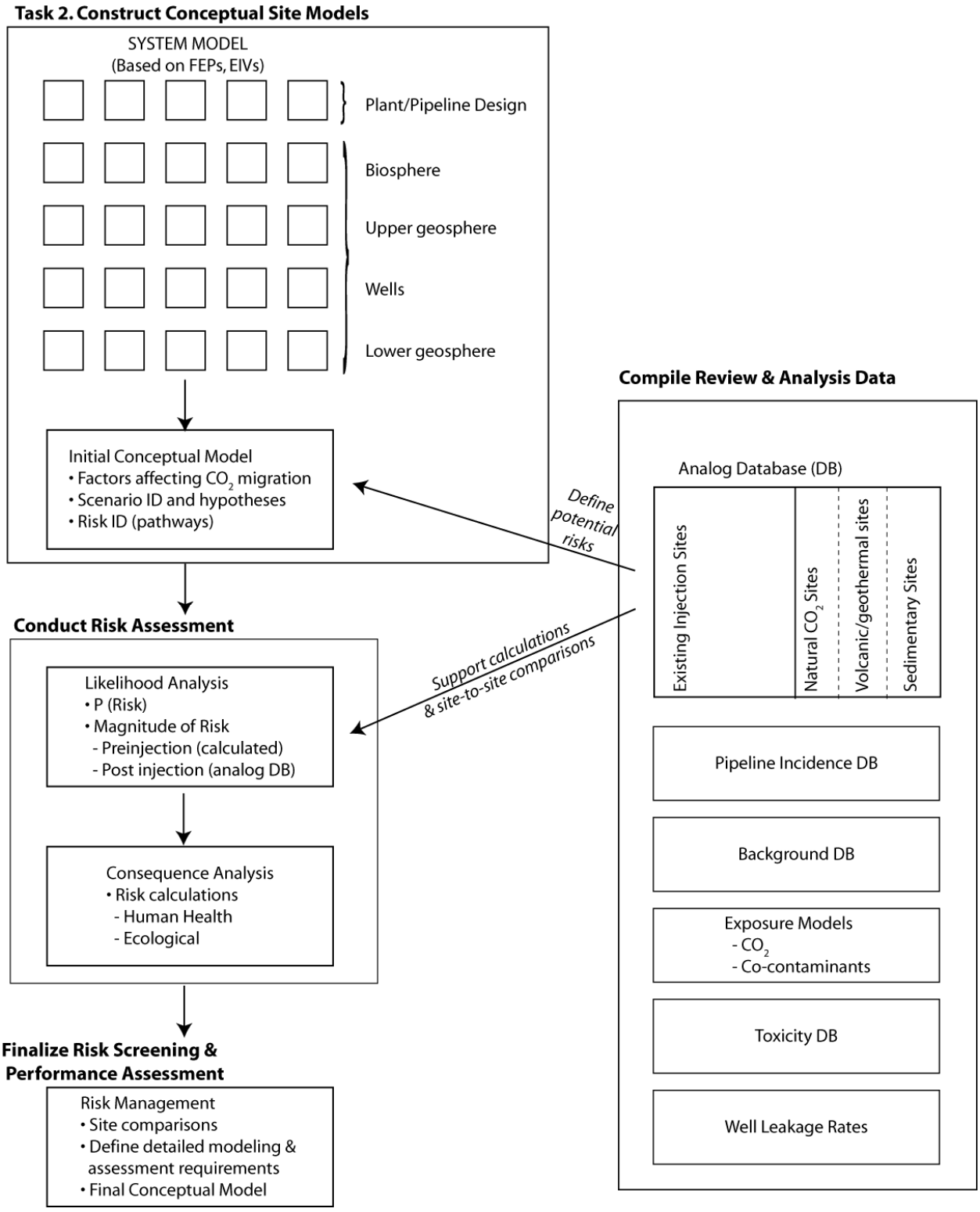


Figure 5-1. Role of the Analog Site Database and Ancillary Databases in the Approach for Conducting the Risk Assessment

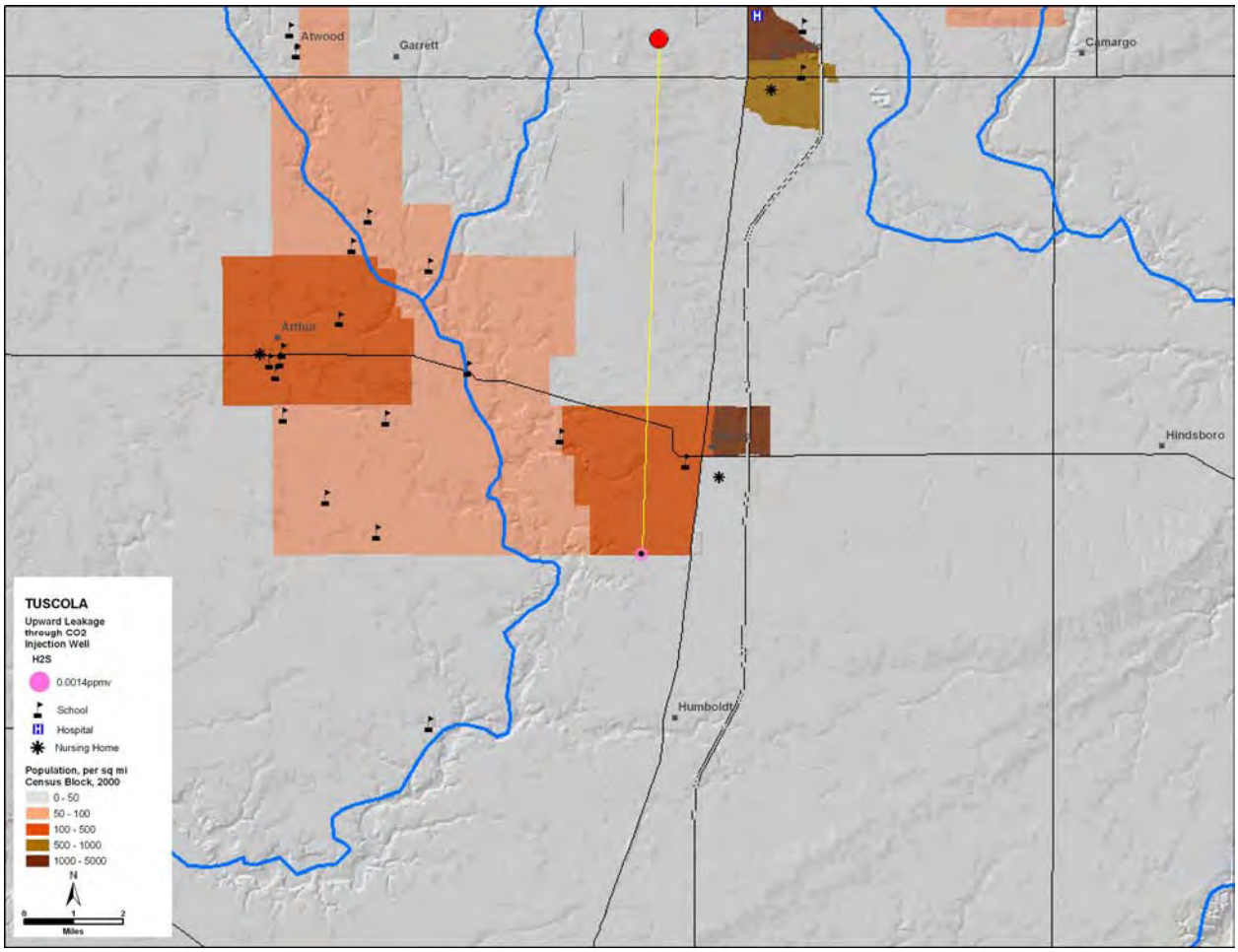
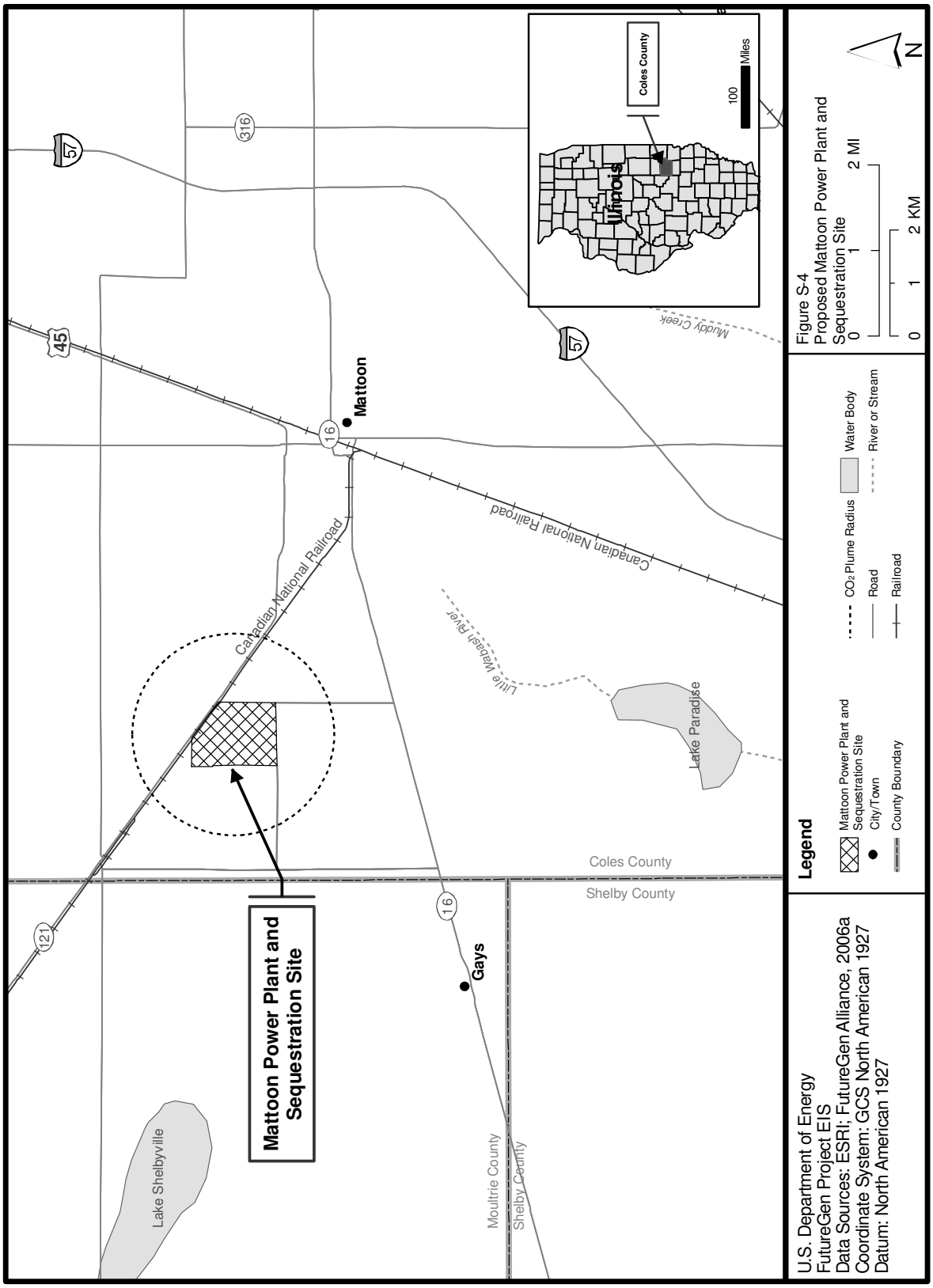
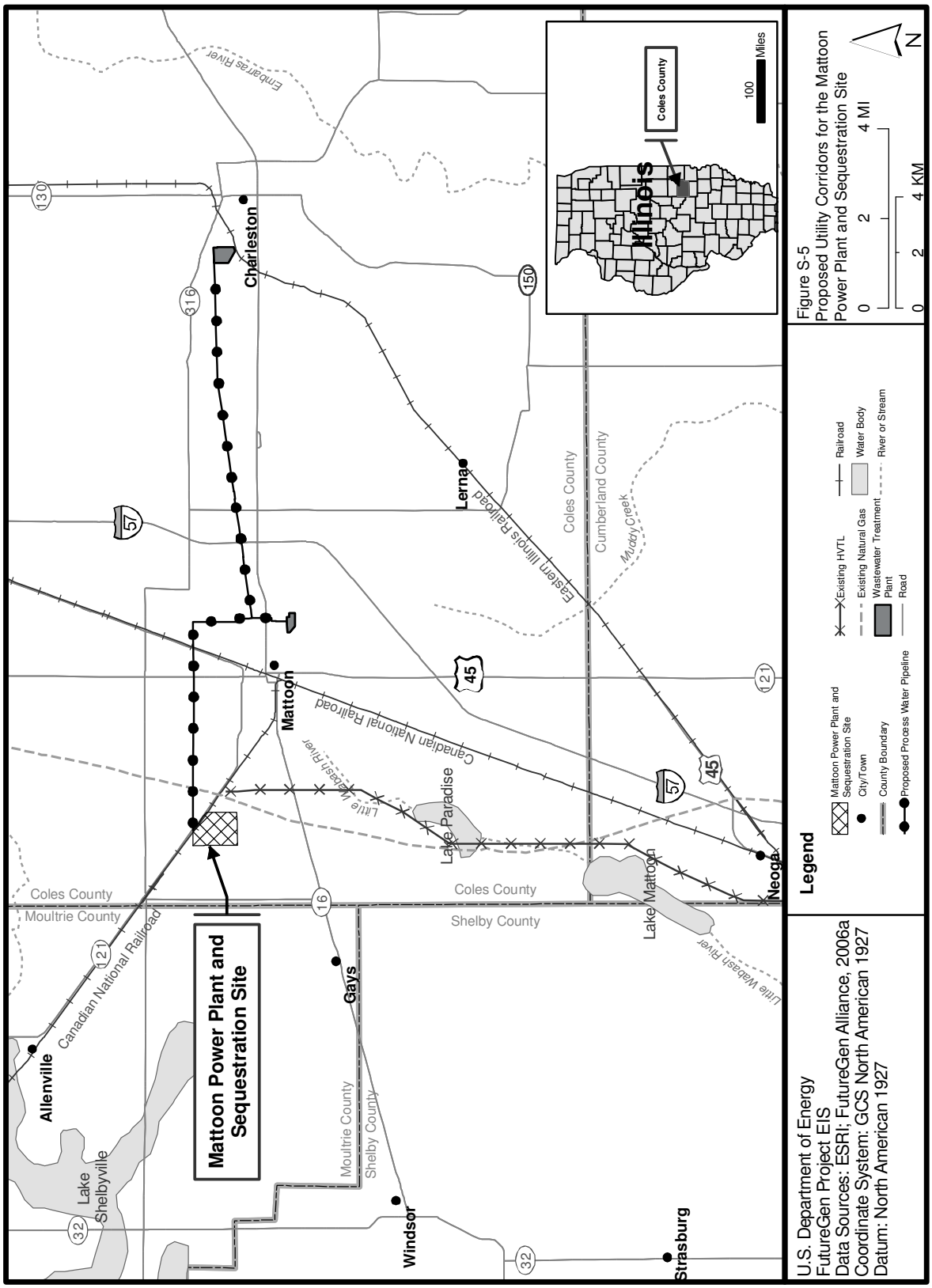
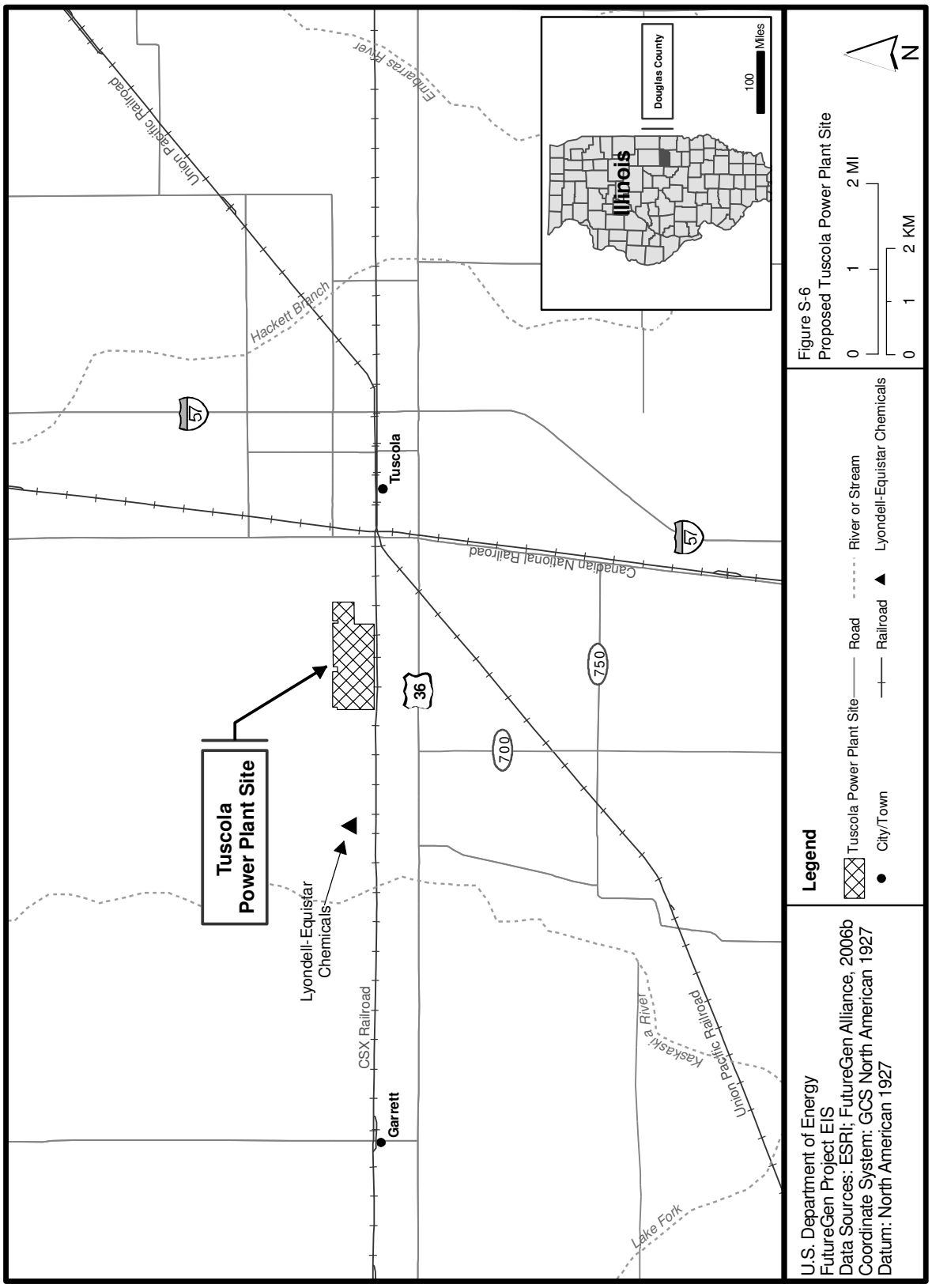
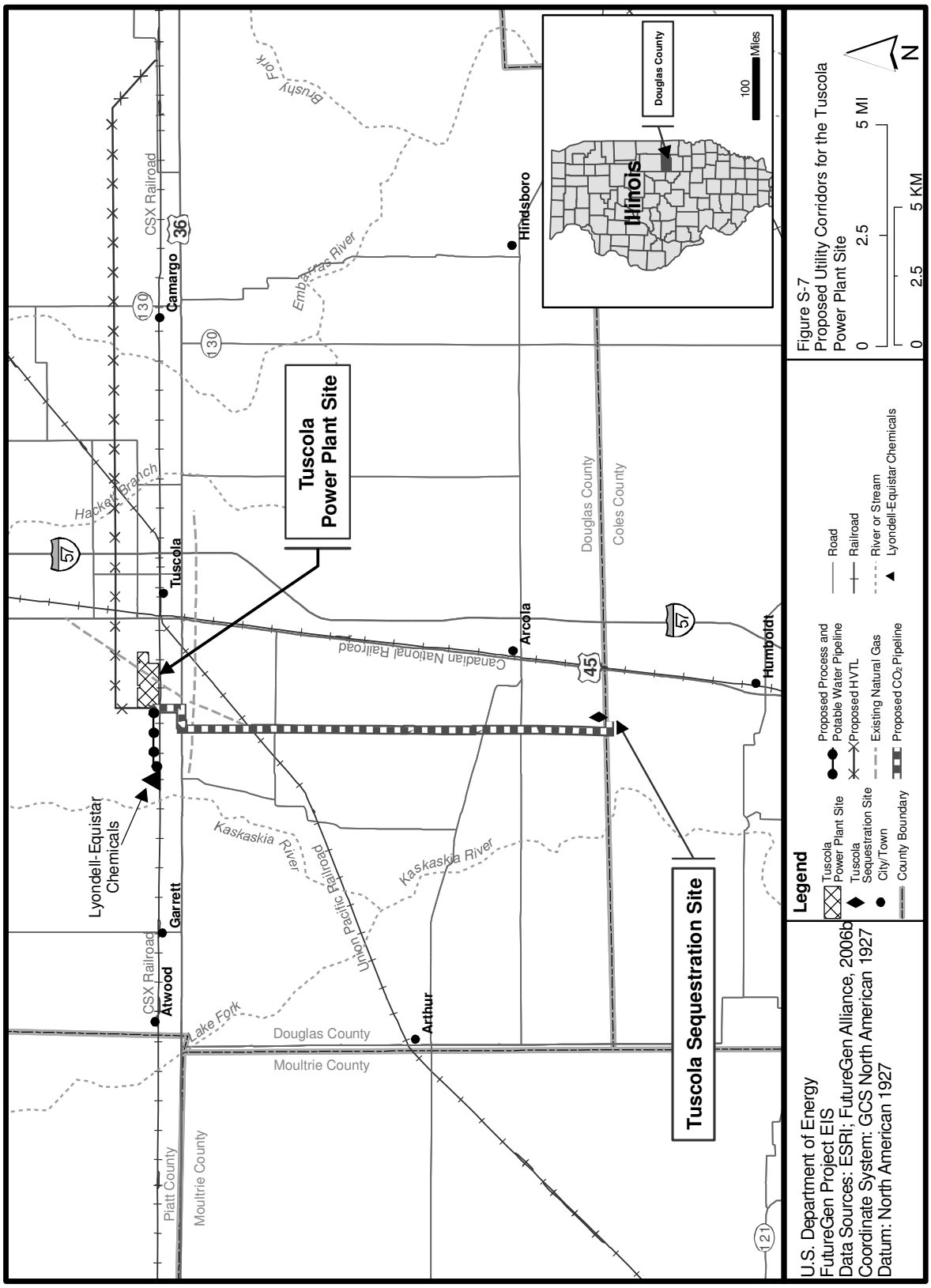


Figure 5-6. Area Within Which H_2S Released from CO_2 Injection Wells Exceeds Chronic Toxicity Criteria (i.e., 0.0014 ppmv H_2S) at the Tuscola (IL) Site


Mattoon Power Plant and Sequestration Site
Mattoon
Gays
Coles County
Shelby County
Moultrie County
Shelby County
Lake Shelbyville
Lake Paradise
Little Wabash River
Muddy Creek
Canadian National Railroad
Canadian National Railroad
Illinois
Coles County
100 Miles
N
Figure S-4
Proposed Mattoon Power Plant and Sequestration Site
0 1 2 MI
0 1 2 KM
Legend
Mattoon Power Plant and Sequestration Site
City/Town
County Boundary
CO2 Plume Radius
Road
Railroad
Water Body
River or Stream
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006a
Coordinate System: GCS North American 1927
Datum: North American 1927


Mattoon Power Plant and Sequestration Site
Charleston
Mattoon
Lerna
Allenville
Gays
Windsor
Strasburg
Neoga
Lake Paradise
Lake Mattoon
Lake Shelbyville
Coles County
Moultrie County
Shelby County
Cumberland County
Canadian National Railroad
Eastern Illinois Railroad
Little Wabash River
Muddy Creek
Embarras River
Illinois
Coles County
100 Miles
Legend
Mattoon Power Plant and Sequestration Site
City/Town
County Boundary
Proposed Process Water Pipeline
Existing HVTL
Existing Natural Gas
Wastewater Treatment Plant
Road
Railroad
Water Body
River or Stream
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006a
Coordinate System: GCS North American 1927
Datum: North American 1927
Figure S-5
Proposed Utility Corridors for the Mattoon Power Plant and Sequestration Site
0 2 4 MI
0 2 4 KM
N


Tuscola
Power Plant Site
Lyondell-Equistar
Chemicals
Tuscola
Garrett
CSX Railroad
Canadian National Railroad
Union Pacific Railroad
Union Pacific Railroad
Embarras River
Hackett Branch
Kaskaskia River
Lake Fork
57
36
750
700
Douglas County
Illinois
100 Miles
N
Figure S-6
Proposed Tuscola Power Plant Site
0 1 2 MI
0 1 2 KM
Legend
Tuscola Power Plant Site
Road
River or Stream
City/Town
Railroad
Lyondell-Equistar Chemicals
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006b
Coordinate System: GCS North American 1927
Datum: North American 1927


Tuscola Power Plant Site
Tuscola Sequestration Site
Lyondell-Equistar Chemicals
Douglas County
Coles County
Moultrie County
Platt County
Hindsboro
Arcola
Tuscola
Camargo
Atwood
Garrett
Arthur
Humboldt
Canadian National Railroad
Union Pacific Railroad
CSX Railroad
Kaskaskia River
Lake Fork
Embarras River
Bushy Fork
Hacker Branch
Illinois
Douglas County
100 Miles
Legend
Tuscola Power Plant Site
Tuscola Sequestration Site
City/Town
County Boundary
Proposed Process and Potable Water Pipeline
Proposed HVTL
Existing Natural Gas
Proposed CO2 Pipeline
Road
Railroad
River or Stream
Lyondell-Equistar Chemicals
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006b
Coordinate System: GCS North American 1927
Datum: North American 1927
Figure S-7
Proposed Utility Corridors for the Tuscola Power Plant Site
0 2.5 5 MI
0 2.5 5 KM
N

