

PMTurkeyCOLPEm Resource

From: Orthen, Richard [Richard.Orthen@fpl.com]
Sent: Friday, September 02, 2011 11:32 AM
To: Matthews, David; Maher, William; Comar, Manny; Stewart, Scott; McCree, Victor; Kugler, Andrew
Subject: L-2011-335 Dated September 2, 2011: Response to NRC Environmental RAI Letter 1103094 (RAI 5563) ESRP Section 9.3 - Alternative Sites
Attachments: L-2011-335 Dated 02SEP11 RAI Ltr 1103094 RAI 5563 Response.pdf

Re: Florida Power & Light Company
Proposed Turkey Point Units 6 and 7
Docket Nos. 52-040 and 52-041
Response to NRC Environmental Request for Additional Information Letter 1103094 (RAI 5563)
Environmental Standard Review Plan Section 9.3 – Alternative Sites

Reference:

1. NRC Letter to FPL dated March 9, 2011, Environmental Request for Additional Information Letter 1103094 Related to ESRP Section 9.3, Alternative Sites, for the Combined License Application Review for Turkey Point Units 6 and 7
2. FPL Letter to NRC L-2011-127 dated April 6, 2011, Response to Environmental Request for Additional Information Letter 1103094 (RAI 5563) Environmental Standard Review Plan Section 9.3 - Alternative Sites

Florida Power & Light Company (FPL) provides, as an attachment to this letter, its response to the Nuclear Regulatory Commission's (NRC) Environmental Request for Additional Information (RAI) RAI 9.3-1 and 9.3-2 provided in Reference 1. FPL informed the NRC of the schedule for submitting this response in Reference 2. The attachment identifies changes that will be made in a future revision of the Turkey Point Units 6 and 7 Combined License Application (if applicable).

The enclosed optical storage media (OSM) is not intended to comply with the recommendations for electronic submission in NRC Guidance Document, Guidance for Electronic Submissions to the NRC.

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From: Orthen, Richard

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Tracking Status: None

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L-2011-335
10 CFR 52.3

September 2, 2011

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Re: Florida Power & Light Company
Proposed Turkey Point Units 6 and 7
Docket Nos. 52-040 and 52-041
Response to NRC Environmental Request for Additional Information Letter
1103094 (RAI 5563) Environmental Standard Review Plan
Section 9.3 – Alternative Sites

Reference:

1. NRC Letter to FPL dated March 9, 2011, Environmental Request for Additional Information Letter 1103094 Related to ESRP Section 9.3, Alternative Sites, for the Combined License Application Review for Turkey Point Units 6 and 7
2. FPL Letter to NRC L-2011-127 dated April 6, 2011, Response to Environmental Request for Additional Information Letter 1103094 (RAI 5563) Environmental Standard Review Plan Section 9.3 - Alternative Sites

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The enclosed optical storage media (OSM) is not intended to comply with the recommendations for electronic submission in NRC Guidance Document, Guidance for Electronic Submissions to the NRC.

If you have any questions, or need additional information, please contact me at 561-691-7490.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on September 2, 2011.

Sincerely,



William Maher
Senior Licensing Director – New Nuclear Projects

WDM/RFO

Attachment 1: FPL Response to NRC RAI No. 9.3-1 (RAI 5563)

Attachment 2: FPL Response to NRC RAI No. 9.3-2 (RAI 5563)

Enclosure: NRC RAI 9.3-1 (e-RAI 5563) Potential Land Use Impacts at Alternative Sites, GIS Shapefiles - August 2011 (1 OSM)

cc (w/o enclosure):

PTN 6 & 7 Project Manager, AP1000 Projects Branch 1, USNRC DNRL/NRO
Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant 3 & 4

NRC RAI Letter No. 1103094 Dated March 9, 2011

SRP Section: EIS 9.3 – Alternative Sites

Question from Environmental Technical Support Branch

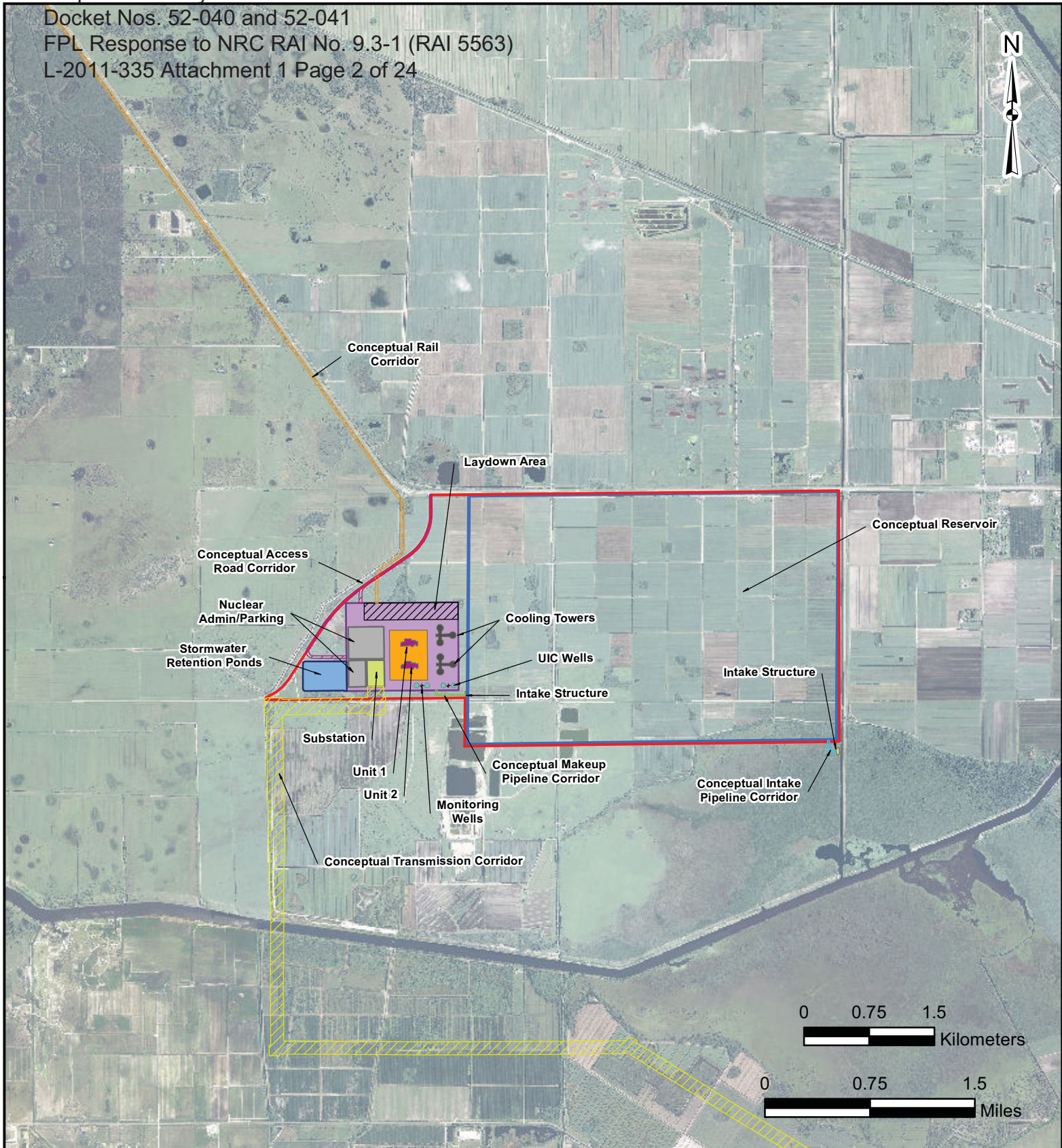
NRC RAI Number: EIS 9.3-1 (RAI 5563)

For each alternative site, provide a map showing the site boundaries, assumed facility footprint, and land cover types based (if possible) on 3 digit FLUCCS codes. Provide estimates on area of each land cover type affected for each alternative site. Provide GIS layers so that the review team can independently verify the data. The staff requests this information in order to characterize the baseline ecological conditions at each site, and to provide a common basis for comparing the ecological impacts of each site.

FPL RESPONSE:

Refer to Figures 1 – 4 for the requested map information, presented as follows:

- Figure 1 (4 pages, 1 page per alternative site) – Conceptual site layout depicting assumed site boundaries and the assumed facility footprint, including assumed cooling water storage reservoir where required.
- Figure 2 (4 pages, 1 page per alternative site) – Conceptual site layout depicting the assumed extent of non-transmission linear features, including access road corridors, pipeline corridors, and rail access corridors as appropriate.
- Figure 3 (4 pages, 1 page per alternative site) – Conceptual site layout depicting the assumed extent of conceptual transmission corridor routing.
- Figure 4 (4 pages, 1 page per alternative site) – Conceptual site layout, focused on the assumed site boundary, depicting the FLUCCS Level I land cover types. FLUCCS Level III data is included in the attached GIS files.



