

EXHIBIT 1

PROPONENT'S ENVIRONMENTAL ASSESSMENT

f
o
r
t
h
e

KIRBY HILLS NATURAL GAS STORAGE FACILITY



Application by Lodi Gas Storage, LLC (U-912-G) for a
Certificate of Public Convenience and
Necessity for Construction and
Operation of Gas Storage Facilities

Application 05-07-____
(Filed July 22, 2005)

Reservoir

Windmills

Exhibit 1
Proponent's Environmental Assessment

Application of Lodi Gas Storage, LLC (U-912-G)
for a Certificate of Public Convenience
and Necessity for Construction
and Operation of Gas
Storage Facilities

Application 05-07-____
(Filed July 22, 2005)

Prepared for:

California Public Utilities Commission

Prepared by:

David J. Bergquist, Vice President
Western Hub Properties LLC
14811 St. Mary's Lane, Suite 150
Houston, TX 77042
(281) 679-3597

With Technical Assistance from:

Jones & Stokes
2600 V Street
Sacramento, CA 95818-1914
Contact: Susan Bushnell
(916) 737-3000

July 2005

Jones & Stokes. 2005. Exhibit 1. Proponent's Environmental Assessment. Application of Lodi Gas Storage, LLC (U-912-G) to the California Public Utilities Commission for a Certificate of Public Convenience and Necessity for Construction and Operation of Gas Storage Facilities. Application 05-07-___ (Filed July 22, 2005). July. (J&S 05426.05) Sacramento, CA.

Table of Contents

Executive Summary	ES-1
Chapter 1 Introduction	1-1
Purpose of the Proponent’s Environmental Assessment.....	1-1
Organization of the PEA	1-2
Facility Overview.....	1-2
Background.....	1-2
Related Storage Facilities	1-3
Lodi Gas Storage Application	1-4
CPUC Application Process.....	1-5
Chapter 2 Project Description	2-1
Site Description.....	2-1
Project Background	2-1
Facility and Route Selection and Evaluation Process	2-3
Project Components	2-3
Metering Station.....	2-4
Gas Pipeline	2-4
Compressor Station	2-5
Flow Line	2-6
Injection/Withdrawal Wells.....	2-7
Temporary Gas Injection System	2-7
Construction Methods.....	2-8
Pipeline Construction Methods	2-8
Compressor Station Construction	2-12
Metering Station Construction	2-14
Injection/Withdrawal Well Construction	2-14
Workforce	2-15
Equipment and Material Staging Area	2-15
Access Roads.....	2-16
Construction Equipment	2-16
Best Management Practices.....	2-17
Construction Schedule.....	2-25
Landowner Coordination and Easement Acquisition	2-25
Operation and Maintenance Program.....	2-26
Required Permits and Approvals	2-26
Local Agencies	2-26
State Agencies.....	2-27
Federal Agencies.....	2-27

Chapter 3 Environmental Analysis3-1

- Introduction 3-1
- Organization of the Environmental Analysis 3-1
- Terms Used in This PEA 3-2

Section 3.1 Aesthetics/Visual Resources.....3.1-1

- Environmental Setting..... 3.1-1
 - Landscape Character 3.1-1
 - Sensitive Viewers 3.1-2
- Regulatory Setting 3.1-2
 - California Department of Transportation Scenic Highway Program 3.1-2
 - Solano County General Plan 3.1-2
- Impact Analysis..... 3.1-3
 - Significance Criteria..... 3.1-3
 - Impacts 3.1-4
 - Mitigation Measures..... 3.1-5

Section 3.2 Air Quality.....3.2-1

- Environmental Setting..... 3.2-1
 - Climate and Topography 3.2-1
 - Air Pollutants and Ambient Air Quality Standards 3.2-2
- Regulatory Setting 3.2-6
 - Federal Regulations..... 3.2-6
 - State Regulations 3.2-6
 - Local Regulations 3.2-8
- Impact Analysis..... 3.2-8
 - Significance Criteria..... 3.2-8
 - Methodology and Assumptions..... 3.2-9
 - Impacts 3.2-11
 - Mitigation Measures..... 3.2-15

Section 3.3 Biological Resources3.3-1

- Environmental Setting..... 3.3-1
 - Methods 3.3-1
 - Special-Status Species..... 3.3-3
 - Waters of the United States, Including Wetlands 3.3-5
 - Biological Communities 3.3-6
 - Regional Setting 3.3-6
 - Special-Status Species..... 3.3-9
- Regulatory Setting 3.3-16
 - Federal Regulations..... 3.3-16
 - State Regulations 3.3-18
 - Local Regulations 3.3-20
- Impact Analysis..... 3.3-20
 - Methodology and Assumptions..... 3.3-20
 - Impact Mechanisms..... 3.3-21
 - Criteria for Determining Significance 3.3-22
 - Impacts 3.3-23
 - Mitigation Measures..... 3.3-26

