

TABLE OF CONTENTS

TABLE OF CONTENTS..... i
LIST OF ACRONYMS **LIST OF ACRONYMS - 1**

VOLUME I

1. PURPOSE AND NEED FOR AGENCY ACTION 1-1
 1.1 INTRODUCTION..... 1-1
 1.2 PROPOSED ACTION..... 1-1
 1.3 PURPOSE AND NEED FOR AGENCY ACTION 1-2
 1.4 FUTUREGEN PROJECT 1-3
 1.4.1 FutureGen Project Technology..... 1-3
 1.4.2 FutureGen Project Objectives..... 1-4
 1.5 SCOPE OF THE ENVIRONMENTAL IMPACT STATEMENT 1-5
 1.5.1 NEPA Scoping Process 1-5
 1.5.2 Public Scoping Comments Received..... 1-7
 1.5.3 Agency Decision-Making Process..... 1-8
1.6 PUBLIC HEARINGS..... 1-10
1.7 SUMMARY OF MAJOR CHANGES IN THE EIS..... 1-13
 2. PROPOSED ACTION AND ALTERNATIVES 2-1
 2.1 INTRODUCTION..... 2-1
 2.2 DESCRIPTION OF THE PROPOSED ACTION 2-1
 2.3 NO-ACTION ALTERNATIVE 2-3
 2.4 SITE ALTERNATIVES..... 2-3
 2.4.1 Mattoon Site..... 2-4
 2.4.2 Tuscola Site 2-9
 2.4.3 Jewett Site 2-15
 2.4.4 Odessa Site 2-21
 2.4.5 New Options from Site Proponents’ Best and Final Offers..... 2-28
 2.4.6 Alternatives Eliminated From Further Consideration 2-40
 2.4.7 Technology Options Eliminated from Further Consideration 2-46
 2.4.8 Preferred Alternative 2-48
 2.5 THE FUTUREGEN PROJECT..... 2-48
 2.5.1 Power Plant and Research Facility..... 2-48
 2.5.2 Carbon Sequestration..... 2-58
 2.5.3 Risk Assessment of Leakage of Captured Gases Before Geologic Sequestration 2-72
 2.5.4 Risk Assessment of Leakage of Sequestered Gases from Geologic Reservoirs..... 2-72
 2.5.5 Resource Requirements 2-72
 2.5.6 Discharges, Waste, and Products..... 2-74
 2.5.7 Construction Plans..... 2-81
 2.5.8 Operation Plans 2-84
 2.5.9 Post-Operation Activities 2-85
 2.6 FUTURE ACTIVITIES..... 2-85
 2.6.1 Follow-on Decisions and Planning..... 2-85
 3. SUMMARY OF ENVIRONMENTAL CONSEQUENCES..... 3-1
 3.1 COMPARISON OF IMPACTS OF ALTERNATIVES 3-1
 3.1.1 Introduction 3-1
 3.1.2 Air Quality..... 3-1
 3.1.3 Climate and Meteorology 3-5

3.1.4	<i>Geology</i>	3-5
3.1.5	<i>Physiography and Soils</i>	3-7
3.1.6	<i>Groundwater</i>	3-8
3.1.7	<i>Surface Water</i>	3-9
3.1.8	<i>Wetlands and Floodplains</i>	3-10
3.1.9	<i>Biological Resources</i>	3-12
3.1.10	Cultural Resources	3-14
3.1.11	Land Use	3-15
3.1.12	Aesthetics	3-17
3.1.13	Transportation and Traffic	3-18
3.1.14	<i>Noise and Vibration</i>	3-20
3.1.15	Utility Systems	3-23
3.1.16	Materials and Waste Management	3-24
3.1.17	<i>Human Health, Safety, and Accidents</i>	3-26
3.1.18	Community Services	3-30
3.1.19	<i>Socioeconomics</i>	3-31
3.1.20	Environmental Justice	3-32
3.2	INCOMPLETE AND UNAVAILABLE INFORMATION	3-64
3.2.1	Overall Data Gaps Associated with Carbon Capture and Geologic Sequestration ...	3-64
3.2.2	<i>FutureGen Risk Assessment</i>	3-65
3.2.3	Incomplete or Unavailable Information Relating to the FutureGen Project Design	3-68
3.2.4	Incomplete or Unavailable Information Relating to the Affected Environment	3-70
3.3	POTENTIAL CUMULATIVE IMPACTS	3-71
3.3.1	<i>Cumulative Impacts of FutureGen Technology</i>	3-72
3.3.2	Relevant Past and OnGoing Activities	3-79
3.3.3	<i>Reasonably Foreseeable Future Actions Near Alternative Sites</i>	3-87
3.3.4	Potential Cumulative Impacts for Alternative Sites	3-91
3.4	<i>UNAVOIDABLE ADVERSE IMPACTS, MITIGATION MEASURES, AND BEST MANAGEMENT PRACTICES</i>	3-101
3.5	COMMITMENTS, USES, AND PRODUCTIVITY	3-113
3.5.1	Irreversible and Irrecoverable Commitments of Resources	3-113
3.5.2	Relationship between Short-Term Uses of the Environment and Long-Term Productivity	3-114
8.	VOLUME I REFERENCES	8-1
8.1	CHAPTER 1 – PURPOSE AND NEED FOR AGENCY ACTION	8-1
8.2	<i>CHAPTER 2 – PROPOSED ACTION AND ALTERNATIVES</i>	8-2
8.3	<i>CHAPTER 3 – SUMMARY OF ENVIRONMENTAL CONSEQUENCES</i>	8-4
9.	INDEX	9-1
10.	<i>GLOSSARY</i>	10-1
11.	DISTRIBUTION LIST	11-1
12.	LIST OF PREPARERS	12-1
12.1	CONFLICT OF INTEREST AND DISCLOSURE FORMS	12-13
	APPENDIX A COORDINATION LETTERS	A-1
	APPENDIX B PUBLIC SCOPING SUMMARY	B-1
B.1	INTRODUCTION	B-1
B.2	PUBLIC SCOPING MEETINGS	B-2
B.3	PUBLIC COMMENTS AND CONCERNS	B-5
	APPENDIX C FEDERAL AND STATE REGULATORY AND PERMITTING REQUIREMENTS	C-1
C.1	FEDERAL ENVIRONMENTAL STATUTES AND REGULATIONS	C-1
C.1.1	National Environmental Policy Act (NEPA)	C-1
C.1.2	<i>Clean Air Act (CAA)</i>	C-1

C.1.3	Clean Water Act (CWA)	C-9
C.1.4	Resource Conservation and Recovery Act (RCRA).....	C-9
C.1.5	National Historic Preservation Act (NHPA)	C-9
C.1.6	Archaeological Resources Protection Act	C-9
C.1.7	American Indian Religious Freedom Act.....	C-9
C.1.8	Native American Graves Protection and Repatriation Act.....	C-10
C.1.9	Endangered Species Act.....	C-10
C.1.10	Fish and Wildlife Conservation Act.....	C-10
C.1.11	National Pollutant Discharge Elimination System (NPDES).....	C-10
C.1.12	Noise Control Act.....	C-10
C.1.13	Farmland Protection Policy Act	C-11
C.1.14	Emergency Planning and Community Right-to-Know Act.....	C-11
C.1.15	Occupational Safety and Health Act	C-11
C.1.16	Safe Drinking Water Act.....	C-11
C.1.17	Pollution Prevention Act	C-11
C.1.18	Notice to the Federal Aviation Administration	C-12
C.2	EXECUTIVE ORDERS.....	C-12
C.3	STATE ENVIRONMENTAL STATUTES AND REGULATIONS	C-13
C.3.1	Illinois Regulatory Requirements.....	C-13
C.3.2	Texas Regulatory Requirements.....	C-14
C.4	FEDERAL AND STATE PERMITTING.....	C-15
APPENDIX D	RISK ASSESSMENT METHODOLOGY	D-1
APPENDIX E	AIR MODELING PROTOCOL	E-1
E.1	FUTUREGEN PROJECT DESIGN CASES	E-1
E.2	MODELED EMISSIONS RATES AND ASSUMPTIONS.....	E-4
E.3	AIR MODELING ANALYSIS.....	E-9
E.3.1	AERMOD Modeling Approach.....	E-10
E.3.2	AERMOD Input Parameters.....	E-11
E.3.3	AERMOD Modeling Results.....	E-33
APPENDIX F	ALOHA SIMULATION OF AQUEOUS AMMONIA SPILLS	F-1
F.1	WORST-CASE METEOROLOGICAL CONDITIONS.....	F-2
F.2	ALOHA SENSITIVITY ANALYSIS FOR 7 DIFFERENT WIND/STABILITY CONDITIONS FOR THE TRUCK SPILL SCENARIO	F-4
F.3	REFERENCES.....	F-8
APPENDIX G	– NOTICE OF AVAILABILITY OF THE DRAFT EIS.....	G-1
APPENDIX H	– NEWSPAPER ADS	H-1
APPENDIX I	– PUBLIC HEARING AGENDAS	I-1
APPENDIX J	– COMMENTOR SIGN-IN SHEETS	J-1
APPENDIX K	– TRANSCRIPTS AND ERRATA SHEETS.....	K-1
APPENDIX L	– COMMENT – RESPONSE FLOW CHART	L-1