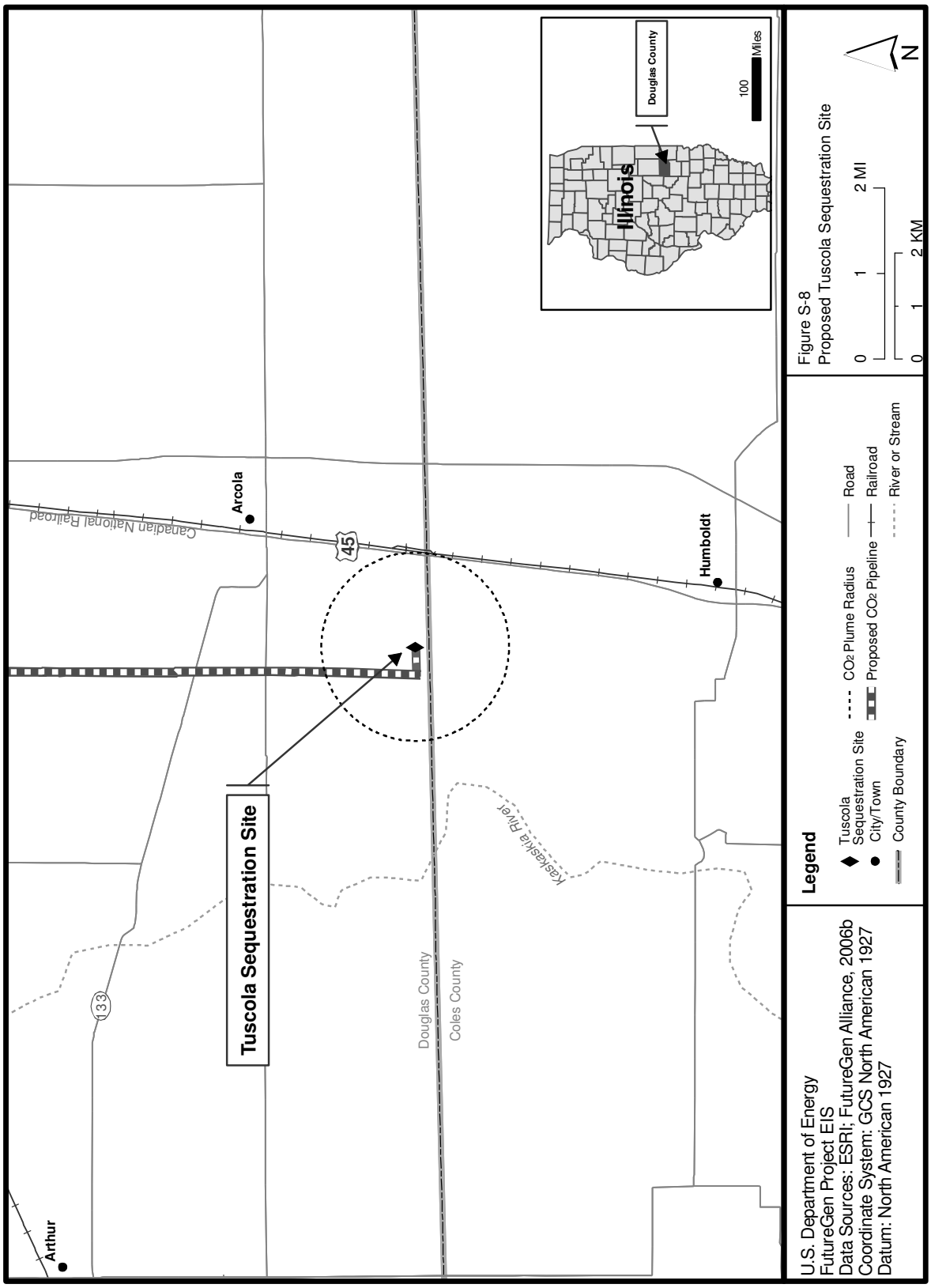


Figure S-8
Proposed Tuscola Sequestration Site

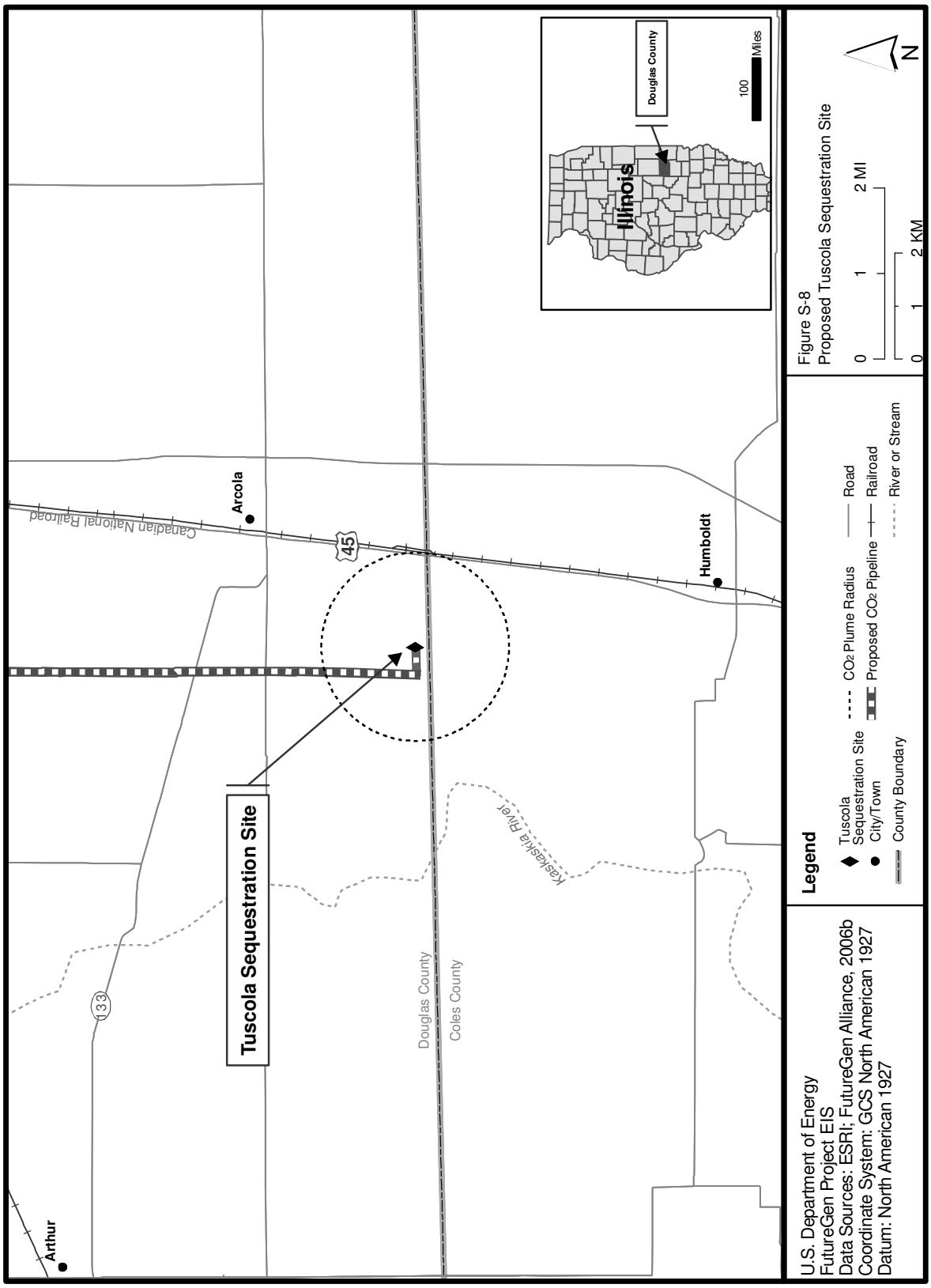
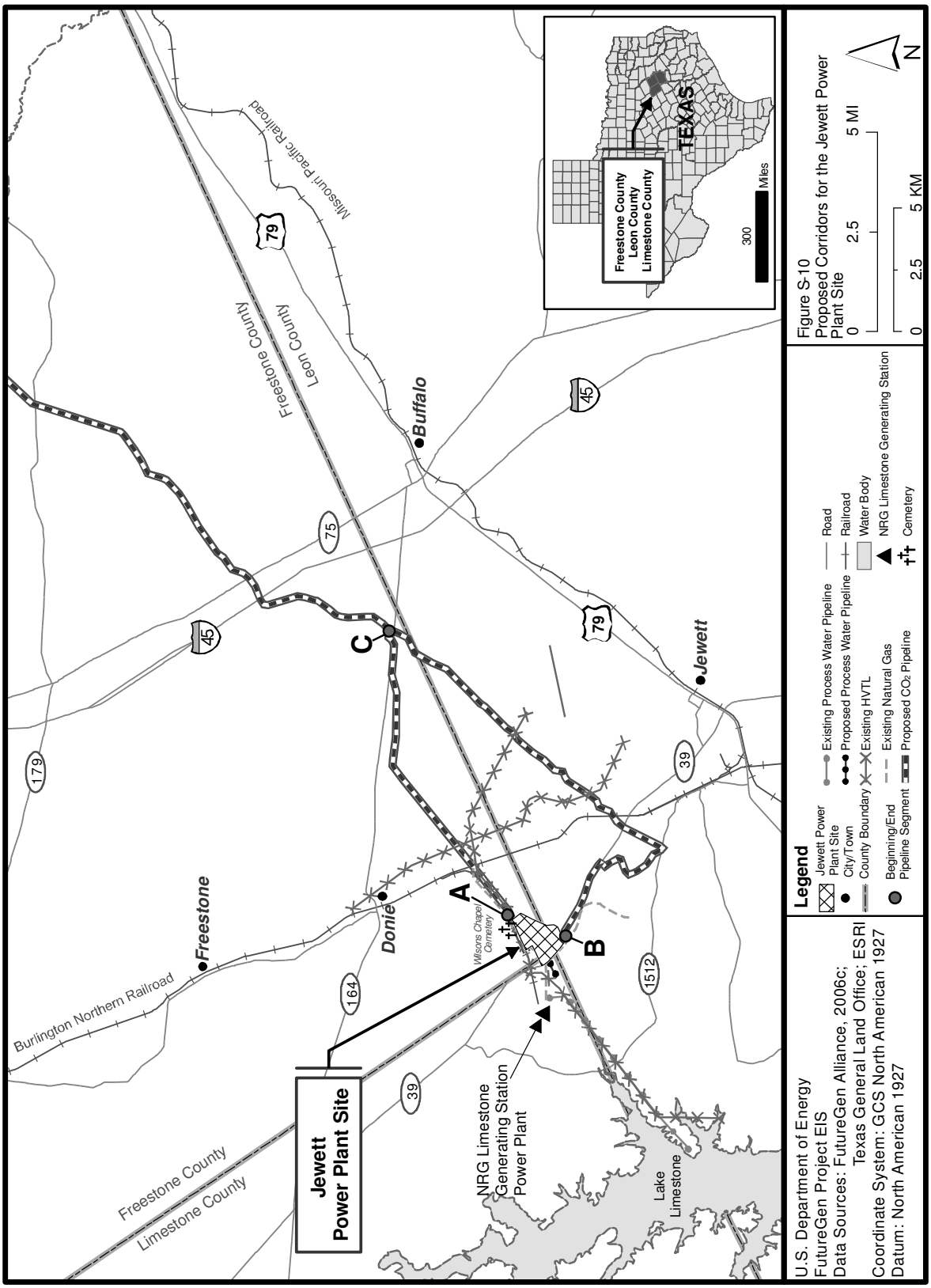
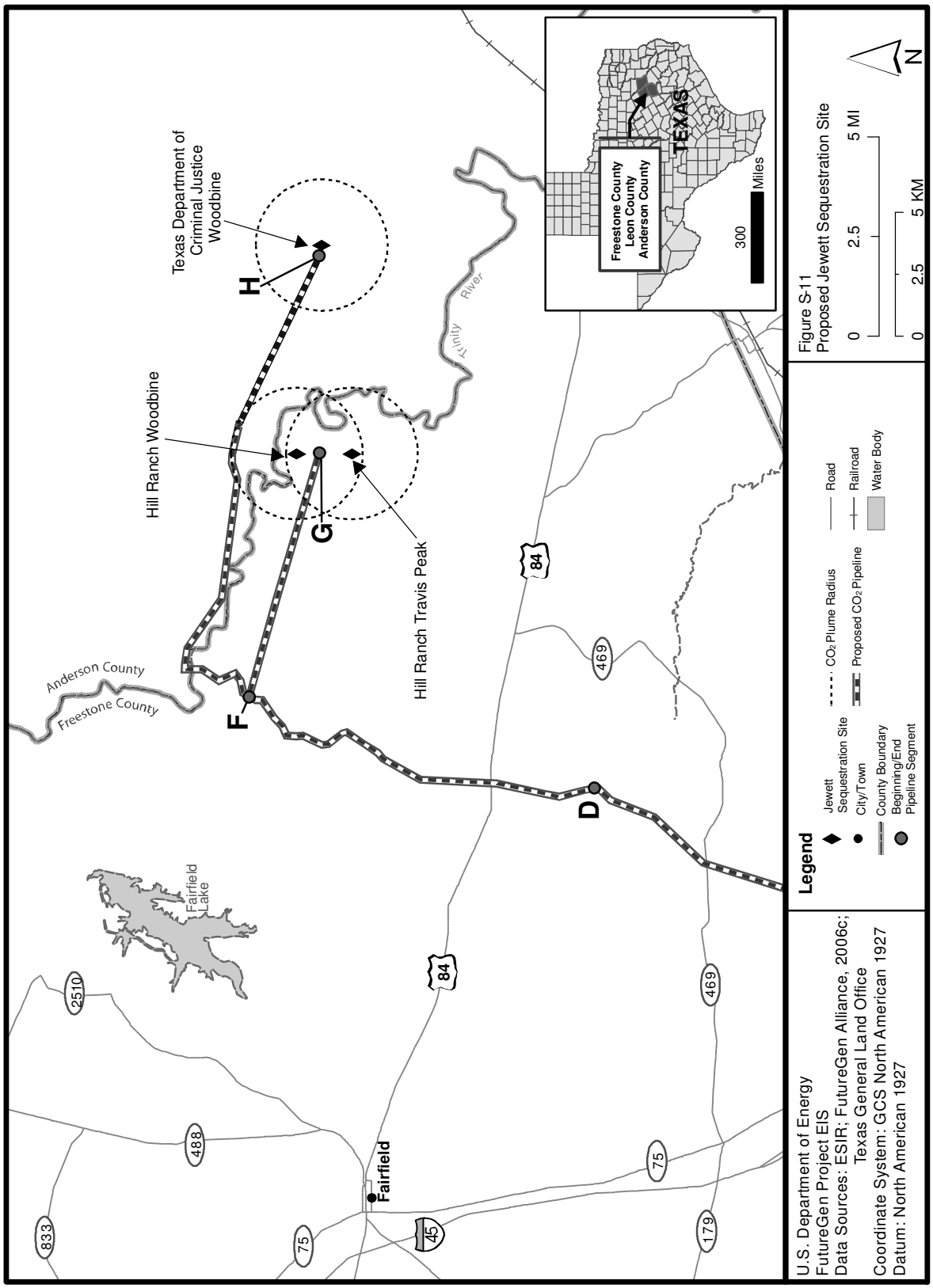
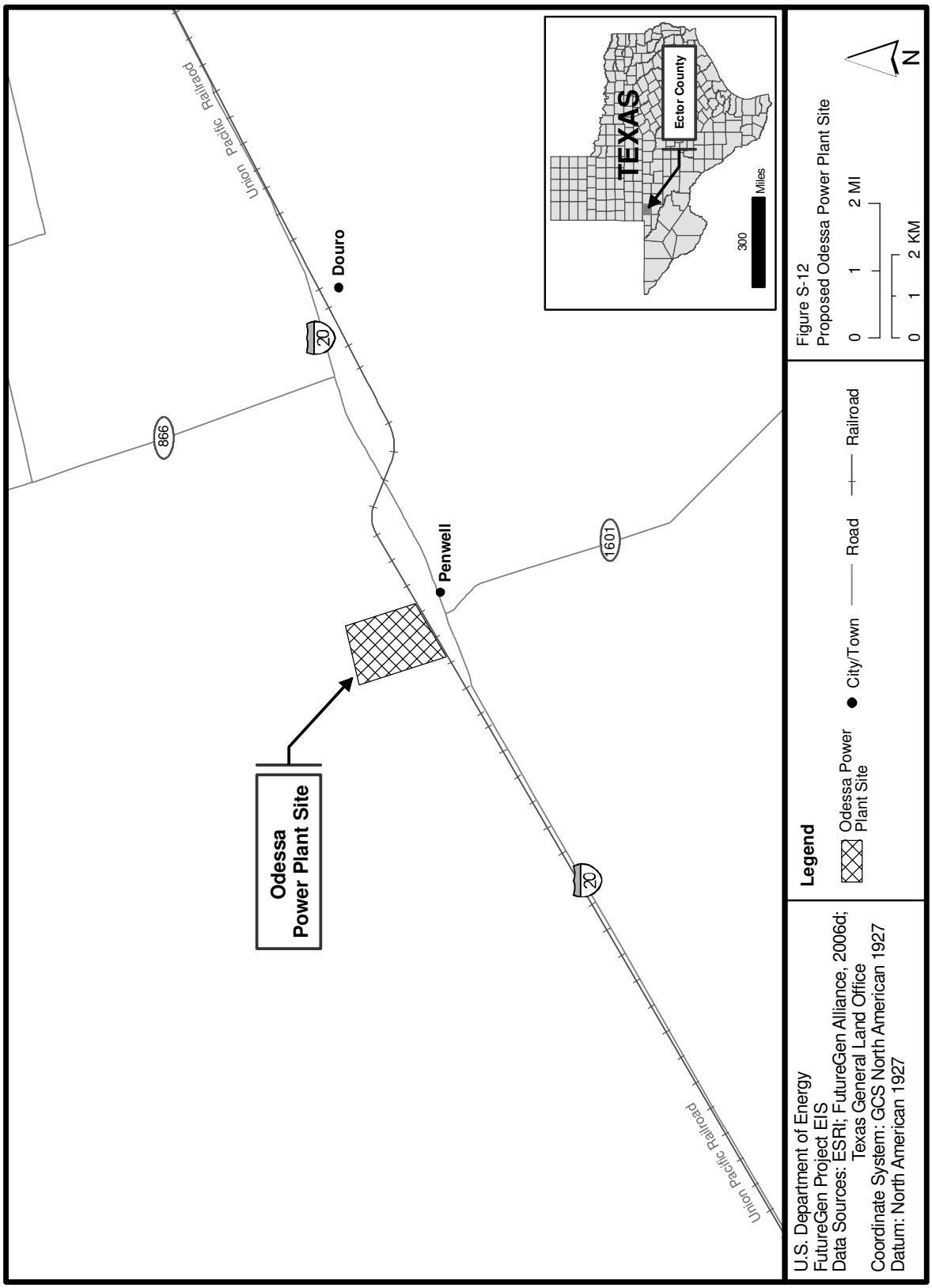
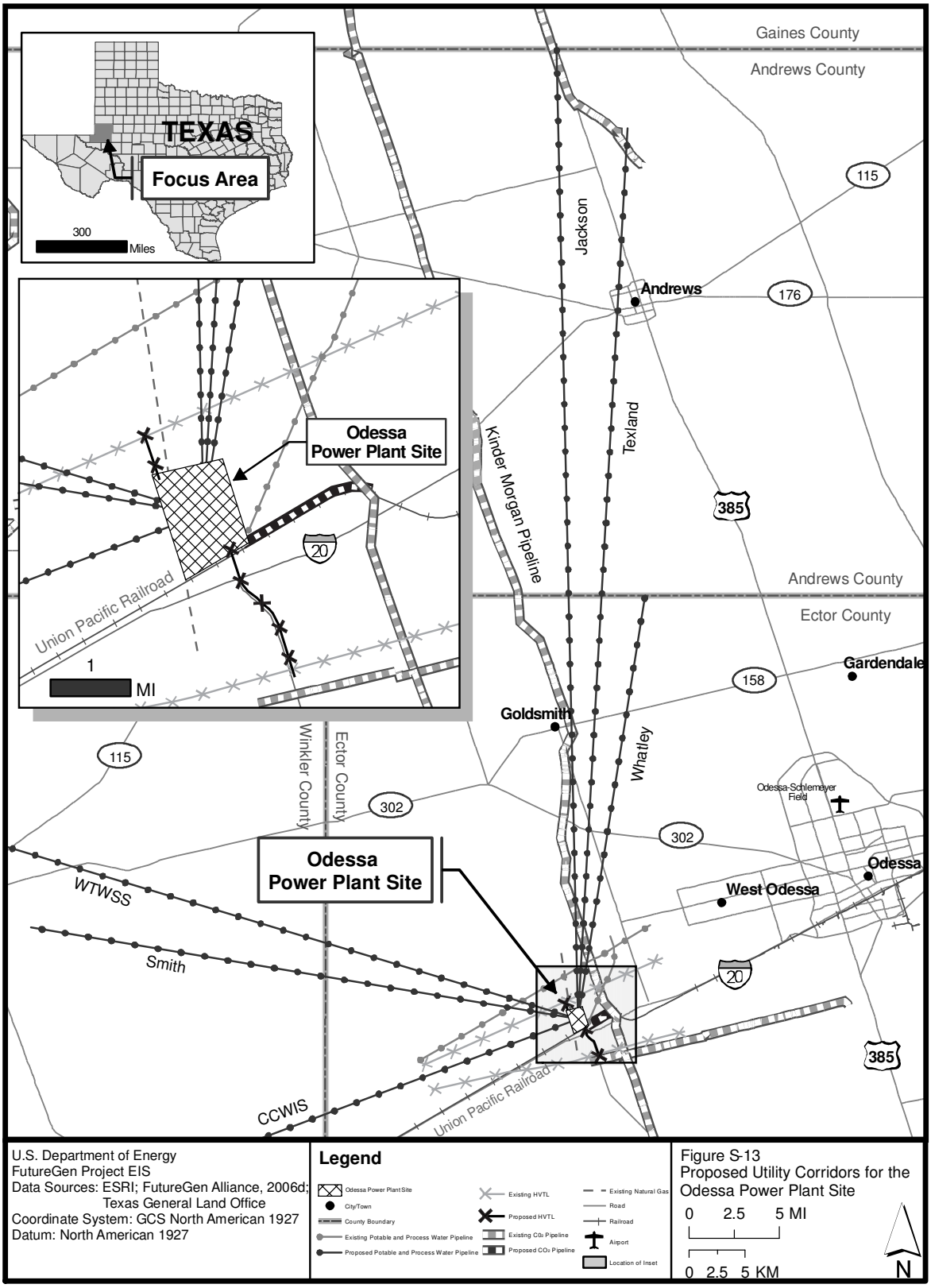


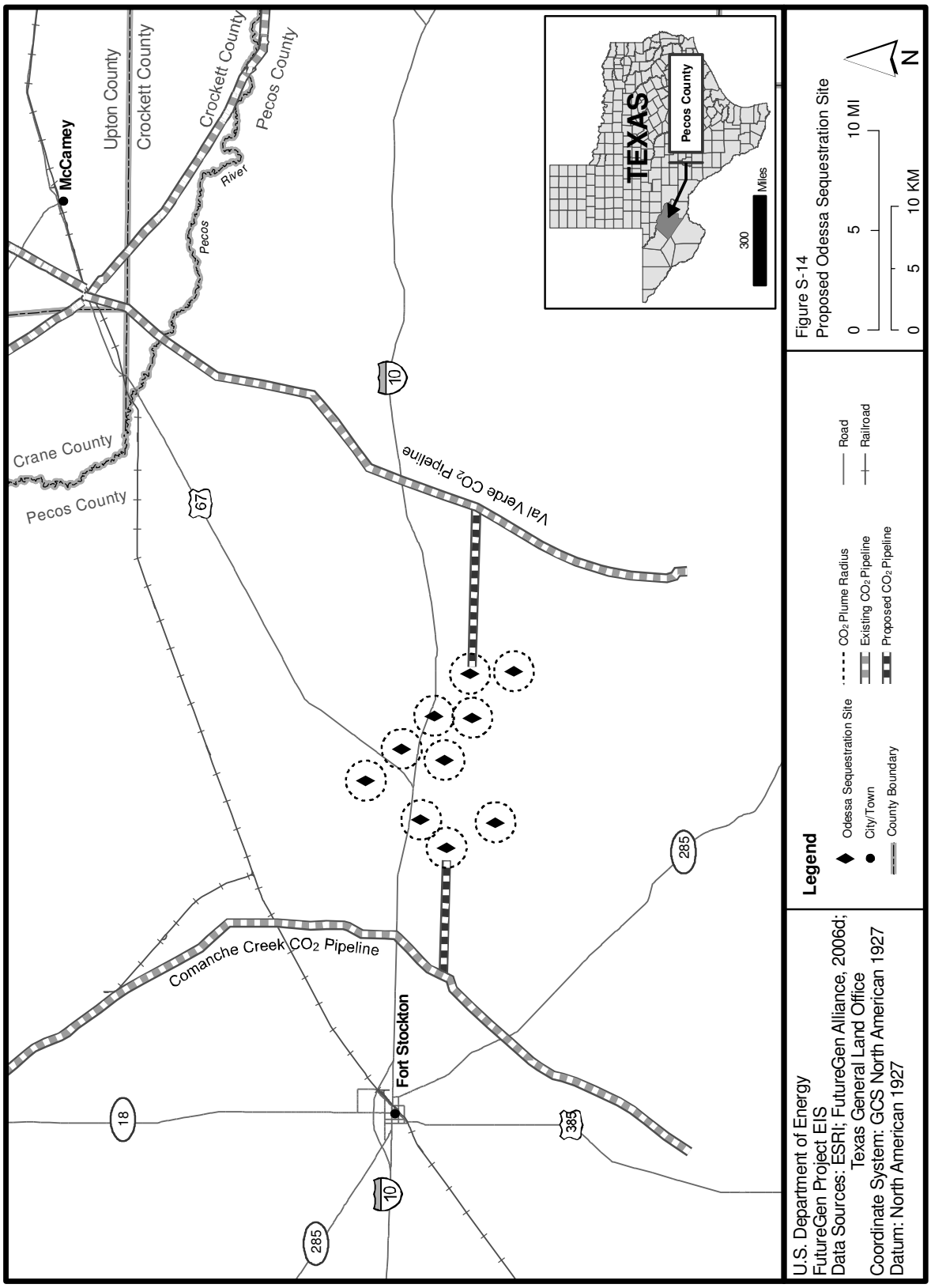
Figure S-8
Proposed Tuscola Sequestration Site

