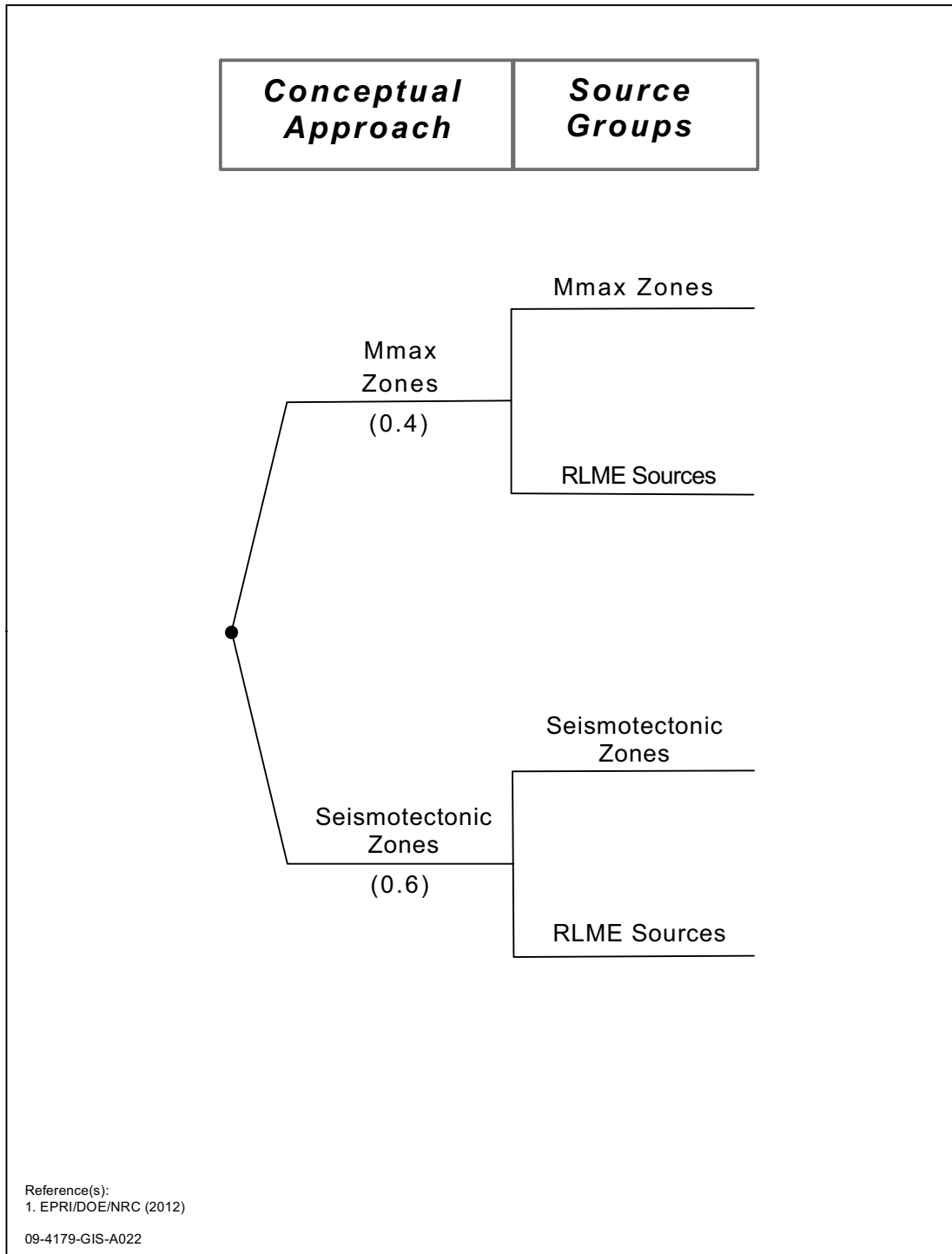


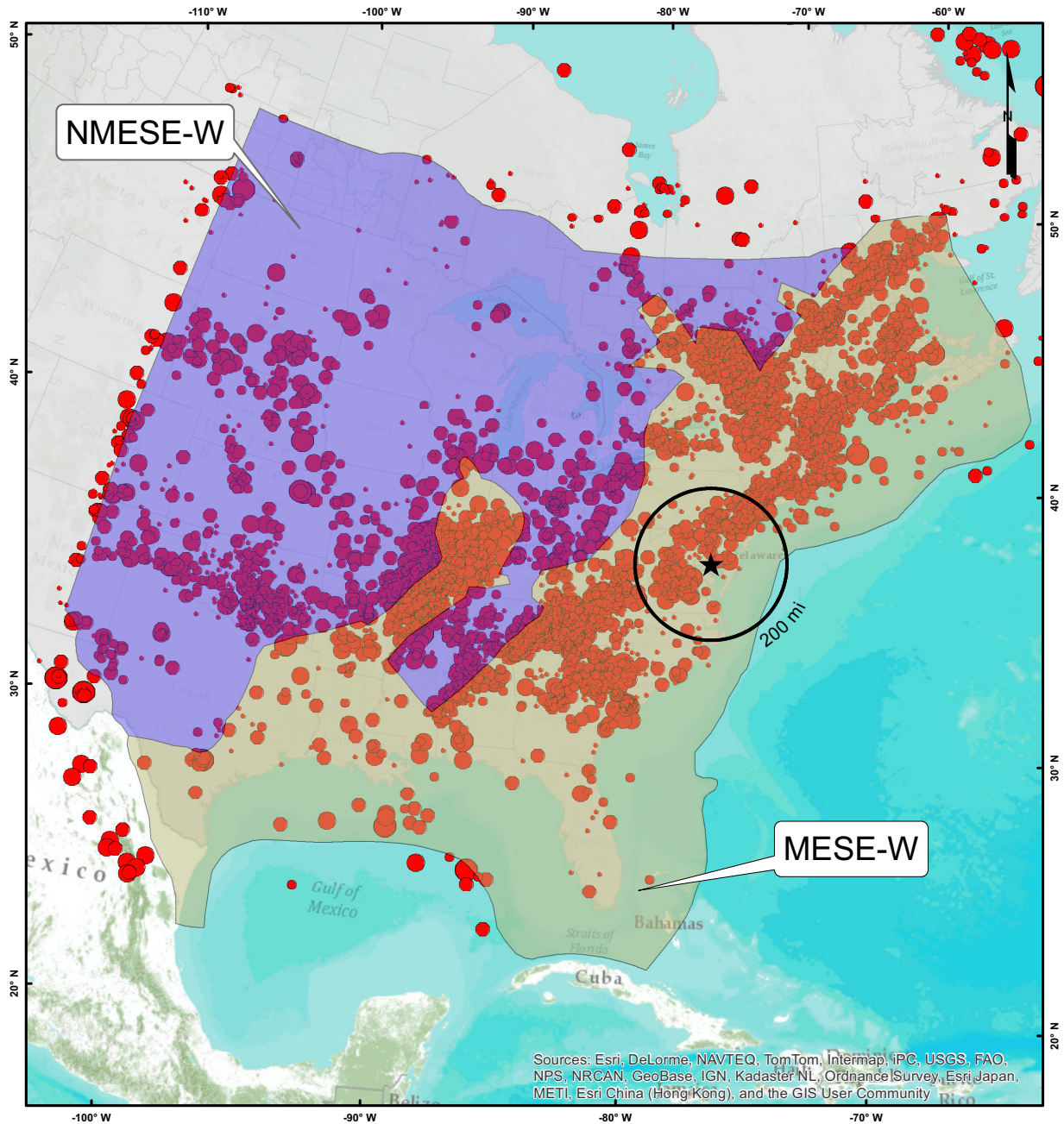
CC3-12-0169,
CC3-12-0188

Figure 2.5-47 — {Master Logic Tree of the CEUS SSC Model}



CC3-12-0169

Figure 2.5-48 — {Mesozoic Extended (MESE-W) and Non-Extended (NMESE-W) Mmax Zones for the "Wide" Interpretation}

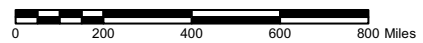


Legend

- ★ Site
- 200 Mile Radius
- Mesozoic Extended (wide)
- Mesozoic Non-Extended (wide)

Earthquake Magnitude (E[M])

