deemed noncommercial. However, there have been many advances in E&P technology, and the potential for hydrocarbon finds still exists.

Palin also took a few jabs at herself during the session, which was emceed by NAPE advisory board chair Carl Campbell. Regarding the 2016 election, she said, "I can see it from my house."

# **Canadian Pacific Workers' Strike Ends With Mediation Pact**

By Caryn Livingston, Hart Energy



Source: Canadian Pacific

Canadian Pacific Railway Ltd. (TSX: CP) (NYSE: CP) came to an agreement with the union Teamsters Canada Rail Conference (TCRC) to enter binding arbitration, effectively ending a strike that began on Feb. 15. The arbitrator will be appointed by the federal government. Under the terms of the agreement, workers returned to work on Feb. 17 at 8 a.m. TCRC represents about 3,000 of CP's active locomotive engineers and conductors, according to CP.

Keith Creel, CP's COO, estimated that the strike would cost the railroad about 1 cent per day in pershare earnings, according to a recent *Bloomberg* story. Based on CP's 166 million diluted shares outstanding as of the end of fourth-quarter 2014, Creel's estimate means that the strike could cost the company about CA\$1.7 million each day.

News of the strike came the same day that CP said it reached an agreement with Unifor, the union representing 1,800 members in 18 different locations, according to a statement from the union. Unifor members at CP conduct safety inspections, maintenance and repairs on all rail cars and locomotives.

The strike was announced on Feb. 14, after negotiations between CP and TCRC broke down without reaching an agreement. In a release, TCRC said the major issues underlying the strike, and that arbitration should address, include "fatigue management and the necessity to implement broad based and effective fatigue countermeasures for the rail workers," as well as "the poor relationship CP management has adopted towards the workers, which has developed into massive numbers of outstanding grievances that need to be resolved."

According to a statement from CP, the company proposed options intended to mitigate TCRC's complaints, including wage increases, better benefit plans and changes to work schedules. CP also noted that "72% of all engineers and conductors do not take the time off they are entitled to. Furthermore, 60% of the conductors and engineers at CP make between \$80,000 and \$160,000, while working an average of 31 to 35 hours a week."

With the strike ended while the two parties pursue an agreement through arbitration, the Canadian government halted plans for the back-to-work legislation it was considering to end the strike, *Bloomberg* reported. At a Feb. 16 news conference, Labor Minister Kellie Leitch said, "I'm incredibly happy that both sides put the interests of Canadians and the Canadian economy first. My expectation is that people return to work quickly."

Both parties remain willing to work toward an agreement, with CP's CEO E. Hunter Harrison stating, "This decision ensures both sides will get back to the table, and gets us back to moving Canada's economy forward. While we would have preferred a negotiated settlement, this is the right thing to do at this time."

Meanwhile, TCRC stated, "The TCRC remains available to achieve a negotiated settlement at any time should the employer chose to agree."

CP is a transcontinental railway in the U.S. and Canada with direct links to eight major ports, including Vancouver and Montreal. CP serves the Bakken Shale, Marcellus Shale and Canadian Oil Sands regions, as well as major ethanol production areas in the U.S. Midwest.

# **Bridging The Gap Between E&P, Midstream**

By Emily Moser, Hart Energy



Alan Armstrong, president and CEO of Williams, urged oil and gas producers to map out midstream takeaway when planning future work in plays at the NAPE business conference in Houston last week. *Source: NAPE* 

HOUSTON—A speaking role for a midstream guy at NAPE might be unusual, but for Alan Armstrong, president and CEO of Williams Cos. (NYSE: WMB), his message was an imperative.

"Boy, it really is a sign of the changing times when a midstream guy is up here speaking at a NAPE conference," he joked.

During his presentation at the NAPE business conference in Houston last week, Armstrong urged oil and gas producers to map out midstream takeaway when planning future work in plays.

"There is so much resistance today getting the infrastructure built out that is critical to developing into these long haul markets," he said. "I'm here today to tell you that this really needs your attention."

Armstrong, who has been busy processing and transporting the spoils of the U.S. shale revolution, said he has seen a growing disconnect between producers and the downstream markets. The pending demand coming from power generation conversions to natural gas from coal might spell even more trouble for getting resources to market.

From a long term view, he said the ability to get infrastructure built out and keep North American products in key markets is one of the biggest challenges the industry faces.

"That is, from my perspective, the Achilles' heel of this great North American energy story," he said.