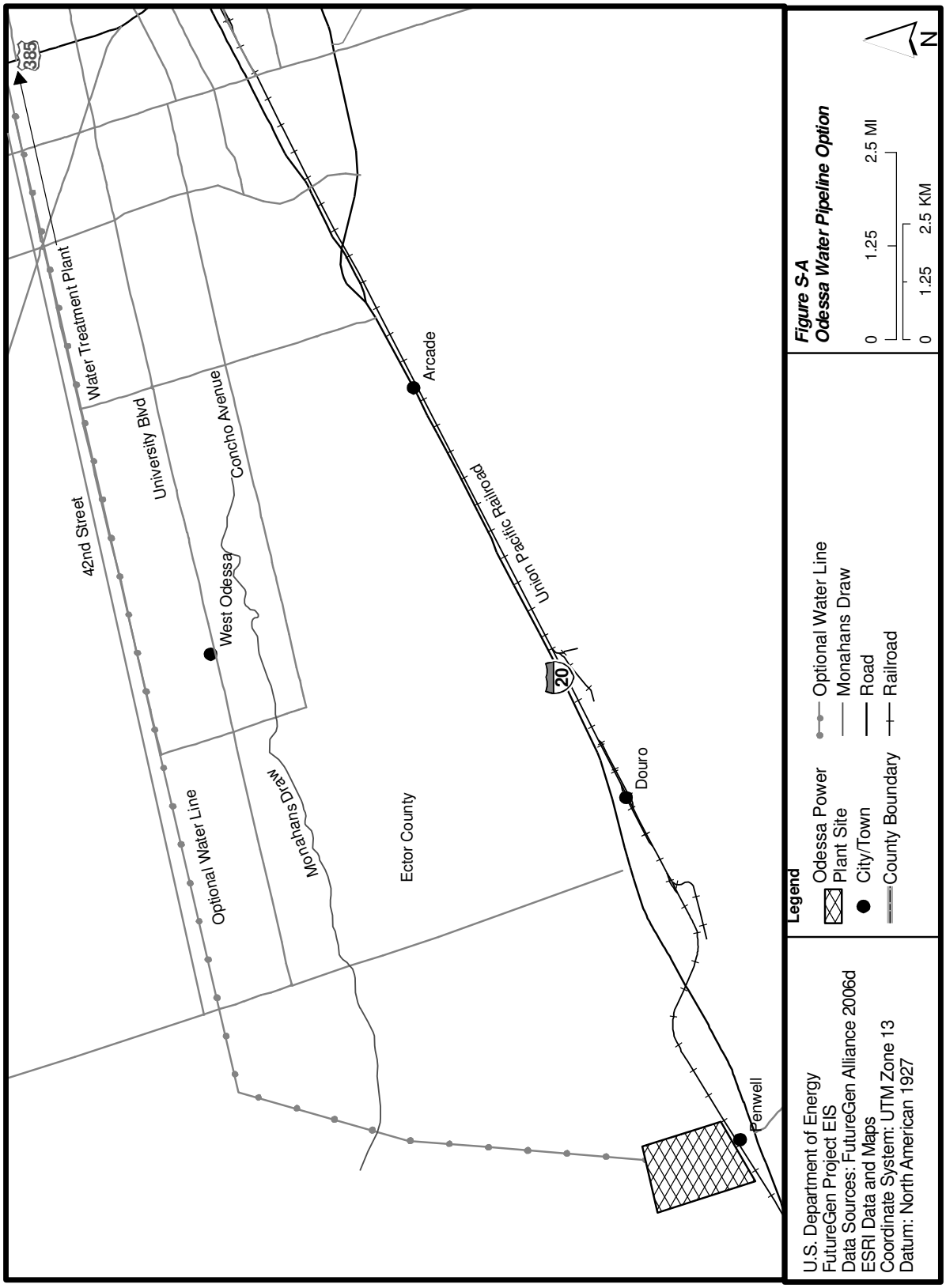

Jewett Power Plant Site
NRG Limestone Generating Station Power Plant
Lake Limestone
Freestone County
Limestone County
Leon County
Freestone County
Burlington Northern Railroad
Missouri Pacific Railroad
Wilsons Chapel Cemetery
Freestone
Donie
Buffalo
Jewett
A
B
C
179
164
45
75
79
39
1512
TEXAS
Freestone County
Leon County
Limestone County
300
Miles
Legend
Jewett Power Plant Site
City/Town
County Boundary
Beginning/End Pipeline Segment
Existing Process Water Pipeline
Proposed Process Water Pipeline
Existing HVTL
Existing Natural Gas
Proposed CO2 Pipeline
Road
Railroad
Water Body
NRG Limestone Generating Station
Cemetery
U.S. Department of Energy
FutureGen Project EIS
Data Sources: FutureGen Alliance, 2006c; Texas General Land Office; ESRI
Coordinate System: GCS North American 1927
Datum: North American 1927
Figure S-10
Proposed Corridors for the Jewett Power Plant Site
0 2.5 5 MI
0 2.5 5 KM
N

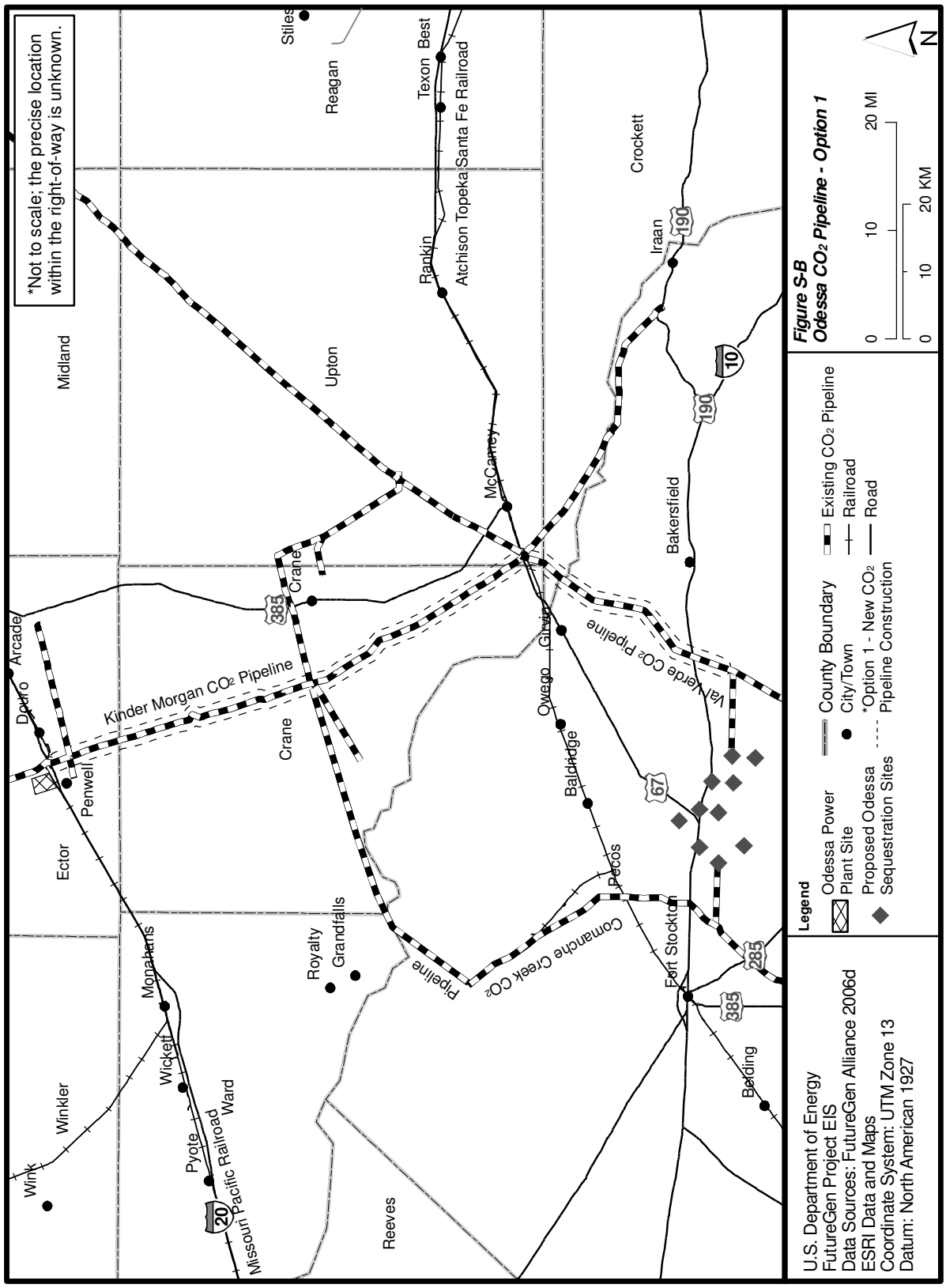

Texas Department of Criminal Justice Woodbine
H
Hill Ranch Woodbine
G
F
Hill Ranch Travis Peak
Trinity River
Anderson County
Freestone County
Fairfield Lake
Fairfield
D
84
469
2510
488
833
75
45
179
Freestone County
Leon County
Anderson County
TEXAS
300
Miles
Legend
Jewett Sequestration Site
City/Town
County Boundary
Beginning/End Pipeline Segment
CO2 Plume Radius
Proposed CO2 Pipeline
Road
Railroad
Water Body
Figure S-11
Proposed Jewett Sequestration Site
0
2.5
5 MI
0
2.5
5 KM
N
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESIR; FutureGen Alliance, 2006c; Texas General Land Office
Coordinate System: GCS North American 1927
Datum: North American 1927

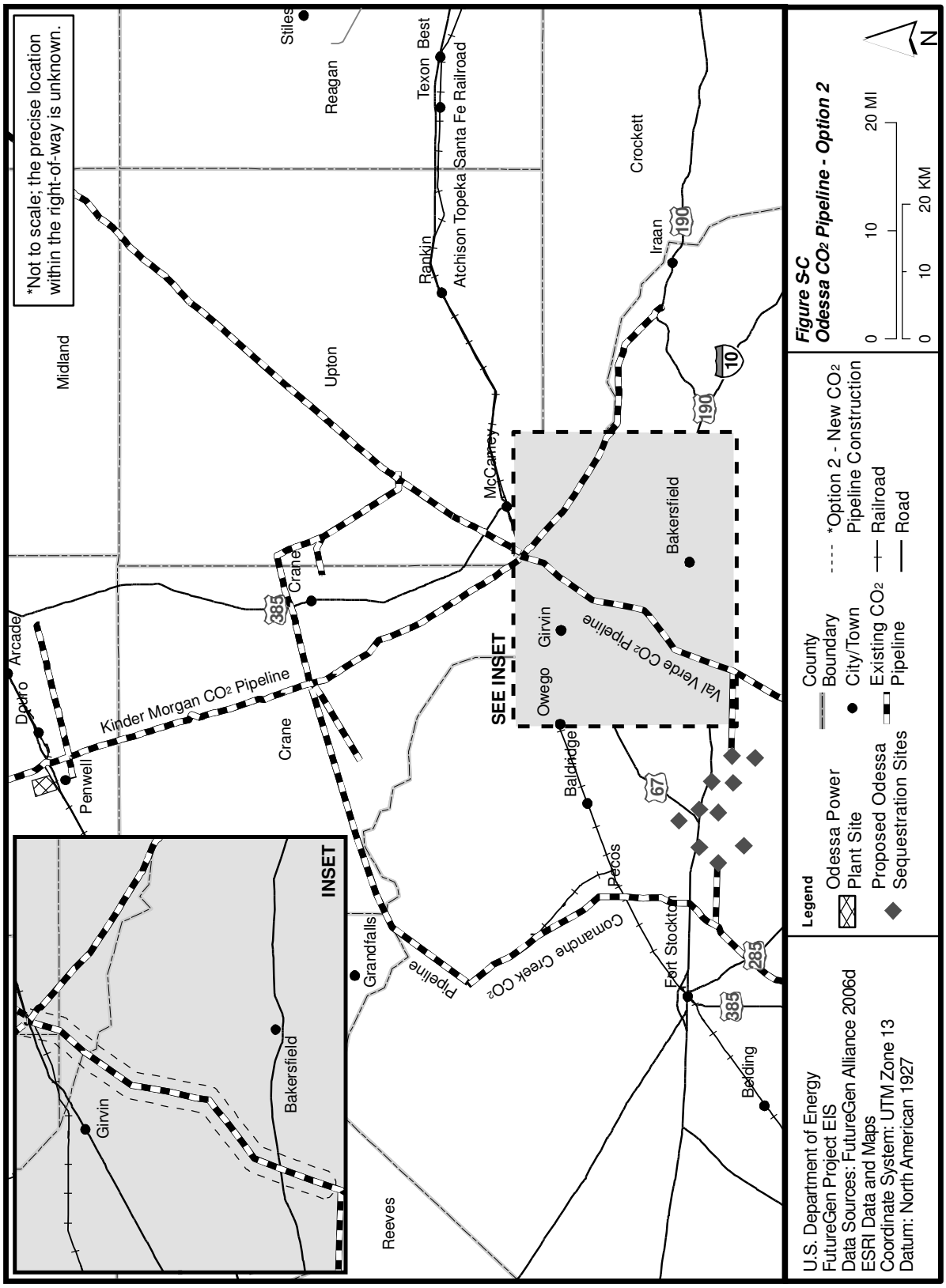

Odessa
Power Plant Site
Douro
Penwell
Union Pacific Railroad
Union Pacific Railroad
866
20
20
1601
TEXAS
Ector County
300
Miles
Legend
Odessa Power Plant Site
City/Town
Road
Railroad
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006d; Texas General Land Office
Coordinate System: GCS North American 1927
Datum: North American 1927
Figure S-12
Proposed Odessa Power Plant Site
0 1 2 MI
0 1 2 KM
N

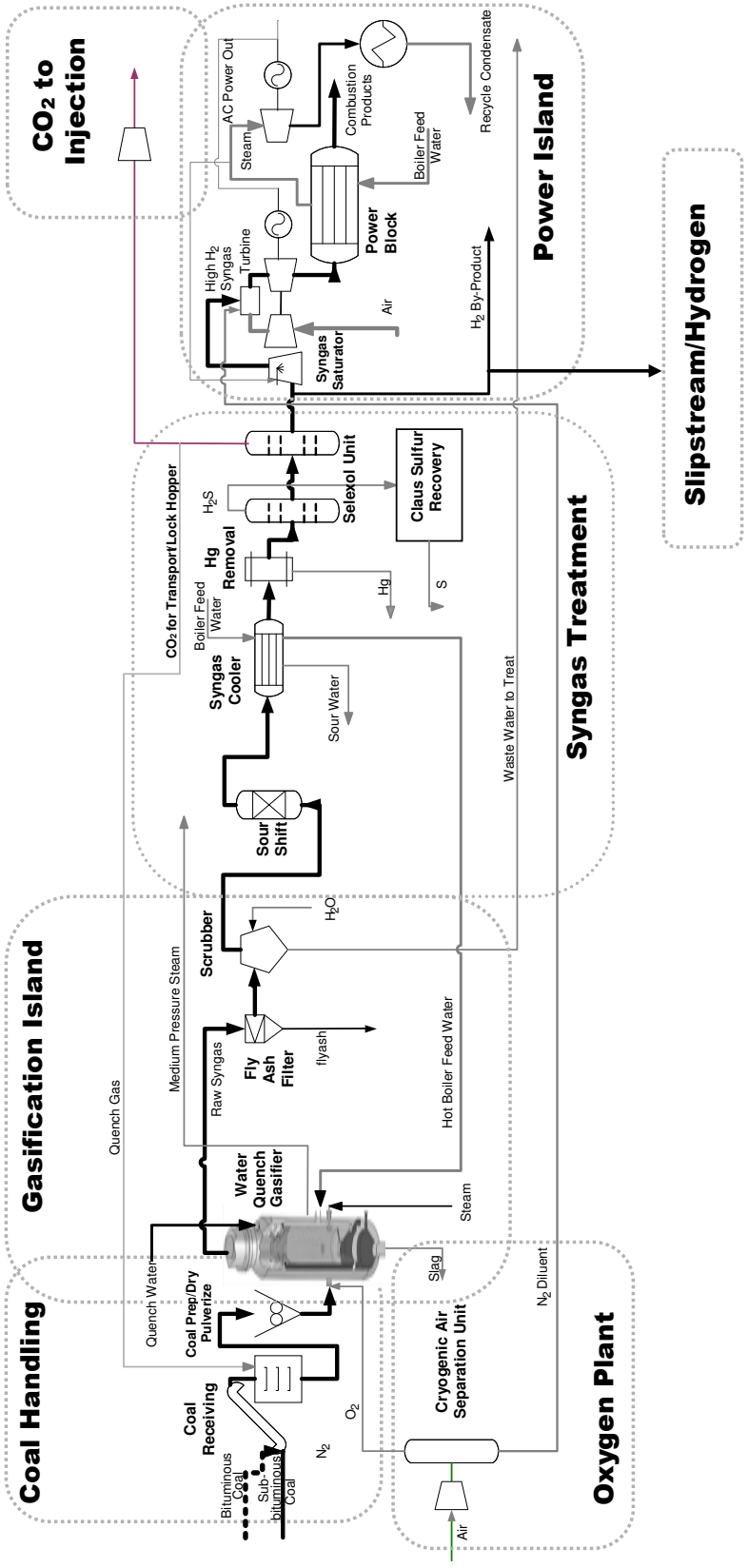

TEXAS
Focus Area
300
Miles
Gaines County
Andrews County
Andrews
115
176
Jackson
Texland
Kinder Morgan Pipeline
385
Odessa
Power Plant Site
20
Union Pacific Railroad
1
MI
Andrews County
Ector County
Gardendale
158
Goldsmith
Whatley
Winkler County
Ector County
115
302
Odessa-Schlemeyer Field
Odessa
West Odessa
WTWSS
Smith
CCWIS
Union Pacific Railroad
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006d; Texas General Land Office
Coordinate System: GCS North American 1927
Datum: North American 1927
Legend
Odessa Power Plant Site
City/Town
County Boundary
Existing Potable and Process Water Pipeline
Proposed Potable and Process Water Pipeline
Existing HVTL
Proposed HVTL
Existing CO2 Pipeline
Proposed CO2 Pipeline
Existing Natural Gas
Road
Railroad
Airport
Location of Inset
Figure S-13
Proposed Utility Corridors for the Odessa Power Plant Site
0 2.5 5 MI
0 2.5 5 KM
N


McCamey
Upton County
Crockett County
Crockett County
Pecos County
Pecos River
Crane County
Pecos County
Comanche Creek CO_2 Pipeline
Val Verde CO_2 Pipeline
Fort Stockton
TEXAS
Pecos County
300
Miles
Legend
Odessa Sequestration Site
City/Town
County Boundary
CO_2 Plume Radius
Existing CO_2 Pipeline
Proposed CO_2 Pipeline
Road
Railroad
Figure S-14
Proposed Odessa Sequestration Site
0 5 10 MI
0 5 10 KM
N
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006d; Texas General Land Office
Coordinate System: GCS North American 1927
Datum: North American 1927


385
20
42nd Street
Water Treatment Plant
University Blvd
Concho Avenue
West Odessa
Optional Water Line
Monahans Draw
Ector County
Union Pacific Railroad
Arcade
Douro
Penwell
Legend
Odessa Power Plant Site
City/Town
County Boundary
Optional Water Line
Monahans Draw
Road
Railroad
U.S. Department of Energy
FutureGen Project EIS
Data Sources: FutureGen Alliance 2006d
ESRI Data and Maps
Coordinate System: UTM Zone 13
Datum: North American 1927
Figure S-A
Odessa Water Pipeline Option
0 1.25 2.5 MI
0 1.25 2.5 KM
N

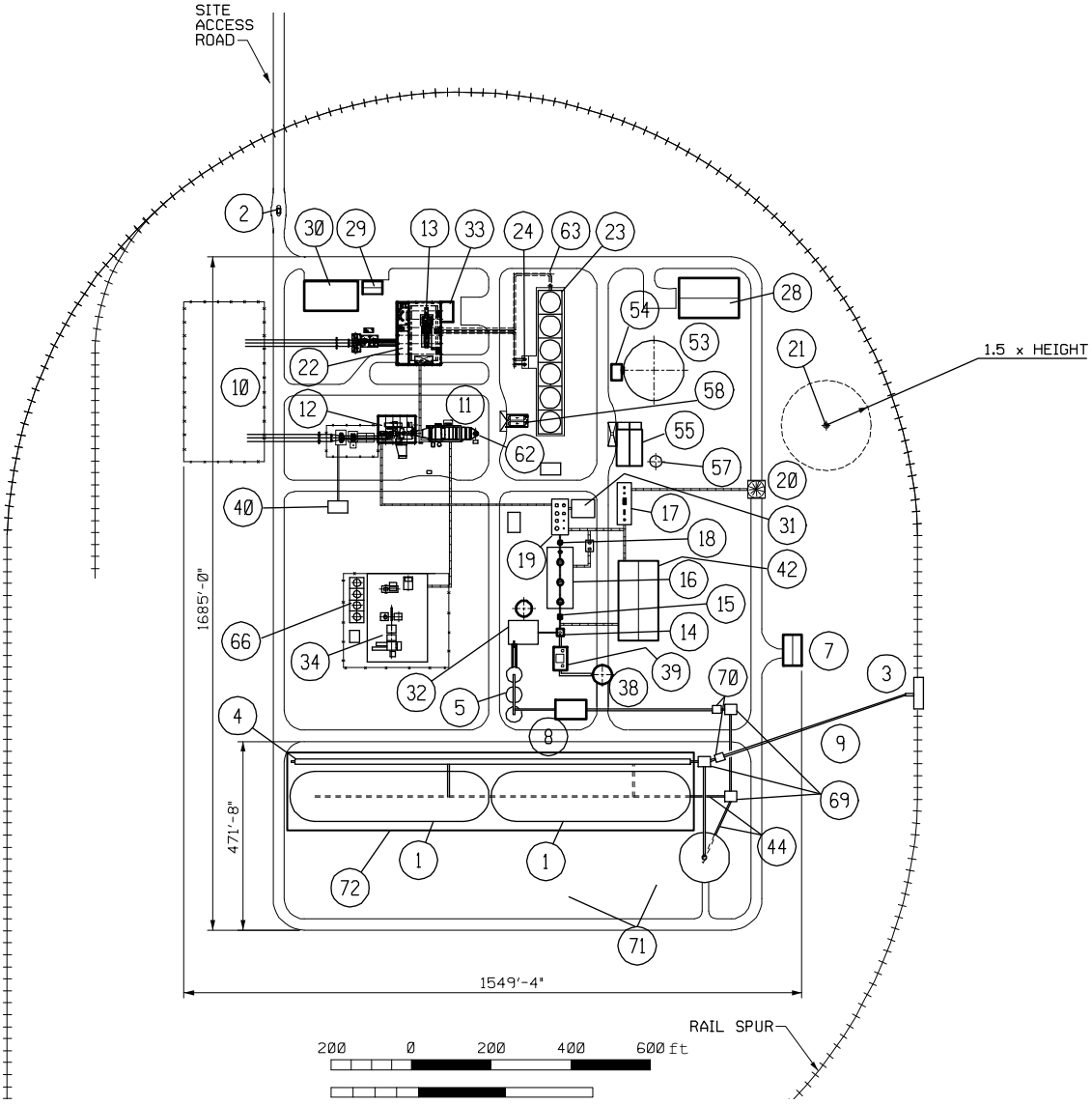

*Not to scale; the precise location within the right-of-way is unknown.
Midland
Upton
Reagan
Stiles
Texon
Best
Rankin
Atchison Topeka Santa Fe Railroad
Crockett
Iraan
190
10
McCamey
Bakersfield
Crane
385
Arcade
Dorro
Penwell
Ector
Kinder Morgan CO2 Pipeline
Crane
Owego
Girvin
Baldridge
Van Horn Trail CO2 Pipeline
67
Pecos
Fort Stockton
285
Comanche Creek CO2 Pipeline
Monahans
Wicket
Pyote
Ward
Missouri Pacific Railroad
20
Wink
Winkler
Royalty
Grandfalls
Reeves
Berding
Legend
Odessa Power Plant Site
Proposed Odessa Sequestration Sites
County Boundary
City/Town
*Option 1 - New CO2 Pipeline Construction
Existing CO2 Pipeline
Railroad
Road
U.S. Department of Energy
FutureGen Project EIS
Data Sources: FutureGen Alliance 2006d
ESRI Data and Maps
Coordinate System: UTM Zone 13
Datum: North American 1927
Figure S-B
Odessa CO2 Pipeline - Option 1
0
10
20 MI
0
10
20 KM
N


*Not to scale; the precise location within the right-of-way is unknown.
Midland
Upton
Reagan
Crockett
Stiles
Texon
Best
Rankin
Atchison Topeka Santa Fe Railroad
Iraan
McCamey
Bakersfield
Girvin
Owego
Val Verde CO2 Pipeline
SEE INSET
Arcade
Dorro
Penwell
Crane
Kinder Morgan CO2 Pipeline
Baldridge
Pecos
Fort Stockton
Comanche Creek CO2 Pipeline
Grandfalls
Reeves
Berding
INSET
Legend
Odessa Power Plant Site
Proposed Odessa Sequestration Sites
County Boundary
City/Town
Existing CO2 Pipeline
*Option 2 - New CO2 Pipeline Construction
Railroad
Road
Figure S-C
Odessa CO2 Pipeline - Option 2
0 10 20 MI
0 10 20 KM
N
U.S. Department of Energy
FutureGen Project EIS
Data Sources: FutureGen Alliance 2006d
ESRI Data and Maps
Coordinate System: UTM Zone 13
Datum: North American 1927



AC = Alternating current
Source: Adapted from FG Alliance, 2007*b*.

