



Progress Energy

James Scarola
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Progress Energy Carolinas, Inc.

Serial: NPD-NRC-2008-033
September 17, 2008

10CFR52.79

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

**SHEARON HARRIS NUCLEAR POWER PLANT, UNITS 2 AND 3
DOCKET NOS. 52-022 AND 52-023
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 007 RELATED TO
IDENTIFICATION OF POTENTIAL HAZARDS IN SITE VICINITY**

Reference: Letter from Manny Comar (NRC) to James Scarola (PEC), dated August 21, 2008,
"Request for Additional Information Letter No. 007 Related to SRP Section
02.02.01-02.02.02 for the Harris Units 2 and 3 Combined License Application"

Ladies and Gentlemen:

Progress Energy Carolinas, Inc. (PEC) hereby submits our response to the Nuclear Regulatory Commission's (NRC) request for additional information provided in the referenced letter.

A response to each NRC request is addressed in the enclosure. The enclosure also identifies changes that will be made in a future revision of the Shearon Harris Nuclear Power Plant Units 2 and 3 application.

If you have any further questions or need additional information, please contact Bob Kitchen at (919) 546-6992 or Garry Miller at (919) 546-6107.

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

Executed on September 17, 2008.

Sincerely,

Enclosure

cc : U.S. NRC Director, Office of New Reactors/NRLPO
U.S. NRC Office of Nuclear Reactor Regulation/NRLPO
U.S. NRC Region II, Regional Administrator
U.S. NRC Resident Inspector, SHNPP Unit 1
Mr. Manny Comar, U.S. NRC Project Manager

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**Shearon Harris Nuclear Power Plant Units 2 and 3
Responses to NRC Request for Additional Information Letter No. 007 Related to SRP Section
02.02.01-02.02.02 for the Combined License Application, dated August 21, 2008**

<u>NRC RAI #</u>	<u>Progress Energy RAI #</u>	<u>Progress Energy Response</u>
02.02.01-02.02.02-1	H-0039	Response enclosed – see following pages
02.02.01-02.02.02-2	H-0040	Response enclosed – see following pages
02.02.01-02.02.02-3	H-0041	Response enclosed – see following pages
02.02.01-02.02.02-4	H-0042	Response enclosed – see following pages

<u>Attachments/Enclosures</u>	<u>Associated NRC RAI #</u>	<u>Pages Included</u>
FSAR Figure 2.2.2-201 (Rev 1 Draft)	02.02.01-02.02.02-1	1 page
FSAR Figure 2.2.2-202 (Rev 1 Draft)	02.02.01-02.02.02-4	2 pages

NRC Letter No.: HAR-RAI-LTR-007

NRC Letter Date: August 21, 2008

NRC Review of Final Safety Analysis Report

NRC RAI #: 02.02.01-02.02.02-1

Text of NRC RAI:

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.20 and 10 CFR 100.21. The FSAR Section 2.2.2.7 does not provide this information adequately to review this section. The Staff's review indicates that there are more than three airports within 20 miles and numerous airports within the region of 50 mile radius (between 20 - 50 miles) of HAR site. Please either address these in the FSAR or give rationale for exclusion.

PGN RAI ID #: H-0039

PGN Response to NRC RAI:

A complete review was conducted of all airports located within the region of 50 miles of the HAR site using the Charlotte Sectional Aeronautical Chart published by the FAA. The review confirmed that there are no airports located within an 8-km (5-mi.) radius of the plant site. There were a total of 62 airports located from this review. The breakdown of the 62 airports, specified by distance from the site, is listed in the following table.

Types of Airports within 50 Miles of the HAR Site

Airport Type	Number
Within 5 Miles	
None	None
5 – 10 Miles	
Public	1
Private	2
Military	0
10 – 20 Miles	
Public	2
Private	7
Military	0
20 – 50 Miles	
Public	11
Private	37
Military	2
Total	62

Operations were reviewed for all 62 airports and compared against movements per year ($500d^2$ and $1000d^2$, where d equals plant-to-airport distance), per SRP (NUREG-0800), Section 3.5.1.6. The outcome determined that no public, private, or military airports from 10 to 50 miles from the HAR site had greater

than 1000d² movements per year. Only one airport within 10 miles of the HAR site (Sanford-Lee County Regional) exceeded 500d² movements per year. Additional airport information will be added to Section 2.2.2.7 of the HAR COL Application in a future amendment.