Armstrong said he admires the ingenuity and innovation that he has seen from the E&P space. Because of producers, hundreds of thousands of jobs have been created in the oil and gas industry and even more in the manufacturing services business.

"Make no doubt about it—whether it's on the demand side or whether it's on the producing side, we're growing our business because this group has demonstrated their ability to innovate and to continue to lower the cost of production in the space," he said.

However, with the decline in commodity prices, the confidence that existed in the capital markets has changed. That money is harder to get now and as a result the industry needs to get creative in how to structure the business, he said.

Those independents from the mighty shale revolution that have relentlessly increased production need to now think about developing infrastructure for the end markets. Bridging that disconnect and bringing commercial structure to those operations is something that the entire industry needs to focus on, he said.

The segregation in duties and between the independents and the midstream/downstream market need reconnecting "through intelligent commercial relationships where we're bridging across the price signals," he said.

Armstrong said this isn't a matter of dramatically reducing the amount of what producers go after, but a change in the pace.

"A lot of the innovation that we brought to get the gas and oil out of the ground at low costs, we now need to bring that innovation to thinking about how we contract through the space," he said.

### **Frac Spread: Cold Winds Blow Up Prices**

By Frank Nieto, Hart Energy



The Siberian blast that hit the East Coast and Midwest the week of Feb. 16 sent natural gas prices surging upward at Transco and Algonquin Citygate hubs, but overall prices were relatively flat. Considering that this blast caused temperatures throughout the country to reach their lowest levels for the month of February in more than a decade, the lack of a sustained price surge is a strong signal of a well-supplied market compared to last year when supplies had trouble getting to demand centers.

The U.S. Energy Information Administration reported that gas storage withdrawal was only 111 billion cubic feet (Bcf) the week of Feb. 13, which is within normal levels. This left the storage level at 2.157 trillion cubic feet (Tcf), which was 46% greater than the 1.479 Tcf level posted during last year's frigid temperatures and 3% greater than the five-year average of 2.099 Tcf.

"The withdrawals were much lower than the 230 Bcf reported in the same week last year and significantly below the five-year average of 188 Bcf ... Boosted by cold weather and low relative prices, coal to gas switching has been robust at these prices in some regions, while in other regions increased renewable generation has displaced gas-fired generation in the supply stack," Barclays Capital said in a Feb. 16 research note.

On a longer-term basis, prices could experience an uptick as Cheniere Energy Inc. announced that its Sabine Pass LNG export terminal may deliver its first cargoes in December 2015. This would be ahead of the projected timeline of first-quarter 2016.

While gas prices were flat, propane prices experienced notable increases at both Conway and Mont Belvieu as a result of increased heating demand. Both hubs saw prices improve by 9% with the Mont Belvieu price hitting 58 cents per gallon (/gal), its highest price since the week of Nov. 26 when it was 69 cents/gal. The Conway price rose to 54 cents/gal, the highest the price has been since it was 57 cents/gal the week of Dec. 3.

Crude oil stock levels remain high, but the market is reacting well to the oversupply situation as rig counts have fallen and gasoline demand is increasing due to the lower prices, especially in the U.S. "Since the beginning of this year, implied product demand has been 3.4% higher year-on-year vs. 2014, driven by higher gasoline, distillate and jet demand," Barclays Capital reported. "Absent the recent spell of bad weather in the Northeast and Midwest, product demand could arguably be even higher. This has helped support product prices, strengthen cracks and increase refinery runs while the market was searching for a floor."

As West Texas Intermediate crude prices rose above the \$50 per barrel (/bbl) threshold, they have ushered in improvements to heavy NGL prices. The biggest increase was for Conway isobutane, which can get short quickly due to the limited isomerization units available in the region. Prices rose 14% to 85 cents/gal, its highest price since the week of Dec. 3 when it was 95 cents/gal. During the last few years in February, isobutane experienced similar upticks at the hub as this movement is fast becoming the norm.

Overall the theoretical NGL bbl rose at similar rates at both hubs as the Conway price rose 6% to \$22.89/bbl with a 9% increase in margin to \$13.18/bbl while the Mont Belvieu price rose 5% to \$23.05/bbl with a 10% increase in margin to \$13.18/bbl.

The most profitable NGL to make at both hubs was  $C_{5+}$  at 87 cents/gal at both hubs. This was followed, in order, by isobutane at 58 cents/gal at Conway and 43 cents/gal at Mont Belvieu; butane at 39 cents/gal at Conway and 40 cents/gal at Mont Belvieu; propane at 30 cents/gal at Conway and 34 cents/gal at Mont Belvieu; and ethane at negative 1 cent/gal at Conway and nil at Mont Belvieu.