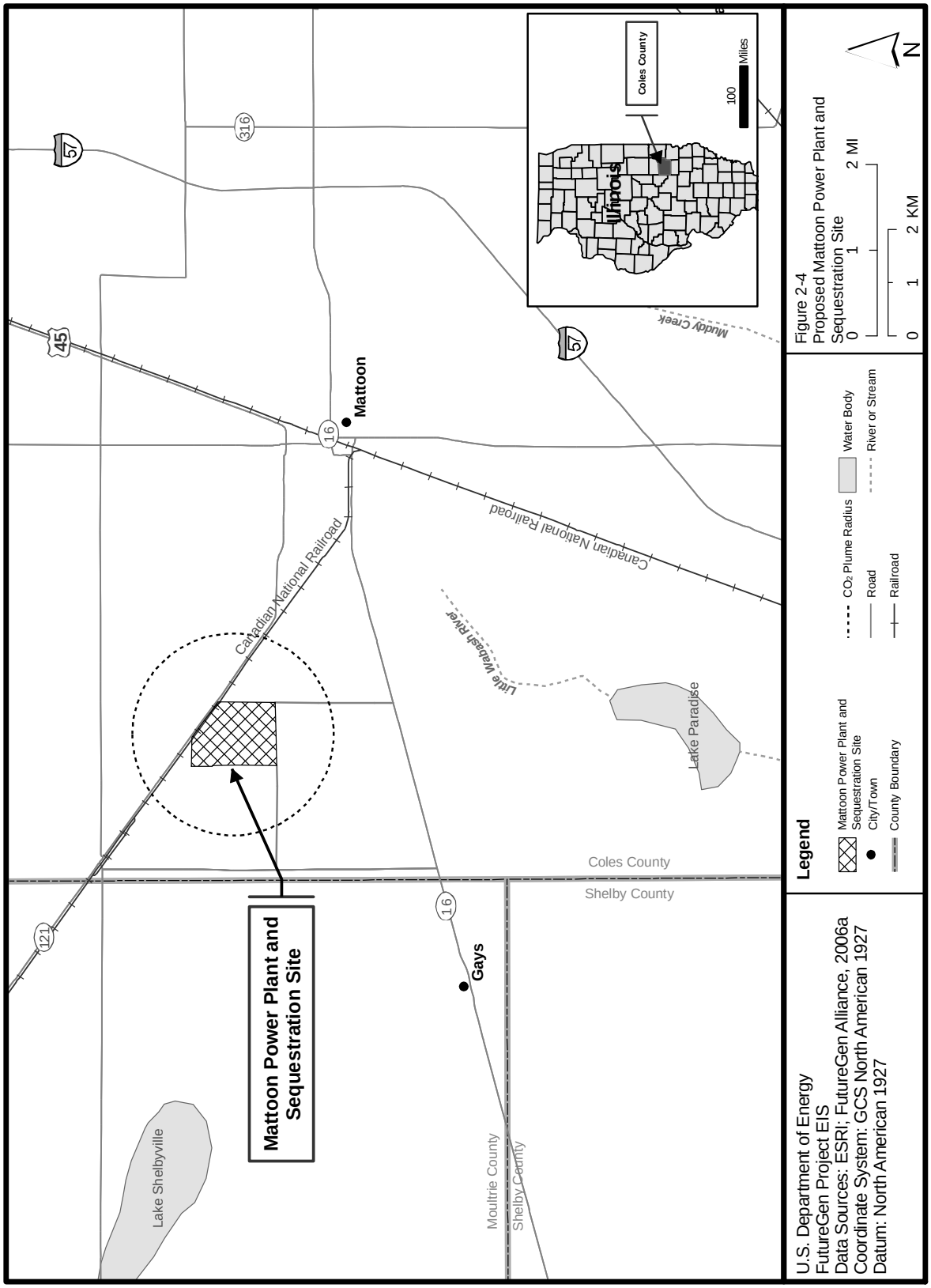
Figure S-16. Block Diagram of and Example Design for the FutureGen Power Plant

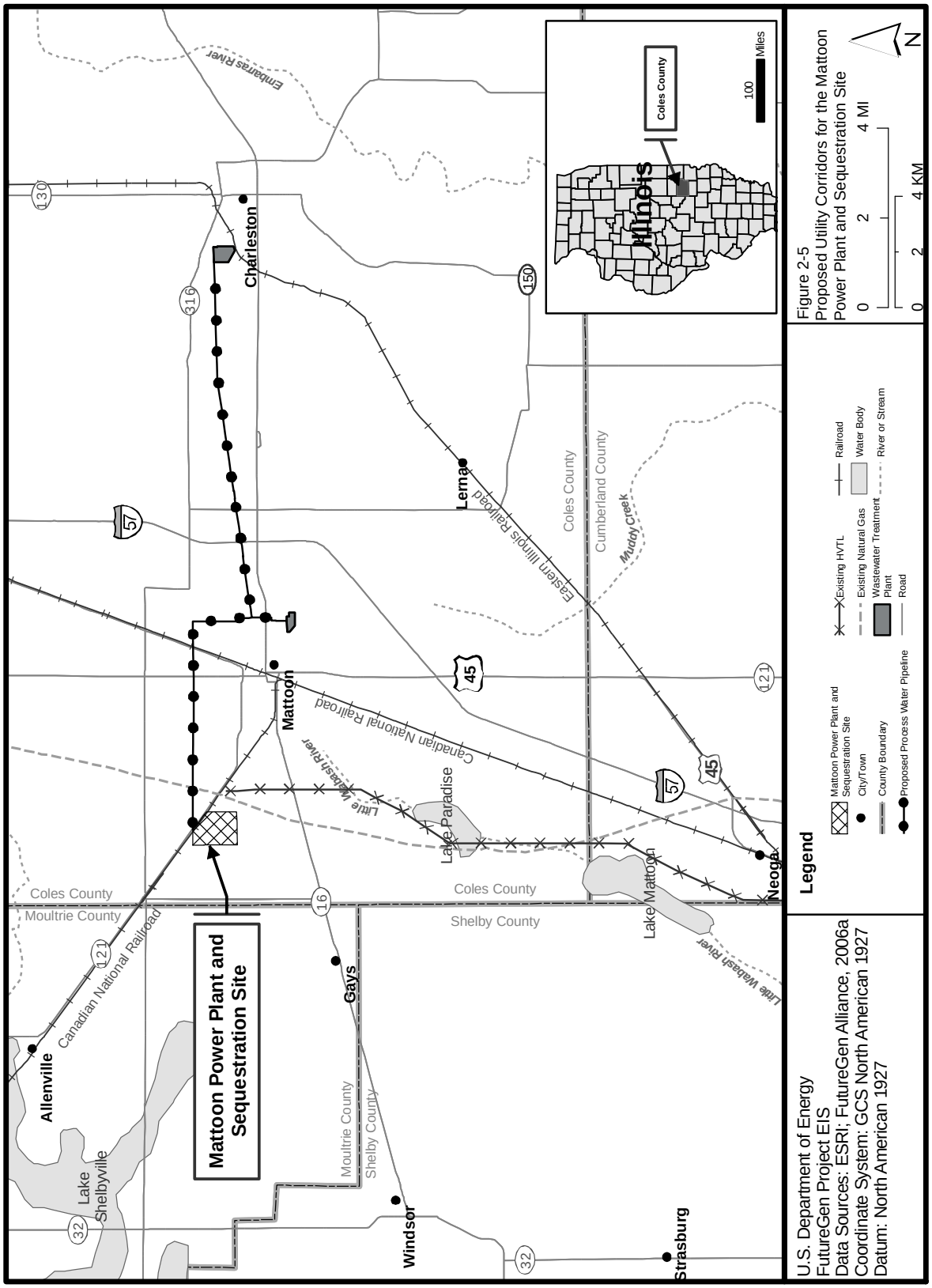


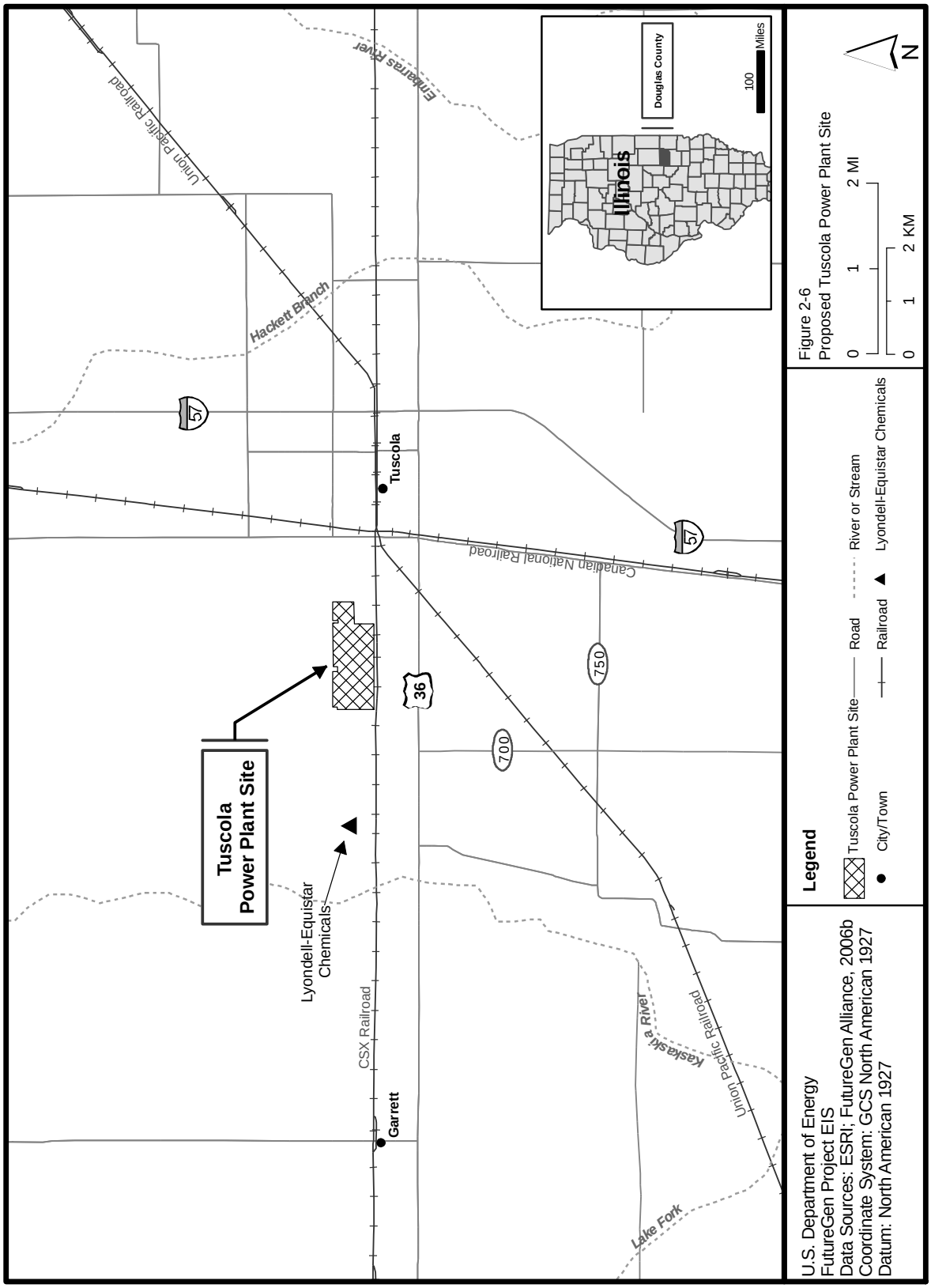
1. COAL STORAGE
2. GUARD HOUSE
3. COAL RECEIVING
4. COAL TRAVELING STACKER
5. COAL STORAGE BINS
6. UTILITY BRIDGE*
7. VEHICLE MAINTENANCE GARAGE
8. CRUSHER BUILDING
9. BELT CONVEYORS
10. SWITCHYARD
11. HEAT RECOVERY STEAM GENERATOR
12. COMBUSTION TURBINE
13. STEAM TURBINE GENERATOR
14. GASIFIER
15. GAS SCRUBBER
16. SHIFT REACTION SECTION
17. CLAUS PLANT
18. MERCURY REMOVAL
19. ACID GAS REMOVAL
20. SULFUR STORAGE
21. FLARE STACK
22. ELECTRICAL ROOM
23. COOLING TOWER
24. CIRCULATING WATER PUMPS
28. WAREHOUSE
29. ADMINISTRATION BUILDING
30. VISITORS CENTER
31. CO_2 COMPRESSION
32. SLURRY PREPARATION
33. WORKSHOP AND STORES
34. AIR SEPARATION UNIT
38. SLAG SILO
39. SLAG PROCESSING AREA AND WATER HANDLING
40. ASU ELECTRICAL BUILDING
41. COAL ELECTRICAL BUILDING*
42. RESEARCH AND DEVELOPMENT FACILITY
43. SOUR WATER STRIPPERS*
44. RECLAIM CONVEYORS
46. EMERGENCY DIESEL GENERATOR*
47. CONTINUOUS EMISSIONS MONITORING SYSTEM ENCLOSURE*
48. CONTROL ROOM*
49. AUXILIARY TRANSFORMERS*
50. STEAM TURBINE GENERATOR STEP UP TRANSFORMER*
51. GENERATOR CIRCUIT BREAKER*
52. COMBUSTION TURBINE GENERATOR STEP UP TRANSFORMER*
53. FIRE SERVICE WATER TANK
54. FIRE SERVICE WATER PUMP HOUSE
55. WATER TREATMENT FACILITY
56. CHEMICAL TRUCK UNLOADING*
57. DEMINERALIZED WATER TANK
58. AMMONIA STORAGE TANKS AND PUMPS
59. AMMONIA UNLOADING AREA*
60. SELECTIVE CATALYTIC REDUCTION SKID*
61. AIR INLET FILTER*
62. STACK
63. CIRCULATING WATER PIPING
64. SLURRY STORAGE TANK*
65. CHEMICAL TREATMENT SKID*
66. ASU COOLING TOWER
69. TRANSFER BUILDING
70. SAMPLE SYSTEM
71. EMERGENCY COAL PILE
72. COAL PILE ENCLOSURE

* = Not shown in figure.
Note: Figure is an example of a typical power plant configuration; however, all components of the typical configuration would not be included in the proposed FutureGen facility. Consecutive numbers missing from the legend result from this difference.
Source: FG Alliance, 2007***b***.

Figure S-18. Example FutureGen Project Configuration


Mattoon Power Plant and Sequestration Site
Mattoon
Gays
Coles County
Shelby County
Moultrie County
Shelby County
Lake Shelbyville
Lake Paradise
Little Wabash River
Canadian National Railroad
Canadian National Railroad
Muddy Creek
Illinois
Coles County
100 Miles
Legend
Mattoon Power Plant and Sequestration Site
City/Town
County Boundary
CO2 Plume Radius
Road
Railroad
Water Body
River or Stream
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006a
Coordinate System: GCS North American 1927
Datum: North American 1927
Figure 2-4
Proposed Mattoon Power Plant and Sequestration Site
0 1 2 MI
0 1 2 KM
N


Mattoon Power Plant and Sequestration Site
Charleston
Mattoon
Lerna
Allenville
Gays
Windsor
Strasburg
Neoga
Lake Shelbyville
Lake Paradise
Lake Mattoon
Coles County
Moultrie County
Shelby County
Cumberland County
Canadian National Railroad
Eastern Illinois Railroad
Little Wabash River
Muddy Creek
Embarras River
Illinois
Coles County
100 Miles
Legend
Mattoon Power Plant and Sequestration Site
City/Town
County Boundary
Proposed Process Water Pipeline
Existing HVTL
Existing Natural Gas
Wastewater Treatment Plant
Road
Railroad
Water Body
River or Stream
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006a
Coordinate System: GCS North American 1927
Datum: North American 1927
Figure 2-5
Proposed Utility Corridors for the Mattoon Power Plant and Sequestration Site
0 2 4 MI
0 2 4 KM
N


Tuscola
Power Plant Site
Lyondell-Equistar
Chemicals
Tuscola
Garrett
Embarras River
Hackett Branch
Canadian National Railroad
Union Pacific Railroad
CSX Railroad
Kaskaskia River
Lake Fork
57
36
750
700
Illinois
Douglas County
100 Miles
N
Figure 2-6
Proposed Tuscola Power Plant Site
0 1 2 MI
0 1 2 KM
Legend
Tuscola Power Plant Site
Road
River or Stream
City/Town
Railroad
Lyondell-Equistar Chemicals
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006b
Coordinate System: GCS North American 1927
Datum: North American 1927