The resulting changes are shown below.

Associated HAR COL Application Revisions:

The following changes will be made to HAR FSAR Chapter 2 in a future amendment:

1. Revise the first paragraph of FSAR Section 2.2.2.7 from:

“There are no airports located within an 8-km (5-mi.) radius of the plant site (Figure 2.2.2-201). Eight airports are located within the region of the HAR site. One major airport (RDU), one general aviation airport (Sanford-Lee County Regional Airport), and three privately owned airports (Deck Airpark, Cox Airport, and Triple W Airport) are in the immediate proximity of less than 32 km (20 mi.) from the plant site. Other airports that are greater than 32 km (20 mi.) from the project area are Pope Air Force Base, Moore County Airport, and Fayetteville Regional Airport. Only the RDU Airport is expected to grow substantially in the near future. See Table 2.2.2-202 and Table 2.2.2-203 for a summary of operations data for the airports within 32 km (20 mi.) of the plant site.”

To read:

“There are no airports located within an 8-km (5-mi.) radius of the plant site (Figure 2.2.2-201). There are sixty-two airports located within the region (50 mi. radius) of the HAR site (Figure 2.2.2-201). Of the sixty-two airports located within the region, there are twelve airports within the immediate proximity of less than 32 km (20 mi.) from the plant site, which include one major public airport (RDU), two general public aviation airports (Sanford-Lee County Regional Airport and Triple W Airport), and nine privately owned airports. The nine privately owned airports are shown below (Reference 2.2-216):

- Bagwell
- Barclaysville Field
- CAG Farms
- Cox
- Deck Airpark
- Eagles Landing
- Fuquay/Angier Field
- Moretz Riverside Landing
- Womble Field.

There are fifty airports located within the range of 32 km (20 mi.) and 80 km (50 mi.) from the project area, which includes two military airports (Pope Air Force Base and Simmons Army Airfield), eleven public airports, and thirty-seven privately owned airports. The eleven public airports are shown below (Reference 2.2-216) and the thirty-seven privately owned airports are shown on Figure 2.2.2-201:

- Burlington-Alamance Regional
- Causey
- Fayetteville Regional
- Franklin County
- Harnett Regional
- Horace Williams
- Hurdle Field
- Johnston County
- Moore County
- Person County
- Southeast Greensboro.

Only the RDU Airport is expected to grow substantially in the near future. A summary of operations data for the public airports within 32 km (20 mi.) of the plant site is provided in Table 2.2.2-202 and a summary of aircraft operations per year for the RDU airport is provided in Table 2.2.2-203.”

2. Revise the first sentence of the second paragraph of FSAR Section 2.2.2.7 from:

“Table 2.2.2-202 describes the types of aircraft and flying patterns for aircraft-associated airports within 32 km (20 mi.) of the plant location.”

To read:

“Table 2.2.2-202 describes the types of aircraft and flying patterns for aircraft-associated public airports within 32 km (20 mi.) of the plant location.”

3. Revise the title of Table 2.2.2-202 in the FSAR Chapter 2 List of Tables from:

“2.2.2-202 Airports within 32 km (20 mi.) of HAR Site”

To read:

“2.2.2-202 Public Airports within 32 km (20 mi.) of HAR Site”

4. Revise reference 2.2-216 in FSAR Section 2.2.5 from:

2.2-216 AirNav.com, “NC11 Deck Airpark, Apex, North Carolina, USA,”
Website, www.airnav.com/airport/NC11, accessed August February 21,
2007 (Table 2.2.2-202).

To read:

2.2-216 Airport IQ 5010, “Airport Master Records and Reports,” Website,
www.gcr1.com/5010Web AirNav.com, accessed September 4, 2008.

Also, the following reference in FSAR Section 2.2.5 is obsolete. This reference will either be noted as not used or deleted and subsequent references renumbered.

