

Linam Ranch QRA Results

Summary of Study by
Quest Consultants, Inc.

February 6, 2006
Final Version

BEFORE THE OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

Case No. 13589 Exhibit No. 14

Submitted by:

DUKE ENERGY FIELD SERVICES, LP

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QRA (Quantitative Risk Assessment) Results

- Determine Relative Hazards
 - Current Inlet Pipelines, Receivers, and Amine
 - 200 MMscfd Inlet, 5 MMscfd AG (Acid Gas)
 - Expanded SRU or
 - AGI Options
 1. Compress at Plant, 3" AG Liquid line (2200 psig)
 2. "Split Compression", 8" AG Line (90 psig)
 3. Compress at Well, 18" AG line (5 psig)
- Risk Contours for Each Option
- Conclusions

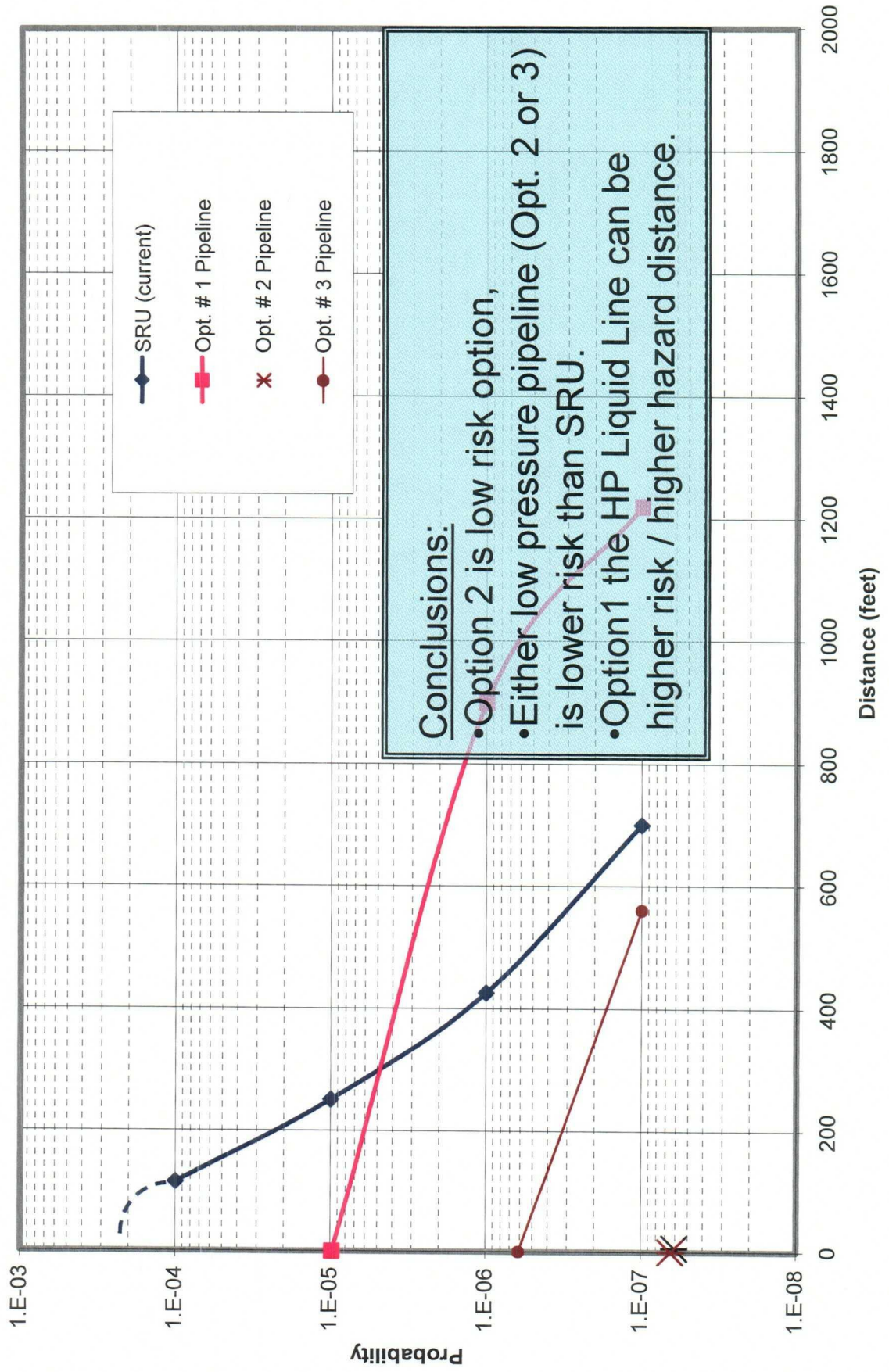
Individual Risk of Fatality

Item(s)	Probability/year	One Chance in
Heart Disease	2.32×10^{-3}	430
Cancer	1.90×10^{-3}	526
All Accidents	5.70×10^{-4}	1,755
Motor Vehicles	7.16×10^{-5}	13,960
Falls	5.65×10^{-5}	17,710
Assault by Firearms	4.11×10^{-5}	24,340
Drowning	1.20×10^{-5}	83,530
Motorcycle	1.12×10^{-5}	89,560
Linam SRU at Fence*	1.00×10^{-5}	100,000
Directly Above 3", 2200 psig AG Liquid Line (Opt. #1)*	9.77×10^{-6}	102,300
Choking on Food	2.84×10^{-6}	351,600
Directly Above 18", 5 psig AG Line (Opt. #3)*	6.15×10^{-7}	1,626,000
Venomous Plants and Animals	2.64×10^{-7}	3,788,700
Lightning	2.29×10^{-7}	4,632,700
Bus Accident (occupants)	1.49×10^{-7}	6,696,300
Directly Above 8", 90 psig AG Line (Opt. #2)*	6.47×10^{-8}	15,456,000
Dog Bites	6.26×10^{-8}	15,966,734

* Assumes Individual Remains at this location 24 hours/day, 365 days/year
and has no personal protective equipment (PPE) and ignores all alarms or warnings.

Risk Transept – Pipeline Options

Risk Profile - Linam AGI Pipeline



QRA Conclusions - Pipelines

1. With Proper Design, Operation, Maintenance, and Spacing the AGI Hazards are Relatively Low
2. Option #2 – “Split Compression” Has Lowest Risk of the AGI Pipeline Options
3. Near the Plant Low Pressure AGI Options Have Lower Risk to Public than the SRU
4. Inside the Linam Plant AGI has lower Risk than SRU
5. At the Public Road (Maddox Plant Road) the Risk from the AGI Well-Site is less than 1×10^{-8}