Section 3.4 Cultural Resources.....3.4-1

Methods 3.4-1

 Pre-Field Research..... 3.4-1

 Field Surveys 3.4-2

Environmental Setting..... 3.4-2

 Prehistoric Setting..... 3.4-3

 Ethnographic Setting 3.4-4

 Historic Setting..... 3.4-6

Regulatory Setting 3.4-9

 State Legislation 3.4-9

Impact Analysis..... 3.4-9

 Significance Criteria 3.4-9

 Impacts 3.4-10

 Mitigation Measures..... 3.4-11

Section 3.5 Energy and Mineral Resources 3.5-1

Environmental Setting..... 3.5-1

 Regional Setting 3.5-1

 Local Setting 3.5-1

Regulatory Setting 3.5-2

 California Surface Mining and Reclamation Act 3.5-2

 Suisun Marsh Protection Act 3.5-3

Impact Analysis..... 3.5-3

 Significance Criteria 3.5-3

 Impacts 3.5-3

 Mitigation Measures..... 3.5-4

Section 3.6 Geology, Soils, and Paleontology.....3.6-1

Environmental Setting..... 3.6-1

 Physical Setting 3.6-1

Regulatory Setting 3.6-6

 State Regulations 3.6-6

 Solano County Regulations 3.6-7

Impact Analysis..... 3.6-7

 Significance Criteria 3.6-7

 Impacts 3.6-8

 Mitigation Measures..... 3.6-10

Section 3.7 Hydrology and Water Quality 3.7-1

Environmental Setting..... 3.7-1

 Climate..... 3.7-1

 Surface Water 3.7-1

 Groundwater 3.7-2

 Water Quality 3.7-2

 Flood Hazard Zones 3.7-2

Regulatory Setting 3.7-3

 Federal Regulations..... 3.7-3

 State Regulations 3.7-4

 Local Plans, Programs, and Policies 3.7-4

Impact Analysis..... 3.7-5

Significance Criteria 3.7-5
 Impacts 3.7-5
 Mitigation Measures..... 3.7-9

Section 3.8 Land Use, Planning, and Agricultural Uses 3.8-1
 Environmental Setting..... 3.8-1
 Regulatory Setting 3.8-2
 Solano County 3.8-2
 Williamson Act 3.8-2
 Impact Analysis..... 3.8-2
 Significance Criteria 3.8-3
 Impacts 3.8-3
 Mitigation Measures..... 3.8-5

Section 3.9 Noise 3.9-1
 Terminology 3.9-1
 Environmental Setting..... 3.9-2
 Land Uses and Receptors Sensitive to Noise in the
 Project Vicinity 3.9-2
 Existing Noise Conditions 3.9-2
 Regulatory Setting 3.9-4
 Solano County 3.9-4
 Impact Analysis..... 3.9-5
 Significance Criteria 3.9-5
 Impacts 3.9-5
 Mitigation Measures..... 3.9-10

Section 3.10 Public Health and Safety 3.10-1
 Environmental Setting..... 3.10-1
 Sensitive Receptors in the Project Vicinity 3.10-1
 Project Characteristics 3.10-1
 Natural Gas Transportation and Safety 3.10-3
 Regulatory Setting 3.10-4
 Federal Regulations..... 3.10-4
 State Regulations 3.10-5
 Impact Analysis..... 3.10-7
 Significance Criteria 3.10-7
 Impacts 3.10-7
 Mitigation Measures..... 3.10-9

Section 3.11 Public Services and Utilities 3.11-1
 Environmental Setting..... 3.11-1
 Public Services 3.11-1
 Utilities 3.11-2
 Regulatory Setting 3.11-3
 Impact Analysis..... 3.11-3
 Significance Criteria 3.11-3
 Impacts 3.11-4
 Mitigation Measures..... 3.11-5

Section 3.12 Transportation and Circulation3.12-1
 Environmental Setting.....3.12-1
 Existing Traffic Conditions3.12-1
 Regulatory Setting3.12-2
 California Department of Transportation.....3.12-2
 Solano County3.12-2
 Impact Analysis.....3.12-3
 Significance Criteria3.12-3
 Impacts3.12-4
 Mitigation Measures.....3.12-5

Chapter 4 Citations.....4-1

Chapter 5 List of Preparers5-1

Acronyms and Abbreviations.....AA-1

Glossary G-1

List of Appendices

Appendix A. Project Description Figures

Appendix B. Landowner List

**Appendix C. Construction and Operations Emission
Estimates for the Kirby Hills Natural Gas
Storage Project**

List of Tables

<u>Table</u>	<u>Page</u>
ES-1 Summary of Potential Impacts and Proposed Mitigation Measures Identified in the PEA	Follows ES-4
2-1 Equipment That May Be Used during Construction of the Proposed Project	2-17
3.2-1 Ambient Air Quality Standards Applicable in California	3.2-3
3.2-2 State and National Air Attainment Status Summary	3.2-4
3.2-3 Estimates of Construction Emissions within the Yolo-Solano Air Quality Management District (pounds per day)	3.2-7
3.2-4 Operations Emission Estimates for the Kirby Hills Natural Gas Project	3.2-8
3.2-5 Screening Health Risk Assessment Modeling Results	3.2-11
3.3-1 Special-Status Wildlife Identified during the Prefield Evaluation as Having the Potential to Occur in the Project Area, Solano County	Follows 3.3-30
3.3-2 Special-Status Plants Identified during the Prefield Evaluation as Having the Potential to Occur in the Project Area, Solano County	Follows 3.3-30
3.6-1 Soils and Key Soil Characteristics in the Project Area	3.6-2
3.6-2 Active Faults in the Project Vicinity	3.6-4
3.9-1 Distances to Noise-Sensitive Uses	3.9-3
3.9-2 Noise Emission Levels Typical for Construction Equipment	3.9-7
3.9-3 Estimated Construction Noise in the Vicinity of Active Construction Sites	3.9-7
3.9-4 Estimated Well Drilling Noise	3.9-9
3.12-1 Level of Service Descriptions	3.12-3

List of Figures

<u>Figure</u>	<u>Follows Page</u>
1-1 General Project Location	1-2
2-1 Project Area	2-2
2-2 Location of the Project Components	2-2
2-3 Project Alternatives	2-2
3.3-1 Biological Resources Located in the Study Area	3.3-2
3.9-1 Project Components and Noise Sensitive Uses in the Project Area	3.9-2
3.9-2 Noise Measurement Position LT-1	3.9-4
3.9-3 Noise Measurement Position LT-4	3.9-4
3.9-4 Noise Measurement Position LT-5	3.9-4