2.2-217 AirNav.com, “NC 81 Cox Airpark, Apex, North Carolina, USA,”
Website, www.airnav.com/airport/NC81, accessed February 21,
2007 (Table 2.2.2-202).

5. Replace FSAR Table 2.2.2-202, in its entirety, with the version provided below.

Table 2.2.2-202
Public Airports within 32 km (20 mi.) of HAR Site

Airport	Distance to Site	Operations	Length and Orientation of Runway	Types of Aircraft Using the Facility	Flying Patterns Associated with the Airport
Raleigh-Durham International Airport	31 km (19 mi.)	245,099 per year	1) 3048 m (10,000 ft.) Oriented north 2) 2286 m (7500 ft.) Oriented north 3) 1088 m (3570 ft.) Oriented east	Commercial, commuter, and general aviation aircraft	Straight in, left turn patterns, and right turn patterns
Sanford-Lee County Regional Airport	14.5 km (9 mi.)	47,085 per year	1981 m (6500 ft.)	Mainly small single-engine and some larger multi-engine aircraft	Standard left traffic
Triple W Airport	23.3 km (14.5 mi.)	21,535 per year	916 m (3004 ft.)	Strictly light aircraft	Standard left and right traffic

Sources: Reference 2.2-207, Reference 2.2-208, and Reference 2.2-218

6. Revise the title of FSAR Figure 2.2.2-201 in the FSAR Chapter 2 List of Figures from:

"2.2.2-201 HAR Site Location"

To read:

"2.2.2-201 Regional Airports"

7. Replace FSAR Figure 2.2.2-201, in its entirety, with the version listed under **Attachments/Enclosures** below. Modifications include the addition of other airports within the 50 mile region of the HAR Site.

Attachments/Enclosures:

Revised FSAR Figure 2.2.2-201 (Rev 1 Draft) – Regional Airports

NRC Letter No.: HAR-RAI-LTR-007

NRC Letter Date: August 21, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 02.02.01-02.02.02-2

Text of NRC RAI:

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.20 and 10 CFR 100.21. The FSAR Section 2.2.2.7 does not provide this information adequately to review this section. The NRC staff finds that the Sanford-Lee County Regional Airport (TTA) is located approximately 8.7 miles west-southwest of the HAR plant site. On the basis of the applicant information provided with daily 129 aircraft operations, the projected annual operations for this airport estimated to be 47085 and would exceed the airport distance/operations criterion of $500d^2$ ($500 \times 8.7 \times 8.7 = 37845$) and therefore an evaluation of aircraft hazards should be performed in Section 3.5.1.6. Please check, address and evaluate appropriately.

PGN RAI ID #: H-0040

PGN Response to NRC RAI:

The Sanford-Lee County Regional Airport is located approximately 9 miles from the HAR plant site. Based on the location of the airport and the number of operations per year at the airport (47,085 from FSAR Table 2.2.2-202), an evaluation of the aircraft hazards will be performed in FSAR Section 3.5.1.6. After the evaluation is completed, the revision to FSAR Subsection 3.5.1.6 (to be added to the FSAR in a future amendment) will be submitted to the NRC by January 30, 2009.

Associated HAR COL Application Revisions:

The following changes will be made to the HAR FSAR in a future amendment:

1. Revise the first sentence of the third paragraph of FSAR Section 2.2.2.7 from:
"The Sanford-Lee County Regional Airport is located approximately 31 km (19 mi.) southwest of the plant location."
To read:
"The Sanford-Lee County Regional Airport is located approximately 14.5 km (9 mi.) southwest of the plant location."
2. Revise FSAR Table 2.2.2-202 (See response to NRC RAI # 02.02.01-02.02.02-1) under column "Distance to Site" for the "Sanford-Lee County Regional Airport" from:
"31 km
(19 mi.)"
To read:
"14.5 km
(9 mi.)"

