From: Ta:	ÊÀ
Cc: Subject: Date: Attachments:	FW: Gas Line installation restrictions and concerns Tuesday, October 28, 2014-10-09:39-AH smace001.pmg smace002.pmg
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Regards,	
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To:	October 28, 2014 10:04 AM FA S Line installation restrictions and concerns
PA	

As a simple answer to the question, there is no "blast radius" or "clear zone" calculation that I know of. That term typically is used by anti-pipeline groups who are looking to raise fear of a pipeline installation. That being said, such concerns are addressed through a number of proper pipeline design and maintenance procedures. In this case, the pipeline is designed and installed to "Class 4" standards, which is the most stringent natural gas pipeline design code. The different class definitions from the USDOT regulations (Title 49, CFR 192 section 192.5) are as follows:

(1) A Class 1 location is:
(i) An offshore area; or
(ii) Any class location unit that has 10 or fewer buildings intended for human occupancy.
(2) A Class 2 location is any class location unit that has more than 10 but fewer than 46 buildings intended for human occupancy.
(3) A Class 3 location is:
(i) Any class location unit that has 46 or more buildings intended for human occupancy; or
(ii) An area where the pipeline lies within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. (The days and weeks need not be consecutive.)
(4) A Class 4 location is any class location unit where buildings with four or more stories above ground are prevalent.
A Class 4 designation means that a 0.4 design factor (Class 1 factor is 0.72) is applied against the pipeline's design pressure (i.e. we only use 40% of its, actual design strength). Once the pipeline is installed, a cathodic protection system is installed to protect and prevent the pipeline from corrosion. This system is monitored monthly to make sure the pipeline maintains its integrity. Issues with its protective coatings can be identified with our monitoring process and they are addressed in a timely manner to prevent development of corrosion leaks. Some of the older pipelines were originally installed without these systems or monitoring requirements.
As for a "clear zone", there is no design code that dictates a minimum distance the pipeline should exist from above ground structures. In fact, we operate existing pipeline that is located several feet from structures in some areas, without incident. This pipeline is designed to be located in populated areas as can be seen by the Class descriptions above. However, the New Jersey Administrative Code offers the follow guidelines:
§ 14:7-1.4 Proscribed areas
(a) No person shall install and/or operate a natural gas pipeline with a maximum operating pressure in

excess of 250 psig within 100 feet of any building intended for human occupancy, which is in existence prior to, or under construction at the date of, execution of the right-of-way agreement, or at the date of filing with the Clerk of the Superior Court of a complaint in a condemnation action, unless such person has obtained prior Board approval of the installation and/or operation of the pipeline.

- (b) No person shall replace or relocate a natural gas pipeline with a maximum operating pressure in excess of 250 psig to a location that is within 100 feet of a building intended for human occupancy without prior approval from the Board's Bureau of Pipeline Safety. However, a pipeline that meets all of the following conditions is exempt from the requirement of prior approval under this subsection:
- At the time of initial installation and/or operation of the pipeline being replaced or relocated, the pipeline was located within 100 feet of a building(s) intended for human occupancy;
- 2. The replacement or relocation will not decrease the horizontal and/or vertical distance between the pipeline and the building(s) described in (b)1 above; and
- 3. The replaced or relocated pipeline will be at least 100 feet away from all other buildings intended for human occupancy that are not described in (b)1 above.
- (c) A request for approval of the installation and/or operation of a transmission pipeline shall be subject to the requirements of 49 CFR 192, including the requirements for passage of internal inspection devices at 49 CFR 192.150, and for an integrity management program in Subpart O, 49 CFR 192.901 through 192.951..

NJAC is a general guideline which we use to guide our standards. We are required to file with the NJBPU for approval for all transmission pipeline being installed in New Jersey. That filing includes a list of all buildings intended for human occupancy that are within that 100 foot limit along with the distance to the pipeline. The BPU will review the alignment to see if there is a way to relocate the pipeline to minimize the list. If they cannot recommend an alternate route, they will accept the exceptions with the approval of the pipeline filing. We make every effort in our design to avoid running the pipeline close to buildings but sometimes there is no choice. On the Joint Base, our proposed alignment conforms to the regulations, and all buildings on the Joint Base are well outside the 100' limit.

In addition, USDOT adopted Pipeline Integrity Regulations in 2003 which requires an operator of a transmission pipeline to develop and implement a continuous assessment plan which sets up a series of activities to mitigate the chances for an event happening from improper operation or maintenance of the pipeline. The regulations only cover pipelines or sections of a pipeline that exist in "high consequence areas" which are defined by a number of parameters in the regulations, similar to the Class definitions. The first method of determination is to simply use the Class designation of the pipeline. As stated above, New Jersey Natural Gas already designates all our transmission pipelines as Class 4 regardless of the definitions, thus making them subject to this regulation. We bring this section to your attention because another parameter for determining a "high consequence area" is the calculation of a "potential impact circle". Using this method, an operator identifies different sites within this circle to determine if it qualifies for this particular regulation. This method is only used if an operator wants to segment their pipeline into "covered" or "not covered" sections under this regulation. Since our pipelines are already covered under the Class designation, we do not use this method.

That said, the pipeline operates at 720 psi and the pressure may cause damage and cratering if it is severely damaged, which is what you typically see pictures of in the newspapers. The majority of recent transmission pipeline incidents have resulted due to third-party damage like the Edison, NJ incident, or on much older pipelines built to less stringent standards decades ago. Each incident is investigated and analyzed to see what went wrong and how could it have been prevented. Typically, most of these incidents lead to new regulations like the One-Call, pipeline integrity, remote operated valves and in-line inspection ("smart pigging") regulations. These require that more proactive actions are undertaken by pipeline operators so incidents can be prevented.

At NING, we take the maintenance and monitoring of our pipelines very seriously. We operate over 200 miles of transmission main (more than the other three distribution companies in New Jersey put together) as part of our total system. We also have a dedicated department to monitor the Pipeline Integrity area of our operations. Our pipelines are:

- · Patrolled monthly to determine if any activity is being performed in their vicinity
- · Remotely monitored for any abnormal activity on a daily basis
- · Surveyed for leakage annually
- · In-line inspected every seven years after the first 10 years of operation.

In addition, One-Call rules require any contractors excavating near these lines to contact NJNG and coordinate their activities with us so we know what is going on around the pipeline and we can make sure they are working in a responsible manner. For transmission pipelines such as this one, we also provide on-site monitoring during all excavation activity around the pipeline. Finally, as this pipeline will be on Joint Base property, your control of access to the Base and the excavation that is performed there significantly reduces any such third-party damage risk.

Today's pipelines are constructed and maintained to a much higher standard than past practices. They are extremely safe when installed and maintained properly. This line is designed with standards that are prescribed for its location and maintained to NJNG standards that are more stringent than Federal code. I hope this answers your concerns. If not, let me know and I will try to address them. Thanks.

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Donamie

From:	PA
To:	RE: Gas Line installation restrictions and concerns
Subject: Date:	Tuesday, October 28, 2014 10:19:50 AM
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Regards,	
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