VOLUME II

4.	MATTOON SITE.....	4.1-1
4.1	CHAPTER OVERVIEW.....	4.1-1
4.1.1	Power Plant Footprint.....	4.1-1
4.1.2	No-Action Alternative	4.1-2
4.1.3	Mattoon Site.....	4.1-2
4.2	AIR QUALITY	4.2-1
4.2.1	Introduction	4.2-1
4.2.2	Affected Environment.....	4.2-3
4.2.3	Impacts.....	4.2-8

4.3	CLIMATE AND METEOROLOGY.....	4.3-1
	4.3.1 Introduction.....	4.3-1
	4.3.2 Affected Environment.....	4.3-1
	4.3.3 Impacts.....	4.3-5
4.4	GEOLOGY.....	4.4-1
	4.4.1 Introduction.....	4.4-1
	4.4.2 Affected Environment.....	4.4-3
	4.4.3 Impacts.....	4.4-9
4.5	PHYSIOGRAPHY AND SOILS.....	4.5-1
	4.5.1 Introduction.....	4.5-1
	4.5.2 Affected Environment.....	4.5-1
	4.5.3 Impacts.....	4.5-4
4.6	GROUNDWATER.....	4.6-1
	4.6.1 Introduction.....	4.6-1
	4.6.2 Affected Environment.....	4.6-2
	4.6.3 Impacts.....	4.6-4
4.7	SURFACE WATER.....	4.7-1
	4.7.1 Introduction.....	4.7-1
	4.7.2 Affected Environment.....	4.7-2
	4.7.3 Impacts.....	4.7-8
4.8	WETLANDS AND FLOODPLAINS.....	4.8-1
	4.8.1 Introduction.....	4.8-1
	4.8.2 Affected Environment.....	4.8-1
	4.8.3 Impacts.....	4.8-8
4.9	BIOLOGICAL RESOURCES.....	4.9-1
	4.9.1 Introduction.....	4.9-1
	4.9.2 Affected Environment.....	4.9-2
	4.9.3 Impacts.....	4.9-5
4.10	CULTURAL RESOURCES.....	4.10-1
	4.10.1 Introduction.....	4.10-1
	4.10.2 Affected Environment.....	4.10-3
	4.10.3 Impacts.....	4.10-5
4.11	LAND USE.....	4.11-1
	4.11.1 Introduction.....	4.11-1
	4.11.2 Affected Environment.....	4.11-1
	4.11.3 Impacts.....	4.11-8
4.12	AESTHETICS.....	4.12-1
	4.12.1 Introduction.....	4.12-1
	4.12.2 Affected Environment.....	4.12-1
	4.12.3 Impacts.....	4.12-5
4.13	TRANSPORTATION AND TRAFFIC.....	4.13-1
	4.13.1 Introduction.....	4.13-1
	4.13.2 Affected Environment.....	4.13-4
	4.13.3 Impacts.....	4.13-11
4.14	NOISE AND VIBRATION.....	4.14-1
	4.14.1 Introduction.....	4.14-1
	4.14.2 Affected Environment.....	4.14-4
	4.14.3 Impacts.....	4.14-9
4.15	UTILITY SYSTEMS.....	4.15-1
	4.15.1 Introduction.....	4.15-1
	4.15.2 Affected Environment.....	4.15-1

	4.15.3 Impacts	4.15-5
4.16	MATERIALS AND WASTE MANAGEMENT	4.16-1
	4.16.1 Introduction	4.16-1
	4.16.2 Affected Environment	4.16-2
	4.16.3 Impacts	4.16-9
4.17	HUMAN HEALTH, SAFETY, AND ACCIDENTS	4.17-1
	4.17.1 Introduction	4.17-1
	4.17.2 Occupational Health and Safety	4.17-2
	4.17.3 Air Emissions	4.17-16
	4.17.4 Risk Assessment for CO ₂ Sequestration.....	4.17-21
	4.17.5 Terrorism/Sabotage Impact	4.17-29
4.18	COMMUNITY SERVICES	4.18-1
	4.18.1 Introduction	4.18-1
	4.18.2 Affected Environment	4.18-3
	4.18.3 Impacts	4.18-5
4.19	SOCIOECONOMICS	4.19-1
	4.19.1 Introduction	4.19-1
	4.19.2 Affected Environment	4.19-1
	4.19.3 Impacts	4.19-7
4.20	ENVIRONMENTAL JUSTICE	4.20-1
	4.20.1 Introduction	4.20-1
	4.20.2 Affected Environment	4.20-3
	4.20.3 Impacts	4.20-4
	4.21 REFERENCES	4.21-1
5.	TUSCOLA SITE.....	5.1-1
5.1	CHAPTER OVERVIEW.....	5.1-1
	5.1.1 Power Plant Footprint.....	5.1-1
	5.1.2 No-Action Alternative	5.1-2
	5.1.3 Tuscola Site	5.1-2
5.2	AIR QUALITY	5.2-1
	5.2.1 Introduction	5.2-1
	5.2.2 Affected Environment	5.2-3
	5.2.3 Impacts	5.2-8
5.3	CLIMATE AND METEOROLOGY	5.3-1
	5.3.1 Introduction	5.3-1
	5.3.2 Affected Environment	5.3-1
	5.3.3 Impacts	5.3-5
5.4	GEOLOGY.....	5.4-1
	5.4.1 Introduction	5.4-1
	5.4.2 Affected Environment	5.4-3
	5.4.3 Impacts	5.4-10
5.5	PHYSIOGRAPHY AND SOILS.....	5.5-1
	5.5.1 Introduction	5.5-1
	5.5.2 Affected Environment	5.5-1
	5.5.3 Impacts	5.5-3
5.6	GROUNDWATER	5.6-1
	5.6.1 Introduction	5.6-1
	5.6.2 Affected Environment	5.6-2
	5.6.3 Impacts	5.6-4
5.7	SURFACE WATER.....	5.7-1
	5.7.1 Introduction	5.7-1

5.7.2	Affected Environment	5.7-2
5.7.3	Impacts	5.7-9
5.8	WETLANDS AND FLOODPLAINS	5.8-1
5.8.1	Introduction	5.8-1
5.8.2	Affected Environment	5.8-1
5.8.3	Impacts	5.8-7
5.9	BIOLOGICAL RESOURCES.....	5.9-1
5.9.1	Introduction	5.9-1
5.9.2	Affected Environment	5.9-1
5.9.3	Impacts	5.9-8
5.10	CULTURAL RESOURCES	5.10-1
5.10.1	Introduction	5.10-1
5.10.2	Affected Environment	5.10-3
5.10.3	Impacts	5.10-5
5.11	LAND USE	5.11-1
5.11.1	Introduction	5.11-1
5.11.2	Affected Environment	5.11-1
5.11.3	Impacts	5.11-8
5.12	AESTHETICS	5.12-1
5.12.1	Introduction	5.12-1
5.12.2	Affected Environment	5.12-1
5.12.3	Impacts	5.12-4
5.13	TRANSPORTATION AND TRAFFIC	5.13-1
5.13.1	Introduction	5.13-1
5.13.2	Affected Environment	5.13-4
5.13.3	Impacts	5.13-11
5.14	NOISE AND VIBRATION	5.14-1
5.14.1	Introduction	5.14-1
5.14.2	Affected Environment	5.14-4
5.14.3	Impacts	5.14-10
5.15	UTILITY SYSTEMS	5.15-1
5.15.1	Introduction	5.15-1
5.15.2	Affected Environment	5.15-1
5.15.3	Impacts	5.15-5
5.16	MATERIALS AND WASTE MANAGEMENT	5.16-1
5.16.1	Introduction	5.16-1
5.16.2	Affected Environment	5.16-2
5.16.3	Impacts	5.16-9
5.17	HUMAN HEALTH, SAFETY, AND ACCIDENTS	5.17-1
5.17.1	Introduction	5.17-1
5.17.2	Occupational Health and Safety	5.17-2
5.17.3	Air Emissions	5.17-16
5.17.4	Risk Assessment for CO ₂ Sequestration.....	5.17-21
5.17.5	Terrorism/Sabotage Impact	5.17-29
5.18	COMMUNITY SERVICES	5.18-1
5.18.1	Introduction	5.18-1
5.18.2	Affected Environment	5.18-3
5.18.3	Impacts	5.18-5
5.19	SOCIOECONOMICS	5.19-1
5.19.1	Introduction	5.19-1
5.19.2	Affected Environment	5.19-1