Attachments/Enclosures:

None

NRC Letter No.: HAR-RAI-LTR-007

NRC Letter Date: August 21, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 02.02.01-02.02.02-3

Text of NRC RAI:

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.20 and 10 CFR 100.21. The FSAR Section 2.2.2.7 does not provide this information adequately to review this section. The NRC staff's review indicates that there is a military route, IR718, with a centerline approximately 1.4 miles north of the HAR site, whose nearest edge is less than 5 miles from the HAR site. Therefore, NRC Staff considers that the applicant should evaluate and address the aircraft hazards associated with this route in Section 3.5.1.6. Please evaluate or provide a justification for its exclusion.

PGN RAI ID #: H-0041

PGN Response to NRC RAI:

Military route IR718 is located within 2 miles of the HAR site. Therefore, an aircraft hazards evaluation of this military route will be conducted. After the evaluation is completed, the revision to FSAR Subsection 3.5.1.6 (to be added to the FSAR in a future amendment) will be submitted to the NRC by January 30, 2009.

Associated HAR COL Application Revisions:

The following changes will be made to the HAR FSAR in a future amendment:

1. Revise the last sentence of the second paragraph of Subsection 2.2.2.7 from:

"There are no active airways, including V-3-6B-J55 (shown on Figure 2.2.2-202) that fall within the plant location."

To read:

"The outer boundary of four airways are routed within 2 miles of the HAR site: IR718, V3-66-155, J207 and J52-55 (shown on Figure 2.2.2-202)."

Attachments/Enclosures:

None

NRC Letter No.: HAR-RAI-LTR-007

NRC Letter Date: August 21, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 02.02.01-02.02.02-4

Text of NRC RAI:

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.20 and 10 CFR 100.21. The FSAR Section 2.2.2.7 does not provide this information adequately to review this section. The NRC Staff's review indicates that there two Federal jet routes Airway J207 and J52- 55, whose nearest edges are well within 2 miles of HAR site. Therefore, in accordance with the acceptance criteria 3.5.1.6, the aircraft hazards associated with these jet routes should be evaluated and addressed in Section 3.5.1.6. Please evaluation, or provide justification for their exclusion.

PGN RAI ID #: H-0042

PGN Response to NRC RAI:

The centerline of Airways V3-66-155, J207 and J52-55 are located 5.5, 2.6 and 3.8 miles, respectively, of the HAR site. The boundary of each these airways is 4 nautical miles from the centerline. Thus, the outer boundary of each of these airways is within 2 miles of the HAR site. Therefore, an aircraft hazards evaluation of these airways will be conducted. After the evaluation is completed, the revision to FSAR Subsection 3.5.1.6 (to be added to the FSAR in a future amendment) will be submitted to the NRC by January 30, 2009.

Associated HAR COL Application Revisions:

The following changes will be made to the HAR FSAR in a future amendment:

1. Revise the last sentence of the second paragraph of Subsection 2.2.2.7 from:

"There are no active airways, including V-3-6B-J55 (shown on Figure 2.2.2-202) that fall within the plant location."

To read:

"The outer boundary of four airways are routed within 2 miles of the HAR site: IR718, V3-66-155, J207 and J52-55 (shown on Figure 2.2.2-202)."