LEGEND

- Alternative Site
- Plant Area
- Conceptual Transmission Corridor
- Conceptual Access Road Corridor
- Conceptual Rail Corridor
- Conceptual Intake Pipeline Corridor
- Conceptual Makeup Pipeline Corridor

REFERENCES:

1. Conceptual Site Layout, FPL/Golder Associates Inc., 2011.
2. Transmission Line Corridor, Tetra Tech, 2010.

PROJECT

09387652_D001

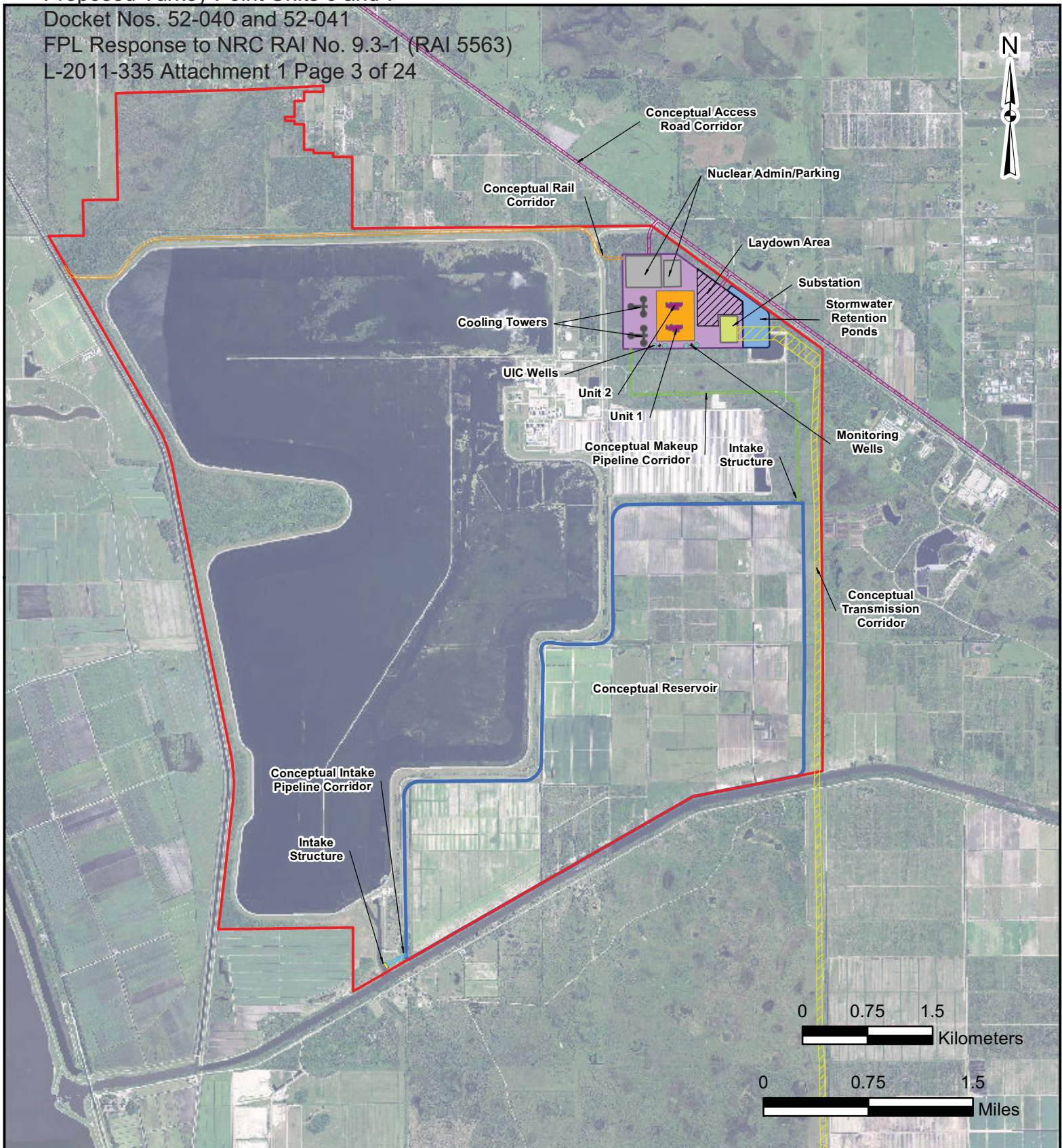
**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

**GLADES
CONCEPTUAL SITE LAYOUT**



FIGURE 1



LEGEND

- ▬ Alternative Site
- ▬ Plant Area
- ▬ Conceptual Transmission Corridor
- ▬ Conceptual Access Road Corridor
- ▬ Conceptual Rail Corridor
- ▬ Conceptual Intake Pipeline Corridor
- ▬ Conceptual Makeup Pipeline Corridor

REFERENCES:

1. Conceptual Site Layout, FPL/Golder Associates Inc., 2011.
2. Transmission Line Corridor, Tetra Tech, 2010.

PROJECT

09387652_D002

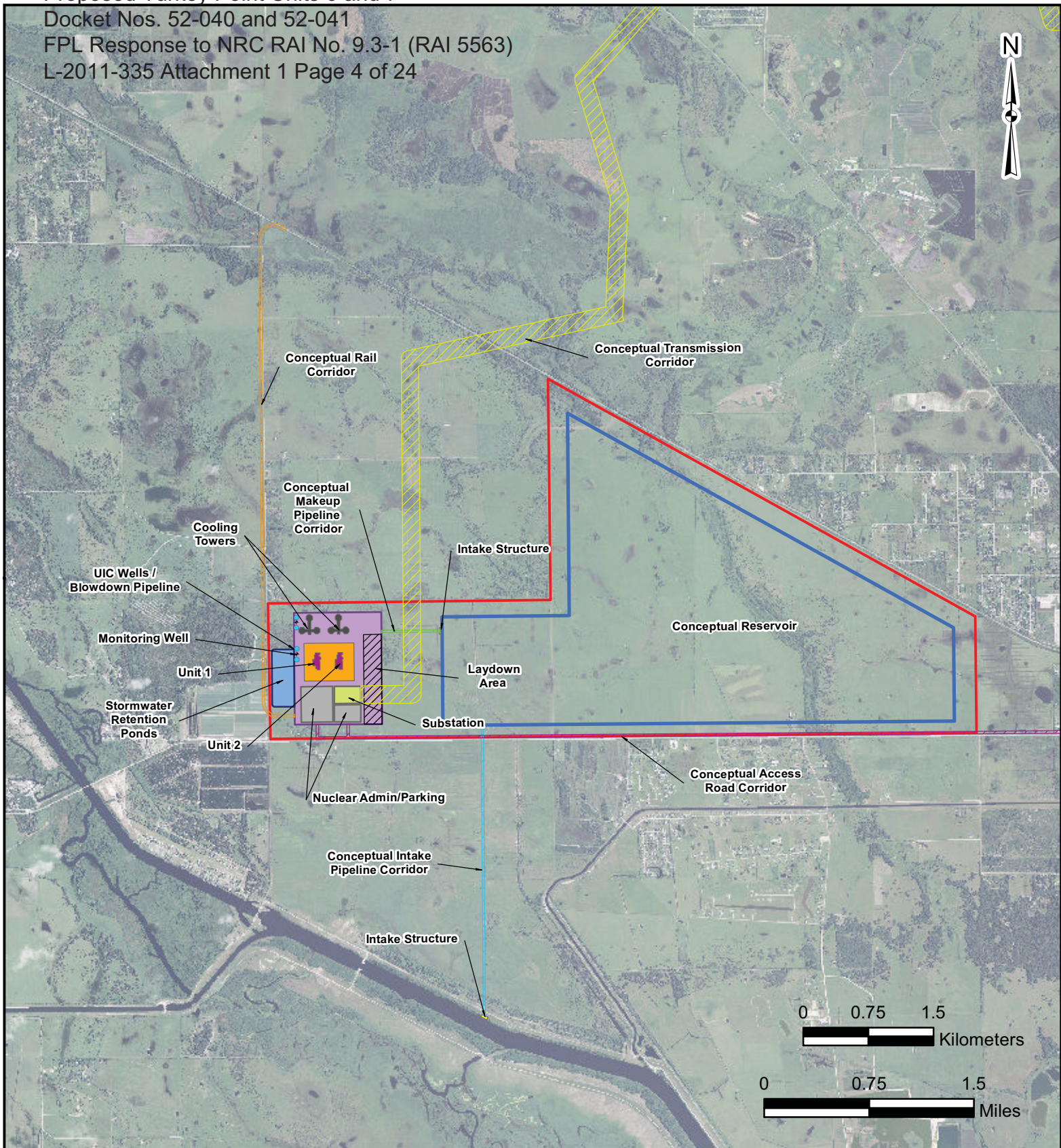
**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

**MARTIN
CONCEPTUAL SITE LAYOUT**



FIGURE 1



LEGEND

- ▬ Alternative Site
- ▬ Plant Area
- ▬ Conceptual Transmission Corridor
- ▬ Conceptual Access Road Corridor
- ▬ Conceptual Rail Corridor
- ▬ Conceptual Intake Pipeline Corridor
- ▬ Conceptual Makeup Pipeline Corridor

REFERENCES:

1. Conceptual Site Layout, FPL/Golder Associates Inc., 2011.
2. Transmission Line Corridor, Tetra Tech, 2010.

PROJECT

09387652_D003

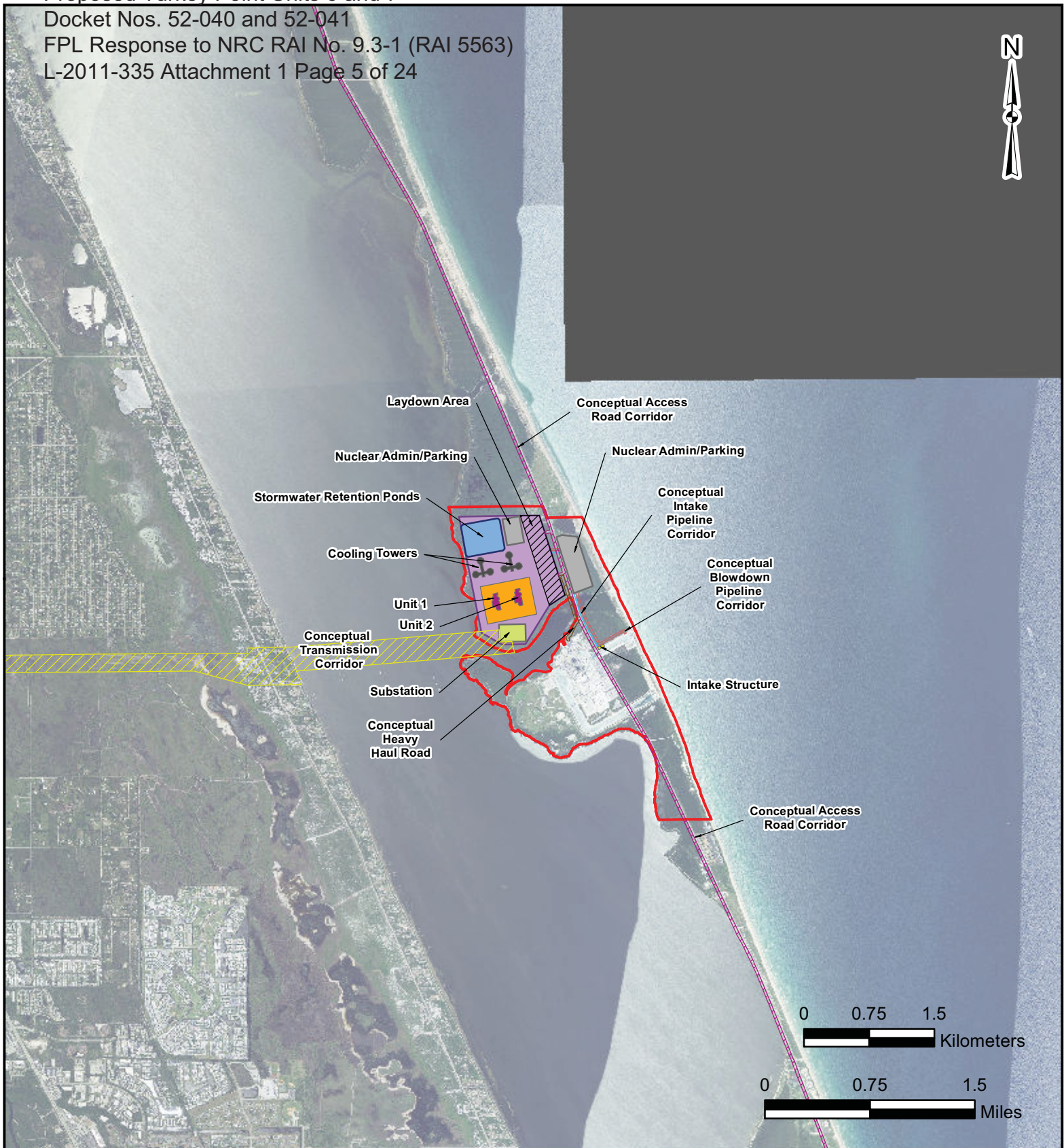
TURKEY POINT UNITS 6 & 7
PROJECT

TITLE

OKEECHOBEE
CONCEPTUAL SITE LAYOUT



FIGURE 1



LEGEND

- Alternative Site
- Conceptual Transmission Corridor
- Conceptual Heavy Haul Road
- Conceptual Access Road Corridor
- Conceptual Intake Pipeline Corridor
- Conceptual Blowdown Pipeline Corridor

REFERENCES:

1. Conceptual Site Layout, FPL/Golder Associates Inc., 2011.
2. Transmission Line Corridor, Tetra Tech, 2010.

PROJECT

09387652_D004

**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

**ST. LUCIE
CONCEPTUAL SITE LAYOUT**



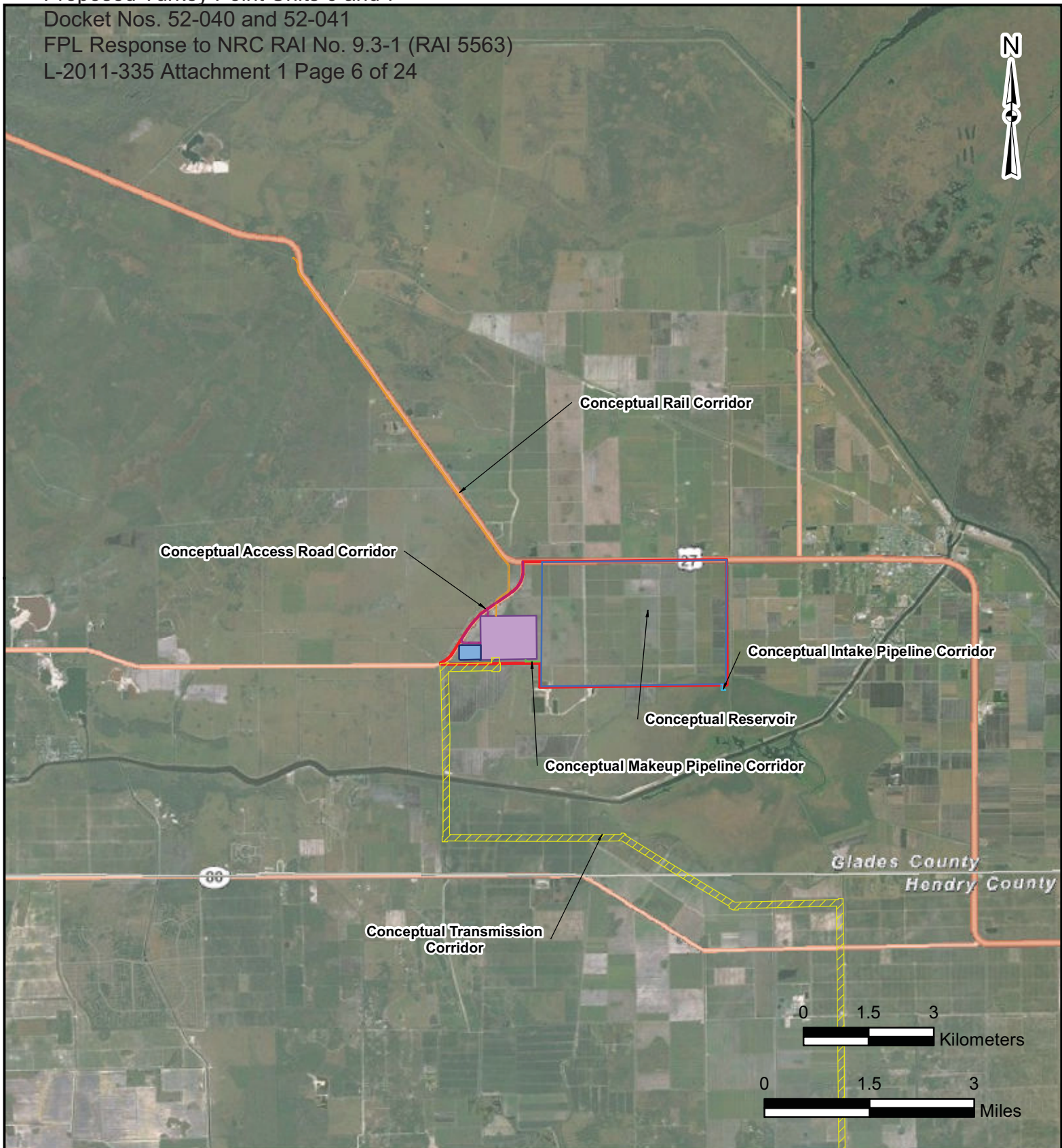
FIGURE 1

Proposed Turkey Point Units 6 and 7

Docket Nos. 52-040 and 52-041

FPL Response to NRC RAI No. 9.3-1 (RAI 5563)

L-2011-335 Attachment 1 Page 6 of 24



LEGEND

- Conceptual Transmission Corridor
- Conceptual Access Road Corridor
- Conceptual Rail Corridor
- Conceptual Intake Pipeline Corridor
- Conceptual Makeup Pipeline Corridor
- Alternative Site

REFERENCES:

1. Conceptual Site Layout, FPL/Golder Associates Inc., 2011.
2. Transmission Line Corridor, Tetra Tech, 2010.

PROJECT

09387652_D010

**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

**GLADES CONCEPTUAL SITE LAYOUT
EXTENT OF NON-TRANSMISSION
LINEAR FACILITIES**



FIGURE 2

Proposed Turkey Point Units 6 and 7

Docket Nos. 52-040 and 52-041

FPL Response to NRC RAI No. 9.3-1 (RAI 5563)

L-2011-335 Attachment 1 Page 7 of 24



LEGEND

- ▬ Alternative Site
- ▬ Conceptual Intake Pipeline Corridor
- ▬ Conceptual Makeup Pipeline Corridor
- ▬ Conceptual Rail Corridor
- ▬ Conceptual Access Road Corridor
- ▬ Conceptual Transmission Corridor

REFERENCES:

1. Conceptual Site Layout, FPL/Golder Associates Inc., 2011.
2. Transmission Line Corridor, TetraTech, 2010.

PROJECT

09387652_D011

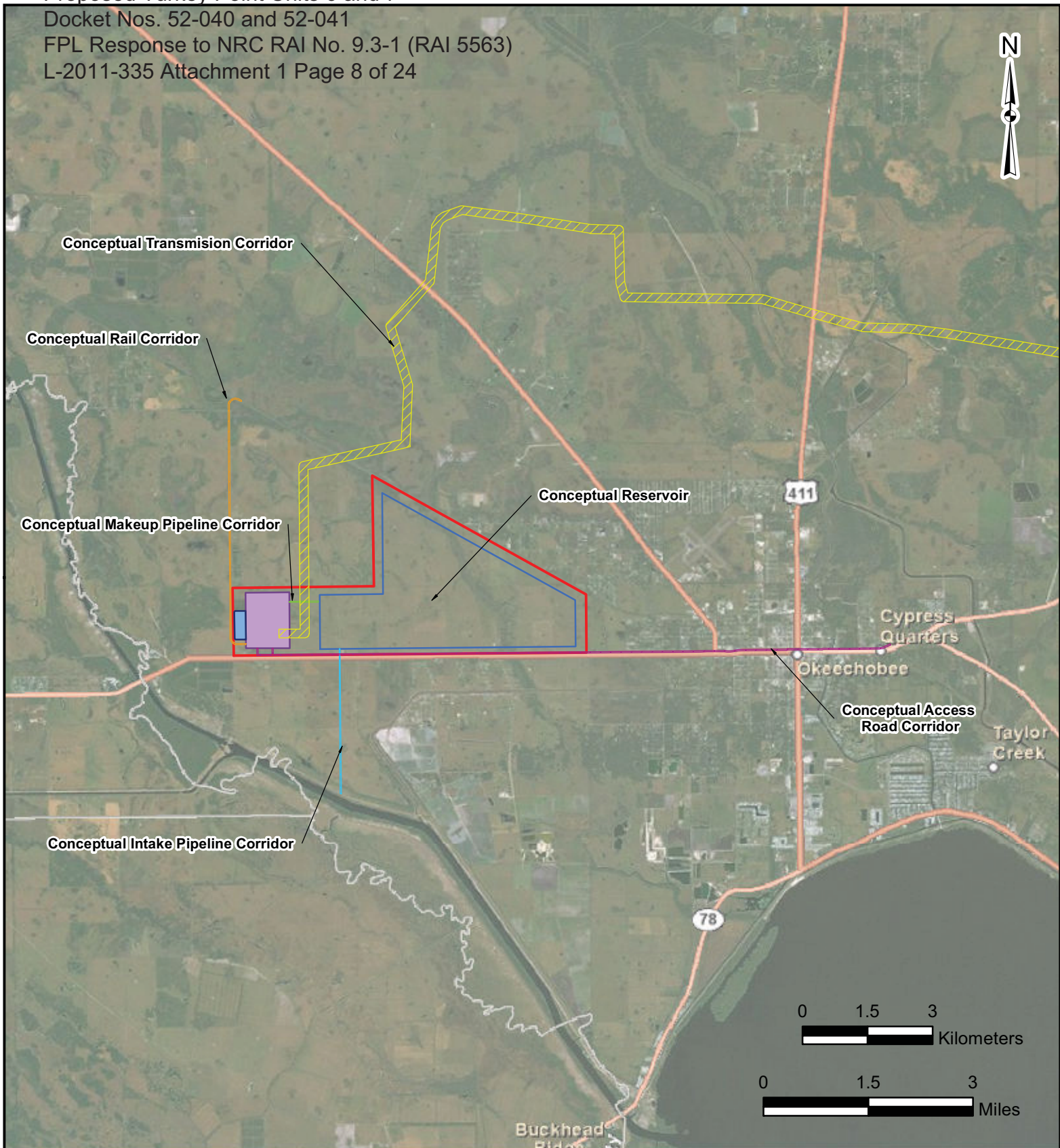
**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

**MARTIN CONCEPTUAL SITE LAYOUT
EXTENT OF NON-TRANSMISSION
LINEAR FACILITIES**



FIGURE 2



LEGEND

- ▬ Alternative Site
- ▬ Conceptual Makeup Pipeline Corridor
- ▬ Conceptual Intake Pipeline Corridor
- ▬ Conceptual Rail Corridor
- ▬ Conceptual Access Road Corridor
- ▬ Conceptual Transmission Corridor

REFERENCES:

1. Conceptual Site Layout, FPL/Golder Associates Inc., 2011.
2. Transmission Line Corridor, Tetra Tech, 2010.

PROJECT

09387652_D012

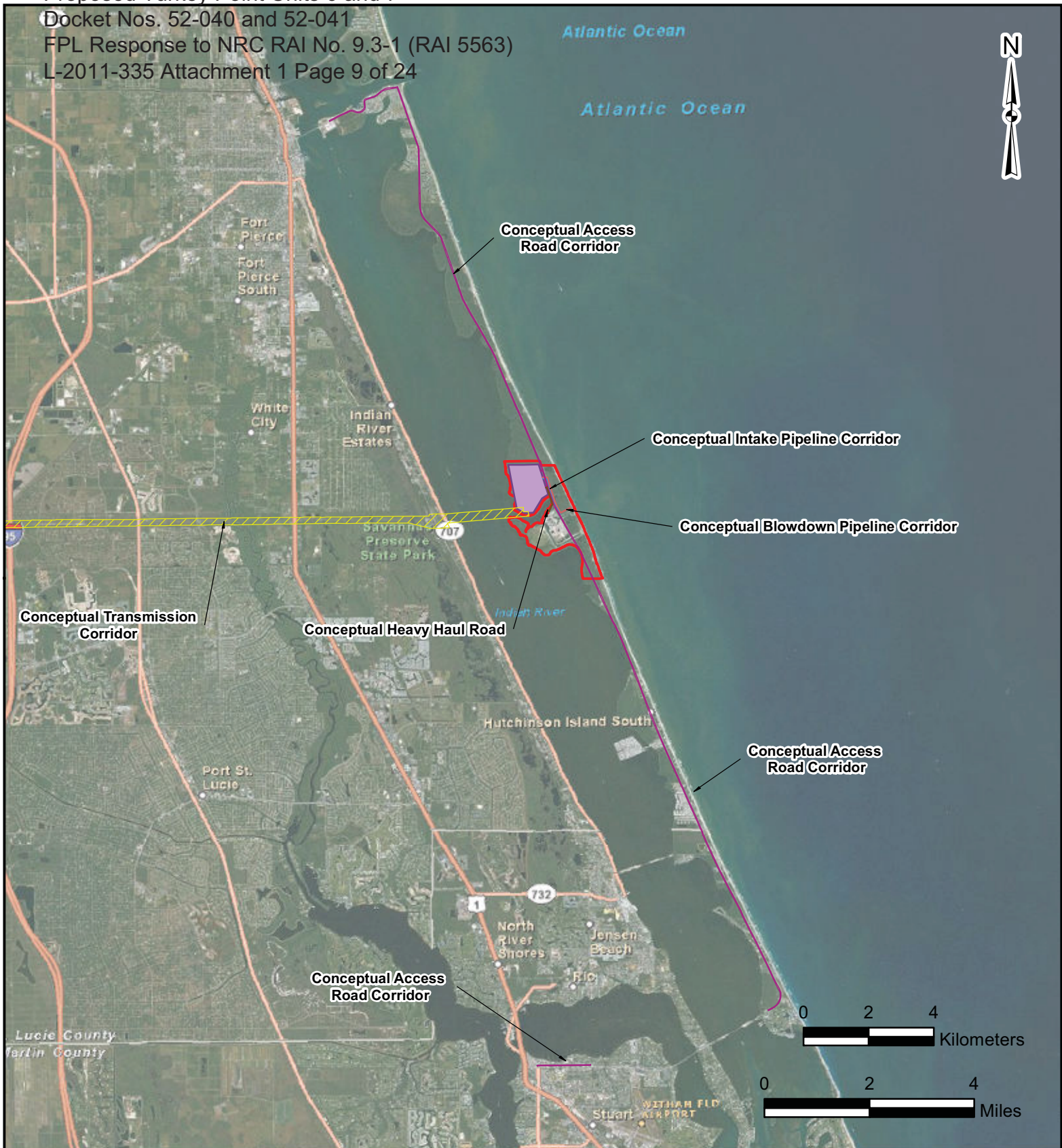
**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

**OKEECHOBEE CONCEPTUAL SITE LAYOUT
EXTENT OF NON-TRANSMISSION
LINEAR FACILITIES**



FIGURE 2



LEGEND

- Alternative Site
- Conceptual Intake Pipeline Corridor
- Conceptual Blowdown Pipeline Corridor
- Conceptual Heavy Haul Road
- Conceptual Access Road Corridor
- Conceptual Transmission Corridor

REFERENCES:

1. Conceptual Site Layout, FPL/Golder Associates Inc., 2011.
2. Transmission Line Corridor, Tetra Tech, 2010.

PROJECT

09387652_D013

**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

**ST. LUCIE CONCEPTUAL SITE LAYOUT
EXTENT OF NON-TRANSMISSION
LINEAR FACILITIES**



FIGURE 2

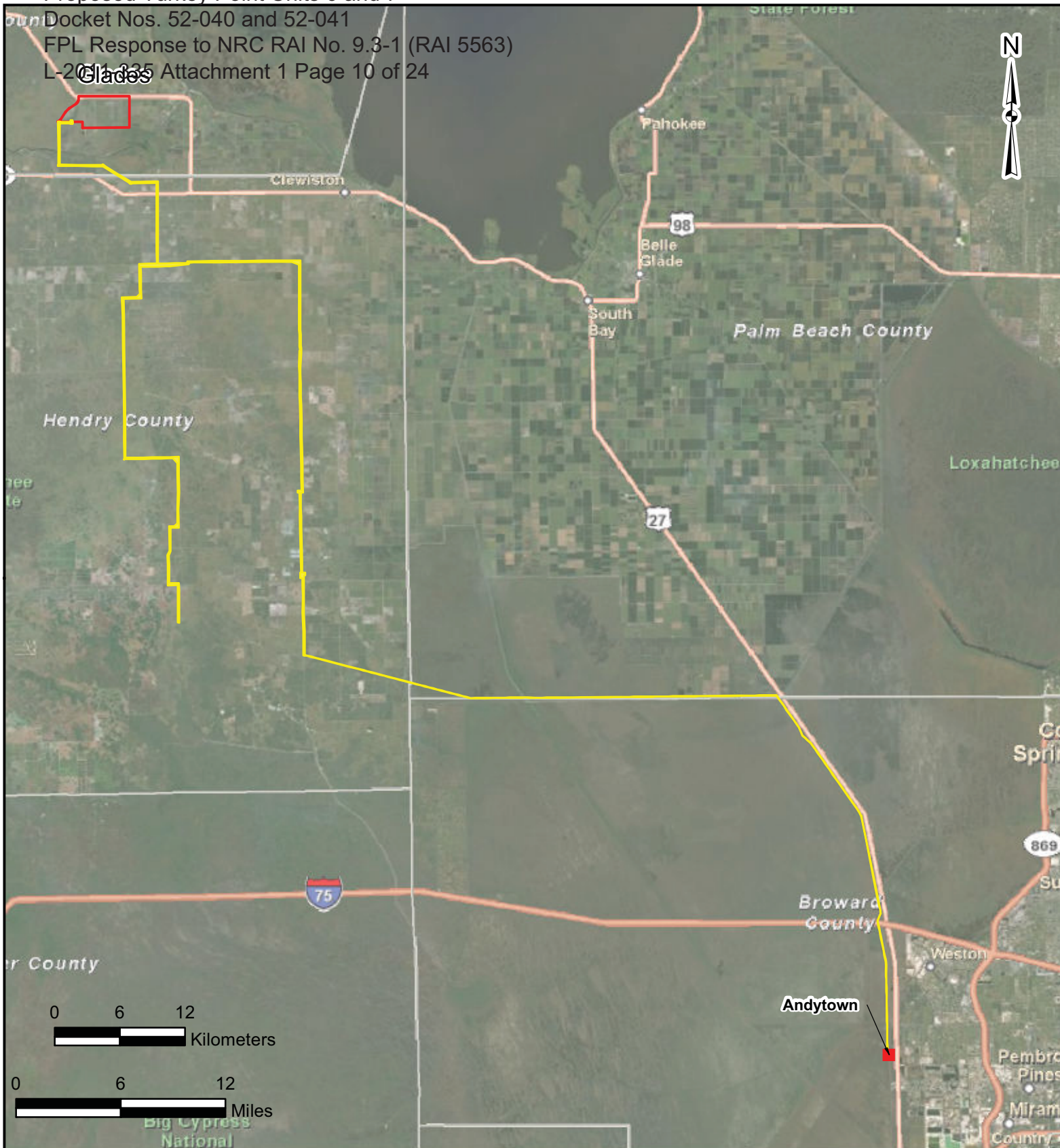
Proposed Turkey Point Units 6 and 7

Docket Nos. 52-040 and 52-041

FPL Response to NRC RAI No. 9.3-1 (RAI 5563)

L-2011-335 Attachment 1 Page 10 of 24

Glades



LEGEND

- 500-kV Substations
- Alternative Site
- Conceptual Transmission Corridor

REFERENCES:

1. Conceptual Site Layout, FPL/Golder Associates Inc., 2011.
2. Transmission Line Corridor, TetraTech, 2010.

PROJECT

09387652_D005

**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

**GLADES
TRANSMISSION LINE CORRIDORS**



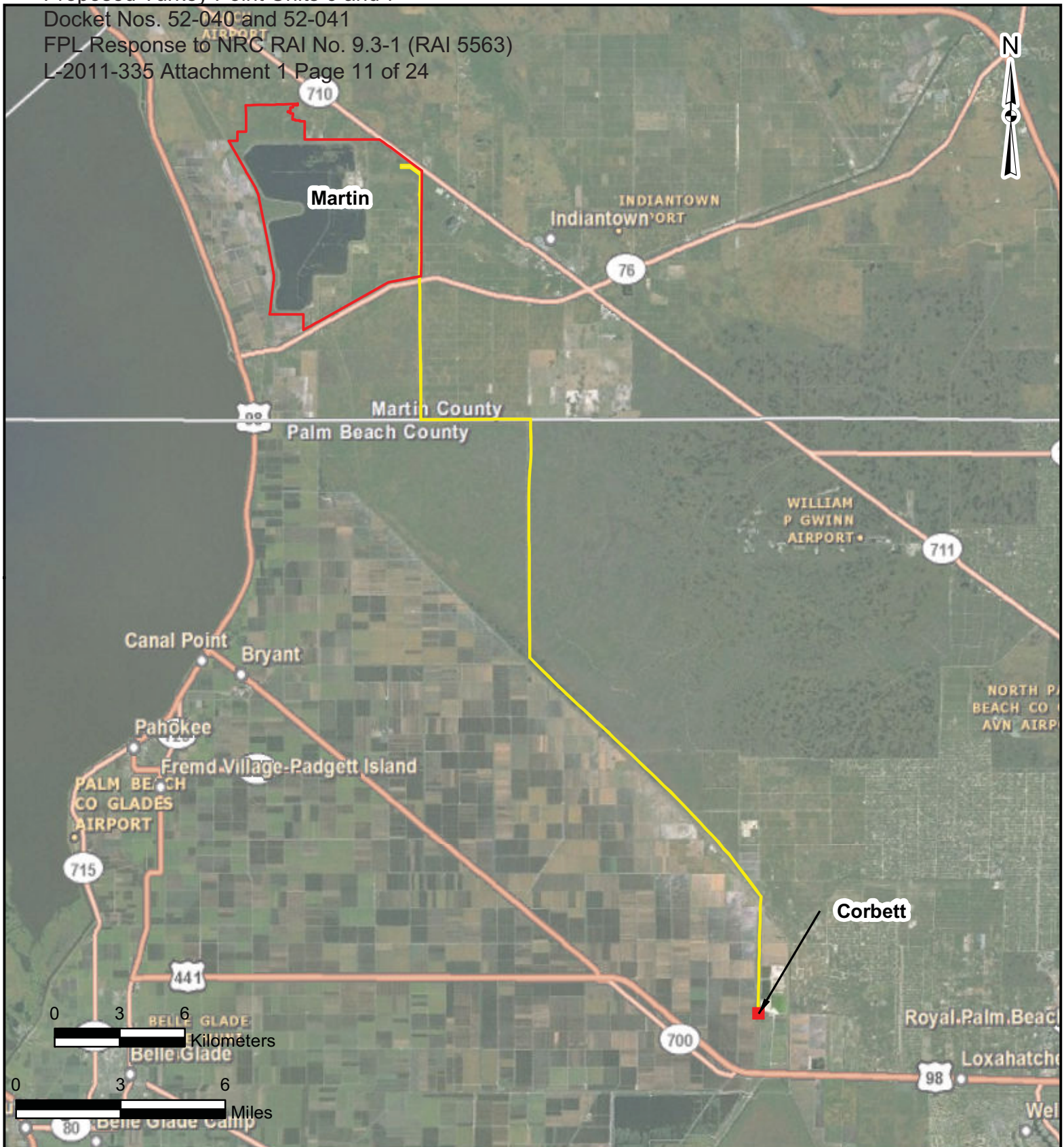
FIGURE 3

Proposed Turkey Point Units 6 and 7

Docket Nos. 52-040 and 52-041

FPL Response to NRC RAI No. 9.3-1 (RAI 5563)

L-2011-335 Attachment 1 Page 11 of 24



LEGEND

- 500-kV Substations
- Alternative Site
- Conceptual Transmission Corridor

REFERENCES:

1. Conceptual Site Layout, FPL/Golder Associates Inc., 2011.
2. Transmission Line Corridor, TetraTech, 2010.

PROJECT

09387652_D006

**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

**MARTIN
TRANSMISSION LINE CORRIDOR**



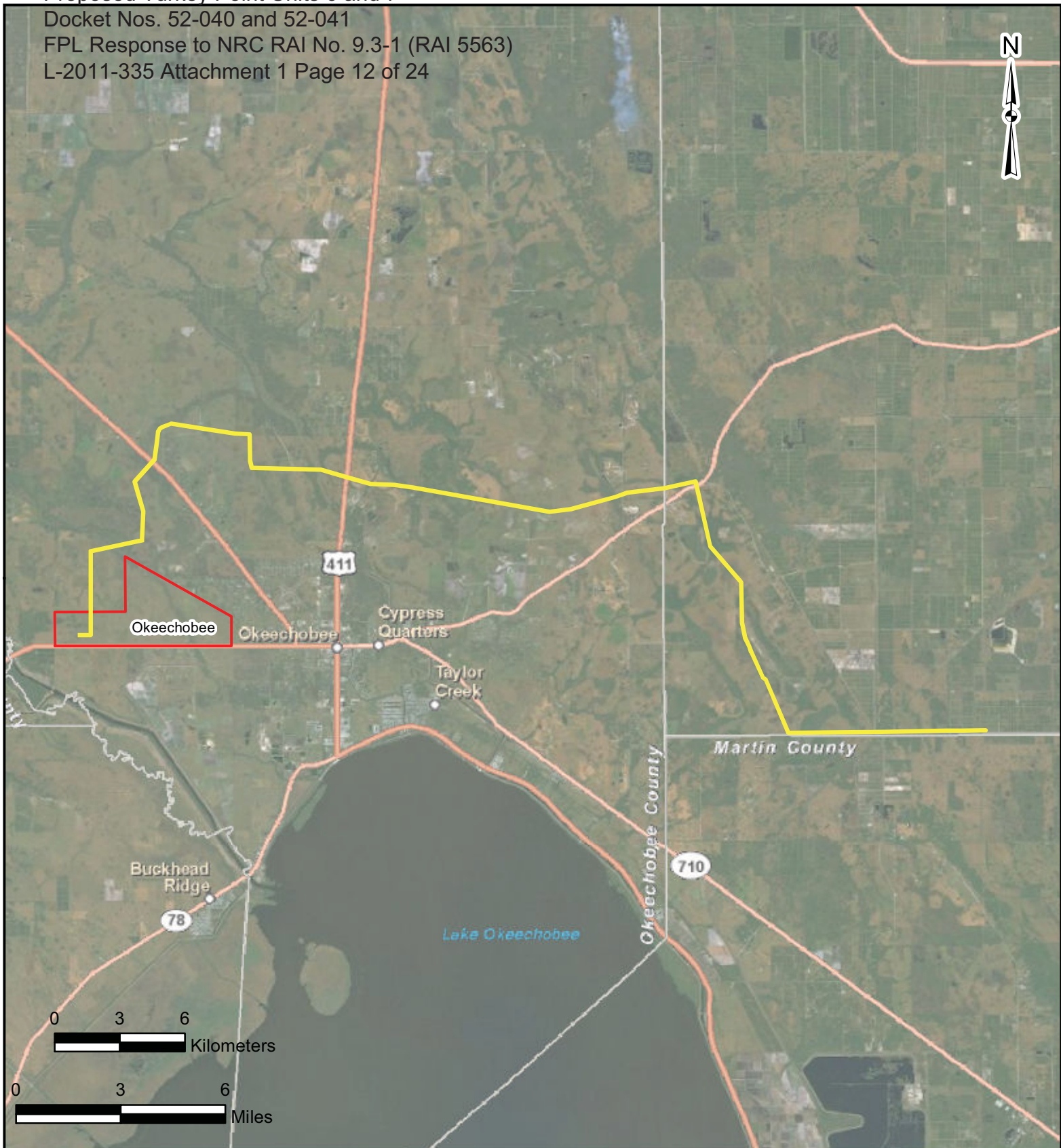
FIGURE 3

Proposed Turkey Point Units 6 and 7

Docket Nos. 52-040 and 52-041

FPL Response to NRC RAI No. 9.3-1 (RAI 5563)

L-2011-335 Attachment 1 Page 12 of 24



LEGEND

- Conceptual Transmission Corridor
- Alternative Site

REFERENCES:

1. Conceptual Site Layout, FPL/Golder Associates Inc., 2011.
2. Transmission Line Corridor, Tetra Tech, 2010.

PROJECT

09387652_D007

**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

**OKEECHOBEE
TRANSMISSION LINE CORRIDOR**



FIGURE 3

Proposed Turkey Point Units 6 and 7

Docket Nos. 52-040 and 52-041

FPL Response to NRC RAI No. 9.3-1 (RAI 5563)

L-2011-335 Attachment 1 Page 13 of 24



LEGEND

- 500-kV Substations
- Conceptual Transmission Corridor
- Alternative Site

REFERENCES:

1. Conceptual Site Layout, FPL/Golder Associates Inc., 2011.
2. Transmission Line Corridor, Tetra Tech, 2010.

PROJECT

09387652_D008

**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

**ST. LUCIE
TRANSMISSION LINE CORRIDOR**



FIGURE 3

Figure 4
Glades Conceptual Site Layout
FLUCCS Level I Land Cover Types

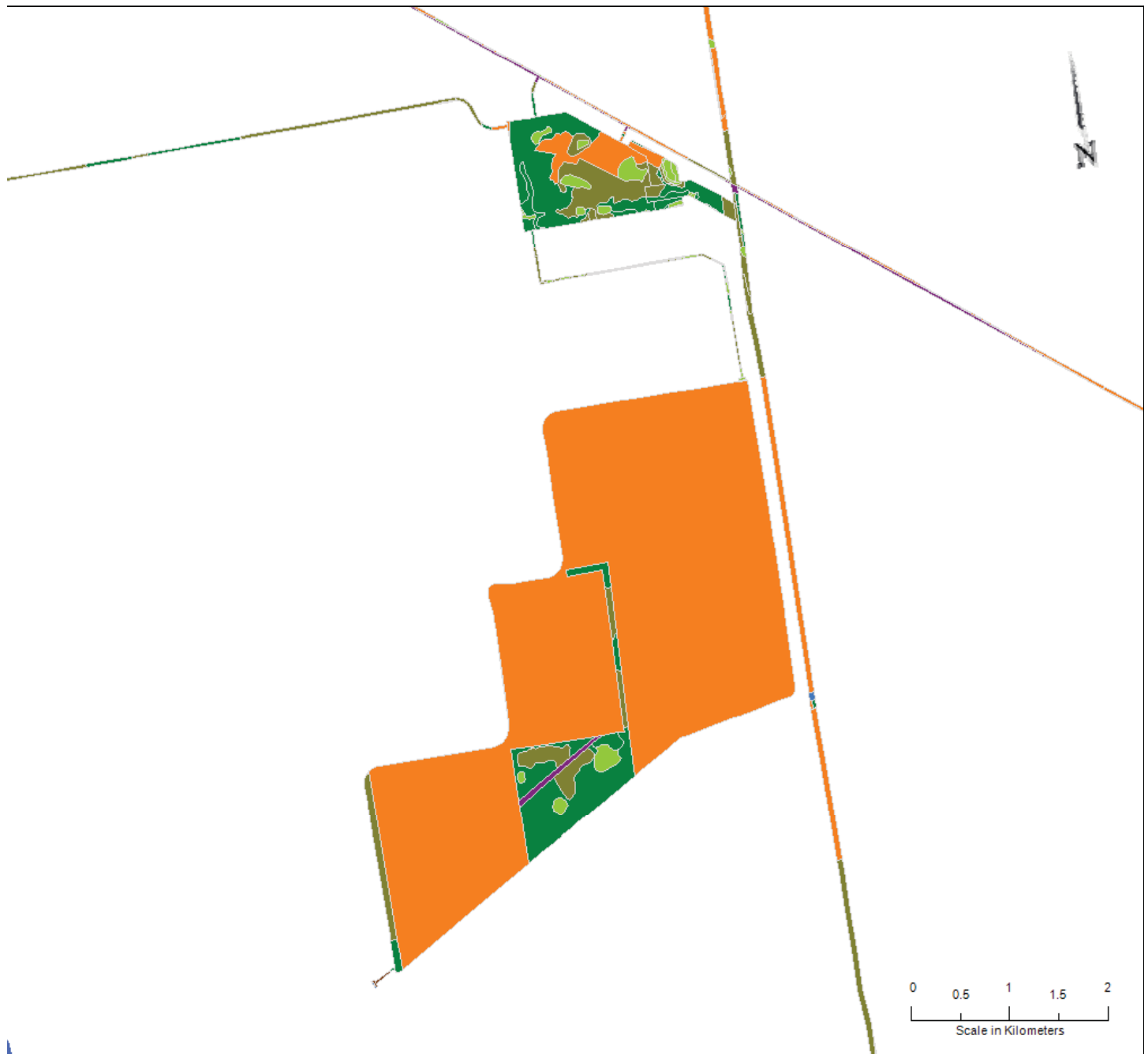


Legend

- | | |
|----------------------|--|
| ■ Urban and Built Up | ■ Barren Land |
| ■ Agriculture | ■ Transportation, Communication, and Utilities |
| ■ Rangeland | ■ Special Classifications |
| ■ Upland Forest | |
| ■ Water | |
| ■ Wetlands | |

Projection: North America Albers Equal Area Conic

Figure 4 Martin Conceptual Site Layout FLUCCS Level I Land Cover Types



Legend

- | | |
|----------------------|--|
| ■ Urban and Built Up | ■ Barren Land |
| ■ Agriculture | ■ Transportation, Communication, and Utilities |
| ■ Rangeland | ■ Special Classifications |
| ■ Upland Forest | |
| ■ Water | |
| ■ Wetlands | |