	5.19.3 Impacts	5.19-6
5.20	ENVIRONMENTAL JUSTICE	5.20-1
	5.20.1 Introduction	5.20-1
	5.20.2 Affected Environment	5.20-3
	5.20.3 Impacts	5.20-4
	5.21 REFERENCES	5.21-1
6.	JEWETT SITE	6.1-1
6.1	CHAPTER OVERVIEW	6.1-1
	6.1.1 Power Plant Footprint.....	6.1-1
	6.1.2 No-Action Alternative	6.1-2
	6.1.3 Jewett Site	6.1-2
6.2	AIR QUALITY	6.2-1
	6.2.1 Introduction	6.2-1
	6.2.2 Affected Environment	6.2-3
	6.2.3 Impacts	6.2-8
6.3	CLIMATE AND METEOROLOGY	6.3-1
	6.3.1 Introduction	6.3-1
	6.3.2 Affected Environment	6.3-1
	6.3.3 Impacts	6.3-5
6.4	GEOLOGY.....	6.4-1
	6.4.1 Introduction	6.4-1
	6.4.2 Affected Environment	6.4-3
	6.4.3 Impacts	6.4-8
6.5	PHYSIOGRAPHY AND SOILS	6.5-1
	6.5.1 Introduction	6.5-1
	6.5.2 Affected Environment	6.5-1
	6.5.3 Impacts	6.5-20
6.6	GROUNDWATER	6.6-1
	6.6.1 Introduction	6.6-1
	6.6.2 Affected Environment	6.6-2
	6.6.3 Impacts	6.6-5
6.7	SURFACE WATER.....	6.7-1
	6.7.1 Introduction	6.7-1
	6.7.2 Affected Environment	6.7-2
	6.7.3 Impacts	6.7-5
6.8	WETLANDS AND FLOODPLAINS	6.8-1
	6.8.1 Introduction	6.8-1
	6.8.2 Affected Environment	6.8-1
	6.8.3 Impacts	6.8-6
6.9	BIOLOGICAL RESOURCES.....	6.9-1
	6.9.1 Introduction	6.9-1
	6.9.2 Affected Environment	6.9-1
	6.9.3 Impacts	6.9-17
6.10	CULTURAL RESOURCES	6.10-1
	6.10.1 Introduction	6.10-1
	6.10.2 Affected Environment	6.10-3
	6.10.3 Impacts	6.10-8
6.11	LAND USE	6.11-1
	6.11.1 Introduction	6.11-1
	6.11.2 Affected Environment	6.11-1
	6.11.3 Impacts	6.11-8

6.12	AESTHETICS	6.12-1
6.12.1	Introduction	6.12-1
6.12.2	Affected Environment	6.12-2
6.12.3	Impacts	6.12-4
6.13	TRANSPORTATION AND TRAFFIC	6.13-1
6.13.1	Introduction	6.13-1
6.13.2	Affected Environment	6.13-4
6.13.3	Impacts	6.13-9
6.14	NOISE AND VIBRATION	6.14-1
	6.14.1 Introduction	6.14-1
	6.14.2 Affected Environment.....	6.14-4
	6.14.3 Impacts.....	6.14-7
6.15	UTILITY SYSTEMS	6.15-1
6.15.1	Introduction	6.15-1
6.15.2	Affected Environment	6.15-1
6.15.3	Impacts	6.15-3
6.16	MATERIALS AND WASTE MANAGEMENT	6.16-1
6.16.1	Introduction	6.16-1
6.16.2	Affected Environment	6.16-2
6.16.3	Impacts	6.16-9
6.17	HUMAN HEALTH, SAFETY, AND ACCIDENTS	6.17-1
6.17.1	Introduction	6.17-1
6.17.2	Occupational Health and Safety	6.17-2
6.17.3	Air Emissions	6.17-17
6.17.4	Risk Assessment for CO ₂ Sequestration.....	6.17-21
	6.17.5 Terrorism/Sabotage Impact.....	6.17-30
6.18	COMMUNITY SERVICES	6.18-1
6.18.1	Introduction	6.18-1
6.18.2	Affected Environment	6.18-3
6.18.3	Impacts	6.18-4
6.19	SOCIOECONOMICS	6.19-1
6.19.1	Introduction	6.19-1
6.19.2	Affected Environment	6.19-1
	6.19.3 Impacts.....	6.19-5
6.20	ENVIRONMENTAL JUSTICE	6.20-1
6.20.1	Introduction	6.20-1
6.20.2	Affected Environment	6.20-3
6.20.3	Impacts	6.20-4
6.21	REFERENCES	6.21-1
7.	ODESSA SITE.....	7.1-1
7.1	CHAPTER OVERVIEW.....	7.1-1
7.1.1	Power Plant Footprint.....	7.1-1
7.1.2	No-Action Alternative	7.1-2
	7.1.3 Odessa Site	7.1-2
7.2	AIR QUALITY	7.2-1
	7.2.1 Introduction	7.2-1
	7.2.2 Affected Environment.....	7.2-3
	7.2.3 Impacts.....	7.2-8
7.3	CLIMATE AND METEOROLOGY.....	7.3-1
7.3.1	Introduction	7.3-1
	7.3.2 Affected Environment.....	7.3-1

	7.3.3 Impacts	7.3-4
7.4	GEOLOGY	7.4-1
	7.4.1 Introduction	7.4-1
	7.4.2 Affected Environment	7.4-3
	7.4.3 Impacts	7.4-8
7.5	PHYSIOGRAPHY AND SOILS	7.5-1
	7.5.1 Introduction	7.5-1
	7.5.2 Affected Environment	7.5-1
	7.5.3 Impacts	7.5-18
7.6	GROUNDWATER	7.6-1
	7.6.1 Introduction	7.6-1
	7.6.2 Affected Environment	7.6-2
	7.6.3 Impacts	7.6-6
7.7	SURFACE WATER	7.7-1
	7.7.1 Introduction	7.7-1
	7.7.2 Affected Environment	7.7-2
	7.7.3 Impacts	7.7-4
7.8	WETLANDS AND FLOODPLAINS	7.8-1
	7.8.1 Introduction	7.8-1
	7.8.2 Affected Environment	7.8-1
	7.8.3 Impacts	7.8-6
7.9	BIOLOGICAL RESOURCES	7.9-1
	7.9.1 Introduction	7.9-1
	7.9.2 Affected Environment	7.9-1
	7.9.3 Impacts	7.9-9
7.10	CULTURAL RESOURCES	7.10-1
	7.10.1 Introduction	7.10-1
	7.10.2 Affected Environment	7.10-3
	7.10.3 Impacts	7.10-6
7.11	LAND USE	7.11-1
	7.11.1 Introduction	7.11-1
	7.11.2 Affected Environment	7.11-1
	7.11.3 Impacts	7.11-9
7.12	AESTHETICS	7.12-1
	7.12.1 Introduction	7.12-1
	7.12.2 Affected Environment	7.12-2
	7.12.3 Impacts	7.12-5
7.13	TRANSPORTATION AND TRAFFIC	7.13-1
	7.13.1 Introduction	7.13-1
	7.13.2 Affected Environment	7.13-4
	7.13.3 Impacts	7.13-8
7.14	NOISE AND VIBRATION	7.14-1
	7.14.1 Introduction	7.14-1
	7.14.2 Affected Environment	7.14-4
	7.14.3 Impacts	7.14-7
7.15	UTILITY SYSTEMS	7.15-1
	7.15.1 Introduction	7.15-1
	7.15.2 Affected Environment	7.15-1
	7.15.3 Impacts	7.15-3
7.16	MATERIALS AND WASTE MANAGEMENT	7.16-1
	7.16.1 Introduction	7.16-1

7.16.2 Affected Environment 7.16-2
7.16.3 Impacts **7.16-8**
7.17 HUMAN HEALTH, SAFETY, AND ACCIDENTS 7.17-1
7.17.1 Introduction 7.17-1
7.17.2 Occupational Health and Safety 7.17-2
7.17.3 Air Emissions 7.17-16
7.17.4 Risk Assessment for CO₂ Sequestration..... 7.17-21
7.17.5 Terrorism/Sabotage Impact..... **7.17-29**
7.18 COMMUNITY SERVICES 7.18-1
7.18.1 Introduction 7.18-1
7.18.2 Affected Environment 7.18-3
7.18.3 Impacts 7.18-4
7.19 SOCIOECONOMICS 7.19-1
7.19.1 Introduction 7.19-1
7.19.2 Affected Environment 7.19-1
7.19.3 Impacts..... **7.19-4**
7.20 ENVIRONMENTAL JUSTICE 7.20-1
7.20.1 Introduction 7.20-1
7.20.2 Affected Environment 7.20-3
7.20.3 Impacts 7.20-3
7.21 REFERENCES **7.21-1**