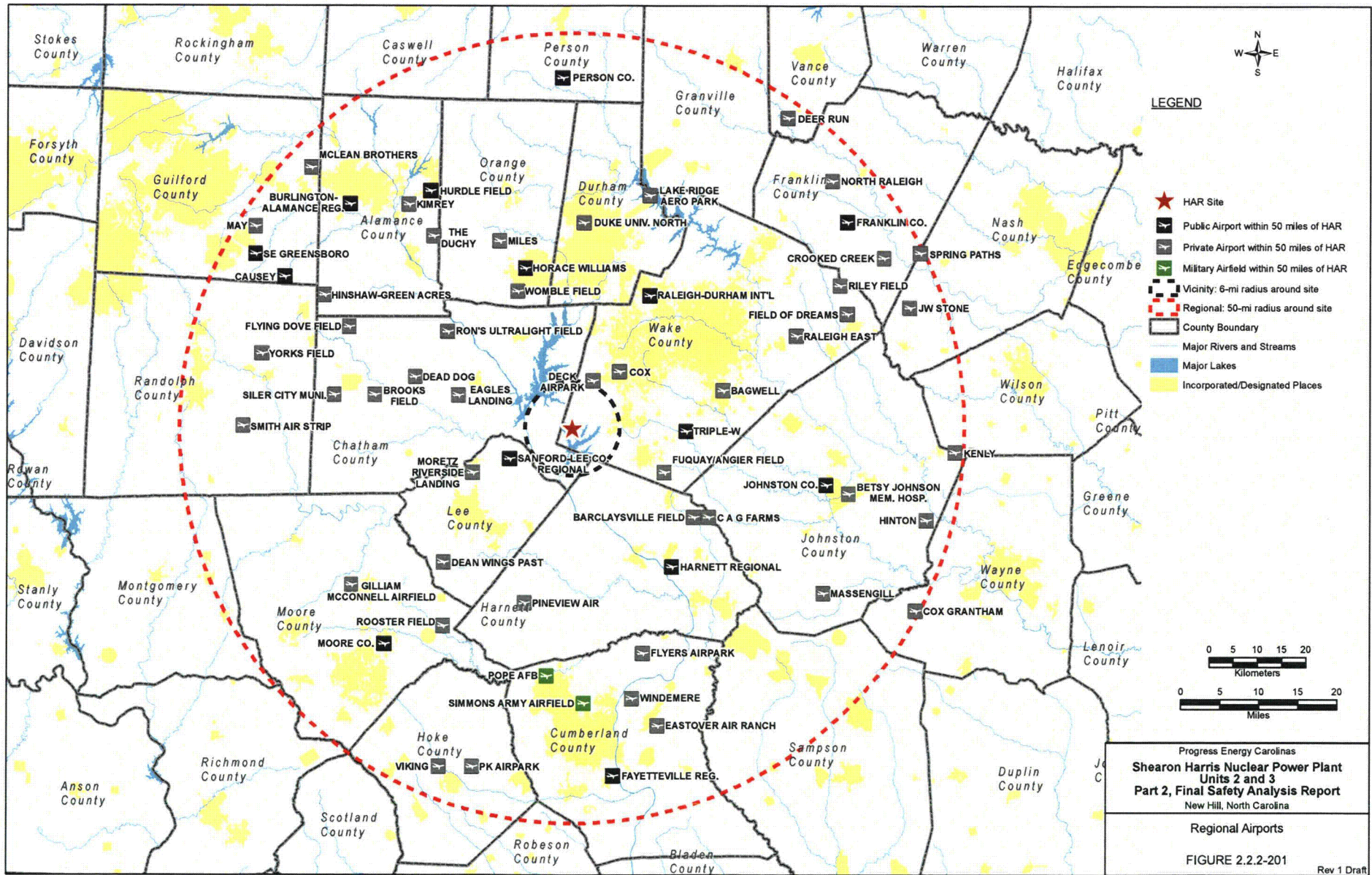
2. Replace FSAR Figure 2.2.2-202, in its entirety, with the version listed under **Attachments/Enclosures** below. A second sheet has been added to Figure 2.2.2-202 that indicates the routes of Airways J207 and J52-55.

Attachments/Enclosures:

Revised FSAR Figure 2.2.2-202 (Rev 1 Draft) – Airports and Airways in Vicinity of HAR

List of Attachments

1. NRC RAI # 02.02.01-02.02.02-1 (PGN RAI ID #H-0039):
FSAR Figure 2.2.2-201 (Rev 1 Draft) – Regional Airports (1 page)
2. NRC RAI # 02.02.01-02.02.02-4 (PGN RAI ID #H-0042):
FSAR Figure 2.2.2-202 (Rev 1 Draft) – Airports and Airways in Vicinity of HAR (2 pages)