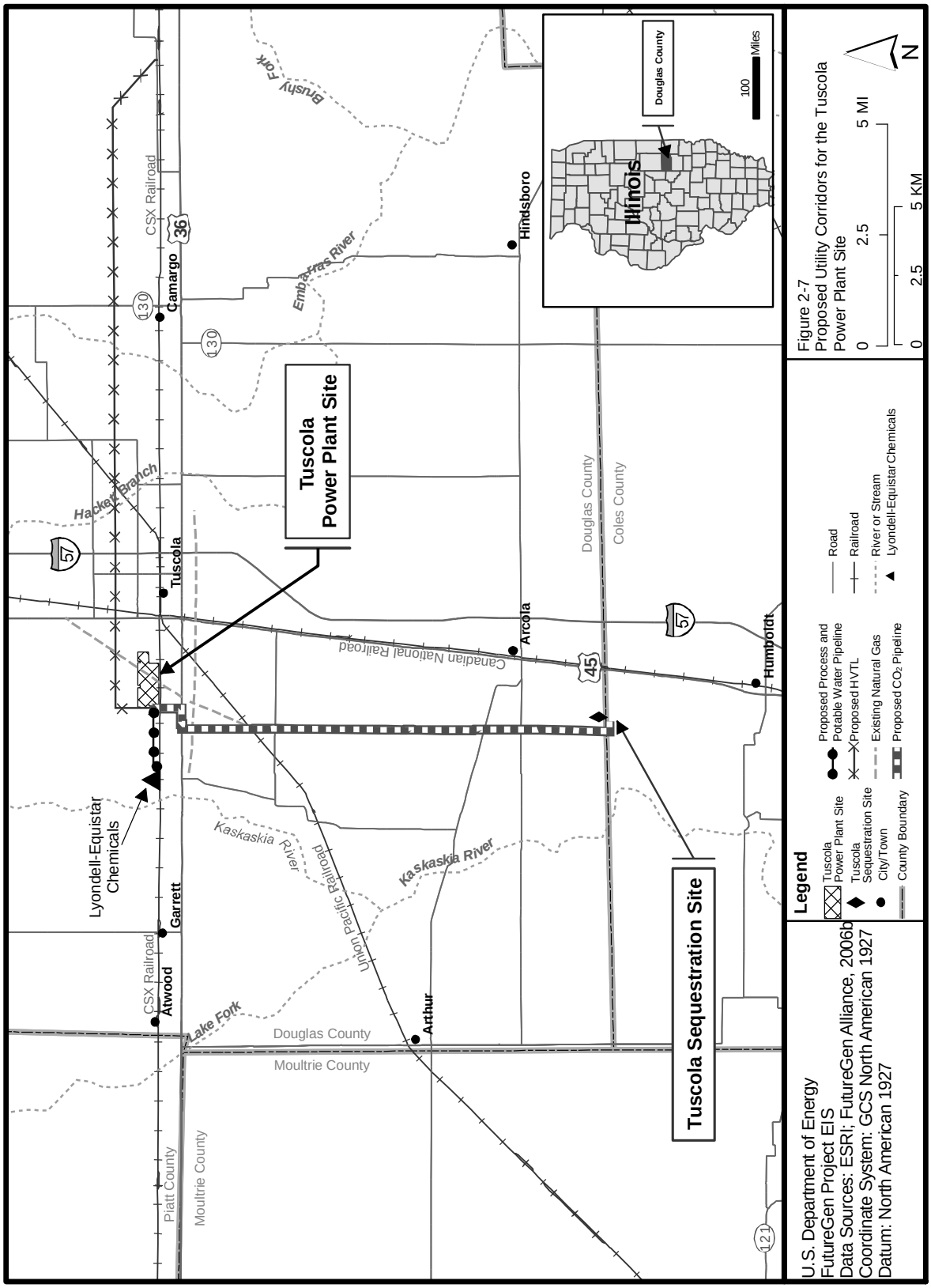


Figure 2-7
Proposed Utility Corridors for the Tuscola Power Plant Site

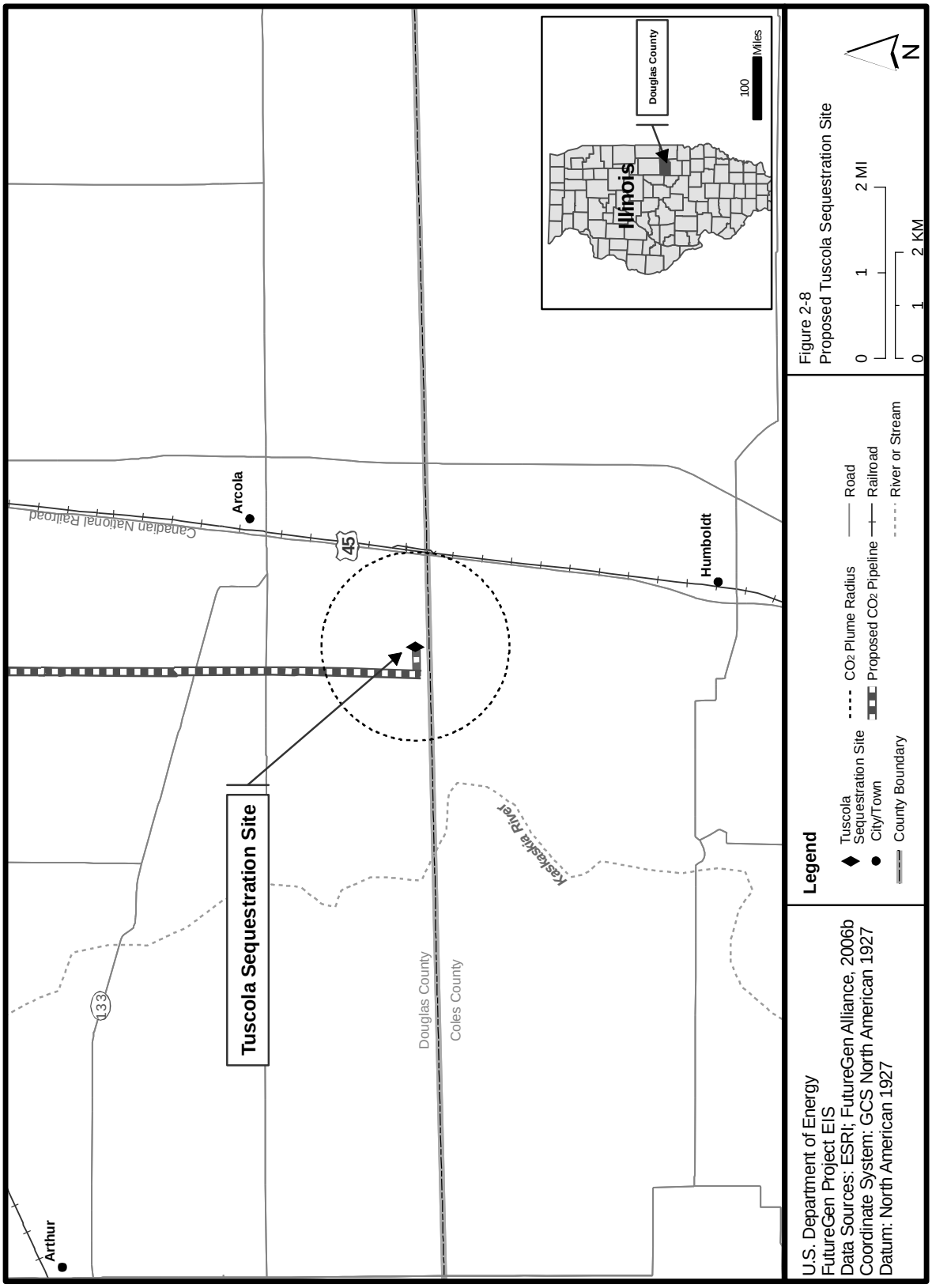
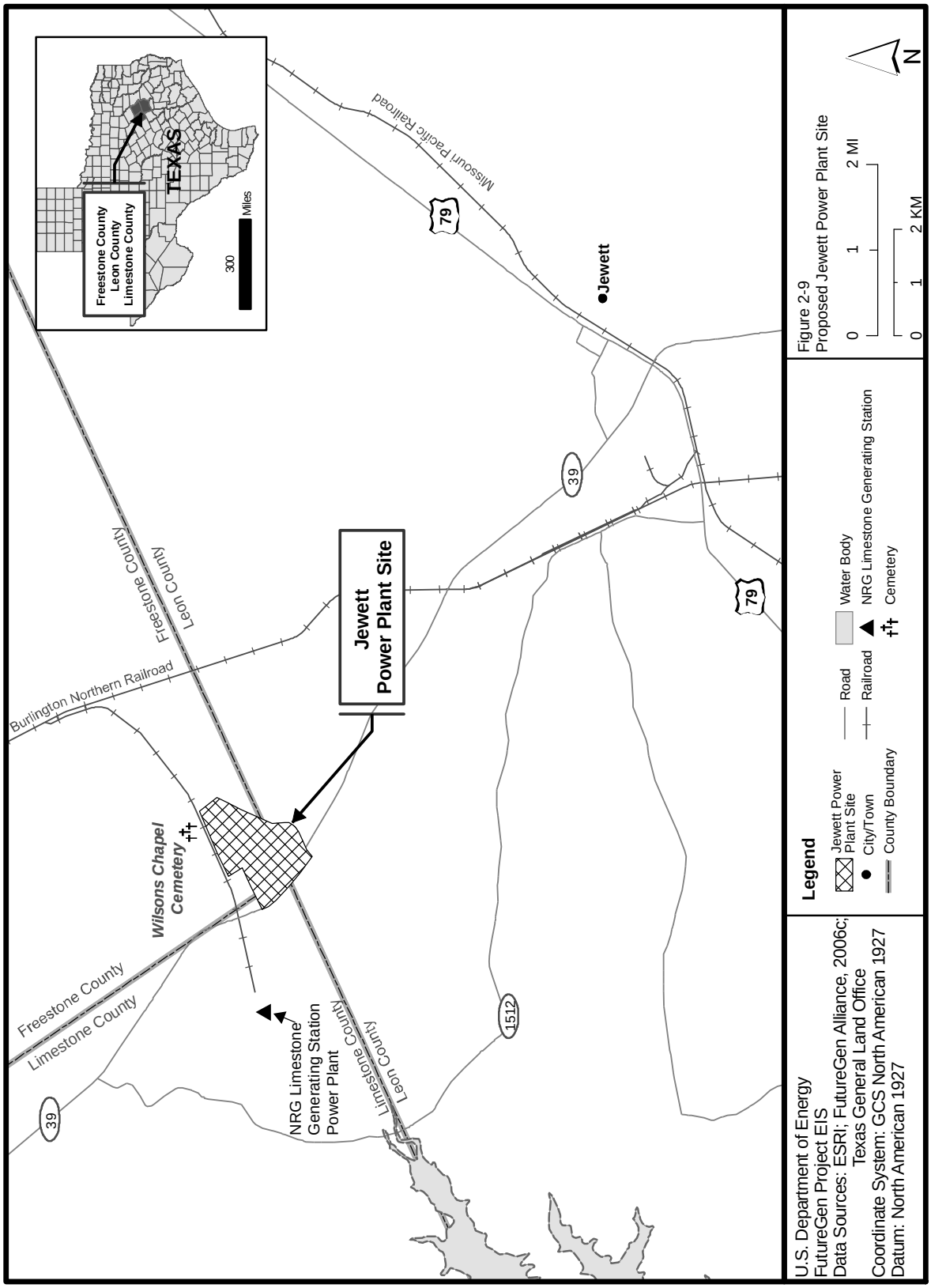
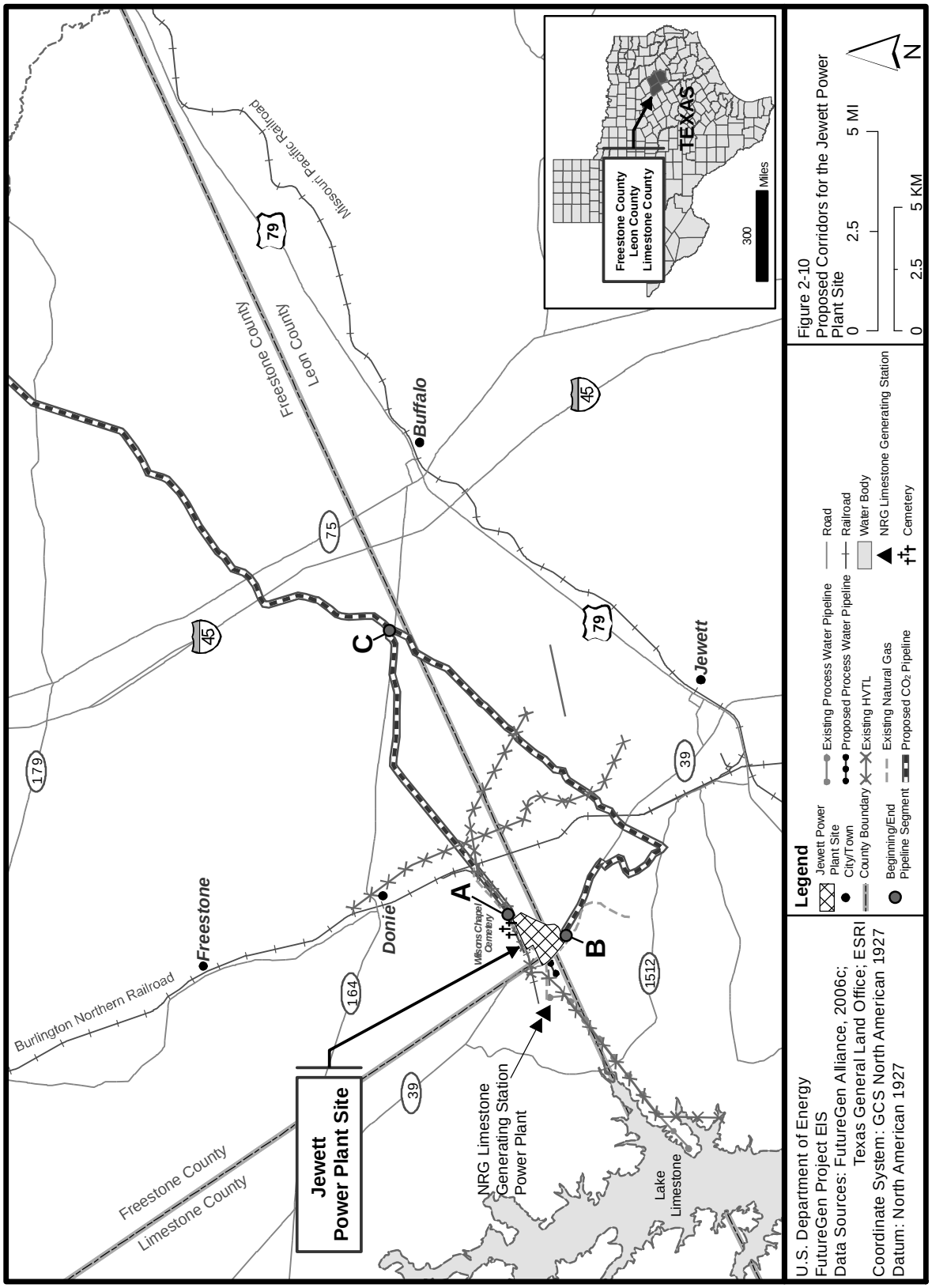
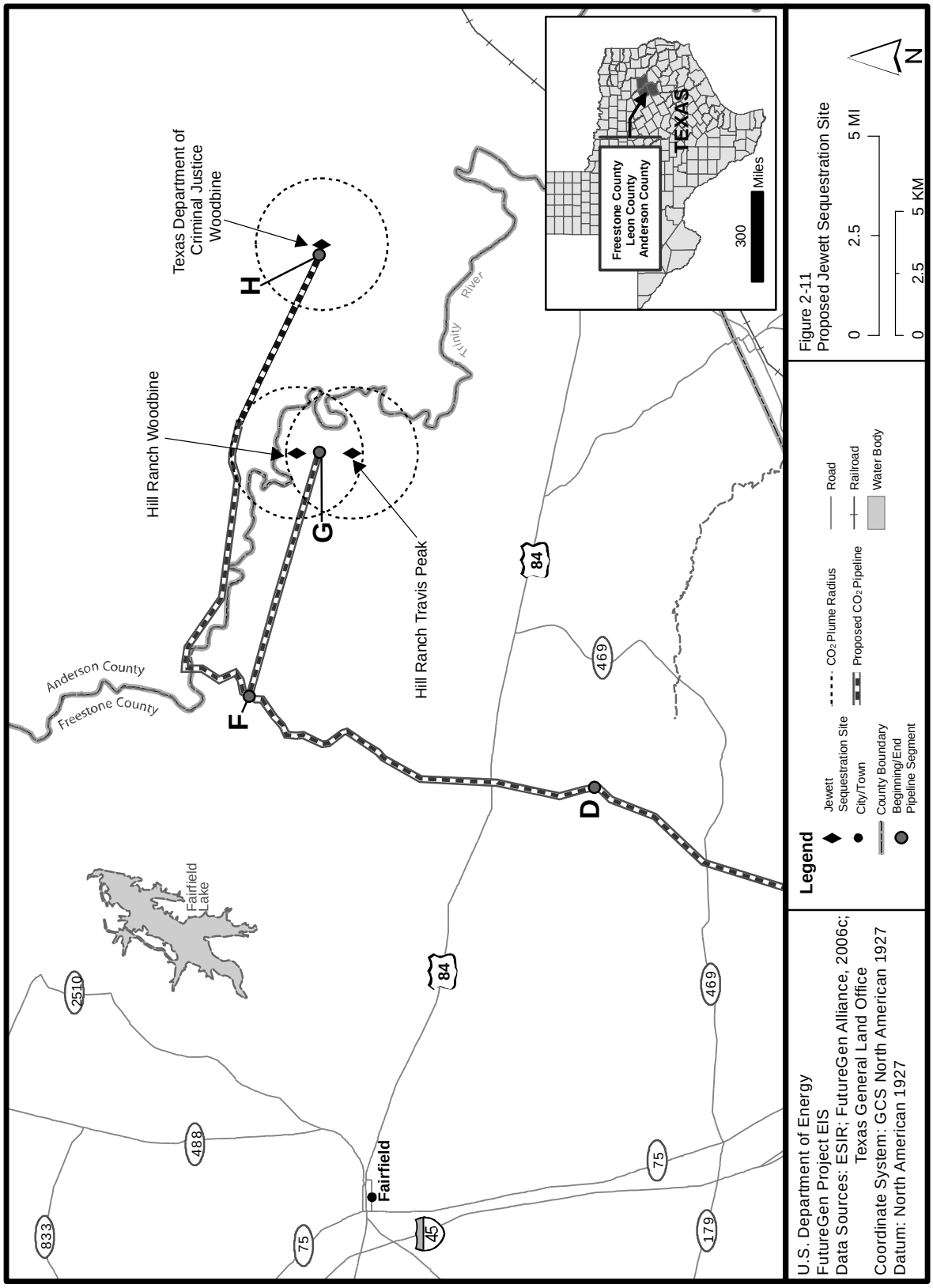
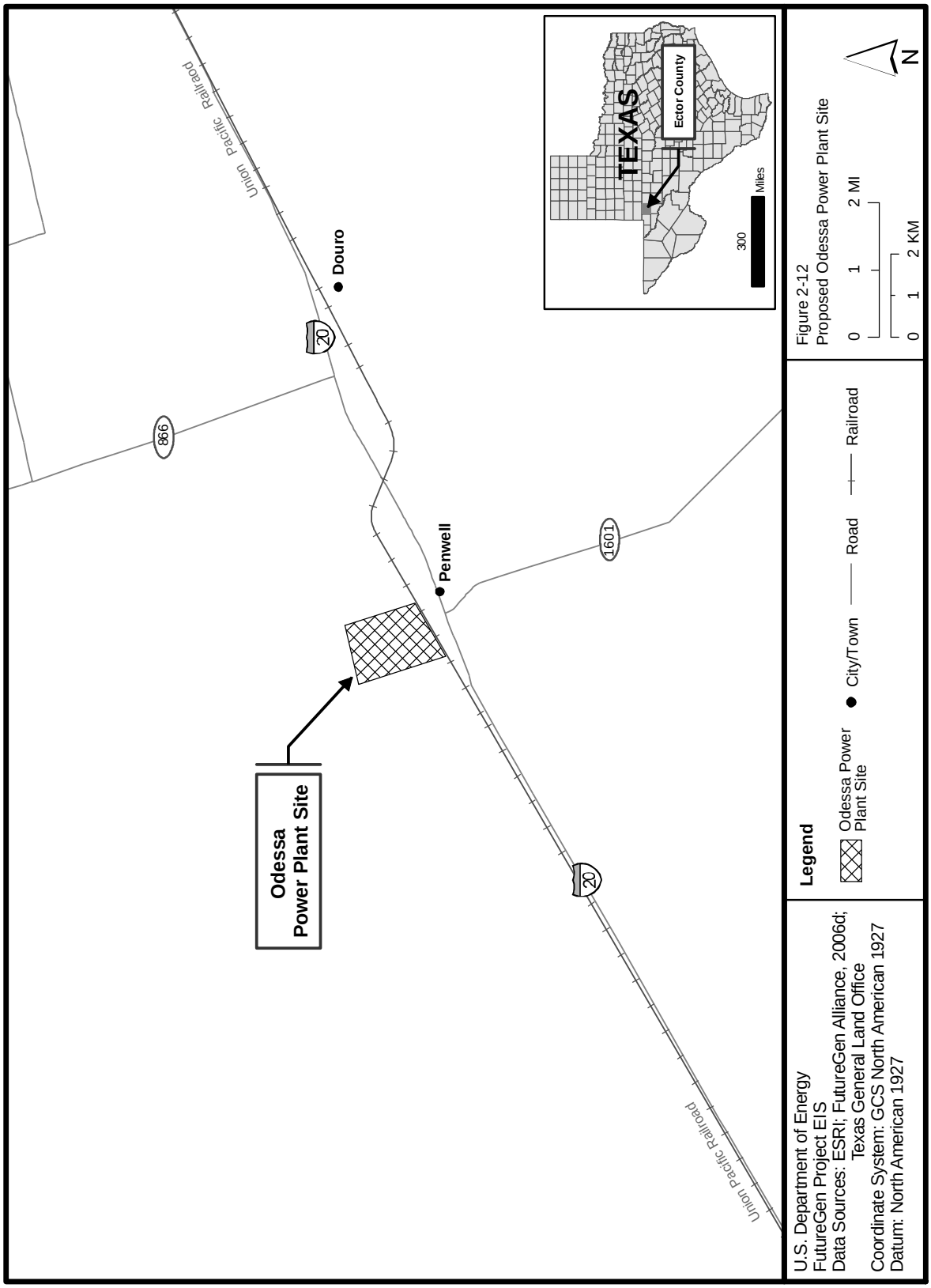


Figure 2-8
Proposed Tuscola Sequestration Site


Freestone County
Leon County
Limestone County
TEXAS
300
Miles
Missouri Pacific Railroad
79
Jewett
39
Jewett
Power Plant Site
Freestone County
Leon County
Burlington Northern Railroad
Wilsons Chapel
Cemetery
Freestone County
Limestone County
NRG Limestone
Generating Station
Power Plant
Limestone County
Leon County
1512
39
79
Legend
Jewett Power Plant Site
City/Town
County Boundary
Road
Railroad
Water Body
NRG Limestone Generating Station
Cemetery
Figure 2-9
Proposed Jewett Power Plant Site
0
1
2 MI
0
1
2 KM
N
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006c; Texas General Land Office
Coordinate System: GCS North American 1927
Datum: North American 1927


Jewett Power Plant Site
NRG Limestone Generating Station Power Plant
A
B
C
Freestone
Donie
Buffalo
Jewett
Wilsons Chapel Cemetery
Burlington Northern Railroad
Missouri Pacific Railroad
Freestone County
Leon County
Limestone County
Lake Limestone
TEXAS
Freestone County
Leon County
Limestone County
300 Miles
Legend
Jewett Power Plant Site
City/Town
County Boundary
Beginning/End Pipeline Segment
Existing Process Water Pipeline
Proposed Process Water Pipeline
Existing HVTL
Existing Natural Gas
Proposed CO2 Pipeline
Road
Railroad
Water Body
NRG Limestone Generating Station
Cemetery
U.S. Department of Energy
FutureGen Project EIS
Data Sources: FutureGen Alliance, 2006c; Texas General Land Office; ESRI
Coordinate System: GCS North American 1927
Datum: North American 1927
Figure 2-10
Proposed Corridors for the Jewett Power Plant Site
0 2.5 5 MI
0 2.5 5 KM
N


Texas Department of Criminal Justice Woodbine
H
Hill Ranch Woodbine
G
Hill Ranch Travis Peak
F
D
Trinity River
Anderson County
Freestone County
Fairfield Lake
Fairfield
2510
488
833
75
45
84
469
179
Freestone County
Leon County
Anderson County
TEXAS
300
Miles
Legend
Jewett Sequestration Site
City/Town
County Boundary
Beginning/End Pipeline Segment
CO2 Plume Radius
Proposed CO2 Pipeline
Road
Railroad
Water Body
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESIR; FutureGen Alliance, 2006c; Texas General Land Office
Coordinate System: GCS North American 1927
Datum: North American 1927
Figure 2-11
Proposed Jewett Sequestration Site
0 2.5 5 MI
0 2.5 5 KM
N


Odessa
Power Plant Site
Douro
Penwell
Union Pacific Railroad
Union Pacific Railroad
866
20
20
1601
TEXAS
Ector County
300
Miles
Legend
Odessa Power Plant Site
City/Town
Road
Railroad
Figure 2-12
Proposed Odessa Power Plant Site
0 1 2 MI
0 1 2 KM
N
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006d; Texas General Land Office
Coordinate System: GCS North American 1927
Datum: North American 1927