VOLUME III

13. COMMENTS AND RESPONSES ON THE DRAFT EIS..... **13-1**
13.1 INTRODUCTION **13-1**
13.2 PUBLIC HEARINGS..... **13-1**
13.3 METHODOLOGY..... **13-4**
13.4 DESCRIPTION OF COMMENTS RECEIVED **13-6**
13.5 COMMENT DOCUMENTS AND RESPONSES..... **13-15**
PUBLIC HEARING COMMENTS AND RESPONSES – GENERAL..... **13-17**
PUBLIC HEARING COMMENTS AND RESPONSES – MATTOON **13-109**
PUBLIC HEARING COMMENTS AND RESPONSES – TUSCOLA..... **13-169**
PUBLIC HEARING COMMENTS AND RESPONSES – ILLINOIS..... **13-255**
PUBLIC HEARING COMMENTS AND RESPONSES – JEWETT **13-291**
PUBLIC HEARING COMMENTS AND RESPONSES – ODESSA..... **13-345**
PUBLIC HEARING COMMENTS AND RESPONSES – TEXAS **13-517**

LIST OF FIGURES

VOLUME I

Figure 1-1. Steps in the NEPA Process.....	1-6
Figure 1-2. FutureGen Project Full Scope Cooperative Agreement Timeline.....	1-10
Figure 2-1. FutureGen Project Overview.....	2-2
Figure 2-2. Construction, Demonstration, Monitoring, and Operating Schedule.....	2-2
Figure 2-3. Alternative Site Locations.....	2-3
Figure 2-4. Proposed Mattoon Power Plant and Sequestration Site.....	2-7
Figure 2-5. Proposed Utility Corridors for the Mattoon Power Plant and Sequestration Site.....	2-8
Figure 2-6. Proposed Tuscola Power Plant Site.....	2-12
Figure 2-7. Proposed Utility Corridors for the Tuscola Power Plant Site.....	2-13
Figure 2-8. Proposed Tuscola Sequestration Site.....	2-14
Figure 2-9. Proposed Jewett Power Plant Site.....	2-18
Figure 2-10. Proposed Utility Corridors for the Jewett Power Plant Site.....	2-19
Figure 2-11. Proposed Jewett Sequestration Site.....	2-20
Figure 2-12. Proposed Odessa Power Plant Site.....	2-25
Figure 2-13. Proposed Utility Corridors for the Odessa Power Plant Site.....	2-26
Figure 2-14. Proposed Odessa Sequestration Site.....	2-27
Figure 2-A. Odessa Water Pipeline Option.....	2-29
Figure 2-B. Odessa CO₂ Pipeline – Option 1.....	2-32
Figure 2-C. Odessa CO₂ Pipeline – Option 2.....	2-33
Figure 2-15. Alliance Siting Process.....	2-40
Figure 2-16. Map of Offered Sites.....	2-42
Figure 2-17. Block Diagram of and Example Design for the FutureGen Power Plant.....	2-49

Figure 2-18. Example FutureGen Project Configuration 2-50

Figure 2-19. FutureGen Power Plant Overview 2-51

Figure 2-20. Geologic Sequestration in a Deep Saline Aquifer 2-59

Figure 2-21. Comparison of FutureGen Project Performance Target to Other IGCC and SOTA Power Plant Technologies 2-78

Figure 3-1. Potential Areas Suitable for EOR or ECBM near Mattoon and Tuscola 3-81

Figure 3-2. Map of Candidate Oil Reservoirs for EOR in Texas 3-84

Figure 3-3. Potential Areas Suitable for EOR or ECBM near Jewett 3-85

Figure 3-4. Potential Areas Suitable for EOR or ECBM near Odessa 3-86

VOLUME II

Figure 4.1-1. Proposed Mattoon Power Plant and Sequestration Site 4.1-6

Figure 4.1-2. Proposed Utility Corridors for the Mattoon Power Plant and Sequestration Site 4.1-7

Figure 4.2-1. Mattoon Sensitive Receptor Locations 4.2-6

Figure 4.3-1. Wind Rose for the Mattoon Region 4.3-3

Figure 4.4-1. Plan View of the Lateral Extent of the Subsurface ROI 4.4-2

Figure 4.4-2. Stratigraphy of the Mattoon Injection Area 4.4-4

Figure 4.7-1. Mattoon Surface Water Resources 4.7-3

Figure 4.8-1. National Wetlands Inventory Map 4.8-4

Figure 4.8-2. Mattoon Floodplain Map 4.8-7

Figure 4.11-1. Future Land Use Classification Map and the City of Mattoon Extraterritorial Boundary 4.11-3

Figure 4.11-2. Land Use Classification for the Proposed Mattoon Power Plant and Sequestration Site 4.11-6

Figure 4.12-1. Proposed Mattoon Power Plant and Sequestration Site 4.12-2

Figure 4.12-2. Proposed Mattoon Process Water Pipeline Corridor Along Prairie Grass Bike Trail 4.12-3

Figure 4.12-3. Proposed Mattoon Process Water Pipeline Corridor Along 1st Street.....	4.12-4
Figure 4.12-4. Proposed Mattoon Electrical Transmission Line Corridor.....	4.12-4
Figure 4.12-5. Artist’s Rendering of an IGCC Plant with Minimal Screening and Architectural Design Elements.....	4.12-7
Figure 4.12-6. Artist’s Rendering of an IGCC Plant with Extensive Screening and Architectural Design Elements	4.12-7
Figure 4.13-1. 50-Mile Traffic and Transportation ROI.....	4.13-2
Figure 4.13-2. Regional Highway and Railroad Network with Trip Distribution During Construction.....	4.13-5
Figure 4.13-3. Mattoon Street and Railroad Network.....	4.13-8
Figure 4.13-4. Material Supply Locations	4.13-15
Figure 4.14-1. SPL Values of Common Noise Sources.....	4.14-3
Figure 4.14-2. Noise Measurement Locations near the Proposed Mattoon Power Plant Site	4.14-6
Figure 4.14-3. Change in Noise Level During Construction at the Proposed Mattoon Power Plant and Sequestration Site.....	4.14-13
Figure 4.14-4. Change in Noise Level During Operation at the Proposed Mattoon Power Plant and Sequestration Site.....	4.14-17
Figure 4.15-1. Proposed Utility Corridors	4.15-4
Figure 4.16-1 Coal Resources.....	4.16-5
Figure 4.16-2. Waste Management Facilities	4.16-7
Figure 4.18-1. Proposed Mattoon Power Plant and Sequestration Site 50-Mile ROI.....	4.18-2
Figure 5.1-1. Proposed Tuscola Power Plant Site.....	5.1-5
Figure 5.1-2. Proposed Utility Corridors for the Tuscola Power Plant Site.....	5.1-6
Figure 5.1-3. Proposed Tuscola Sequestration Site	5.1-7
Figure 5.2-1. Tuscola Sensitive Receptor Locations	5.2-6
Figure 5.3-1. Wind Rose for the Tuscola Region	5.3-3
Figure 5.4-1. Plan View of the Lateral Extent of the Subsurface ROI	5.4-2

Figure 5.4-2. Stratigraphy of the Tuscola Injection Area	5.4-4
Figure 5.7-1. Tuscola Surface Water Resources	5.7-3
Figure 5.7-2. Process Water Source for the Proposed Tuscola Power Plant	5.7-6
Figure 5.8-1. National Wetlands Inventory Map	5.8-4
Figure 5.8-2. Tuscola Floodplain Map.....	5.8-6
Figure 5.11-1. Land Use Classification for Lands within the City of Tuscola’s Extraterritorial Jurisdictional Boundary	5.11-3
Figure 5.11-2. Land Use Classification for the Proposed Tuscola Power Plant Site, CO ₂ Corridor and Proposed Sequestration Site	5.11-4
Figure 5.12-1. Proposed Tuscola Power Plant Site.....	5.12-2
Figure 5.12-2. Proposed Tuscola Sequestration Site	5.12-3
Figure 5.12-3. Proposed Tuscola Electrical Transmission Line Corridor.....	5.12-4
Figure 5.12-4. Artist’s Rendering of an IGCC Plant with Minimal Screening and Architectural Design Elements	5.12-6
Figure 5.12-5. Artist’s Rendering of an IGCC Plant with Extensive Screening and Architectural Design Elements	5.12-7
Figure 5.13-1. 50-Mile Traffic and Transportation ROI.....	5.13-2
Figure 5.13-2. Regional Highway Network with Trip Distribution During Construction.....	5.13-5
Figure 5.13-3. Tuscola Street Network.....	5.13-8
Figure 5.14-1. SPL Values of Common Noise Sources.....	5.14-3
Figure 5.14-2. Noise Measurement Locations near the Proposed Tuscola Power Plant Site	5.14-6
Figure 5.14-3. Change in Noise Level During Construction at the Proposed Tuscola Power Plant Site	5.14-13
Figure 5.14-4. Change in Noise Level During Operation at the Proposed Tuscola Power Plant Site	5.14-18
Figure 5.15-1. Proposed Utility Corridors	5.15-7
Figure 5.16-1. Coal Resources.....	5.16-5