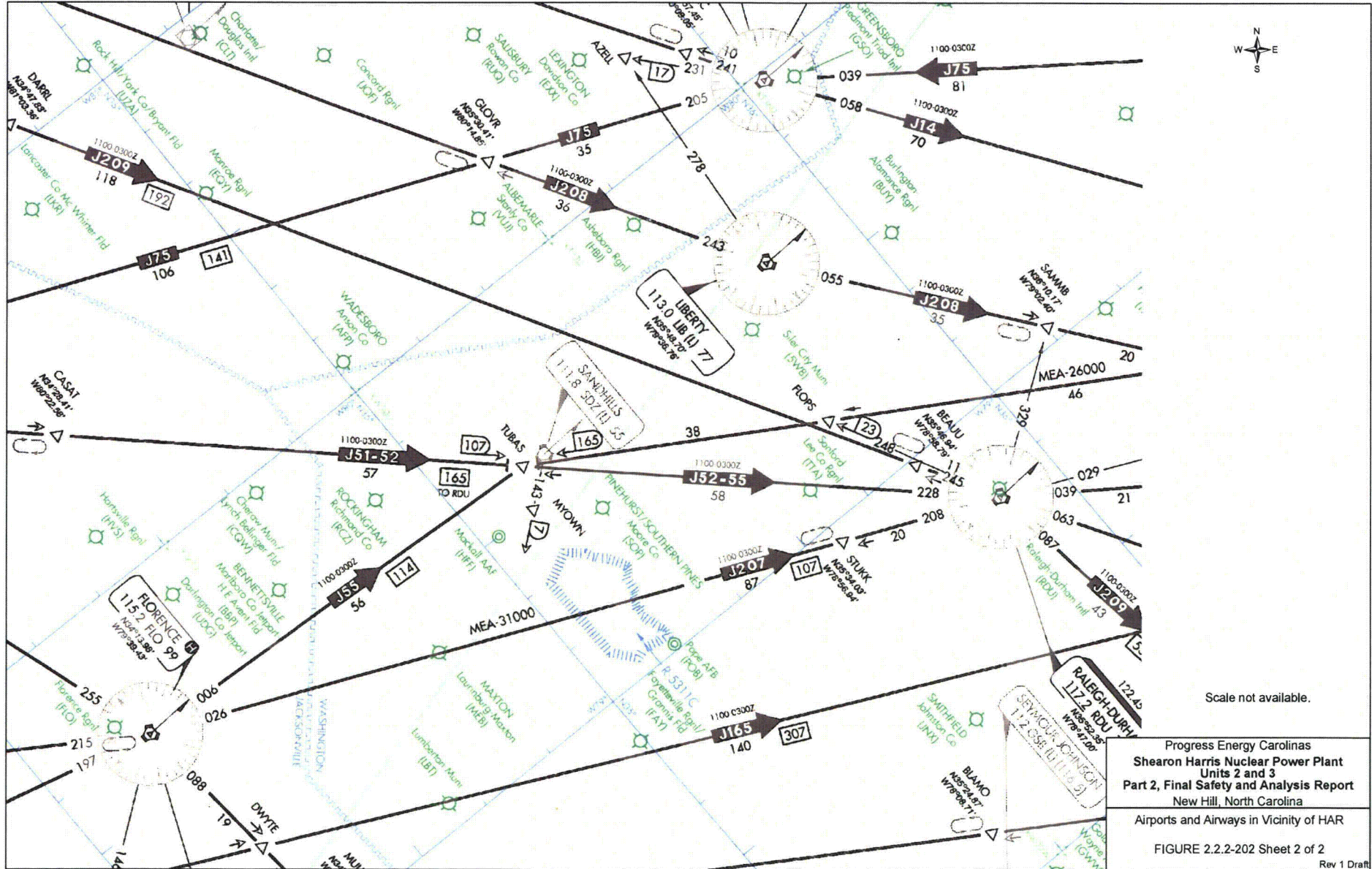


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Progress Energy Carolinas
Shearon Harris Nuclear Power Plant
Units 2 and 3
Part 2, Final Safety and Analysis Report
New Hill, North Carolina

Airports and Airways in Vicinity of HAR

FIGURE 2.2.2-202 Sheet 1 of 2



Progress Energy Carolinas
 Shearon Harris Nuclear Power Plant
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 Part 2, Final Safety and Analysis Report
 New Hill, North Carolina
 Airports and Airways in Vicinity of HAR
 FIGURE 2.2.2-202 Sheet 2 of 2
 Rev 1 Draft