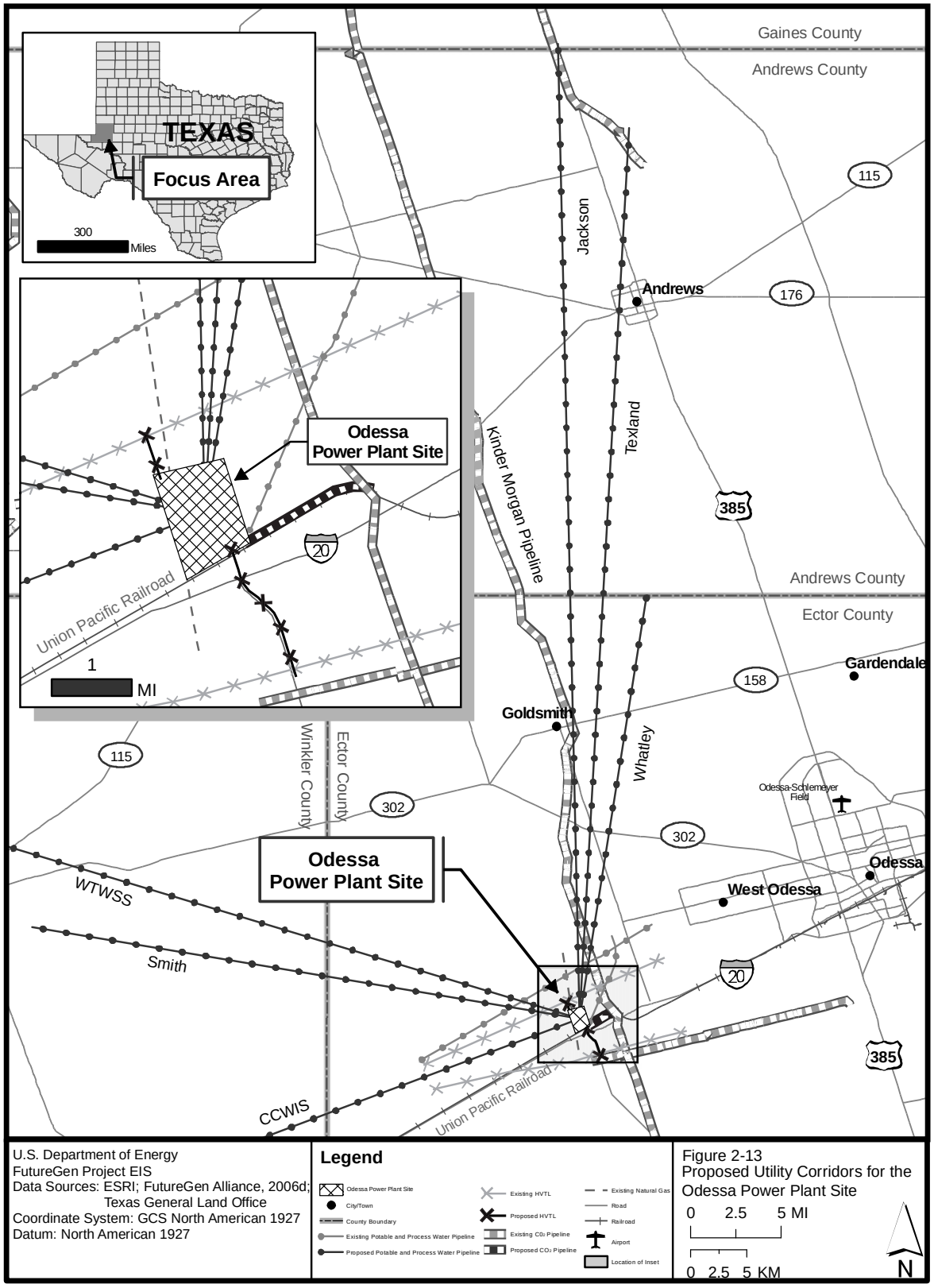
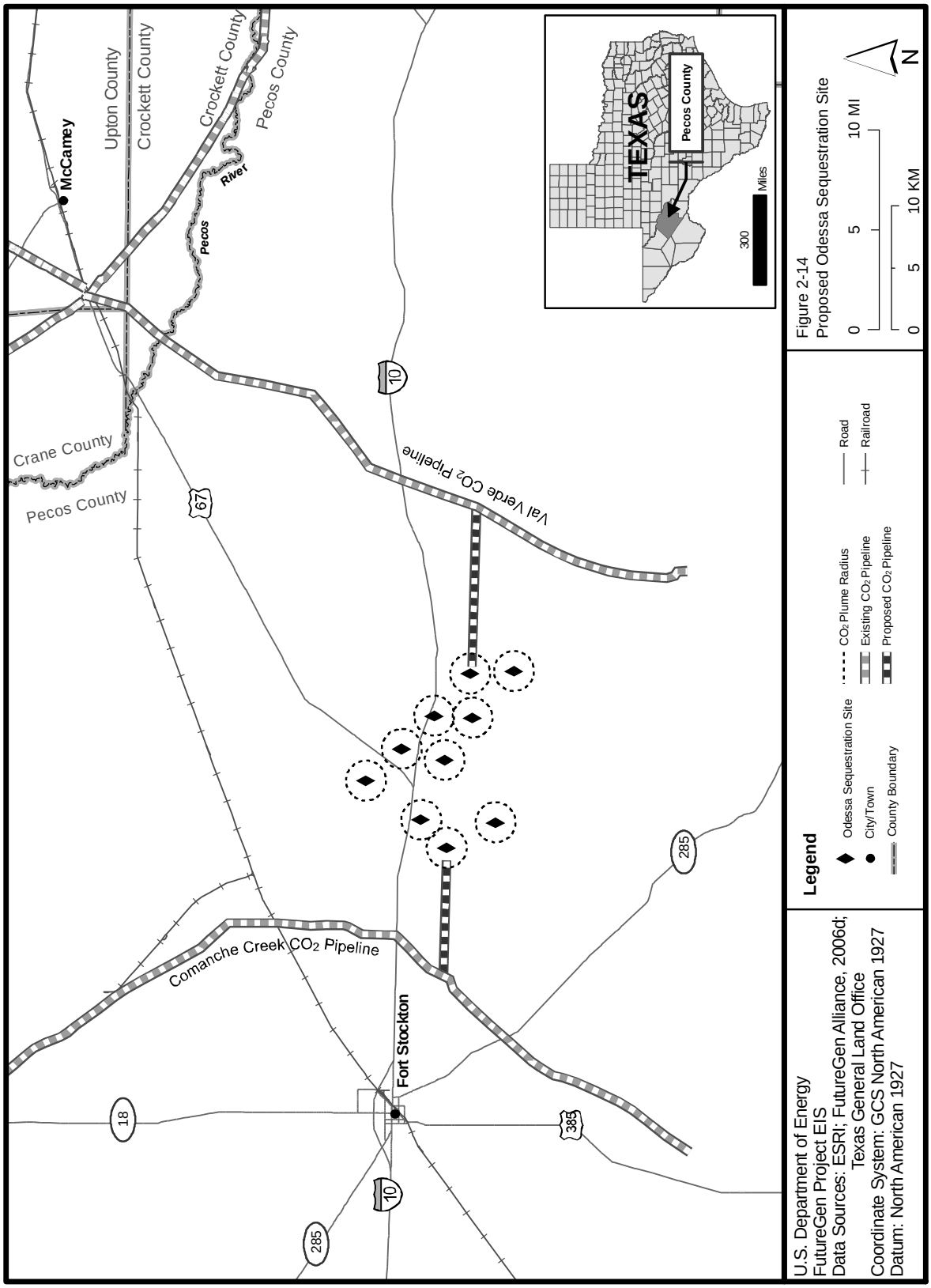
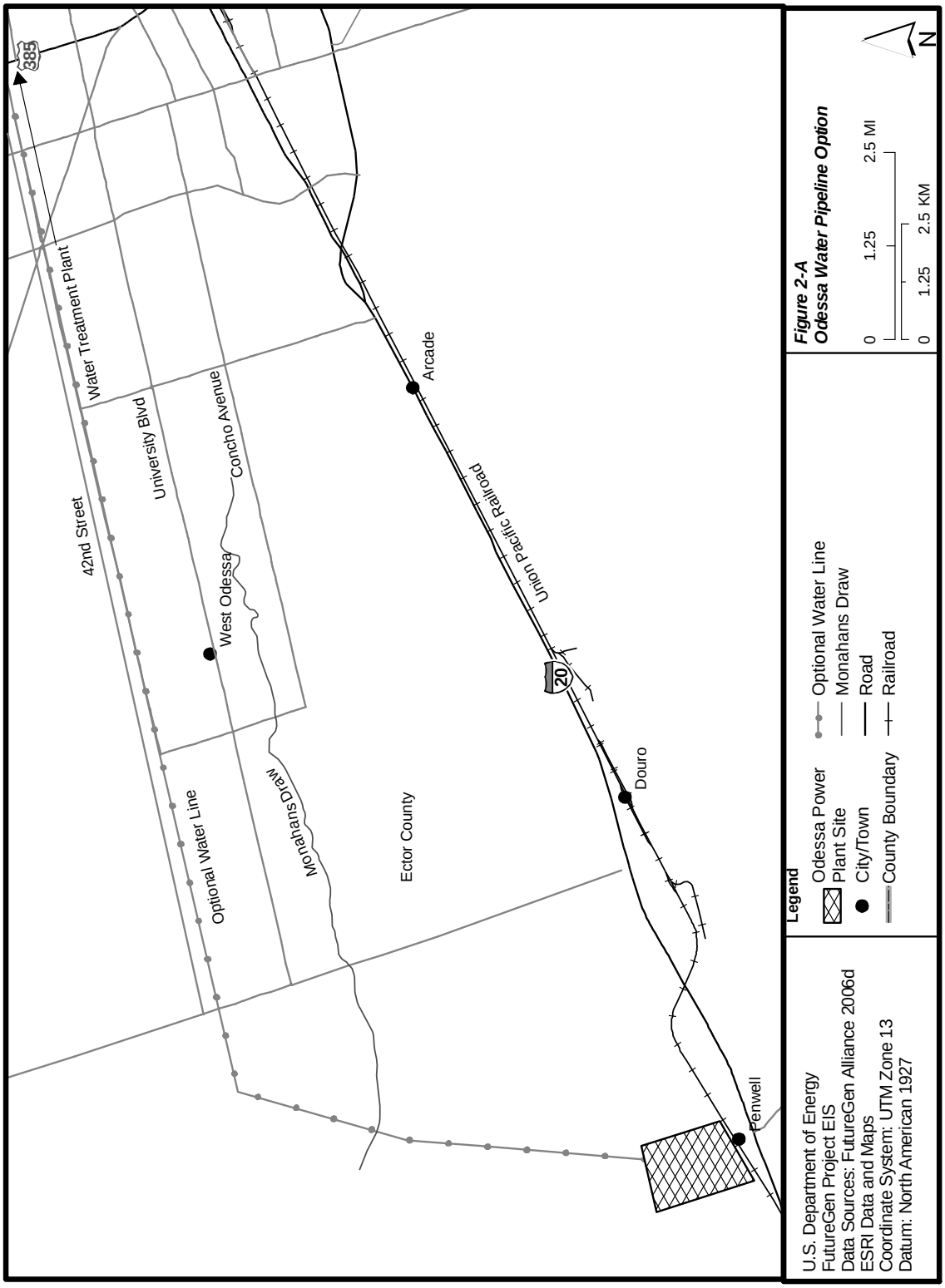
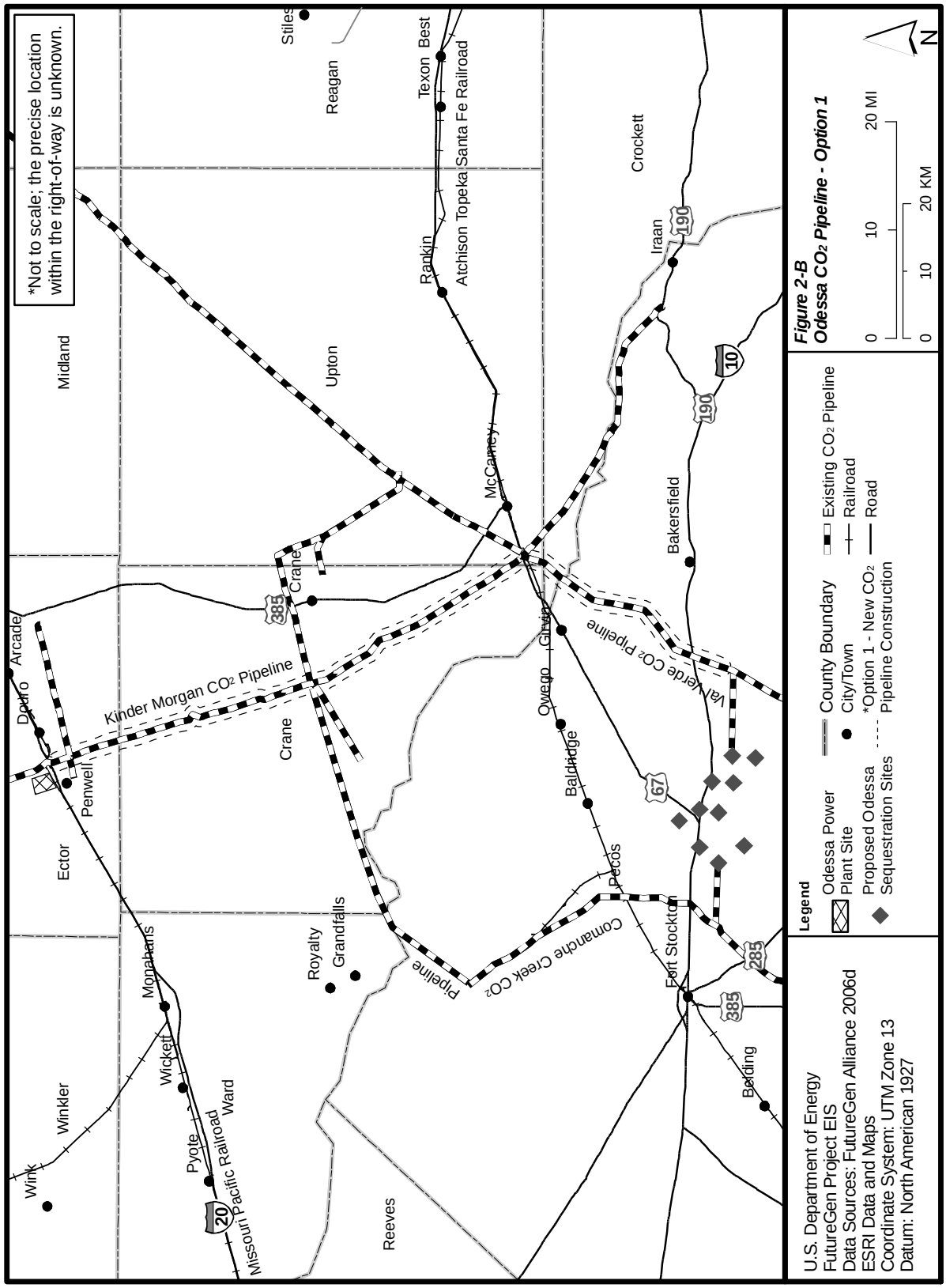
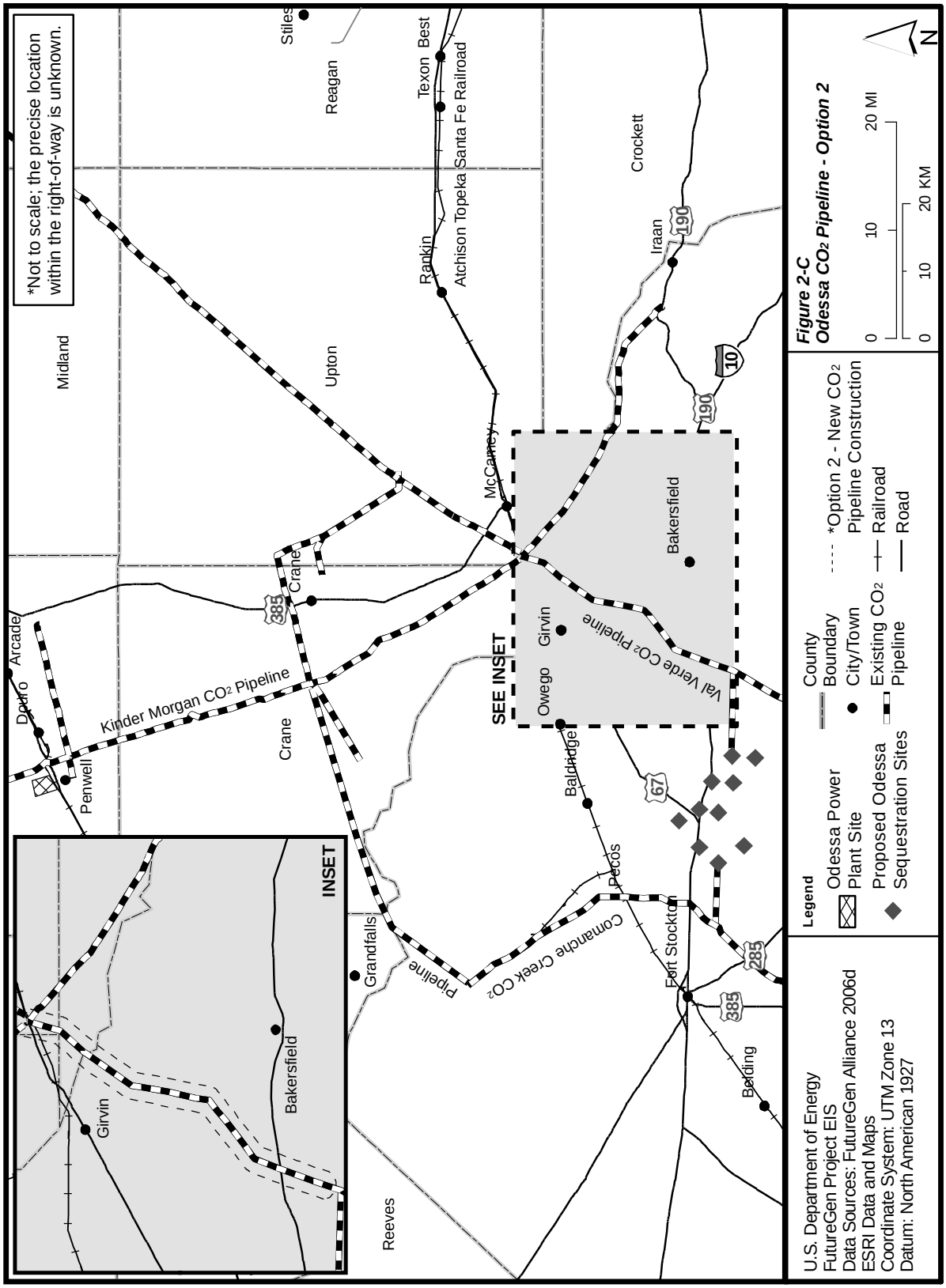


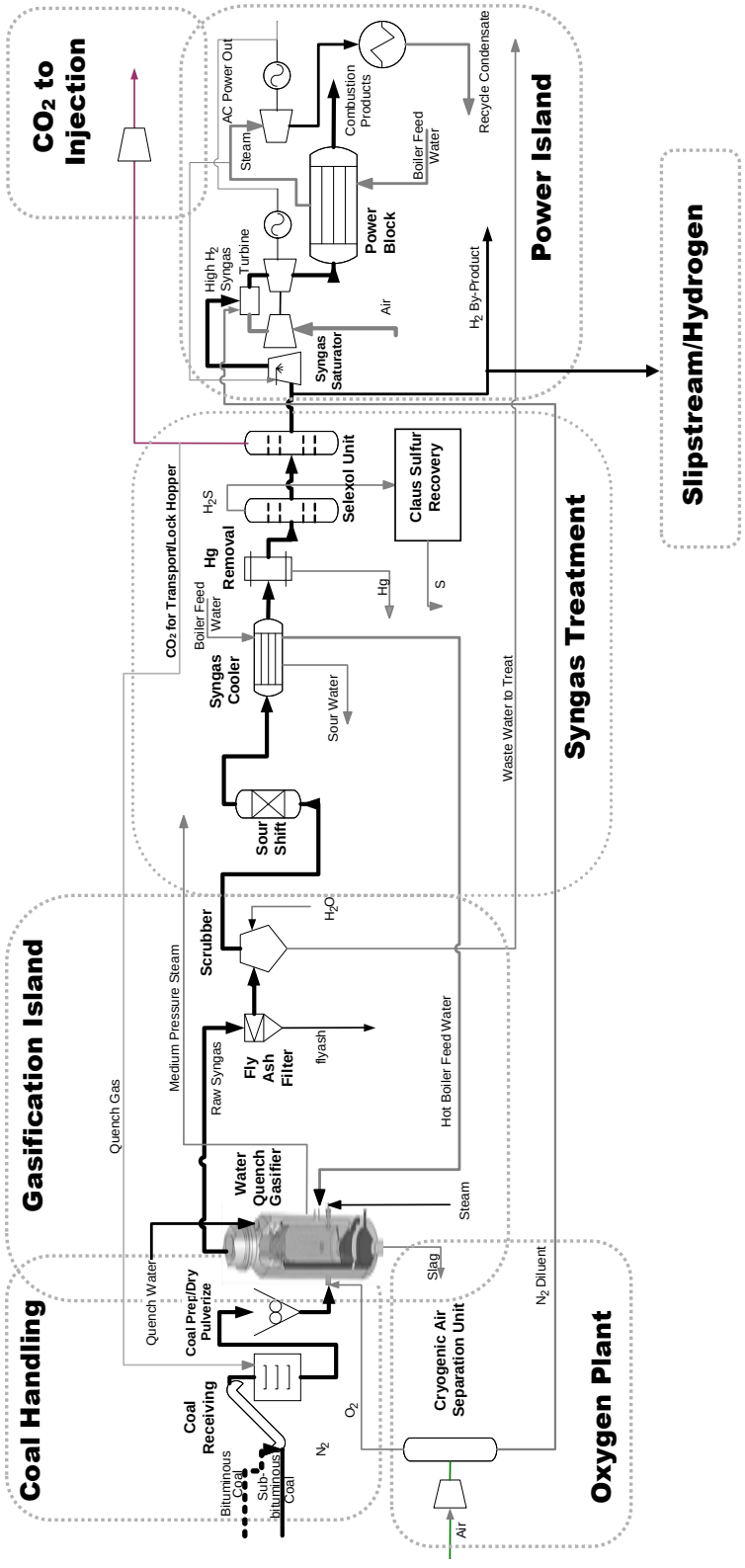
Figure 2-13
Proposed Utility Corridors for the Odessa Power Plant Site


McCamey
Upton County
Crockett County
Crockett County
Pecos County
Pecos River
Crane County
Pecos County
Val Verde CO2 Pipeline
Comanche Creek CO2 Pipeline
Fort Stockton
67
10
285
18
385
TEXAS
Pecos County
300
Miles
Legend
Odessa Sequestration Site
City/Town
County Boundary
CO2 Plume Radius
Existing CO2 Pipeline
Proposed CO2 Pipeline
Road
Railroad
Figure 2-14
Proposed Odessa Sequestration Site
0 5 10 MI
0 5 10 KM
N
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006d; Texas General Land Office
Coordinate System: GCS North American 1927
Datum: North American 1927


385
Water Treatment Plant
42nd Street
University Blvd
Concho Avenue
West Odessa
Optional Water Line
Monahans Draw
Ector County
Arcade
Union Pacific Railroad
20
Douro
Penwell
Legend
Odessa Power Plant Site
City/Town
County Boundary
Optional Water Line
Monahans Draw
Road
Railroad
U.S. Department of Energy
FutureGen Project EIS
Data Sources: FutureGen Alliance 2006d
ESRI Data and Maps
Coordinate System: UTM Zone 13
Datum: North American 1927
Figure 2-A
Odessa Water Pipeline Option
0 1.25 2.5 MI
0 1.25 2.5 KM
N

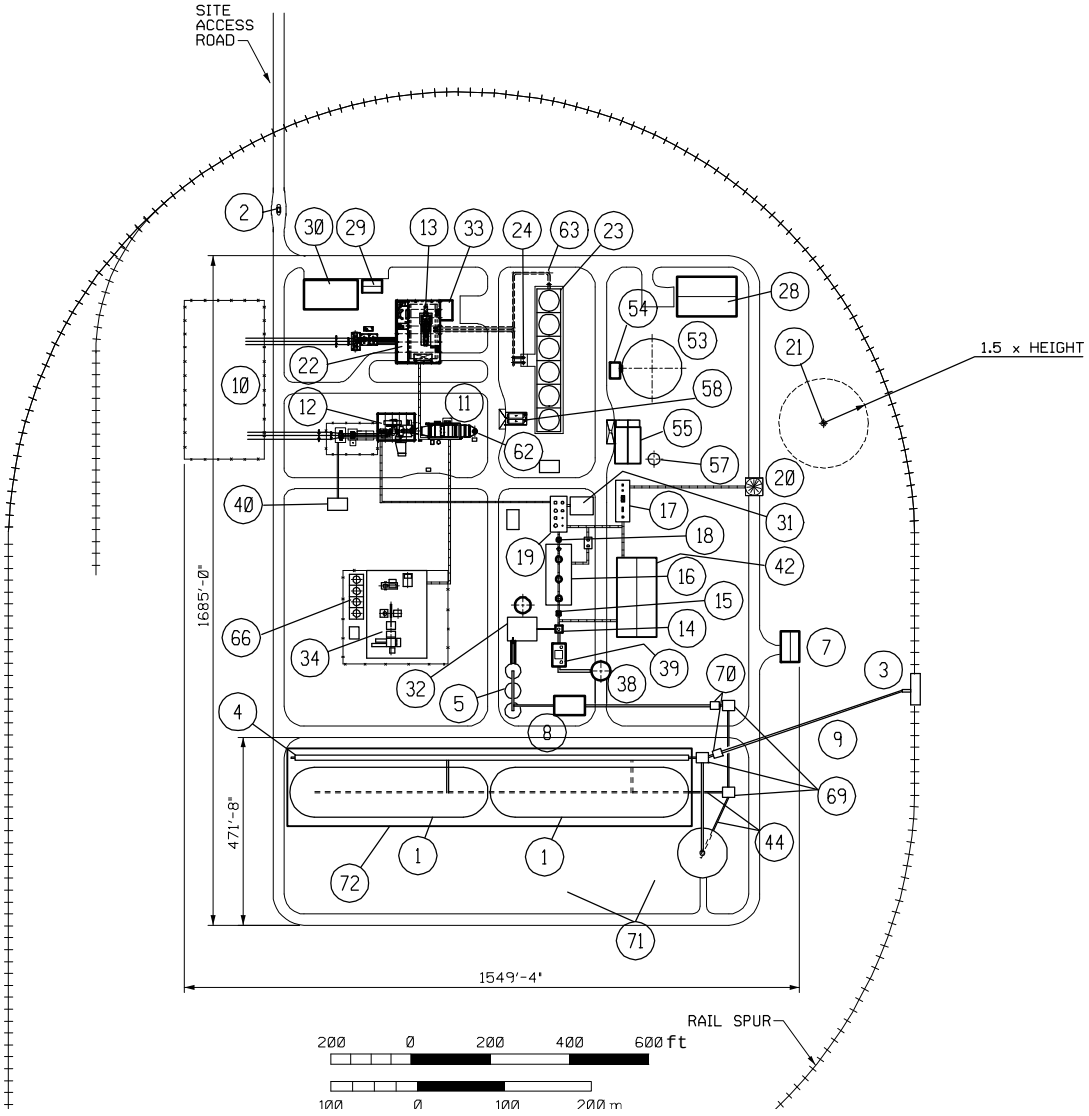

*Not to scale; the precise location within the right-of-way is unknown.
Midland
Upton
Reagan
Stiles
Texon
Best
Rankin
Atchison Topeka Santa Fe Railroad
Crockett
Iraan
McCamey
Bakersfield
Arcade
Dorro
Penwell
Ector
Crane
Kinder Morgan CO2 Pipeline
Owego
Girvin
Baldridge
Pecos
Fort Stockton
Comanche Creek CO2 Pipeline
Van Horn CO2 Pipeline
Monahans
Wickett
Pyote
Ward
Winkler
Wink
Missouri Pacific Railroad
Royalty
Grandfalls
Reeves
Berding
385
67
285
20
190
10
Legend
Odessa Power Plant Site
Proposed Odessa Sequestration Sites
County Boundary
City/Town
*Option 1 - New CO2 Pipeline
Existing CO2 Pipeline
Railroad
Road
Pipeline Construction
U.S. Department of Energy
FutureGen Project EIS
Data Sources: FutureGen Alliance 2006d
ESRI Data and Maps
Coordinate System: UTM Zone 13
Datum: North American 1927
Figure 2-B
Odessa CO2 Pipeline - Option 1
0 10 20 MI
0 10 20 KM
N


*Not to scale; the precise location within the right-of-way is unknown.
Midland
Upton
Reagan
Stiles
Texon
Best
Rankin
Atchison Topeka Santa Fe Railroad
Crockett
Iraan
190
10
67
285
385
Arcade
Dorro
Penwell
Crane
Kinder Morgan CO2 Pipeline
SEE INSET
Girvin
Owego
Val Verde CO2 Pipeline
Bakersfield
McCamey
Baldridge
Pecos
Fort Stockton
Comanche Creek CO2 Pipeline
Grandfalls
Reeves
Berding
INSET
Legend
Odessa Power Plant Site
Proposed Odessa Sequestration Sites
County Boundary
City/Town
Existing CO2 Pipeline
*Option 2 - New CO2 Pipeline Construction
Railroad
Road
Figure 2-C
Odessa CO2 Pipeline - Option 2
0 10 20 MI
0 10 20 KM
N
U.S. Department of Energy
FutureGen Project EIS
Data Sources: FutureGen Alliance 2006d
ESRI Data and Maps
Coordinate System: UTM Zone 13
Datum: North American 1927



AC = Alternating current
Source: Adapted from FG Alliance, 2007*b*

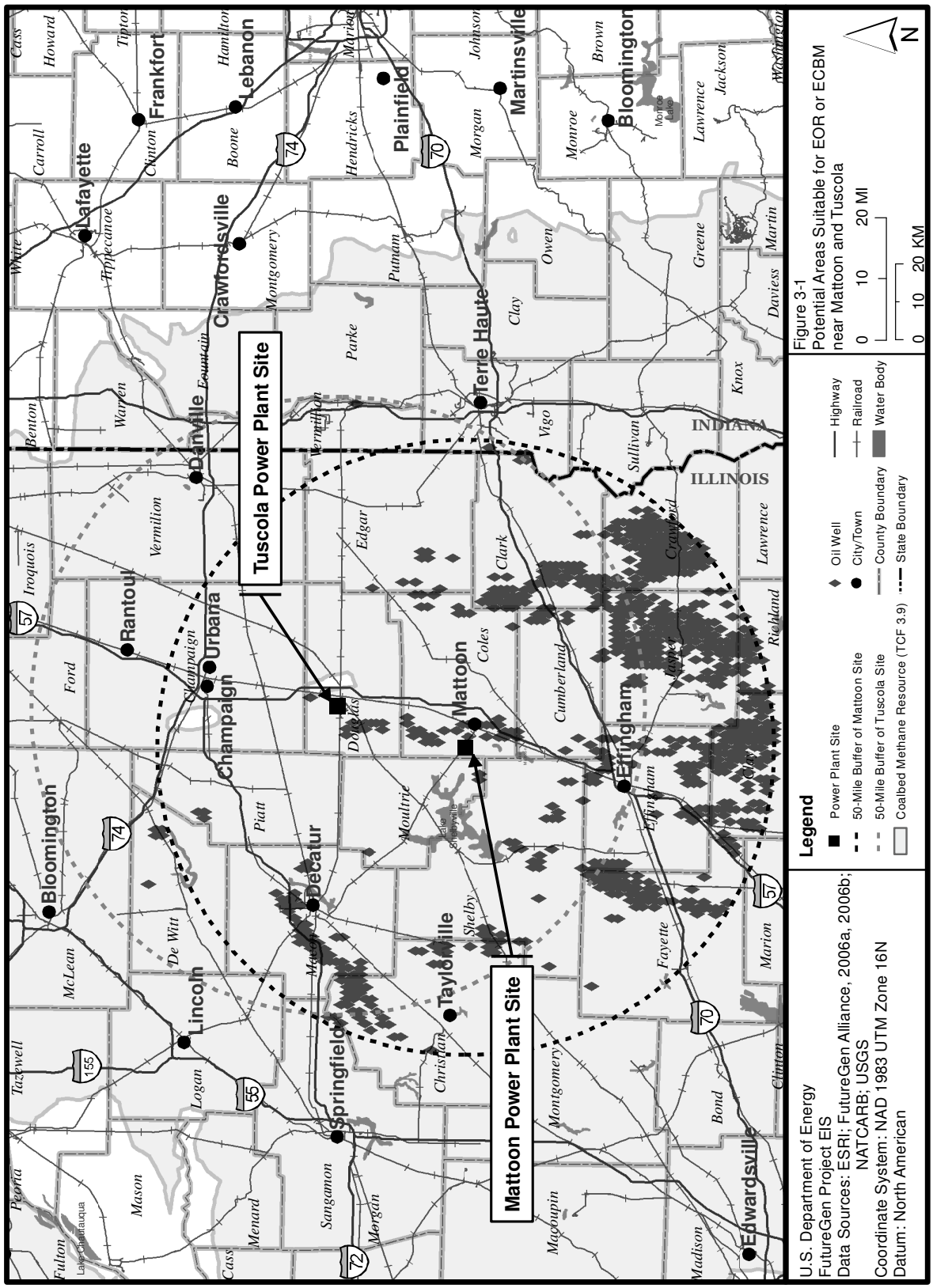
Figure 2-17. Block Diagram of and Example Design for the FutureGen Power Plant