Figure 5.16-2. Waste Management Facilities	5.16-8
Figure 5.18-1. Proposed Tuscola Power Plant and Sequestration Sites 50-Mile ROI	5.18-2
Figure 6.1-1. Proposed Jewett Power Plant Site	6.1-6
Figure 6.1-2. Proposed Utility Corridors for the Jewett Power Plant Site	6.1-7
Figure 6.1-3. Proposed Jewett Sequestration Site	6.1-8
Figure 6.2-1. Jewett Sensitive Receptor Locations	6.2-7
Figure 6.3-1. Wind Rose for the Jewett Region	6.3-3
Figure 6.4-1. Plan View of the Lateral Extent	6.4-2
Figure 6.4-2. Stratigraphy of the Jewett Injection Area	6.4-4
Figure 6.7-1. Jewett Surface Water Resources	6.7-3
Figure 6.8-1. National Wetlands Inventory Map	6.8-3
Figure 6.8-2. Jewett Floodplain Map	6.8-5
Figure 6.11-1. Aerial Photo of the Proposed Jewett Power Plant Site Land Use ROI	6.11-4
Figure 6.12-1. Proposed Jewett Power Plant Site with NRG Limestone Electric Generating Station in the Background	6.12-2
Figure 6.12-2. Proposed Jewett Sequestration Site	6.12-3
Figure 6.12-3. Artist’s Rendering of an IGCC Plant with Minimal Screening and Architectural Design Elements	6.12-7
Figure 6.12-4. Artist’s Rendering of an IGCC Plant with Extensive Screening and Architectural Design Elements	6.12-7
Figure 6.13-1. 50-Mile Traffic and Transportation ROI	6.13-2
Figure 6.13-2. Regional Highway Network with Trip Distribution During Construction	6.13-5
Figure 6.14-1. SPL Values of Common Noise Sources	6.14-3
Figure 6.14-2. Noise Measurement Locations near the Proposed Jewett Power Plant Site	6.14-5
Figure 6.15-1. Existing and Proposed Utility Corridors	6.15-4
Figure 6.16-1. Coal Resources	6.16-4

Figure 6.16-2. Waste Management Facilities	6.16-8
Figure 6.18-1. Proposed Jewett Power Plant and Sequestration Sites 50-Mile ROI	6.18-2
Figure 7.1-1. Proposed Odessa Power Plant Site.....	7.1-6
Figure 7.1-2. Proposed Utility Corridors for the Odessa Power Plant Site.....	7.1-7
Figure 7.1-3. Proposed Odessa Sequestration Site.....	7.1-8
Figure 7.2-1. Odessa Sensitive Receptor Locations.....	7.2-7
Figure 7.3-1. Wind Rose for the Odessa Region	7.3-3
Figure 7.4-1. Plan View of the Lateral Extent of the Subsurface ROI	7.4-2
Figure 7.4-2. Stratigraphy of the Odessa Injection Area	7.4-4
Figure 7.7-1. Odessa Surface Water Resources	7.7-3
Figure 7.8-1. Wetlands within the ROI at the Proposed Odessa Power Plant Site	7.8-3
Figure 7.8-2. Odessa Floodplain Map.....	7.8-5
Figure 7.11-1. Aerial Photo of the Proposed Odessa Power Plant Land Use ROI	7.11-5
Figure 7.12-1. Proposed Odessa Power Plant Site.....	7.12-2
Figure 7.12-2. Town of Penwell	7.12-3
Figure 7.12-3. Proposed Odessa Sequestration Site.....	7.12-4
Figure 7.12-4. Artist’s Rendering of an IGCC Plant with Minimal Screening and Architectural Design Elements	7.12-7
Figure 7.12-5. Artist’s Rendering of an IGCC Plant with Extensive Screening and Architectural Design Elements	7.12-7
Figure 7.13-1. 50-Mile Traffic and Transportation ROI.....	7.13-2
Figure 7.13-2. Highway and Railroad Network.....	7.13-5
Figure 7.14-1. SPL Values of Common Noise Sources.....	7.14-3
Figure 7.14-2. Sensitive Receptor Locations near the Proposed Odessa Power Plant Site	7.14-5
Figure 7.15-1. Existing and Proposed Utility Corridors	7.15-5

Figure 7.16-1. Coal Resources..... 7.16-4

Figure 7.16-2. Waste Management Facilities 7.16-7

Figure 7.18-1. Proposed Odessa Power Plant and Sequestration Sites 50-Mile ROI..... 7.18-2

VOLUME III

No figures used.

LIST OF TABLES

VOLUME I

Table 1-1. FutureGen Project Objectives.....	1-4
Table 1-2. Public Scoping Meeting Locations and Dates	1-6
Table 1-3. Issues Identified During Public Scoping	1-7
Table 1-4. Public Hearing Locations and Dates.....	1-11
Table 1-5. Number of People in Attendance at Public Hearings	1-11
Table 1-6. General Comments from Public Hearings.....	1-12
Table 2-1. Mattoon Site Features	2-4
Table 2-2. Tuscola Site Features.....	2-9
Table 2-3. Jewett Site Features.....	2-15
Table 2-4. Odessa Site Features	2-21
Table 2-A. City of Odessa Water Supply and Treatment Capacity.....	2-30
Table 2-B. Potential Impacts Associated with the New Odessa Process Water Pipeline and CO₂ Pipeline Options	2-35
Table 2-5. Power Plant Technology Cases under Evaluation for the FutureGen Project	2-53
Table 2-6. Preliminary Schedule of Possible FutureGen Project CO ₂ Plume Monitoring Activities	2-67
Table 2-7. Remediation Options for Geological CO ₂ Storage Projects	2-70
Table 2-8. FutureGen Project Performance Targets.....	2-74
Table 2-9. FutureGen Project Potential Air Emissions: FutureGen Project Estimated Maximum Air Emissions vs. Performance Target.....	2-76
Table 2-10. Comparison of FutureGen Project Performance Target to Other IGCC and SOTA Power Plant Technologies.....	2-77
Table 2-11. Estimated Quantities and Uses of Chemicals for FutureGen Plant Operation	2-80
Table 2-12. Possible Pollution Prevention, Recycling, and Reuse Features.....	2-80
Table 3-1. Project Features for Alternative Sites	3-2

Table 3-2. Predicted Maximum Concentrations and Resulting Ambient Concentrations 3-4

Table 3-3. Summary Comparison of Impacts 3-33

Table 3-4. Incomplete or Unavailable Information Relating to the FutureGen Project Design 3-69

Table 3-5. Incomplete or Unavailable Information Relating to the Affected Environment 3-70

Table 3-6. Reasonably Foreseeable Projects within the Mattoon and Tuscola, Illinois ROIs 3-87

Table 3-7. Reasonably Foreseeable Projects within the Jewett, Texas ROI 3-89

Table 3-8. Reasonably Foreseeable Projects within the Odessa, Texas ROI 3-91

Table 3-9. Draft Air Permit Emissions for the Taylorville Energy Center 3-92

Table 3-10. Permitted and Estimated Air Emissions from Proposed Ethanol and Bio-Diesel Plants near Mattoon and Tuscola 3-93

Table 3-11. Comparison of All Proposed Emission Sources within the Mattoon and Tuscola ROIs 3-94

Table 3-12. Air Emissions Expected for Proposed Coal-Fueled Power Plants near Jewett 3-98

Table 3-13. Possible Mitigation Measures for the FutureGen Project 3-102

Table 3-14. Possible BMPs to Minimize Potential Impacts from the FutureGen Project 3-109

Table B-1. Public Scoping Meeting Locations and Dates B-2

Table B-2. Dates and Publications for Advertisements B-3

Table B-3. Attendance at Public Scoping Meetings B-4

Table B-4. Verbal Comments Received during the Public Scoping Meetings B-4

Table B-5. Number of Written Comments Received During the Scoping Period B-5

Table B-6. Summary of Comments Received B-6

Table C.1-1. National Ambient Air Quality Standards C-2

Table C.1-2. Air Quality Regulations C-3

Table C.1-3. Permit or Approval Requirements to Construct and Operate the Proposed Facilities.. C-15

Table E-1. Stack Emissions for Each Technology Case per Coal Type E-2

Table E-2. FutureGen Project’s Estimated Maximum Air Emissions E-4

Table E-3. Potential Unplanned Restart Events Per Year During the R&D Operations Phase	E-5
Table E-4. Estimates of Modeled Air Emissions Rates	E-6
Table E-5. Air Quality Modeling Basis for the Proposed FutureGen Power Plant Operations Impact Analysis	E-6
Table E-6. Mattoon Land Use Surface Characterization	E-13
Table E-7. Tuscola Land Use Characterization	E-17
Table E-8. Jewett Land Use Characterization.....	E-21
Table E-9. Odessa Land Use Characterization	E-25
Table E-10. Background Concentration for the Proposed Mattoon and Tuscola Power Plant.....	E-29
Table E-11. Background Concentration for the Proposed Jewett Power Plant.....	E-30
Table E-12. Background Concentration for the Proposed Odessa Power Plant	E-31
Table E-13. 7.5 Minute DEM Terrain Input Data for Proposed Power Plant Sites	E-32
Table E-14. Receptor Grid Tier and Spacing Distance.....	E-33
Table E-15. Predicted Maximum Concentration Increases from Proposed Mattoon Power Plant	E-34
Table E-16. Predicted Maximum Concentration Increases from Proposed Tuscola Power Plant	E-35
Table E-17. Predicted Maximum Concentration Increases from Proposed Jewett Power Plant	E-36
Table E-18. Predicted Maximum Concentration Increases from Proposed Odessa Power Plant	E-37
Table F-1. Summary of ALOHA Information Used With the 19 Percent Aqueous NH ₃ Spill Simulations	F-1
Table F-2. Predicted Maximum Radii for Jewett Site Worst-Case Analysis.....	F-2
Table F-3. Predicted Maximum Radii for Tuscola Site Worst-Case Analysis	F-3
Table F-4. Predicted Maximum Radii for Odessa Site Worst-Case Analysis	F-3
Table F-5. Predicted Maximum Radii for Mattoon Site Worst-Case Analysis	F-4
Table F-6. Effect of Meteorological Conditions on Predicted NH ₃ Concentrations for the 23.1-Ton (21-metric ton) Truck Spill Scenario	F-5
Table F-7. Truck Spill Scenario Across Four Sites.....	F-6

