Attachment No. 4
City Council Staff Report
PXP - ANNEX NO. 75
February 7, 2006

Jon Picciuolo 445 Oak Hill Terrace Lompoc, CA 93436 (805) 733-1217

October 31, 2005

To: Gary Keefe, City of Lompoc

From: Jon-Picciuolo

Subj: Plains Exploration and Production Company's Proposed

Housing Development in the Lompoc Oil Field

Gary -

I'm sure that you and your planning staff will soon be writing reports related to the Plains proposal.

As far as I know, the City of Lompoc does not have a petroleum facilities branch (similar to the county's Energy Division). There is one aspect of the Plains proposal which may escape your staff's attention and may in fact be a "deal killer."

The proposed location for the Plains housing development is directly above a buried high-pressure "sour gas" pipeline that brings unprocessed natural gas from Platform Irene to the Lompoc Oil and Gas Plant on Harris Grade Road. This pipeline has been the subject of county risk analyses over the years, most recently in 1999. I have enclosed two illustrations from some of the county's most recent analytical work.

The bottom line is this: unless Plains can relocate the pipeline far enough from the houses it intends to build, the occupants of the houses will be endangered (fatal exposure from a pipeline leak or rupture) by hydrogen sulfide gas. The pipeline relocation options are limited and may not reduce the risk below an acceptable level.

The county's Energy Division can provide more detailed information.

Sincerely,

Jan

approximately 656.2 feet from the pipeline centerline and 49.1 feet wide. This footprint would not overlap any populated areas or sensitive receptors. As such, the QRA concluded that this hazard is not a significant threat or impact to local residents, who are located a minimum of 1,500 feet away from the pipeline centerline.

TABLE 9
Summary of QRA Hazard Footprint Calculations for an Acute H<sub>2</sub>S Release (4,000 ppm and 8,000 ppm)

-	RELEASE	MAXIMUM	METEOROLOGY		MAX. ACUTE
	TIME	RELEASE	(Stability	H <sub>2</sub> S	HAZARD
RELEASE TYPE	(min)	(lbs/min)	Classification)*	(ppm)	FOOTPRINT**
LEAK:	274	357	F	4,000	59.1 x 11.2
1-inch diameter hole		_		8,000	114.8 x 13.1
			D	4,000	6.6 x 4.6
				8,000	7.6 x 6.2
			Average	4,000	32.8 x 7.9
				8,000	58.4 x 7.5
LEAK:	68.5	1,429	F	4,000	180.5 x 8.2
2-inch diameter hole				8,000	262.5 x 13.1
			D	4,000	9.8 x 6.6
		_		8,000	32.8 x 6.6
			Average .	4,000	95.1 x 7.4
	<u> </u>	]		8,000	147.6 x 9.8
RUPTURE:	4.3	22,809	F	4,000	333.1 x 157.5
8-inch diameter hole				8,000	488.9 x 196.9
			D	4,000	246.1 x 26.2
			I	8,000	508.6 x 36.1
			Average	4,000	288.7 x 91.9
	]			8,000	498.7 x 116.5
RUPTURE:	2.1	45,511	F.	4,000	295.3 x 196.9
11-inch diameter hole				8,000	360.9 x 229.7
			D	4,000	278.9 x 23.0
		İ		8,000	656.2 x 49.1
			Average	4,000	287.1 x 109.9
<u> </u>		_		8,000	508.6 x 139.4

<sup>\*</sup> F = Very stable conditions with a wind velocity of 2.0 m/sec.

Source

Torch Pt. Pedernales Gas Pipeline Quantitative Risk Assessment Prepared for the County of Santa Barbara Planning and Development Department, Energy Division. October 1998.

Though not detailed in the QRA, the absolute, worst-case  $H_2S$  release scenario for the pipeline would be an upset event occurring under still (i.e., zero wind velocity) weather conditions. This scenario is not presented in Table 9. The preparer of the QRA has confirmed that the hazard footprint for this scenario could be up to 20% to 30% greater than the footprints presented in

D = Neutral conditions with a wind velocity of 4.0 m/sec.

<sup>\*\*</sup> Distance from Centerline x Width (in feet).