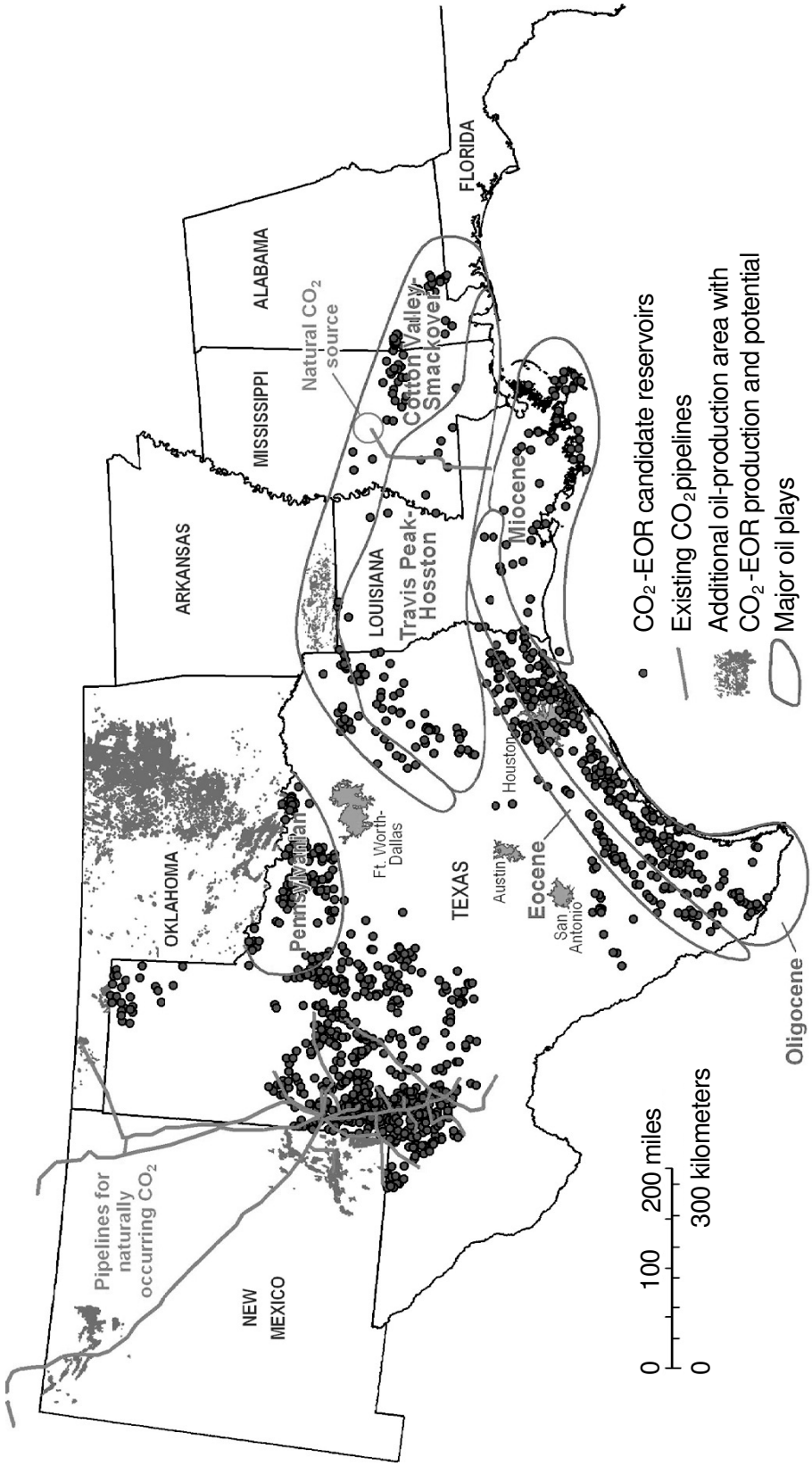


1. COAL STORAGE
2. GUARD HOUSE
3. COAL RECEIVING
4. COAL TRAVELING STACKER
5. COAL STORAGE BINS
6. UTILITY BRIDGE*
7. VEHICLE MAINTENANCE GARAGE
8. CRUSHER BUILDING
9. BELT CONVEYORS
10. SWITCHYARD
11. HEAT RECOVERY STEAM GENERATOR
12. COMBUSTION TURBINE
13. STEAM TURBINE GENERATOR
14. GASIFIER
15. GAS SCRUBBER
16. SHIFT REACTION SECTION
17. CLAUS PLANT
18. MERCURY REMOVAL
19. ACID GAS REMOVAL
20. SULFUR STORAGE
21. FLARE STACK
22. ELECTRICAL ROOM
23. COOLING TOWER
24. CIRCULATING WATER PUMPS
28. WAREHOUSE
29. ADMINISTRATION BUILDING
30. VISITORS CENTER
31. CO_2 COMPRESSION
32. SLURRY PREPARATION
33. WORKSHOP AND STORES
34. AIR SEPARATION UNIT
38. SLAG SILO
39. SLAG PROCESSING AREA AND WATER HANDLING
40. ASU ELECTRICAL BUILDING
41. COAL ELECTRICAL BUILDING*
42. RESEARCH AND DEVELOPMENT FACILITY
43. SOUR WATER STRIPPERS*
44. RECLAIM CONVEYORS
46. EMERGENCY DIESEL GENERATOR*
47. CONTINUOUS EMISSIONS MONITORING SYSTEM ENCLOSURE*
48. CONTROL ROOM*
49. AUXILIARY TRANSFORMERS*
50. STEAM TURBINE GENERATOR STEP UP TRANSFORMER*
51. GENERATOR CIRCUIT BREAKER*
52. COMBUSTION TURBINE GENERATOR STEP UP TRANSFORMER*
53. FIRE SERVICE WATER TANK
54. FIRE SERVICE WATER PUMP HOUSE
55. WATER TREATMENT FACILITY
56. CHEMICAL TRUCK UNLOADING*
57. DEMINERALIZED WATER TANK
58. AMMONIA STORAGE TANKS AND PUMPS
59. AMMONIA UNLOADING AREA*
60. SELECTIVE CATALYTIC REDUCTION SKID*
61. AIR INLET FILTER*
62. STACK
63. CIRCULATING WATER PIPING
64. SLURRY STORAGE TANK*
65. CHEMICAL TREATMENT SKID*
66. ASU COOLING TOWER
69. TRANSFER BUILDING
70. SAMPLE SYSTEM
71. EMERGENCY COAL PILE
72. COAL PILE ENCLOSURE

* = Not shown in figure
Note: Figure is an example of a typical power plant configuration; however, all components of the typical configuration would not be included in the proposed FutureGen facility. Consecutive numbers missing from the legend result from this difference.
Source: FG Alliance, 2007***b***

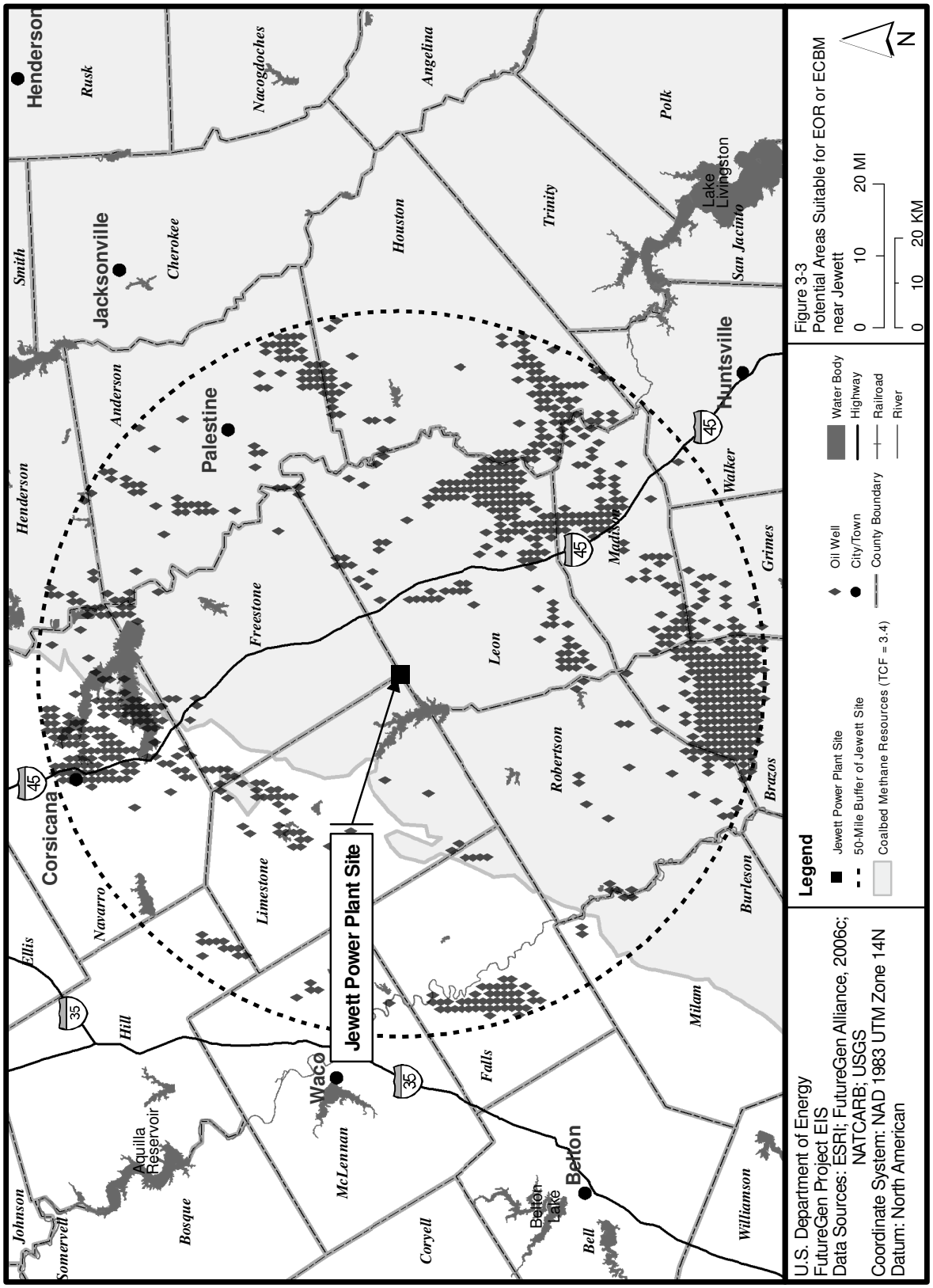
Figure 2-18. Example FutureGen Project Configuration

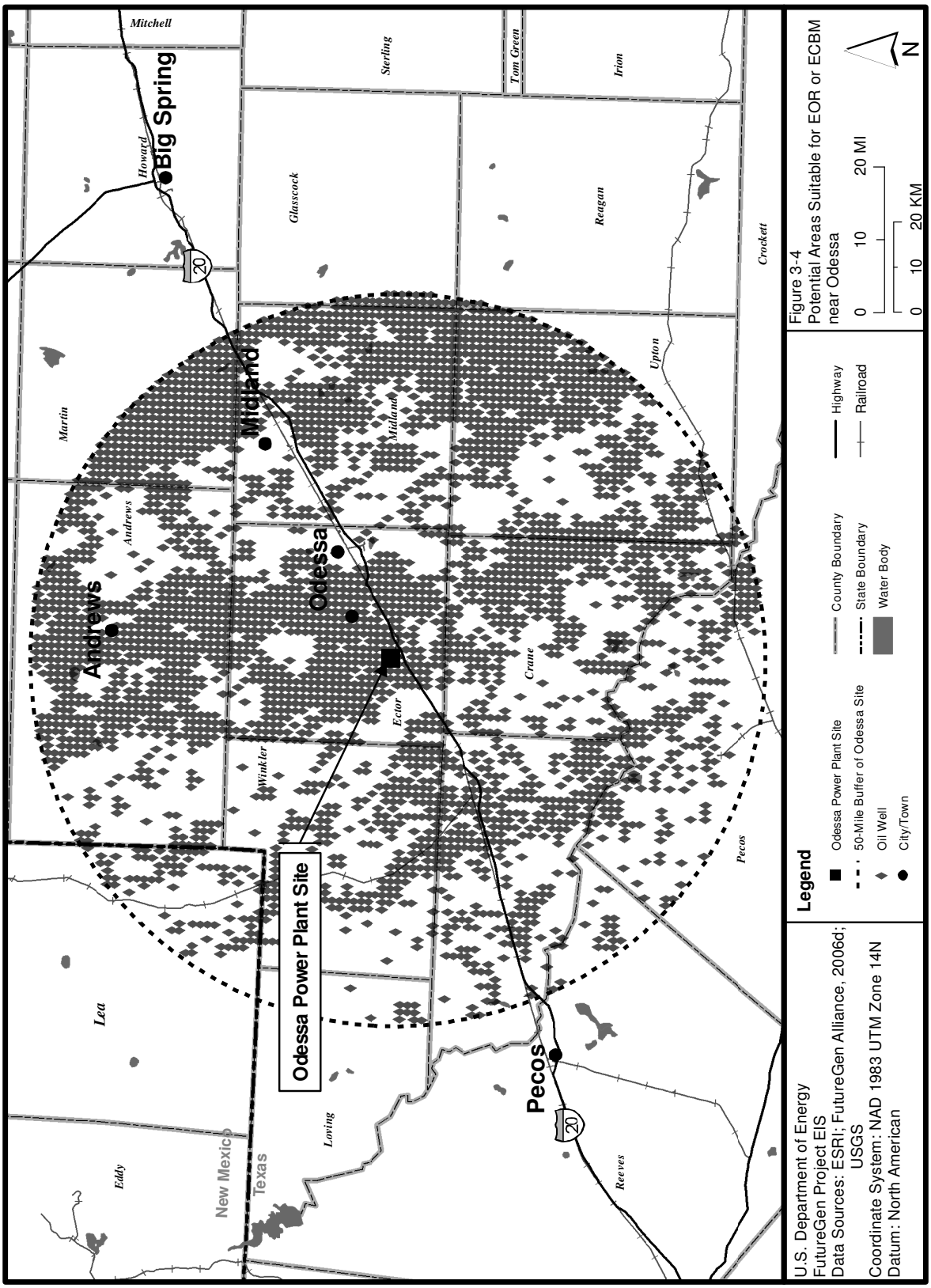

Tuscola Power Plant Site
Mattoon Power Plant Site
Bloomington
Champaign
Urbana
Danville
Rantoul
Decatur
Lincoln
Springfield
Taylorville
Mattoon
Effingham
Terre Haute
Lafayette
Frankfort
Crawfordsville
Lebanon
Plainfield
Martinsville
Bloomington
Edwardsville
INDIANA
ILLINOIS
Legend
Power Plant Site
50-Mile Buffer of Mattoon Site
50-Mile Buffer of Tuscola Site
Coalbed Methane Resource (TCF 3.9)
Oil Well
City/Town
County Boundary
State Boundary
Highway
Railroad
Water Body
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006a, 2006b; NATCARB; USGS
Coordinate System: NAD 1983 UTM Zone 16N
Datum: North American
Figure 3-1
Potential Areas Suitable for EOR or ECBM near Mattoon and Tuscola
0 10 20 MI
0 10 20 KM
N



Source: Holtz et al., 2005

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


Henderson
Rusk
Nacogdoches
Angelina
Smith
Jacksonville
Cherokee
Houston
Trinity
Polk
Lake Livingston
San Jacinto
Anderson
Palestine
Huntsville
Walker
Henderson
Freestone
Leon
Madison
Grimes
Corsicana
Robertson
Brazos
Navarro
Limestone
Jewett Power Plant Site
Burleson
Ellis
Hill
Milam
Waco
Falls
Johnson
Somervell
Aquilla Reservoir
Bosque
McLennan
Belton
Belton Lake
Coryell
Bell
Williamson
45
35
Legend
Jewett Power Plant Site
50-Mile Buffer of Jewett Site
Coalbed Methane Resources (TCF = 3.4)
Oil Well
City/Town
County Boundary
Water Body
Highway
Railroad
River
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006c; NATCARB; USGS
Coordinate System: NAD 1983 UTM Zone 14N
Datum: North American
Figure 3-3
Potential Areas Suitable for EOR or ECBM near Jewett
0 10 20 MI
0 10 20 KM
N


Mitchell
Big Spring
Howard
Sterling
Tom Green
Irion
Glasscock
Reagan
Crockett
Upton
Martin
Midland
Andrews
Odessa
Crane
Ector
Winkler
Pecos
Odessa Power Plant Site
Lea
Eddy
New Mexico
Texas
Loving
Reeves
20
Legend
Odessa Power Plant Site
50-Mile Buffer of Odessa Site
Oil Well
City/Town
County Boundary
State Boundary
Water Body
Highway
Railroad
U.S. Department of Energy
FutureGen Project EIS
Data Sources: ESRI; FutureGen Alliance, 2006d; USGS
Coordinate System: NAD 1983 UTM Zone 14N
Datum: North American
Figure 3-4
Potential Areas Suitable for EOR or ECBM near Odessa
0 10 20 MI
0 10 20 KM
N

Source: FG Alliance, 2006a

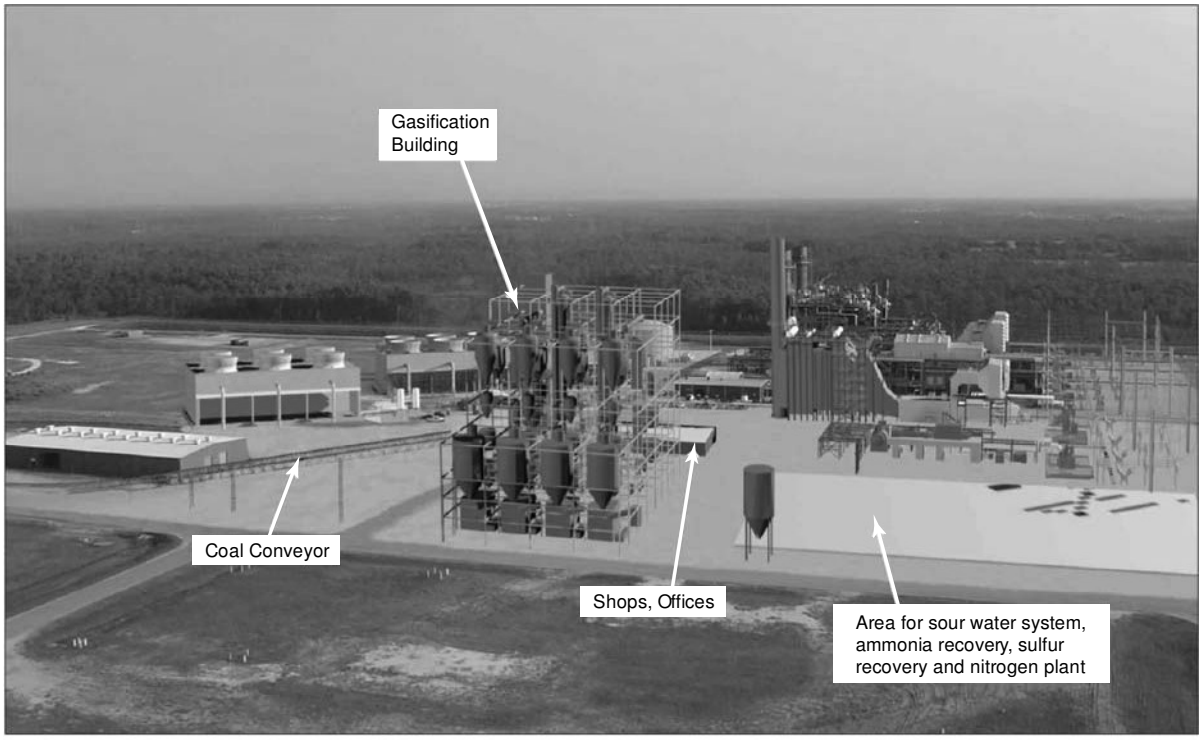
Figure 4.12-3. Proposed Mattoon Process Water Pipeline Corridor Along 1st Street

Figure 4.12-4. Proposed Mattoon Electrical Transmission Line Corridor

Source: FG Alliance, 2006a

Figure 4.12-3. Proposed Mattoon Process Water Pipeline Corridor Along 1st Street

Figure 4.12-4. Proposed Mattoon Electrical Transmission Line Corridor

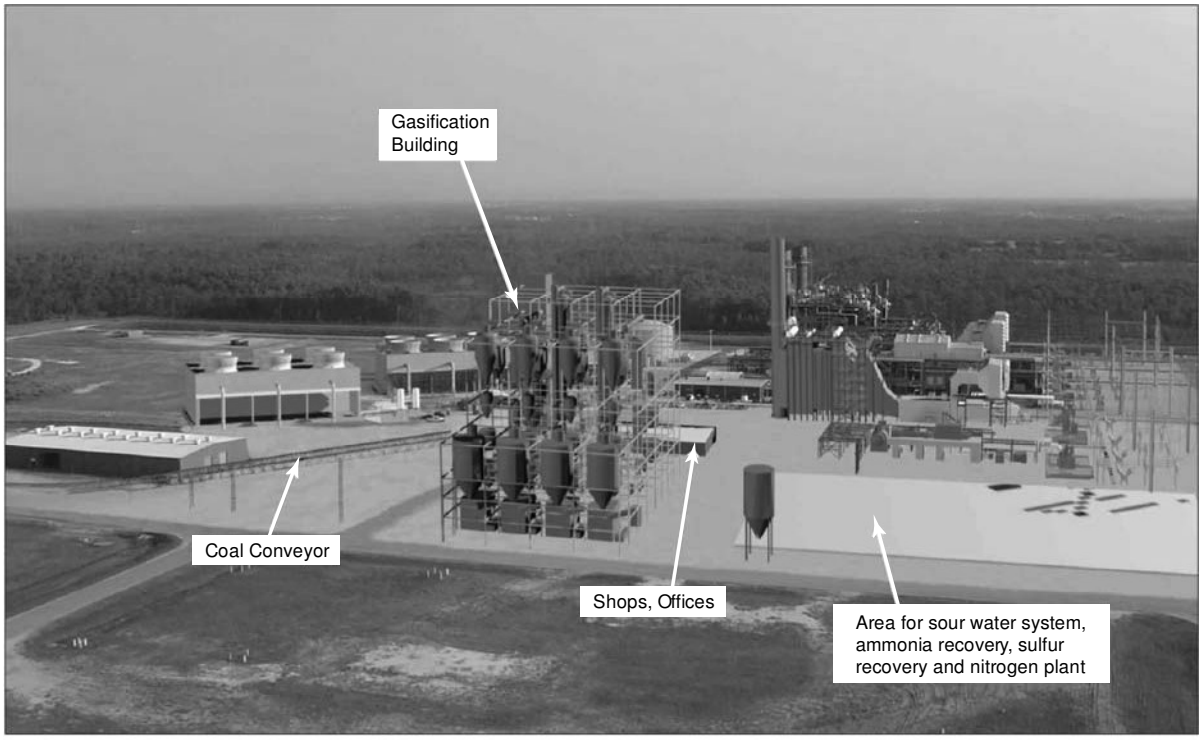


Source: DOE, 2006a

Figure 4.12-5. Artist's Rendering of an IGCC Plant with Minimal Screening and Architectural Design Elements

Source: DOE, 2006b

Figure 4.12-6. Artist's Rendering of an IGCC Plant with Extensive Screening and Architectural Design Elements

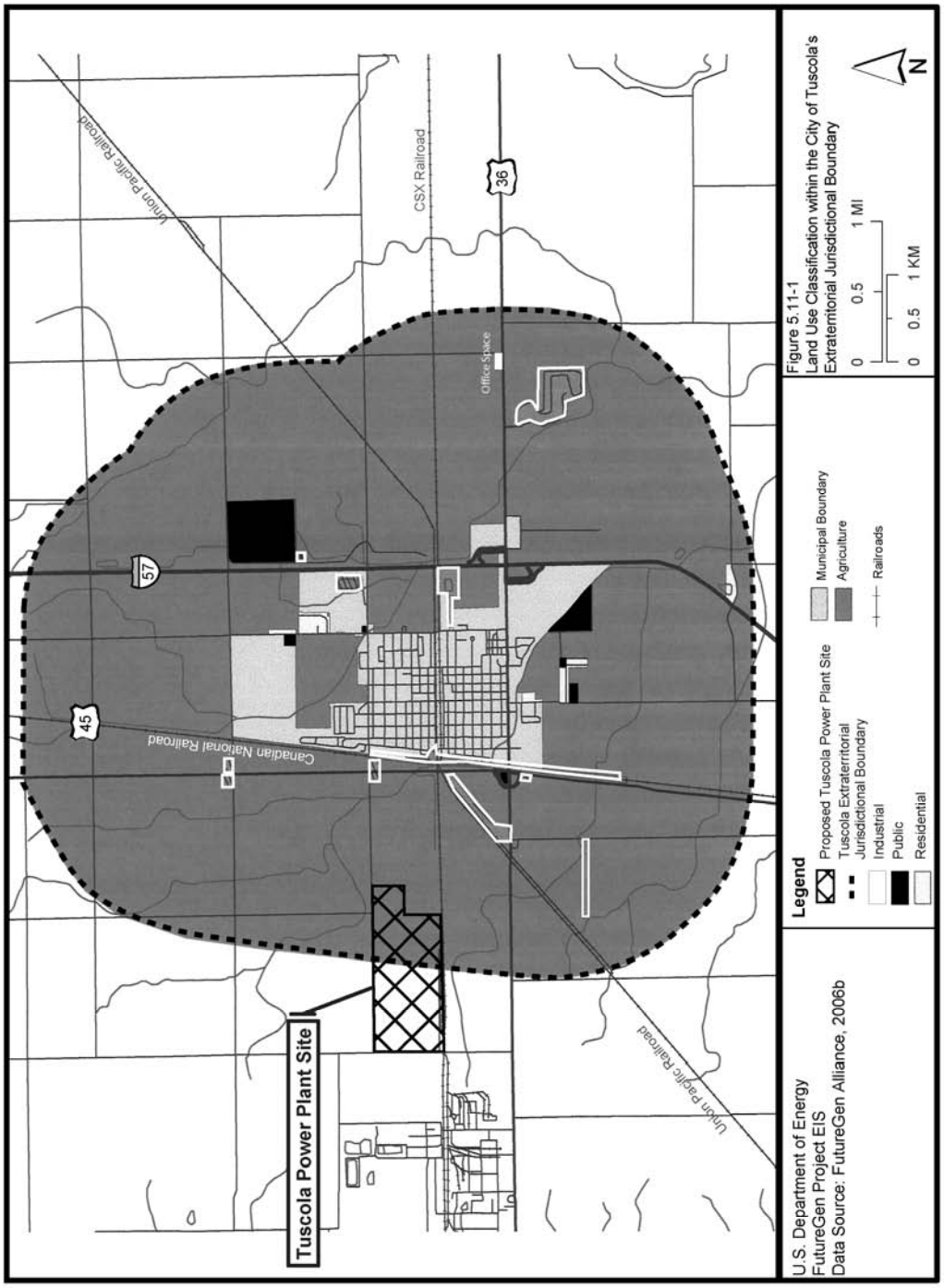


Source: DOE, 2006a

Figure 4.12-5. Artist's Rendering of an IGCC Plant with Minimal Screening and Architectural Design Elements

Source: DOE, 2006b

Figure 4.12-6. Artist's Rendering of an IGCC Plant with Extensive Screening and Architectural Design Elements