The National Weather Service anticipates temperatures to increase the week of Feb. 25 from the lows caused by the Siberian blast, but to remain colder-than-normal for this time of year. This should help work off even more excess gas and propane as heating demand remains strong in the last few weeks of winter.

NGL PRICES										
Mont Belvieu	Eth	Pro	Norm	lso	Pen+	NGL Bbl				
Feb. 11 - 17, '15	17.83	58.20	68.03	70.20	116.80	\$23.05				
Feb. 4 - 10, '15	16.83	53.44	65.92	67.80	113.46	\$21.92				
Jan. 28 - Feb. 3, '15	17.85	49.34	66.00	67.90	103.10	\$20.90				
Jan. 21 - 27, '15	18.63	50.58	70.28	71.68	95.06	\$20.94				
January '15	18.79	47.27	67.03	68.30	94.52	\$20.28				
December '14	17.25	55.54	72.72	74.08	116.89	\$23.00				
4th Qtr '14	20.22	76.90	96.73	98.28	149.25	\$30.10				
3rd Qtr '14	23.19	103.92	123.69	128.39	212.20	\$40.27				
2nd Qtr '14	29.26	106.55	124.12	130.23	222.81	\$42.31				
1st Qtr '14	34.50	129.51	137.62	141.49	212.60	\$46.16				
Feb. 12 - 18, '14	40.31	154.24	138.12	140.96	210.98	\$49.90				
Conway, Group 140	Eth	Pro	Norm	lso	Pen+	NGL Bbl				
Feb. 11 - 17, '15	17.00	54.40	66.60	84.48	116.03	\$22.89				
Feb. 4 - 10, '15	16.36	49.94	65.42	74.28	111.60	\$21.62				
Jan. 28 - Feb. 3, '15	17.45	45.76	68.42	75.18	100.90	\$20.76				
Jan. 21 - 27, '15	18.00	47.12	72.36	77.10	94.70	\$20.84				
January '15	18.06	43.51	70.80	76.05	94.99	\$20.33				
December '14	16.52	53.04	83.35	86.00	117.65	\$23.68				
4th Qtr '14	18.69	78.64	102.72	113.19	146.37	\$30.77				
3rd Qtr '14	20.38	104.99	123.51	140.07	207.90	\$40.18				
2nd Qtr '14	26.26	105.44	121.26	163.00	221.62	\$42.62				
1st Qtr '14	25.46	169.48	132.08	147.10	216.86	\$49.93				
Feb. 12 - 18, *14	30.25	166.16	129.30	149.00	218.18	\$50.31				

CURRENT FRAC SPREAD (CENTS/GAL)									
February 20, 2015	Conway	Change from Start of Week	Mont Belvieu	Last Week					
Ethane	17.00		17.83						
Shrink	17.64		17.90						
Margin	-0.64	37.09%	-0.07	93.76%					
Propane	54.40		58.20						
Shrink	24.37		24.73						
Margin	30.03	15.78%	33.47	16.95%					
Normal Butane	66.60		68.03	1					
Shrink	27.58		28.00	1					
Margin	39.02	2.00%	40.03	5.85%					
Isobutane	84.48		70.20	1					
Shrink	26.49		26.89	I					
Margin	57.99	20.34%	43.31	6.13%					
Pentane+	116.03		116.80						
Shrink	29.50		29.94	1					
Margin	86.53	4.83%	86.86	4.14%					
NGL \$/Bbl	22.89	5.89%	23.05	5.12%					
Shrink	9.72		9.86						
Margin	13.18	9.35%	13.18	9.63%					
Gas (\$/mmBtu)	2.66	1.53%	2.70	-0.37%					
Gross Bbl Margin (in cents/gal)	29.66	10.02%	30.21	10.33%					
NGL Val	lue in \$/mmBtu	(Basket Value)							
Ethane	0.94	3.91%	0.98	5.94%					
Propane	1.89	8.93%	2.02	8.91%					
Normal Butane	0.72	1.80%	0.73	3.20%					
Isobutane	0.53	13.73%	0.44	3.54%					
Pentane+	1.50	3.97%	1.51	2.94%					
Total Barrel Value in \$/mmbtu	5.57	6.17%	5.68	5.60%					
Maroin	2.91	10.81%	2.98	11.66%					

Price, Shrink of 42-gal NGL barrel based on following: Ethane, 36.5%; Propane, 31.8%; Normal Butane, 11.2%; Isobutane, 6.2%; Pentane+, 14.3%, Fuel, frac, transport costs not included. Conway gas based on NGPL Midcontinent zone, Mont Belvieu based on Houston Ship Channel.

