# Appendix H.2 Pipeline Risk Assessment





Groundwater & Environmental Services, Inc.

101 E. Southwest Parkway, Suite 114 Lewisville, TX 75067

T. 800.871.6417

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Raphael Guzman Chief Business Official Inglewood Unified School District 401 S. Inglewood Ave Inglewood, CA 90301

## Re: Pipeline Risk Analysis Update for Inglewood Unified School District Morningside High School

Dear Mr. Guzman:

Groundwater & Environmental Services is pleased to provide this pipeline risk analysis to the Inglewood Unified School District. The analysis was prepared for the high pressure natural gas pipeline (the Line) operated by Southern California Gas Co. (SoCalGas) located adjacent to the Inglewood Unified School District Morningside High School located at 10500 Yukon Ave S. Inglewood, CA (the Site).

#### **Site Information**

#### Morningside High School

Morningside High School is located at 10500 Yukon Avenue in Inglewood, California. The Site is bordered by residential neighborhoods along West 108<sup>th</sup> St to the south, Monroe Middle School and Woodworth Elementary School to the east, the West 104<sup>th</sup> St. corridor to the north, and the Yukon Ave South corridor to the east. The northern property line of the Site is approximately 40 feet from the Pipeline and the nearest building is approximately 90 feet away. A satellite image with the pipeline location is provided as Attachment A.

#### **Risk Assessment Protocol**

The objective of the risk analysis is to determine potential health and safety hazards posed by the proximity of the natural gas pipeline to students, faculty, and staff. The analysis was prepared in accordance with California Code of Regulations, Title 5, Section 14010 (h) and the California Department of Education (CDE) Guidance Protocol for School Site Pipeline Risk Analysis dated February 2007 (the Protocol).

Pipeline Risk Analysis Inglewood Unified School District Morningside High School



### **Risk Assessment Findings**

The Protocol recommends an IR Significance Criterion of 1.0E-06. The risk assessment calculated an estimated IR value of 1.2E-07, therefore according to the protocol an insignificant degree of risk exists. Because the pipeline is an "insignificant risk" as defined by CDE, no limitations exist on new construction or modernization of existing buildings on the Morningside site as a result of the pipeline per the CDE.

#### Limitations

Numerous factors affect the risks associated with pipeline failures. Information on all the factors will typically be incomplete. Assumptions and default values will be required for some of the input data requirements. This necessarily limits the accuracy of the risk estimate for a specific length (segment) if a pipeline. It is especially difficult to determine the probability associated with a specific short segment of pipe. The relationship between factors that affect the likelihood of failure and the failure rate remains an area of ongoing industry interest and research. Relative risk models have been developed that can be used to adjust generic failure rate data to account for specific local attributes in a pipeline system. However, this information is typically proprietary to the pipeline operator and is not generally available to a LEA. Therefore, it must be recognized at the outset, that the risk values determined using this Protocol are, in fact, estimates. The probability estimate for the failure of a given line segment is a statistical probability that may differ from the actual value for a given segment. In spite of this uncertainty, CDE has determined that that the approach taken is reasonable within the context for which the Protocol was developed and for which the results will be used.

It has been a pleasure to work with you on this assessment. If you have any questions concerning this report or attachments, please call me at (925) 788-4331.

Sincerely,

Groundwater & Environmental Services, Inc.

Douglas Wolf

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Director

James Ryan

**Project Engineer** 

## **Attachment A**

**Site Location Map** 