Projection: North America Albers Equal Area Conic

Figure 4
Okeechobee Conceptual Site Layout
FLUCCS Level I Land Cover Types

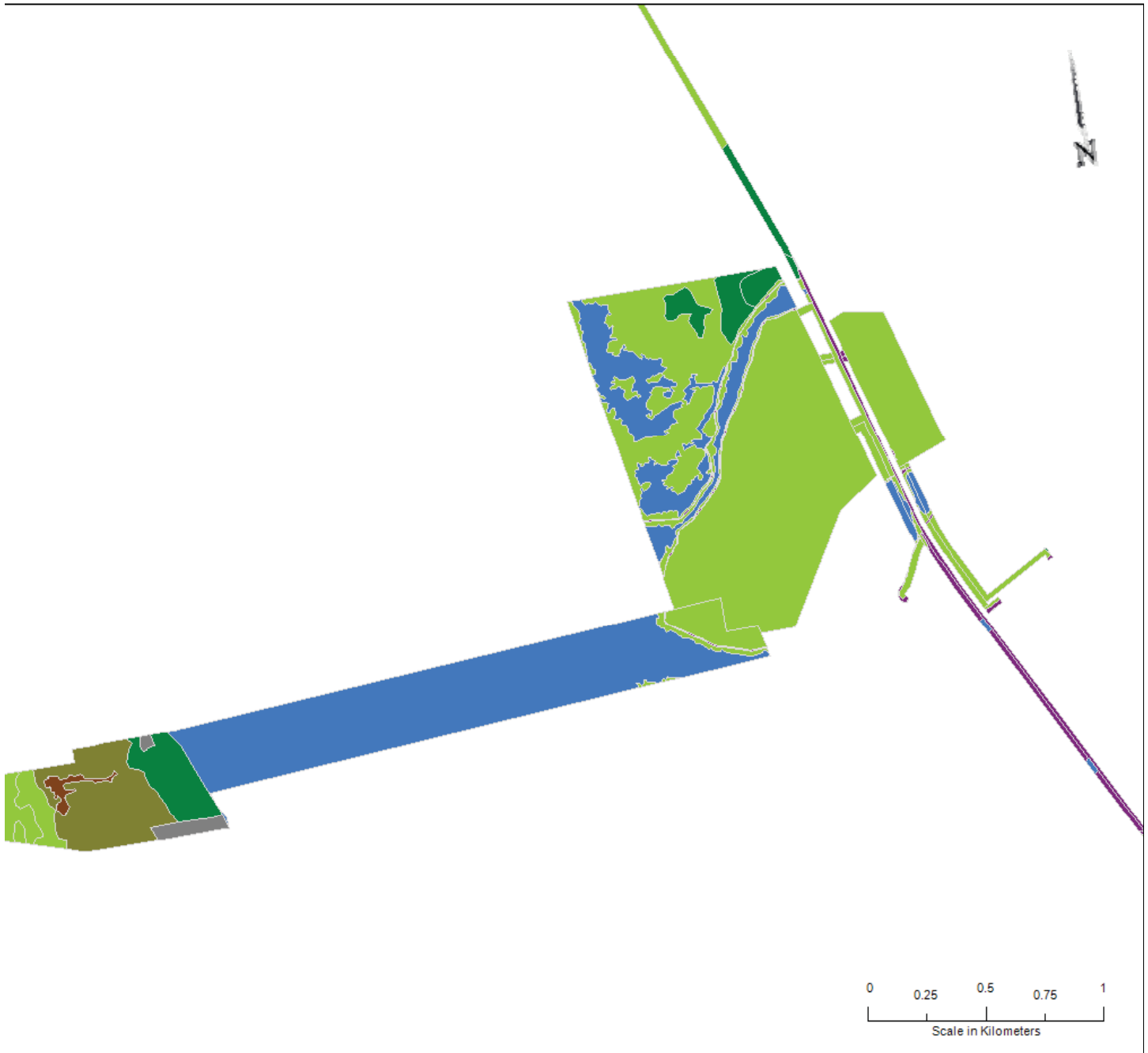


Legend

- | | |
|----------------------|--|
| ■ Urban and Built Up | ■ Barren Land |
| ■ Agriculture | ■ Transportation, Communication, and Utilities |
| ■ Rangeland | ■ Special Classifications |
| ■ Upland Forest | |
| ■ Water | |
| ■ Wetlands | |

Projection: North America Albers Equal Area Conic

Figure 4
St. Lucie Conceptual Site Layout
FLUCCS Level I Land Cover Types



Legend

- | | |
|----------------------|--|
| ■ Urban and Built Up | ■ Barren Land |
| ■ Agriculture | ■ Transportation, Communication, and Utilities |
| ■ Rangeland | ■ Special Classifications |
| ■ Upland Forest | |
| ■ Water | |
| ■ Wetlands | |

Projection: North America Albers Equal Area Conic

Refer to Tables 1 – 4 for estimates of the potentially affected area(s) of each land cover type (FLUCCS Level III) for each alternative site. The estimates include land cover types for all potentially affected areas identified on the conceptual site layouts, including the assumed plant area, assumed cooling water reservoir, and assumed offsite infrastructure features (e.g., access road corridors, rail corridors, pipeline corridors, transmission corridors), as appropriate.

**Table 1. Estimate of Potentially Affected Areas by Land Cover Type
Glades Alternative Site**

Land Use Description	FLUCCS Code	Potentially Affected Area [acres]
Extractive	160	32.7
Holding Ponds	166	35.4
Improved Pastures	211	1,443.3
Unimproved Pastures	212	10.9
Woodland Pastures	213	173.7
Row Crops	214	311.4
Field Crops	215	4,087.7
Citrus Groves	221	851.5
Aquaculture	254	4.1
Herbaceous (Dry Prairie)	310	69.6
Shrub and Brushland	320	2.8
Mixed Rangeland	330	35.9
Upland Hardwood Forests	420	16.6
Brazilian Pepper	422	50.8
Live Oak	427	8.5
Cabbage Palm	428	6.3
Hardwood-Coniferous Mixed	434	18.5
Coniferous Plantations	441	16.3
Streams and Waterways	510	57.8
Ditches	511	145.3
Lakes	520	1.5
Reservoirs	530	0.2
Reservoirs less than 10 acres	534	1.4
Mixed Wetland Hardwoods	617	419.9
Exotic Wetland Hardwoods	619	185.9
Cypress	621	43.3
Wetland Forested Mixed	630	0.2
Freshwater Marshes	641	934.6
Wet Prairies	643	256.0
Emergent Aquatic Vegetation	644	33.2
Roads and Highways	814	1.5
Electric Power Facilities	831	1.1
Electrical Power Transmission Lines	832	29.5

**Table 2. Estimate of Potentially Affected Areas by Land Cover Type
Martin Alternative Site**

Land Use Description	FLUCCS Code	Potentially Affected Area [acres]
Fixed Single Family Units, less than 2 dwellings per acre	111	0.8
Mixed Units (Fixed and Mobile Home)	113	6.2
Fixed Single Family Units, 2-5 dwellings per acre	121	0.9
Commercial and Services	140	13.0
Other Light Industrial	155	1.5
Race Tracks	183	0.7
Parks and Zoos	185	1.6
Improved Pastures	211	152.5
Unimproved Pastures	212	75.9
Woodland Pastures	213	19.2
Row Crops	214	3.2
Field Crops	215	7.6
Citrus Groves	221	2,808.5
Sod Farms	242	5.0
Ornamentals	243	0.6
Herbaceous (Dry Prairie)	310	257.9
Shrub and Brushland	320	95.8
Palmetto Prairies	321	131.2
Mixed Rangeland	330	50.5
Pine Flatwoods	411	360.2
Upland Hardwood Forests	420	13.5
Brazilian Pepper	422	10.4
Hardwood-Coniferous Mixed	434	63.1
Streams and Waterways	510	4.8
Lakes	520	8.6
Reservoirs	530	0.4
Mixed Wetland Hardwoods	617	50.5
Cypress	621	0.1
Hydric Pine Flatwoods	625	81.4
Wetland Forested Mixed	630	12.9
Freshwater Marshes	641	243.9
Wet Prairies	643	70.7
Emergent Aquatic Vegetation	644	17.8
Fill Areas (Highways/Railways)	744	2.8
Transportation	810	85.2
Roads and Highways	814	1.1
Electric Power Facilities	831	1.5
Electrical Power Transmission Lines	832	12.6

**Table 3. Estimate of Potentially Affected Areas by Land Cover Type
Okeechobee Alternative Site**

Land Use Description	FLUCCS Code	Potentially Affected Area [acres]
Fixed Single Family Units, 2-5 dwellings per acre	121	7.5
Mixed Units (Fixed/Mobile Home)	123	4.8
Mobile Home Units/6 or more	132	2.6
Commercial and Services	140	25.4
Improved Pastures	211	3,509.6
Unimproved Pastures	212	301.6
Woodland Pastures	213	365.1
Field Crops	215	78.6
Citrus Groves	221	121.9
Dairies	252	36.1
Herbaceous (Dry Prairie)	310	24.0
Shrub and Brushland	320	0.3
Mixed Rangeland	330	3.1
Pine Flatwoods	411	3.1
Brazilian Pepper	422	0.2
Live Oak	427	17.4
Hardwood-Coniferous Mixed	434	5.6
Streams and Waterways	510	3.1
Ditches	511	12.6
Lakes	530	0.6
Reservoirs less than 10 acres	534	2.1
Bay Swamps	611	42.8
Mixed Wetland Hardwoods	617	227.1
Cypress	621	13.1
Hydric Pine Flatwoods	625	10.4
Wetland Forested Mixed	630	49.7
Freshwater Marshes	641	407.3
Wet Prairies	643	1,291.9
Roads and Highways	814	0.01

**Table 4. Estimate of Potentially Affected Areas by Land Cover Type
St. Lucie Alternative Site**

Land Use Description	FLUCCS Code	Potentially Affected Area [acres]
Fixed Single Family Units, less than 2 dwellings per acre	111	14.4
Fixed Single Family Units, 2-5 dwellings per acre	121	14.0
Fixed Single Family Units, 6 or more dwellings per acre	131	2.7
Mobile Home Units, 6 or more dwellings per acre	132	8.9
Multiple dwelling units, low rise	133	14.0
Multiple dwelling units, high rise	134	5.5
High density under construction	139	6.2
Commercial and Services	140	19.5
Retail and Services	141	4.9
Commercial and Services under construction	149	0.04
Other Light Industrial	155	6.2
Institutional	170	1.6
Educational	171	0.1
Golf Courses	182	10.3
Parks and Zoos	185	8.3
Improved Pastures	211	214.8
Unimproved Pastures	212	83.3
Woodland Pastures	213	29.0
Field Crops	215	7.6
Citrus Groves	221	172.3
Herbaceous (Dry Prairie)	310	396.0
Shrub and Brushland	320	127.0
Palmetto Prairies	321	36.0
Coastal Scrub	322	45.2
Mixed Rangeland	330	46.3
Pine Flatwoods	411	260.7
Upland Hardwood Forests	420	28.2
Brazilian Pepper	422	25.0
Tropical Hardwoods	426	0.04
Cabbage Palm	428	5.2
Hardwood-Coniferous Mixed	434	23.4
Australian Pines	437	3.4
Streams and Waterways	510	5.4
Ditches	511	3.9
Lakes	520	2.7

**Table 4. Estimate of Potentially Affected Areas by Land Cover Type
St. Lucie Alternative Site (continued)**

Land Use Description	FLUCCS Code	Potentially Affected Area [acres]
Reservoirs	530	6.3
Embayments opening directly into Gulf or Atlantic Ocean	541	186.5
Embayments not opening directly into Gulf or Atlantic Ocean	542	40.2
Enclosed Saltwater Ponds within Salt Marsh	543	0.1
Mangrove Swamps	612	419.9
Mixed Wetland Hardwoods	617	63.3
Cypress	621	0.1
Hydric Pine Flatwoods	625	41.1
Freshwater Marshes	641	282.5
Wet Prairies	643	78.3
Emergent Aquatic Vegetation	644	32.4
Disturbed Land	740	3.2
Transportation	810	1.3
Roads and Highways	814	24.0
Utilities	830	0.1
Electric Power Facilities	831	12.0
Electrical Power Transmission Lines	832	1.5
Sewage Treatment	834	2.8

Refer to the enclosed OSM containing the FLUCCS Level III data utilized in preparing the estimate of the area of each land cover type for each alternative site.