RESIN PRICES – MARKET UPDATE – FEBRUARY 20, 2015										
TOTAL OFFERS: 14,737,472 lbs		SPOT		CONTRACT						
Resin	Total lbs	Low	High	Bid	Offer					
LLDPE - Film	2,421,864	0.6	0.64	0.57	0.61					
HDPE - Blow Mold	2,251,416	0.535	0.635	0.55	0.59					
LDPE - Film	2,105,840	0.55	0.64	0.6	0.64					
HMWPE - Film	2,047,128	0.555	0.635	0.59	0.63					
PP Homopolymer - Inj	1,935,864	0.67	0.74	0.67	0.71					
PP Copolymer - Inj	1,721,404	0.67	0.75	0.69	0.73					
HDPE - Inj	1,366,852	0.52	0.605	0.58	0.62					
LDPE - Inj	520,736	0.675	0.735	0.64	0.68					
LLDPE - Inj	366,368	0.54	0.615	0.62	0.66					

Source: Plastics Exchange - www.theplasticsexchange.com

# NGL Energy Partners Announces Grand Mesa Pipeline Upsize

#### **Business Wire**

NGL Energy Partners LP (NYSE:NGL) announced Feb. 17 its decision to increase the size of its 100% owned Grand Mesa Pipeline to a higher capacity 20-inch design.

The decision to expand was based on initial shipper commitments and additional volumes committed to Rimrock Midstream LLC's 150-mile Denver-Julesburg (D-J) Basin gathering system that is currently under development which will tie into Grand Mesa Pipeline at Lucerne, Colo.

The larger pipeline provides area producers a reliable and cost-effective takeaway option out of the basin capable of transporting more than 200,000 barrels per day.

The Grand Mesa Pipeline system will include more than 550 miles of new crude oil transportation pipeline, multiple truck injection bays, more than one million barrels of operational storage and at least two origination points located near Lucerne and Kersey (Riverside Station) in Weld County, Colo.

The system is in active development and is scheduled to commence service in the fourth quarter of 2016. Rimrock will construct and operate the pipeline system.

### Yara, BASF Agree To Build Ammonia Plant In Freeport, Texas

Yara International and BASF Group have agreed to build a world-scale ammonia plant at BASF's site in Freeport, Texas, the companies said in a Feb. 19 release.

The ammonia plant will be owned 68% by Yara and 32% by BASF and located on BASF's site in Freeport. The plant will have a capacity of about 750,000 metric tons per year. Each party will offtake ammonia from the plant in accordance with its equity share.

Total capital investment for the plant is estimated at \$600 million.

Yara, based in Oslo, Norway, will in addition build an ammonia tank at the BASF terminal bringing Yara's total investment to \$490 million. BASF, based in Ludwigshafen, Germany, will in addition upgrade its current terminal and pipeline assets.

The plant will use hydrogen as raw material, reducing capex, maintenance and carbon dioxide emissions significantly.

The hydrogen technology reduces capex and maintenance significantly compared to a traditional natural gas based ammonia plant. The technology also allows for lower carbon dioxide emissions. A long-term supply agreement for nitrogen and hydrogen has been signed with Praxair Inc., the largest industrial gases company in North America, linking the feedstock variable cost to the advantageous natural gas prices available at the U.S. Gulf Coast.

KBR Inc., of Houston, has been awarded a fixed price turnkey contract for the engineering, procurement and construction. The plant is expected to be completed by the end of 2017. Yara will manage construction of the plant while BASF will operate the plant and the export terminal.

# EnLink Midstream Acquires 25% Interest In Subsidiary

### **Business Wire**

For about \$925 million in a dropdown transaction, EnLink Midstream Partners LP (NYSE: ENLK) acquired a 25% equity interest in EnLink Midstream Holdings LP (EMH) from EnLink Midstream LLC (NYSE: ENLC), the company said Feb. 17.

ENLC is the general partner. About 31.6 million partnership units were issued to ENLC, and Dallas-based ENLK's total equity interest is now 75%. ENLC owns the remaining 25% interest, the company said.

EMH owns the assets that Devon Energy Corp. (NYSE: DVN) contributed to ENLC March 2014, which include gathering and processing systems in North Texas and Oklahoma. The assets are supported by long-term, fixed-fee contracts with minimum volume commitments. The dropdown of the remaining 25% equity interest in EMH is expected to occur later in 2015.