Table F-8. Predicted NH₃-Concentration Radii Under the Second Most Conservative Set of Meteorological Conditions at Each Site.....F-6

VOLUME II

Table 4.1-1. Mattoon Site Features 4.1-3

Table 4.2-1. Yearly Estimates of Maximum Air Emissions from the FutureGen Project 4.2-2

Table 4.2-2. Monitoring Stations and Ambient Air Quality Data..... 4.2-4

Table 4.2-3. Allowable PSD Increments 4.2-7

Table 4.2-4. Nearest Class I Areas to Proposed Mattoon Power Plant and Sequestration Site 4.2-7

Table 4.2-5. Comparison of Maximum Concentration Increases to NAAQS and PSD Increments..... 4.2-10

Table 4.2-6. Annual Hazardous Air Pollutant Emissions 4.2-12

Table 4.2-7. Screening Analysis for Effects on Vegetation and Soils 4.2-17

Table 4.3-1. Seasonal Weather Data 4.3-2

Table 4.5-1. Predominant Soil Types, Characteristics, and Uses in the Proposed Power Plant and Sequestration Sites and Related Corridors..... 4.5-2

Table 4.7-1. Water Resources within ROI Listed on State of Illinois 2006 303(d) List..... 4.7-5

Table 4.7-2. Water Quality Data Summary 4.7-6

Table 4.7-3. Effluent Flow Data from the Mattoon and Charleston WWTPs 4.7-7

Table 4.8-1. Summary of Delineated Wetlands within the Proposed Mattoon Power Plant Project ROI 4.8-2

Table 4.10-1. Previously Recorded Archaeological Sites within ROI..... 4.10-4

Table 4.13-1. Level of Service Criteria, Two-Lane Highways 4.13-3

Table 4.13-2. Level of Service Criteria, Multi-Lane Highways 4.13-3

Table 4.13-3. Level of Service Criteria, Basic Freeway Segments..... 4.13-4

Table 4.13-4. Roadway Class Characteristics..... 4.13-6

Table 4.13-5. 2005 Average Daily and Peak Hour Traffic Volumes.....	4.13-10
Table 4.13-6. 2009 Average Daily and Peak Hour No-Build Traffic Volumes.....	4.13-11
Table 4.13-7. 2009 Average Daily and Peak Hour Construction Traffic Volumes	4.13-12
Table 4.13-8. 2012 Average Daily and Peak Hour No-Build Traffic Volumes.....	4.13-16
Table 4.13-9. 2012 Average Daily and Peak Hour Build Traffic Volumes.....	4.13-17
Table 4.14-1. Noise Measurement Locations Near Proposed Mattoon Power Plant Site.....	4.14-5
Table 4.14-2. Measured Ambient Noise Levels and Maximum and Minimum Sound Pressure Level Values	4.14-7
Table 4.14-3. Daytime Maximum Allowable Octave Band Noise Level Emitted to Receiving Class A Property in dB	4.14-8
Table 4.14-4. Nighttime Maximum Allowable Octave Band Noise Levels Emitted to Receiving Class A Property in dB	4.14-9
Table 4.14-5. Common Equipment Sources and Measured Noise Levels at a 50-foot (15-meter) Reference Distance	4.14-10
Table 4.14-6. Estimated Noise Levels at Selected Residential Receptor Locations.....	4.14-11
Table 4.14-7. Projected Noise Level Increase During Construction.....	4.14-15
Table 4.14-8. Projected Noise Level Increase During Plant Operation.....	4.14-20
Table 4.15-1. Capacities of Existing Transmission Network	4.15-3
Table 4.15-2. Utility System Construction Requirements	4.15-5
Table 4.15-3. Annual Rainfall Totals for Mattoon Memorial Airport.....	4.15-9
Table 4.16-1. Illinois Basin Bituminous Coal.....	4.16-3
Table 4.16-2. Western-PRB Sub-Bituminous Coal	4.16-3
Table 4.16-3. Nearby Sanitary Waste Landfills.....	4.16-6
Table 4.16-4. Hazardous Waste Landfills.....	4.16-8
Table 4.16-5. Coal Consumption	4.16-12
Table 4.16-6. Process Chemicals Consumption and Storage.....	4.16-13

Table 4.16-7. Waste Generation 4.16-14

Table 4.17-1. Occupational Injury/Illness and Fatality Data for Project Related Industries in 2005 ..4.17-2

Table 4.17-2. Calculated Annual Occupational Injury/Illness and Fatality Cases for Power Plant Construction..... 4.17-7

Table 4.17-3. Calculated Annual Occupational Injury/Illness and Fatality Cases for Power Plant Operation 4.17-8

Table 4.17-4. Properties and Hazards Associated with Chemicals of Concern 4.17-10

Table 4.17-5. Definitions of Occupational Health Criteria..... 4.17-12

Table 4.17-6. Hazard Endpoints for Individuals Potentially Exposed to an Ammonia Spill..... 4.17-12

Table 4.17-7. Description of Hazard Endpoints for Ammonia Spill Receptors 4.17-13

Table 4.17-8. Effects of an Ammonia Spill at the Proposed Power Plant 4.17-13

Table 4.17-9. Calculated Annual Occupational Injury and Fatality Cases for Sequestration Site Operation 4.17-15

Table 4.17-10. Calculated Annual Occupational Injury and Fatality Cases for Utility Corridors Operation 4.17-16

Table 4.17-11. Summary Analysis Results – Hazardous Air Pollutants..... 4.17-18

Table 4.17-12. Exceedance of Occupational Health Criteria¹ for Workers 4.17-24

Table 4.17-13. Description of Hazard Endpoints for Public Receptors..... 4.17-25

Table 4.17-14. Hazard Endpoints for Public Receptors..... 4.17-26

Table 4.17-15. Effects to the Public from Pre-Sequestration Releases..... 4.17-28

Table 4.17-16. Number of Individuals with Adverse Effects from Potential Exposure to Post-Sequestration H₂S Gas Releases 4.17-29

Table 4.17-17. Effects to the Public from Explosions at the FutureGen Plant 4.17-31

Table 4.18-1. Staffing Levels of Police Departments in Coles County 4.18-3

Table 4.18-2. School Statistics for Coles County, Illinois and the U.S. in 2005 4.18-4

Table 4.19-1. Population Distribution and Projected Change for Counties Containing Land Area within the ROI..... 4.19-2

Table 4.19-2. Employment and Income for Counties within the ROI..... 4.19-3

Table 4.19-3. Minimum and Maximum Hourly Wages by Trade in Coles County, Illinois in November 2005..... 4.19-5

Table 4.19-4. Total Housing Units within the ROI in 2006..... 4.19-6

Table 4.20-1. County, Regional, and National Population and Low-Income Distributions (2000) 4.20-2

Table 5.1-1. Tuscola Site Features..... 5.1-3

Table 5.2-1. Yearly Estimates of Maximum Air Emissions from the FutureGen Project 5.2-2

Table 5.2-2. Monitoring Stations and Ambient Air Quality Data..... 5.2-4

Table 5.2-3. Allowable PSD Increments 5.2-7

Table 5.2-4. Nearest Class I Areas to Proposed Tuscola Power Plant Site..... 5.2-7

Table 5.2-5. Comparison of Maximum Concentration Increases with NAAQS and PSD Increments..... 5.2-11

Table 5.2-6. Annual Hazardous Air Pollutant Emissions 5.2-12

Table 5.2-7. Screening Analysis for Effects on Vegetation and Soils 5.2-17

Table 5.3-1. Seasonal Weather Data..... 5.3-2

Table 5.5-1. Predominant Soil Types, Characteristics, and Uses in the Proposed Power Plant and Sequestration Sites and Related Corridors..... 5.5-2

Table 5.7-1. Water Resources Near the Proposed Power Plant Site Listed on State of Illinois 2006 303(d) List..... 5.7-5

Table 5.7-2. Water Quality Data Summary 5.7-7

Table 5.7-3. Discharge Data at Equistar Chemical Intake 5.7-8

Table 5.8-1. Summary of Delineated Wetlands within the Proposed Tuscola Power Plant Project ROI..... 5.8-3