This response is PLANT SPECIFIC.

References:

None

ASSOCIATED COLA REVISIONS:

The updated and site-specific information provided in this response will be reflected in a future COLA revision.

ASSOCIATED ENCLOSURES:

1 OSM – NRC RAI 9.3-1 (e-RAI 5563) Potential Land Use Impacts at Alternative Sites, GIS Shapefiles - August 2011

The contents of the OSM are summarized as follows:

LAYER_NAME	LAYER_TITLE
Site	Boundary of Alternative Sites
Site_Impacts	Potential Land Use Impacts of Site Facilities at Alternative Sites
Non_Linear_Facilities	Boundary of Associated Non-Linear Facilities (e.g., reservoirs) at Alternative Sites
Associated_Non_Linear_Facilities_Impacts	Potential Land Use Impacts of Associated Non-Linear Facilities (e.g., reservoirs) at Alternative Sites
Non_Transmission_Linear_Facilities	Boundary of Non-Transmission Linear Facilities (e.g., roads, rail, pipelines) at Alternative Sites
Associated_Non_Transmission_Linear_Facilities_Impacts	Potential Land Use Impacts of Non-Transmission Linear Facilities (e.g., roads, rail, pipelines) at Alternative Sites
Conc_TLineCorridors	Boundary of Transmission Corridors at Alternative Sites
Transmission_Corridor_LandUse_by_Segment	Potential Land Use Impacts within Transmission Corridors at Alternative Sites

Proposed Turkey Point Units 6 and 7
Docket Nos. 52-040 and 52-041
FPL Response to NRC RAI No. 9.3-1 (RAI 5563)
L-2011-335 Enclosure Page 1 of 1

Enclosure

Turkey Point Units 6 and 7 COL Application

ENVIRONMENTAL REPORT

NRC RAI No. 9.3-1 (e-RAI 5563) Potential Land Use Impacts at Alternative Sites, GIS Shapefiles - August 2011 (1 OSM)

Enclosure: 1 Total Page and 1 OSM

NRC RAI Letter No. 1103094 Dated March 9, 2011

SRP Section: EIS 9.3 – Alternative Sites

Question from Environmental Technical Support Branch

NRC RAI Number: EIS 9.3-2 (RAI 5563)

For each alternative site, provide a map showing the site, existing transmission infrastructure, the likely connection point to the regional grid, a generalized route or macro-corridor between the plant site and the connection point, and the land cover types within and near the macro corridor. Provide a summary table, using 3-digit FLUCCS codes if possible, of potentially affected land cover acreage for each alternative site. The staff requests this information in order to compare impacts among the different alternative sites. It is understood that the exact route cannot be determined at this time, but the staff can make qualitative comparisons based on generalized routes, including the proportion of the potential route that would be expected to follow existing transmission corridors or other existing linear features.

FPL RESPONSE:

The response to RAI 5563 9.3-1 includes a figure for the conceptual site layout at each alternative site depicting the assumed extent of the conceptual transmission corridor routing (Figure 3). For each alternative site, this figure shows the assumed connection point to the regional grid and a conceptual macro-corridor route between the plant site and the connection point. A map showing the existing transmission system in the FPL service territory was included as Figure 9.3-4 in ER Rev. 2. Given the areal extent of the entire conceptual site layout (including conceptual transmission corridor routing), FLUCCS Level III data is included in the GIS files attached with the RAI 5563 9.3-1 response. In the tables below (Tables 1-4), FPL has provided estimates of the potentially affected area(s) of each land cover type (FLUCCS Level III) within the conceptual transmission corridor for each alternative site. The following transmission corridor dimensions were assumed in the conceptual transmission corridor routing:

- Glades site – assumed corridor length = 121 miles, assumed corridor width varies from approximately 200-500 ft.
- Martin site – assumed corridor length = 31 miles, assumed corridor width varies from approximately 200-300 ft.
- Okeechobee site – assumed corridor length = 38 miles, assumed corridor width = 660 ft.
- St. Lucie site – assumed corridor length = 63 miles, assumed corridor width varies from approximately 200-660 ft.

This response is PLANT SPECIFIC.

**Table 1. Estimate of Potentially Affected Areas by Land Cover Type
Glades Alternative Site Transmission Corridor**

Land Use Description	FLUCCS Code	Potentially Affected Area [acres]
Improved Pastures	211	1,263.1
Unimproved Pastures	212	9.0
Woodland Pastures	213	173.7
Row Crops	214	311.4
Field Crops	215	1,352.6
Citrus Groves	221	851.5
Aquaculture	254	4.1
Herbaceous (Dry Prairie)	310	69.6
Shrub and Brushland	320	2.8
Mixed Rangeland	330	35.9
Upland Hardwood Forests	420	7.0
Brazilian Pepper	422	50.8
Live Oak	427	8.5
Cabbage Palm	428	6.3
Hardwood-Coniferous Mixed	434	18.5
Streams and Waterways	510	57.8
Ditches	511	0.1
Lakes	520	1.5
Reservoirs	530	0.2
Mixed Wetland Hardwoods	617	358.8
Exotic Wetland Hardwoods	619	9.4
Cypress	621	43.3
Wetland Forested Mixed	630	0.2
Freshwater Marshes	641	902.3
Wet Prairies	643	220.2
Emergent Aquatic Vegetation	644	33.2
Roads and Highways	814	1.5
Electric Power Facilities	831	1.1
Electrical Power Transmission Lines	832	29.5

**Table 2. Estimate of Potentially Affected Areas by Land Cover Type
Martin Alternative Site Transmission Corridor**

Land Use Description	FLUCCS Code	Potentially Affected Area [acres]
Improved Pastures	211	14.0
Field Crops	215	7.6
Citrus Groves	221	78.6
Herbaceous (Dry Prairie)	310	189.7
Shrub and Brushland	320	49.6
Palmetto Prairies	321	4.6
Mixed Rangeland	330	44.0
Pine Flatwoods	411	43.4
Upland Hardwood Forest	420	0.6
Hardwood-Coniferous Mixed	434	9.2
Streams and Waterways	510	3.5
Lakes	520	2.7
Mixed Wetland Hardwoods	617	23.8
Cypress	621	0.1
Hydric Pine Flatwoods	625	39.1
Freshwater Marshes	641	179.1
Wet Prairies	643	54.7
Emergent Aquatic Vegetation	644	17.8
Electric Power Facilities	831	1.5

**Table 3. Estimate of Potentially Affected Areas by Land Cover Type
Okeechobee Alternative Site Transmission Corridor**

Land Use Description	FLUCCS Code	Potentially Affected Area [acres]
Improved Pastures	211	1,611.2
Unimproved Pastures	212	301.6
Woodland Pastures	213	281.2
Field Crops	215	78.6
Citrus Groves	221	121.9
Dairies	252	36.1
Herbaceous (Dry Prairie)	310	21.8
Shrub and Brushland	320	0.3
Pine Flatwoods	411	2.2
Live Oak	427	17.4
Hardwood-Coniferous Mixed	434	5.6
Streams and Waterways	510	2.8
Ditches	511	0.2
Bays and Swamps	611	42.8
Mixed Wetland Hardwoods	617	138.1
Cypress	621	13.1
Hydric Pine Flatwoods	625	10.4
Wetland Forested Mixed	630	49.7
Freshwater Marshes	641	196.3
Wet Prairies	643	91.2

**Table 4. Estimate of Potentially Affected Areas by Land Cover Type
St. Lucie Alternative Site Transmission Corridor**

Land Use Description	FLUCCS Code	Potentially Affected Area [acres]
Fixed Single Family Units, less than 2 dwellings per acre	111	6.6
Fixed Single Family Units, 2-5 dwellings per acre	121	1.9
Commercial and Services	140	0.1
Other Light Industrial	155	6.2
Educational	171	0.1
Golf Courses	182	4.8
Improved Pastures	211	214.8
Unimproved Pastures	212	83.3
Woodland Pastures	213	29.0
Field Crops	215	7.6
Citrus Groves	221	172.3
Herbaceous (Dry Prairie)	310	392.1
Shrub and Brushland	320	127.0
Palmetto Prairies	321	36.0
Coastal Scrub	322	41.5
Mixed Rangeland	330	46.3
Pine Flatwoods	411	260.7
Upland Hardwood Forests	420	7.0
Brazilian Pepper	422	20.1
Hardwood-Coniferous Mixed	434	23.4
Streams and Waterways	510	4.8
Ditches	511	3.9
Lakes	520	2.7
Reservoirs	530	2.9
Embayments opening directly into Gulf or Atlantic Ocean	541	157.4
Mangrove Swamps	612	14.7
Mixed Wetland Hardwoods	617	63.3
Cypress	621	0.1
Hydric Pine Flatwoods	625	41.1
Freshwater Marshes	641	282.5
Wet Prairies	643	78.3
Emergent Aquatic Vegetation	644	32.4
Disturbed Land	740	3.2
Transportation	810	1.3
Roads and Highways	814	11.1
Utilities	830	0.1

**Table 4. Estimate of Potentially Affected Areas by Land Cover Type
St. Lucie Alternative Site Transmission Corridor (continued)**

Land Use Description	FLUCCS Code	Potentially Affected Area [acres]
Electric Power Facilities	831	4.8
Electrical Power Transmission Lines	832	1.5

This response is PLANT SPECIFIC.

References:

None

ASSOCIATED COLA REVISIONS:

The updated and site-specific information contained in the response will be reflected in future COLA revisions.

ASSOCIATED ENCLOSURES:

None