### **Enable Midstream Partners Will Reduce** Workforce

#### **Business Wire**

Oklahoma City-based Enable Midstream Partners LP (NYSE: ENBL) said Feb. 16 that it will reduce its workforce by about 10% this year.

Certain corporate functions will shift to Oklahoma City and Houston, the company added.

"Volatility in the commodity markets is taking a toll on our customers and driving our need to respond to what will, undoubtedly, be one of the most financially demanding years we've seen in the energy sector," said Lynn Bourdon, president and CEO.

"We find ourselves in a challenging market, forced to make some very difficult decisions. Today's announcement follows a great deal of careful and thoughtful consideration as to how best to ensure that we meet our long-term financial objectives and to respond quickly in this dynamic market."

# **Rail, Pipeline Regulators Probe Oil Train Derailment**

#### Bloomberg

U.S. regulators joined the investigation into a fiery CSX Corp. (NYSE: CSX) oil-train derailment in West Virginia that forced residents to flee their homes in frigid weather and threatened drinking water, Bloomberg said Feb. 17.

The crash, the second in 10 months involving a CSX train laden with Bakken oil, promises to add to the public-safety debate over North American crude-by-rail shipments. The Obama administration is revising standards after a series of oil-train derailments led by a 2013 Quebec accident that killed 47 people and non-fatal explosions in the U.S.

Sarah Feinberg, acting administrator of the Federal Railroad Administration, and Chief Safety Officer Robert Lauby were traveling to the crash site, and investigators from the Pipeline Hazardous Materials Safety Administration were already on the scene, according to the FRA. As firefighters worked Feb. 17 to douse the remaining flames following the Feb. 16 derailment, authorities' focus turned to learning why the train came off the tracks and whether the cargo of North Dakota Bakken crude had reached a municipal water intake on the Kanawha River.

Ice dams might have kept the crude from reaching a local water system, and authorities are testing samples to be sure the spill was contained, said Terrance Lively, a spokesman for the West Virginia Department of Military Affairs and Public Safety in Charleston.

"We do know there is some crude oil in the stream," Lively said Feb. 17 by telephone.

Gary Sease, a CSX spokesman, didn't immediately respond to a request for comment that day about track conditions and the train's speed at the time of the accident, which occurred after 1 p.m. on Feb. 16.

The rural nature of the crash site might have limited the fallout from having 27 oil cars derail and as many 15 of them catch fire. Even with power lines damaged, the possible jeopardy to the water system and Gov. Earl Ray Tomblin declaring a state of emergency covering Kanawha and Fayette counties, only about 85 people had to use local shelters, Lively said.

CSX is cooperating with federal authorities, Sease said by email. The train -- with 107 oil cars, two cars of sand and a pair of locomotives -- was headed for Yorktown, Va., according to Sease.

The destination was a rail-to-marine terminal operated by Plains All American Pipeline LP (NYSE: PAA), according to New York-based ClipperData, which tracks waterborne crude movements. A Plains All American spokesman, Brad Leone, didn't immediately respond to a voice message and email left before regular business hours Feb. 17.

The April 2014 crude-train derailment in Lynchburg, Va., also involved a CSX train headed to the Plains All American facility. About 15 cars came off the tracks, and the resulting fire led to dramatic video of flames and billowing smoke against the backdrop of a small city's downtown.

The tank units on the West Virginia train were CPC-1232 rail cars made with either 7/16-inch (1.1centimeter) carbon steel shells and 1/8-inch carbon steel jackets, or cars with 1/2-inch carbon steel shells, according to an email from Sease.

The new U.S. standards for trains carrying crude would first require companies to upgrade tank cars known as DOT-111s, which safety investigators have said are prone to puncture in rail accidents, a person familiar with the proposal said this month.

The draft rule also would require that new cars be built with steel shells that are 9/16th of an inch thick, people familiar with the plan said. The walls of the current cars, both DOT-111s and the newer CPC-1232 models, are 7/16th of an inch thick.

The Feb. 16 derailment was the second in three days in North America. Canadian National Railway Co. shut its main line linking western and eastern Canada after an eastbound train carrying crude oil came off the tracks in Ontario.

The train of 100 cars, all carrying crude from Canada's oil-producing region of Alberta to eastern Canada, derailed just before midnight Feb. 14 in a remote and wooded area about 30 miles (48 kilometers) north of Gogama, Ontario, spokesman Patrick Waldron said in an email.

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