Table 5.9-1. Fishery Sampling Data, Upper Kaskaskia River, IEPA Site 0-31 (Electric Seine)..... 5.9-4

Table 5.9-2. Macroinvertebrate Sampling Data, Upper Kaskaskia River, IEPA Site 0-31 5.9-5

Table 5.10-1. Previously Recorded Archaeological Sites within ROI..... 5.10-4

Table 5.13-1. Level of Service Criteria, Two-Lane Highways..... 5.13-3

Table 5.13-2. Level of Service Criteria, Multi-Lane Highways	5.13-3
Table 5.13-3. Level of Service Criteria, Basic Freeway Segments.....	5.13-4
Table 5.13-4. Roadway Class Characteristics.....	5.13-6
Table 5.13-5. 2005 Average Daily and Peak Hour Traffic Volumes.....	5.13-10
Table 5.13-6. 2009 Average Daily and Peak Hour No-Build Traffic Volumes.....	5.13-11
Table 5.13-7. 2009 Average Daily and Peak Hour Construction Traffic Volumes	5.13-12
Table 5.13-8. 2012 Average Daily and Peak Hour No-Build Traffic Volumes.....	5.13-15
Table 5.13-9. 2012 Average Daily and Peak Hour Build Traffic Volumes.....	5.13-16
Table 5.14-1. Noise Measurement Locations Near the Proposed Tuscola Power Plant	5.14-5
Table 5.14-2. Measured Ambient Noise Levels and Maximum and Minimum Sound Pressure Level Values	5.14-7
Table 5.14-3. Daytime Maximum Allowable Octave Band Noise Level Emitted to Receiving Class A Property in dB	5.14-9
Table 5.14-4. Nighttime Maximum Allowable Octave Band Noise Levels Emitted to Receiving Class A Property in dB	5.14-9
Table 5.14-5. Common Equipment Sources and Measured Noise Levels at a 50-foot (15-meter) Reference Distance	5.14-11
Table 5.14-6. Estimated Noise Level at Selected Residential Receptor Locations	5.14-12
Table 5.14-7. Projected Noise Level Increase during Construction	5.14-16
Table 5.14-8. Projected Noise Level Increase during Plant Operation.....	5.14-21
Table 5.15-1. Consumption/Discharge Data at Lyondell-Equistar Chemical Company Water Intake	5.15-2
Table 5.15-2. Capacities of Existing Transmission Network	5.15-4
Table 5.15-3. Utility System Construction Requirements	5.15-5
Table 5.16-1. Illinois Basin Bituminous Coal.....	5.16-4
Table 5.16-2. Western-PRB Sub-Bituminous Coal	5.16-4
Table 5.16-3. Nearby Sanitary Waste Landfills.....	5.16-7

Table 5.16-4. Hazardous Waste Landfills.....	5.16-9
Table 5.16-5. Coal Consumption	5.16-13
Table 5.16-6. Process Chemicals Consumption and Storage.....	5.16-13
Table 5.16-7. Waste Generation	5.16-15
Table 5.17-1. Occupational Injury/Illness and Fatality Data for Project Related Industries in 2005 ..	5.17-2
Table 5.17-2. Calculated Annual Occupational Injury and Fatality Cases for Power Plant Construction.....	5.17-6
Table 5.17-3. Calculated Annual Occupational Injury/Illness and Fatality Cases for Power Plant Operation	5.17-8
Table 5.17-4. Properties and Hazards Associated with Chemicals of Concern.....	5.17-10
Table 5.17-5. Definitions of Occupational Health Criteria.....	5.17-12
Table 5.17-6. Hazard Endpoints for Individuals Potentially Exposed to an Ammonia Spill.....	5.17-13
Table 5.17-7. Description of Hazard Endpoints for Ammonia Spill Receptors	5.17-13
Table 5.17-8. Effects of an Ammonia Spill at the Proposed Power Plant	5.17-14
Table 5.17-9. Calculated Annual Occupational Injury and Fatality Cases for Sequestration Site Operation	5.17-15
Table 5.17-10. Calculated Annual Occupational Injury and Fatality Cases for Utility Corridor Operation	5.17-16
Table 5.17-11. Summary Analysis Results — Hazardous Air Pollutants.....	5.17-18
Table 5.17-12. Exceedance of Occupational Health Criteria ¹ for Workers	5.17-24
Table 5.17-13. Description of Hazard Endpoints for Public Receptors.....	5.17-25
Table 5.17-14. Hazard Endpoints for Public Receptors.....	5.17-26
Table 5.17-15. Effects to the Public from Pre-Sequestration Releases.....	5.17-28
Table 5.17-16. Number of Individuals with Adverse Effects from Potential Exposure to Post-Sequestration H ₂ S Gas Releases	5.17-29
Table 5.17-17. Effects to the Public from Explosions at the FutureGen Plant	5.17-31
Table 5.18-1. Staffing Levels of Police Departments in Douglas County	5.18-3

Table 5.18-2. School Statistics for Douglas County, Illinois and the U.S. in 2005	5.18-5
Table 5.19-1. Population Distribution and Projected Change for Counties Containing Land Area within the ROI.....	5.19-2
Table 5.19-2. Employment and Income for Counties within the ROI.....	5.19-3
Table 5.19-3. Minimum and Maximum Hourly Wages by Trade in Douglas County, Illinois, in November 2005.....	5.19-4
Table 5.19-4. Total Housing Units within the ROI in 2006.....	5.19-5
Table 5.20-1. County, Regional and National Population and Low-Income Distributions (2000)	5.20-2
Table 6.1-1. Jewett Site Features	6.1-3
Table 6.2-1. Yearly Estimates of Maximum Air Emissions from the FutureGen Project	6.2-2
Table 6.2-2. Monitoring Stations and Ambient Air Quality Data	6.2-4
Table 6.2-3. Allowable PSD Increments	6.2-6
Table 6.2-4. Nearest Class I Areas to Proposed Jewett Power Plant Site	6.2-6
Table 6.2-5. Comparison of Maximum Concentration Increases with NAAQS and PSD Increments.....	6.2-11
Table 6.2-6. Annual Hazardous Air Pollutant Emissions	6.2-12
Table 6.2-7. Screening Analysis for Effects on Vegetation and Soils	6.2-17
Table 6.3-1. Seasonal Weather Data.....	6.3-2
Table 6.3-2. Regional Tornado Activity, 1950 to 2006	6.3-4
Table 6.5-1. Predominant Soil Types, Characteristics, and Uses in the Proposed Power Plant and Sequestration Sites and Related Corridors.....	6.5-2
Table 6.6-1. Typical Range of Physical Properties of Carrizo-Wilcox Aquifer Units that May Provide Water for the Proposed FutureGen Project.....	6.6-3
Table 6.6-2. Estimated Recharge Rates for Carrizo-Wilcox Aquifer Units.....	6.6-3
Table 6.6-3. Representative Water Quality Analysis from the Simsboro Aquifer Adjacent to the Proposed Power Plant Site	6.6-3
Table 6.6-4. Groundwater Use in the Carrizo-Wilcox Aquifer System.....	6.6-4

Table 6.6-5. Projected Water Demand1 for 2010-2060.....	6.6-7
Table 6.7-1. Annual Average Water Quality Data for the Trinity River Station.....	6.7-5
Table 6.9-1. Aquatic Invertebrates Collected from Creeks within the ROI.....	6.9-6
Table 6.9-2. Fish Species Whose Geographic Distribution Includes the Proposed Power Plant Site ...	6.9-9
Table 6.9-3. Invertebrates Designated as “Rare” by TPWD in Freestone, Leon, Limestone, and Anderson Counties.....	6.9-16
Table 6.10-1. Summary of Previous Archaeological Investigations in CO ₂ Pipeline Segments and Sequestration Sites.....	6.10-5
Table 6.11-1. Comparison of Land Uses within the Potential Utility Corridors and their ROIs	6.11-7
Table 6.13-1. Level of Service Criteria, Two-Lane Highways.....	6.13-3
Table 6.13-2. Level of Service Criteria, Multi-Lane Highways	6.13-3
Table 6.13-3. Level of Service Criteria, Basic Freeway Segments.....	6.13-4
Table 6.13-4. 2005 Average Daily and Peak Hour Traffic Volumes.....	6.13-8
Table 6.13-5. 2009 Average Daily and Peak Hour No-Build Traffic Volumes.....	6.13-9
Table 6.13-6. 2009 Average Daily and Peak Hour Construction Traffic Volumes	6.13-11
Table 6.13-7. 2012 Average Daily and Peak Hour No-Build Traffic Volumes.....	6.13-12
Table 6.13-8. 2012 Average Daily and Peak Hour Build Traffic Volumes.....	6.13-13
Table 6.14-1. Common Equipment Sources and Measured Noise Levels at a 50-foot (15-meter) Reference Distance	6.14-8
Table 6.14-2. Estimated Noise Level at Selected Receptor Locations	6.14-9
Table 6.15-1. Utility System Construction Requirements	6.15-5
Table 6.16-1. Coal Price Projections	6.16-5
Table 6.16-2. Nearby Sanitary Waste Landfills.....	6.16-7
Table 6.16-3. Coal Consumption	6.16-12
Table 6.16-4. Process Chemicals Consumption and Storage.....	6.16-13
Table 6.16-5. Waste Generation	6.16-14