Union Pacific Railroad
CSX Railroad
36
Office Space
57
45
Canadian National Railroad
Tuscola Power Plant Site
Union Pacific Railroad
Legend
Proposed Tuscola Power Plant Site
Tuscola Extraterritorial Jurisdictional Boundary
Industrial
Public
Residential
Municipal Boundary
Agriculture
Railroads
Figure 5.11-1
Land Use Classification within the City of Tuscola's Extraterritorial Jurisdictional Boundary
0 0.5 1 MI
0 0.5 1 KM
N
U.S. Department of Energy
FutureGen Project EIS
Data Source: FutureGen Alliance, 2006b

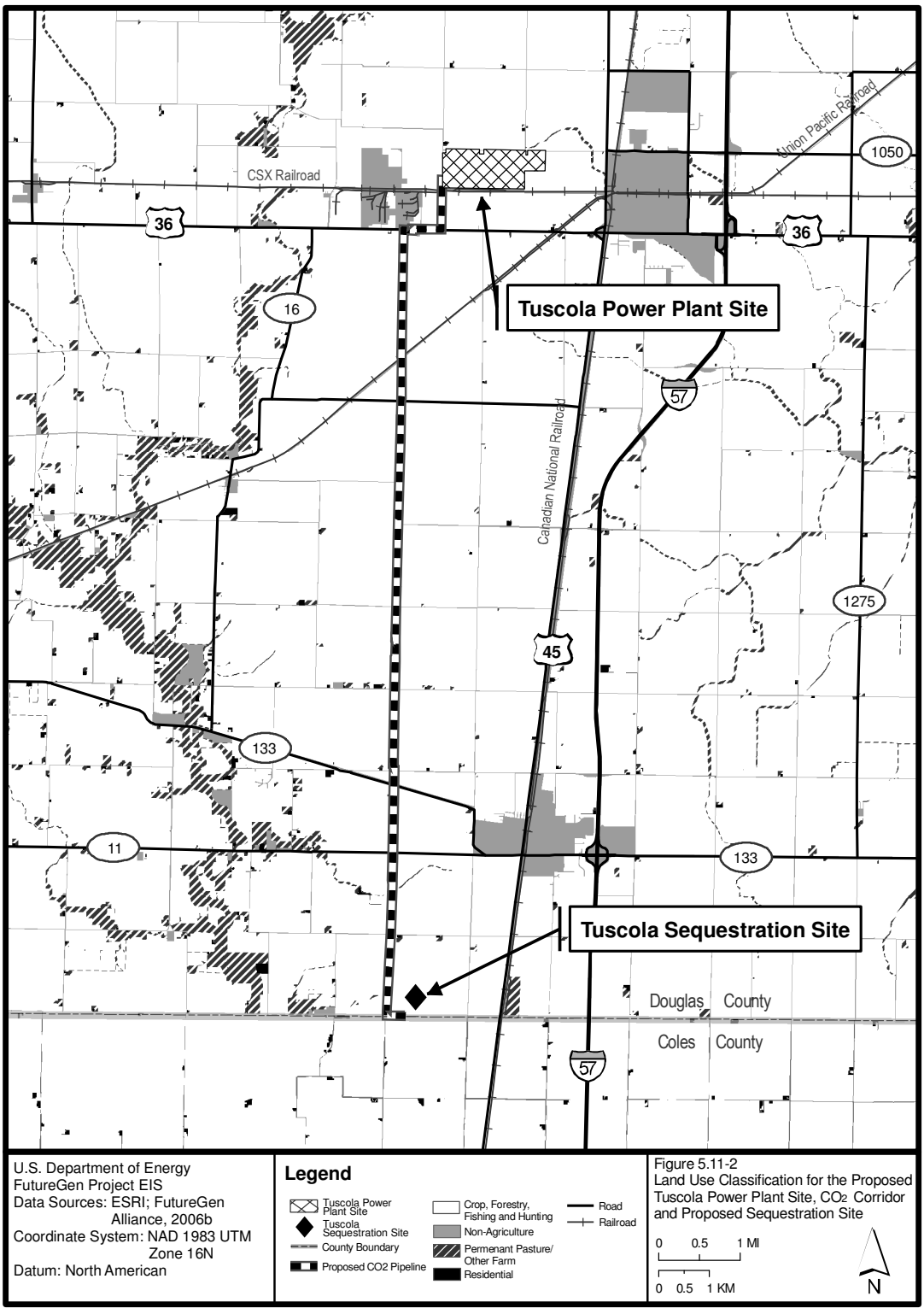
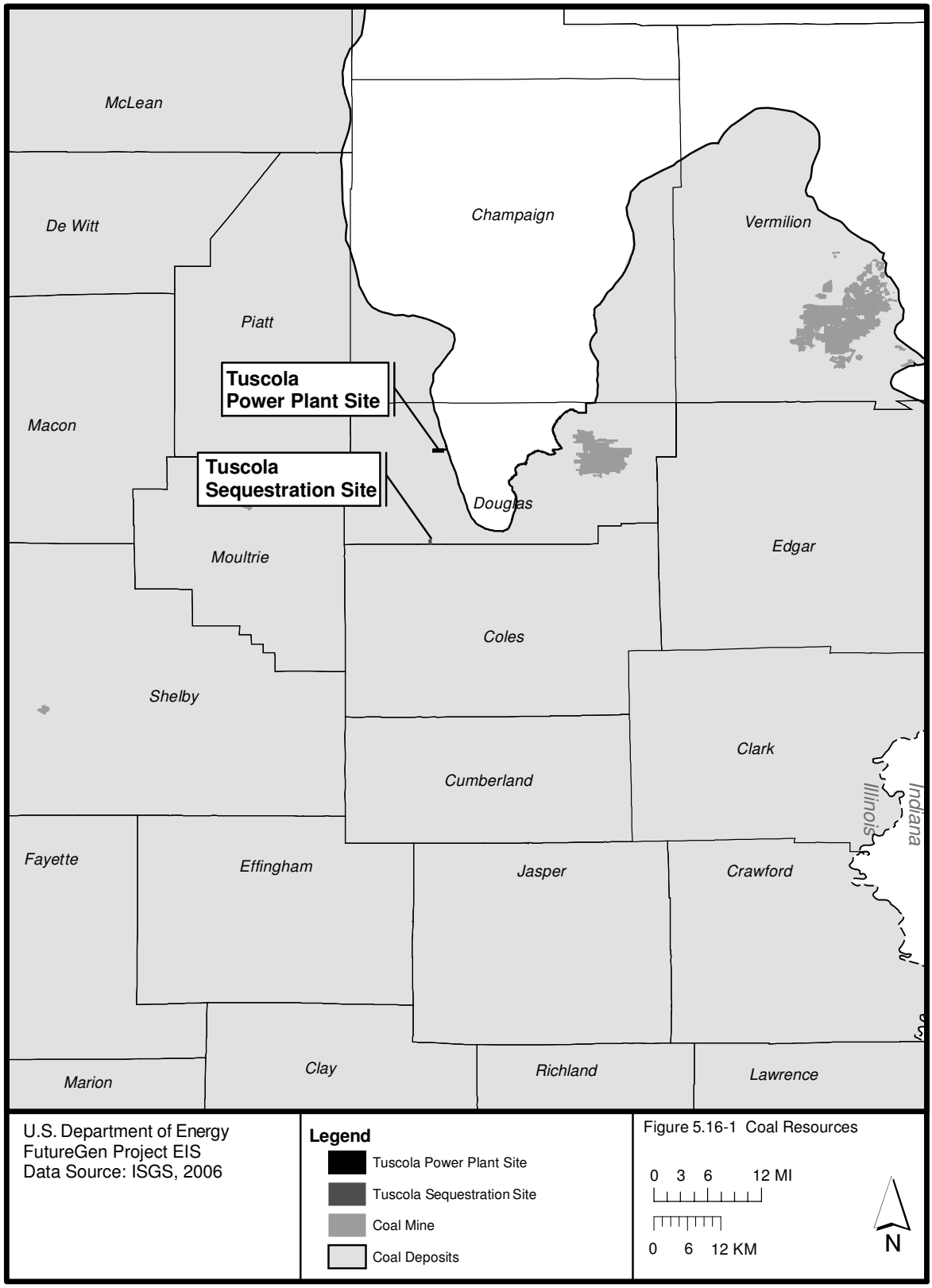
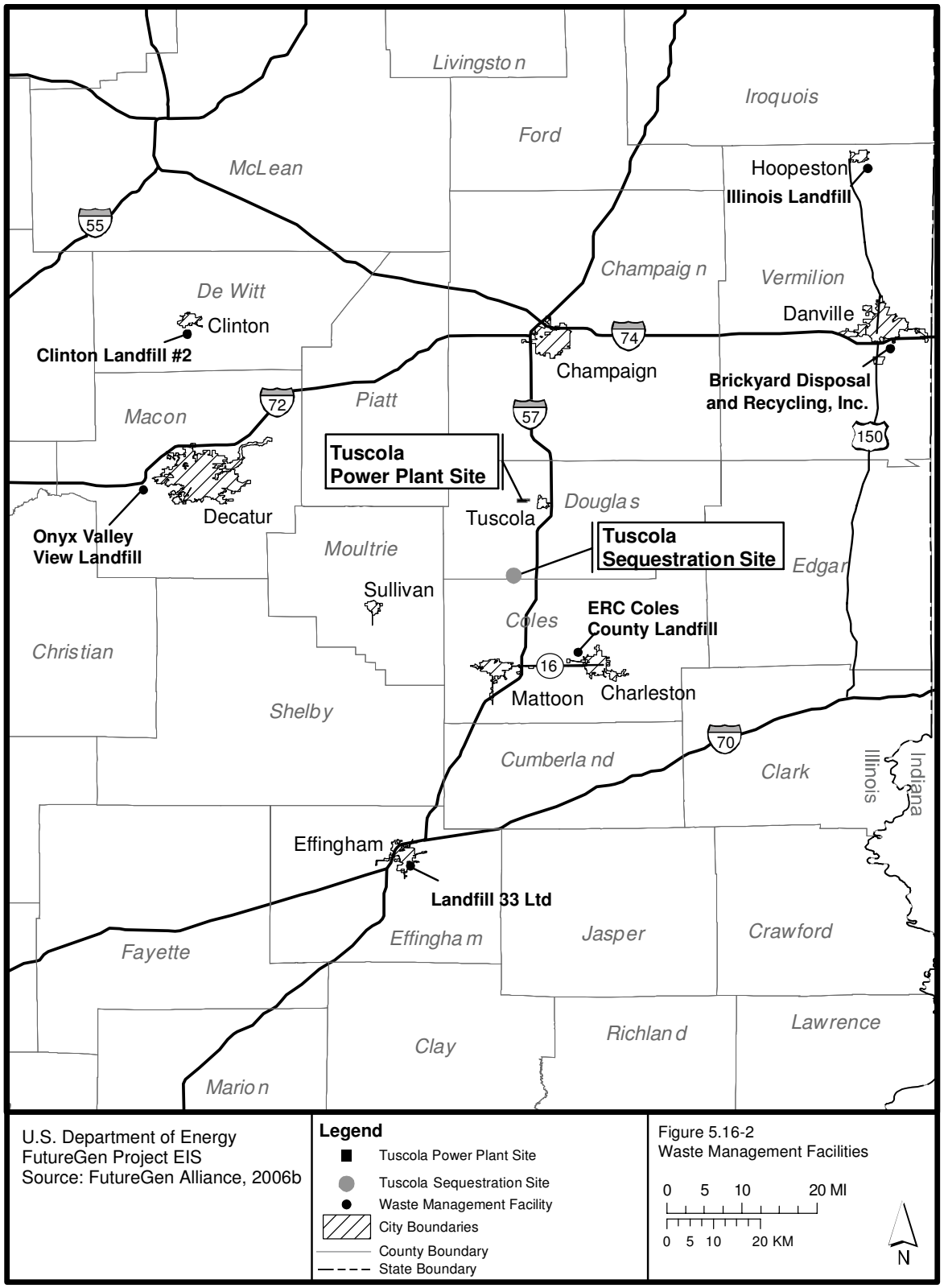
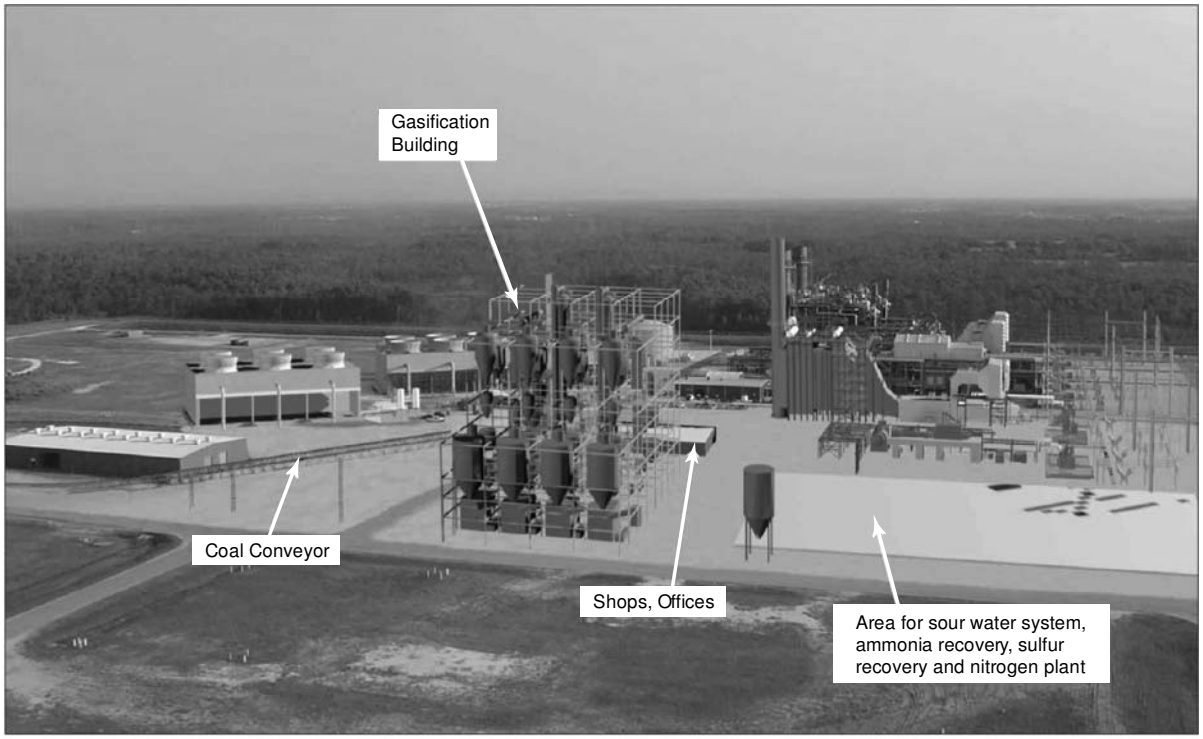


Figure 5.11-2
Land Use Classification for the Proposed Tuscola Power Plant Site, CO_2 Corridor and Proposed Sequestration Site


McLean
De Witt
Champaign
Vermilion
Piatt
Tuscola
Power Plant Site
Macon
Tuscola
Sequestration Site
Douglas
Edgar
Moultrie
Coles
Shelby
Clark
Cumberland
Indiana
Illinois
Fayette
Effingham
Jasper
Crawford
Marion
Clay
Richland
Lawrence
U.S. Department of Energy
FutureGen Project EIS
Data Source: ISGS, 2006
Legend
Tuscola Power Plant Site
Tuscola Sequestration Site
Coal Mine
Coal Deposits
Figure 5.16-1 Coal Resources
0 3 6 12 MI
0 6 12 KM
N


Livingston
Iroquois
Ford
McLean
Hoopeston
Illinois Landfill
55
Champaign
Vermilion
De Witt
Danville
Clinton
Clinton Landfill #2
74
Champaign
Brickyard Disposal
and Recycling, Inc.
72
Piatt
57
Macon
150
Tuscola
Power Plant Site
Douglas
Decatur
Tuscola
Onyx Valley
View Landfill
Moultrie
Tuscola
Sequestration Site
Edgar
Sullivan
Coles
ERC Coles
County Landfill
Christian
16
Mattoon
Charleston
Shelby
70
Cumberland
Clark
Indiana
Illinois
Effingham
Landfill 33 Ltd
Effingham
Jasper
Crawford
Fayette
Clay
Richland
Lawrence
Marion
U.S. Department of Energy
FutureGen Project EIS
Source: FutureGen Alliance, 2006b
Legend
Tuscola Power Plant Site
Tuscola Sequestration Site
Waste Management Facility
City Boundaries
County Boundary
State Boundary
Figure 5.16-2
Waste Management Facilities
0 5 10 20 MI
0 5 10 20 KM
N

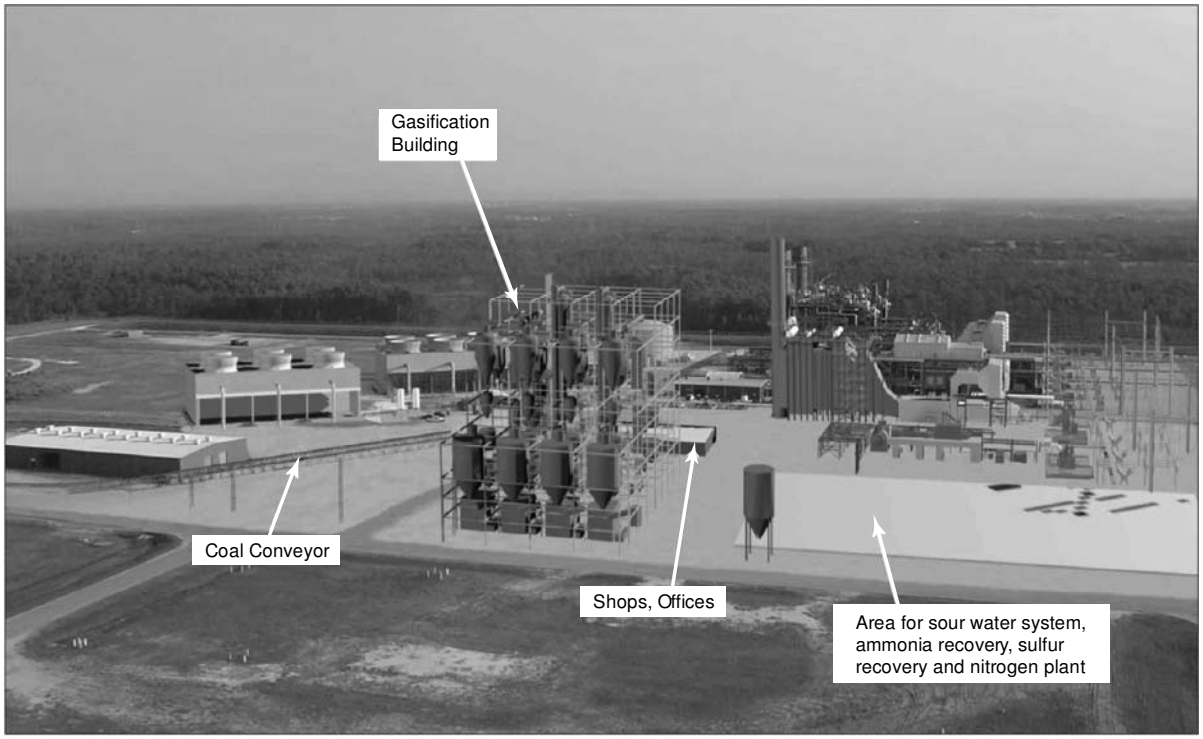


Source: DOE, 2006a

Figure 6.12-3. Artist's Rendering of an IGCC Plant with Minimal Screening and Architectural Design Elements

Source: DOE, 2006

Figure 6.12-4. Artist's Rendering of an IGCC Plant with Extensive Screening and Architectural Design Elements

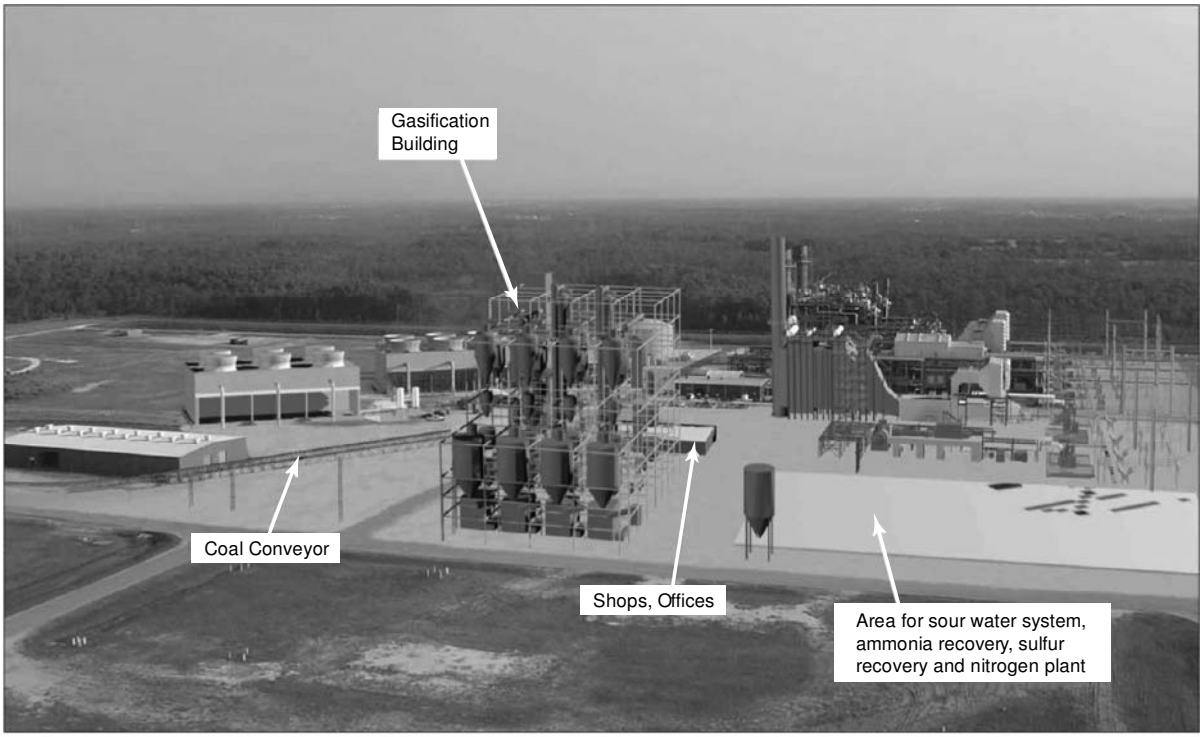


Source: DOE, 2006a

Figure 6.12-3. Artist's Rendering of an IGCC Plant with Minimal Screening and Architectural Design Elements

Source: DOE, 2006

Figure 6.12-4. Artist's Rendering of an IGCC Plant with Extensive Screening and Architectural Design Elements

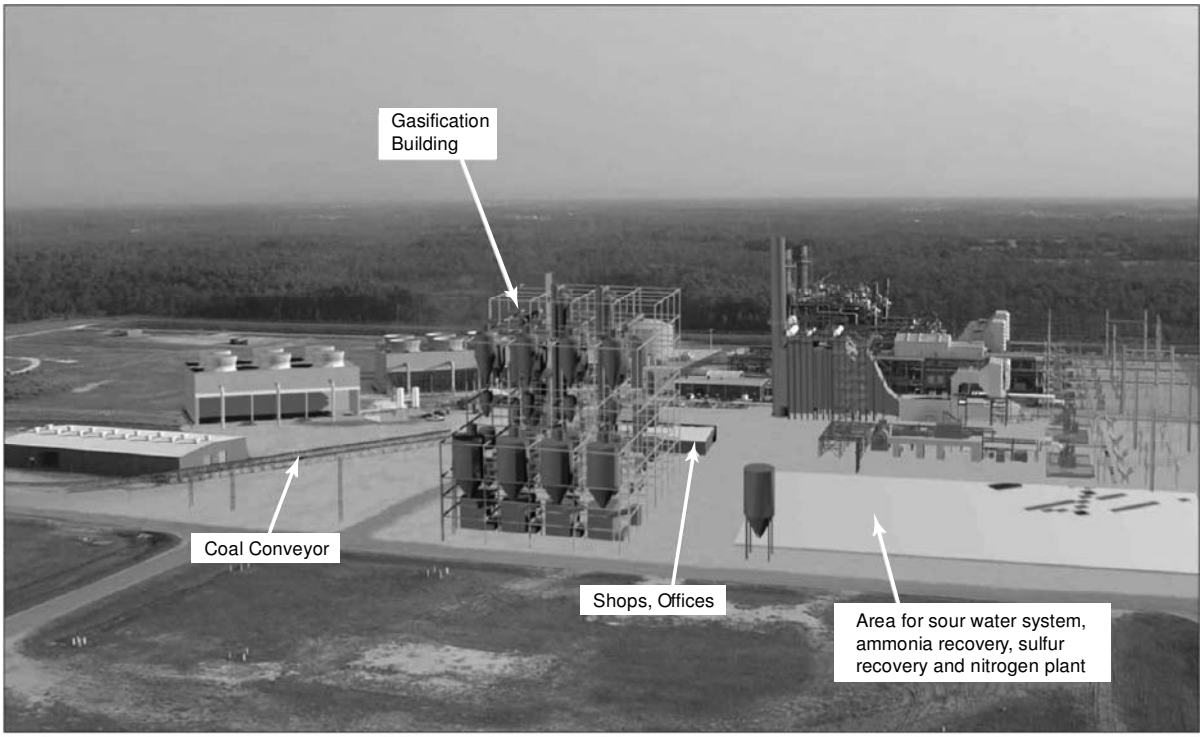


Source: DOE, 2006a

Figure 7.12-4. Artist's Rendering of an IGCC Plant with Minimal Screening and Architectural Design Elements

Source: DOE, 2006b

Figure 7.12-5. Artist's Rendering of an IGCC Plant with Extensive Screening and Architectural Design Elements



Source: DOE, 2006a

Figure 7.12-4. Artist's Rendering of an IGCC Plant with Minimal Screening and Architectural Design Elements

Source: DOE, 2006b

Figure 7.12-5. Artist's Rendering of an IGCC Plant with Extensive Screening and Architectural Design Elements