Table 6.17-1. Occupational Injury/Illness and Fatality Data for Project Related Industries in 2005 ..	6.17-2
Table 6.17-2. Calculated Annual Occupational Injury/Illness and Fatality Cases for Power Plant Construction.....	6.17-7
Table 6.17-3. Calculated Annual Occupational Injury/Illness and Fatality Cases for Power Plant	6.17-8
Table 6.17-4. Properties and Hazards Associated with Chemicals of Concern.....	6.17-10
Table 6.17-5. Definitions of Occupational Health Criteria.....	6.17-12
Table 6.17-6. Hazard Endpoints for Individuals Potentially Exposed to an Ammonia Spill.....	6.17-12
Table 6.17-7. Description of Hazard Endpoints for Ammonia Spill Receptors	6.17-13
Table 6.17-8. Effects of an Ammonia Spill at the Proposed Power Plant	6.17-15
Table 6.17-9. Calculated Annual Occupational Injury and Fatality Cases for Sequestration Site Operation	6.17-16
Table 6.17-10. Calculated Annual Occupational Injury and Fatality Cases for Utility Corridors Operation	6.17-16
Table 6.17-11. Summary Analysis Results — Hazardous Air Pollutants.....	6.17-18
Table 6.17-12. Exceedance of Occupational Health Criteria ¹ for Workers	6.17-24
Table 6.17-13. Description of Hazard Endpoints for Public Receptors.....	6.17-26
Table 6.17-14. Hazard Endpoints for Public Receptors.....	6.17-26
Table 6.17-15. Effects to the Public from Pre-Sequestration Releases.....	6.17-29
Table 6.17-16. Number of Individuals with Adverse Effects from Potential Exposure to Post-Sequestration H ₂ S Gas Releases	6.17-30
Table 6.17-17. Effects to the Public from Explosions at the FutureGen Plant	6.17-32
Table 6.18-1. Staffing Levels of Police Departments in Freestone, Leon, and Limestone Counties ..	6.18-3
Table 6.18-2. School Statistics for Texas and the U.S. in 2005.....	6.18-4
Table 6.19-1. Population Distribution and Projected Change for Counties Containing Land Area within the ROI.....	6.19-2
Table 6.19-2. Employment and Income for Counties within the ROI.....	6.19-3

Table 6.19-3. Average Hourly Wage Rates in 2003 by Trade in Freestone, Leon, and Limestone Counties in Texas.....	6.19-4
Table 6.19-4. Total Housing Units within the ROI for the Year 2000	6.19-4
Table 6.20-1. County, Regional and National Population and Low-income Distributions (2000).....	6.20-2
Table 7.1-1. Odessa Site Features	7.1-3
Table 7.2-1. Yearly Estimates of Maximum Air Emissions from the FutureGen Project	7.2-2
Table 7.2-2. Monitoring Stations and Ambient Air Quality Data	7.2-4
Table 7.2-3. Allowable PSD Increments	7.2-8
Table 7.2-4. Nearest Class I Areas to Proposed Odessa Power Plant Site.....	7.2-8
Table 7.2-5. Comparison of Maximum Concentration Increases with NAAQS and PSD Increments.....	7.2-12
Table 7.2-6. Annual Hazardous Air Pollutant Emissions	7.2-13
Table 7.2-7. Screening Analysis for Effects on Vegetation and Soils	7.2-18
Table 7.3-1. Seasonal Weather Data	7.3-2
Table 7.5-1. Predominant Soil Types, Characteristics, and Uses in the Proposed Power Plant and Sequestration Sites and Related Corridors.....	7.5-2
Table 7.6-1. Dockum Aquifer Properties.....	7.6-4
Table 7.6-2. Groundwater Quality	7.6-4
Table 7.6-3. Groundwater Production and Use in Ector County	7.6-5
Table 7.6-4. Projected Water Demand for 2010-2060 (Groundwater and Surface Water Combined).....	7.6-7
Table 7.6-5. Groundwater Availability vs. FutureGen Project Demand.....	7.6-8
Table 7.11-1. Comparison of Land Uses within the Potential Utility Corridors	7.11-7
Table 7.13-1. Level of Service Criteria, Two-Lane Highways	7.13-3
Table 7.13-2. Level of Service Criteria, Multi-Lane Highways	7.13-3
Table 7.13-3. Level of Service Criteria, Basic Freeway Segments.....	7.13-4

Table 7.13-4. 2005 Average Daily and Peak Hour Traffic Volumes.....	7.13-7
Table 7.13-5. 2009 Average Daily and Peak Hour No-Build Traffic Volumes.....	7.13-8
Table 7.13-6. 2009 Average Daily and Peak Hour Construction Traffic Volumes	7.13-10
Table 7.13-7. 2012 Average Daily and Peak Hour No-Build Traffic Volumes.....	7.13-11
Table 7.13-8. 2012 Average Daily and Peak Hour Build Traffic Volumes.....	7.13-12
Table 7.14-1. Common Equipment Sources and Measured Noise Levels at a 50-foot (15-meter) Reference Distance	7.14-8
Table 7.14-2. Estimated Noise Level at Selected Receptor Locations	7.14-9
Table 7.14-3. Projected Noise Level Increase during Construction	7.14-11
Table 7.14-4. Projected Noise Level Increase during Plant Operation.....	7.14-14
Table 7.15-1. Utility System Construction Requirements	7.15-4
Table 7.16-1. Coal Price Projections	7.16-5
Table 7.16-2. Nearby Sanitary Waste Landfills.....	7.16-6
Table 7.16-3. Coal Consumption	7.16-11
Table 7.16-4. Process Chemicals Consumption and Storage.....	7.16-12
Table 7.16-5. Waste Generation	7.16-13
Table 7.17-1. Occupational Injury/Illness and Fatality Data for Project Related Industries in 2005 ..	7.17-2
Table 7.17-2. Calculated Annual Occupational Injury/Illness and Fatality Cases for Power Plant Construction.....	7.17-6
Table 7.17-3. Calculated Annual Occupational Injury/Illness and Fatality Cases for Power Plant Operation	7.17-8
Table 7.17-4. Properties and Hazards Associated with Chemicals of Concern.....	7.17-10
Table 7.17-5. Definitions of Occupational Health Criteria.....	7.17-12
Table 7.17-6. Hazard Endpoints for Individuals Potentially Exposed to an Ammonia Spill.....	7.17-12
Table 7.17-7. Description of Hazard Endpoints for Ammonia Spill Receptors	7.17-13
Table 7.17-8. Effects of an Ammonia Spill at the Proposed Power Plant	7.17-14

Table 7.17-9. Calculated Annual Occupational Injury and Fatality Cases for Sequestration Site Operation 7.17-15

Table 7.17-10. Calculated Annual Occupational Injury and Fatality Cases for Utility Corridors Operation 7.17-16

Table 7.17-11. Summary Analysis Results — Hazardous Air Pollutants..... 7.17-18

Table 7.17-12. Exceedance of Occupational Health Criteria for Workers 7.17-24

Table 7.17-13. Description of Hazard Endpoints for Public Receptors..... 7.17-25

Table 7.17-14. Hazard Endpoints for Public Receptors..... 7.17-26

Table 7.17-15. Effects to the Public from Pre-Sequestration Releases..... 7.17-28

Table 7.17-16. Number of Individuals with Adverse Effects from Potential Exposure to Post-Sequestration H₂S Gas Releases 7.17-29

Table 7.17-17. Effects to the Public from Explosions at the FutureGen Plant 7.17-31

Table 7.18-1. School Statistics for Texas and the U.S. in 2005..... 7.18-4

Table 7.19-1. Population Distribution and Projected Change for Counties Containing Land Area within the ROI..... 7.19-2

Table 7.19-2. Employment and Income for Counties within the ROI..... 7.19-3

Table 7.19-3. Average Hourly Wage Rates in 2003 by Trade in Ector County, Texas..... 7.19-3

Table 7.19-4. Total Housing Units within the ROI in 2000..... 7.19-4

Table 7.20-1. County, Regional and National Population and Low-income Distributions (2000)..... 7.20-2

VOLUME III

Table 13-1. Public Hearing Locations and Dates 13-1

Table 13-2. Public Hearing Newspaper Advertisements 13-2

Table 13-3. Number of People in Attendance at Public Hearings..... 13-3

Table 13-4. Number of People that Provided Oral Comments at the Public Hearings 13-3

Table 13-5. General Comments from Public Hearings..... 13-4

Table 13-6. General Terms on the Comment-Response Process 13-5

Table 13-7. Commentors, Comment Numbers, and Resource Areas 13-6