- 2.2 - 2.7
- 2.8 - 3.1
- 3.2 - 3.8
- 3.9 - 4.8
- ≥4.9



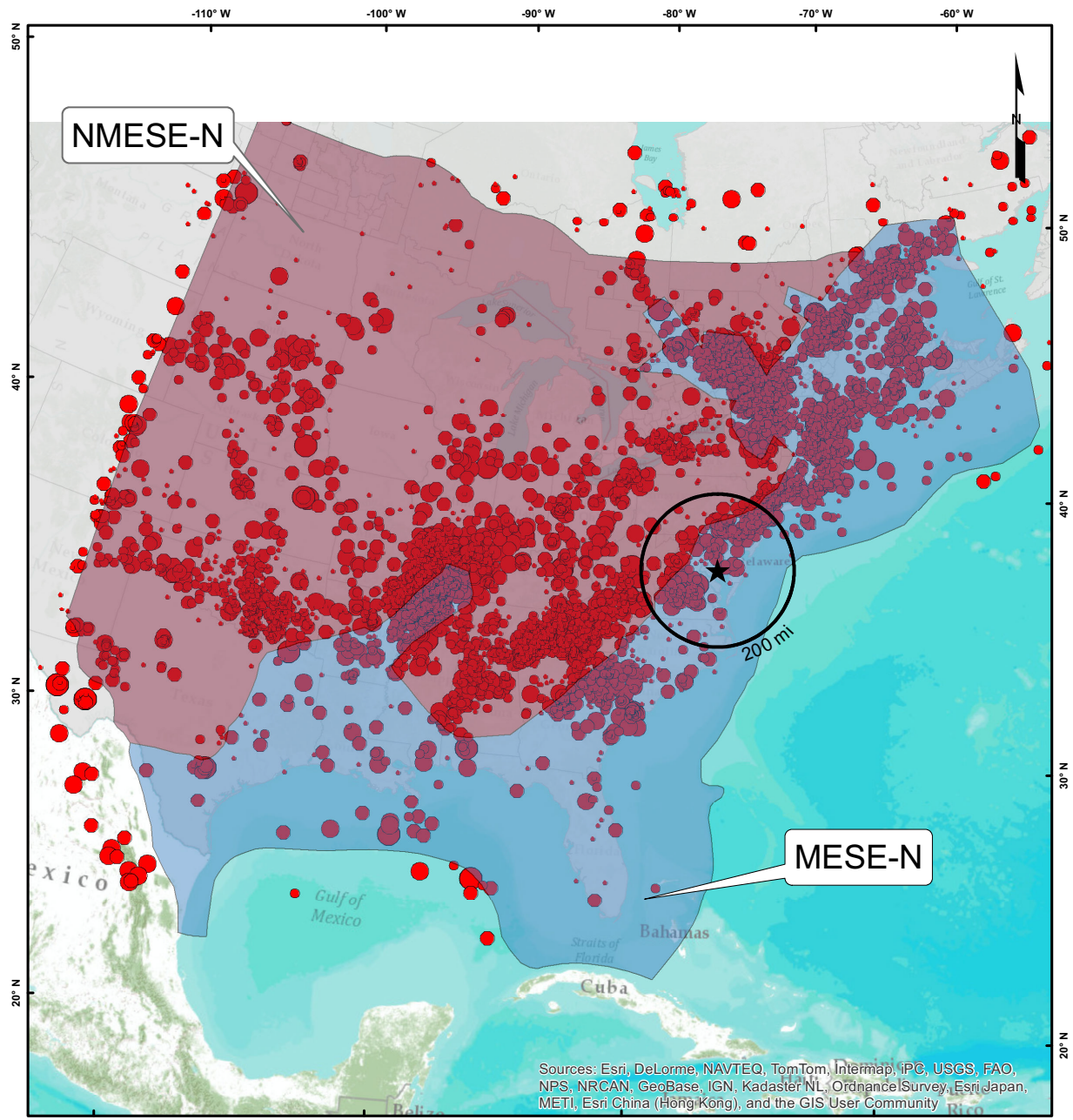
DATUM: NAD 83

Reference(s):
1. EPRI/DOE/NRC (2012)

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CC3-12-0169

Figure 2.5-49 — {Mesozoic Extended (MESE-N) and Non-Extended (NMESE-N) Mmax Zones for the "Narrow" Interpretation}

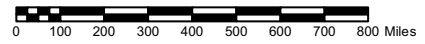


Legend

- ★ Site
- 200 Mile Radius
- Mesozoic Extended (narrow)
- Mesozoic Non-Extended (narrow)

Earthquake Magnitude (E[M])

- 2.2 - 2.7
- 2.8 - 3.1
- 3.2 - 3.8
- 3.9 - 4.8
- ≥4.9



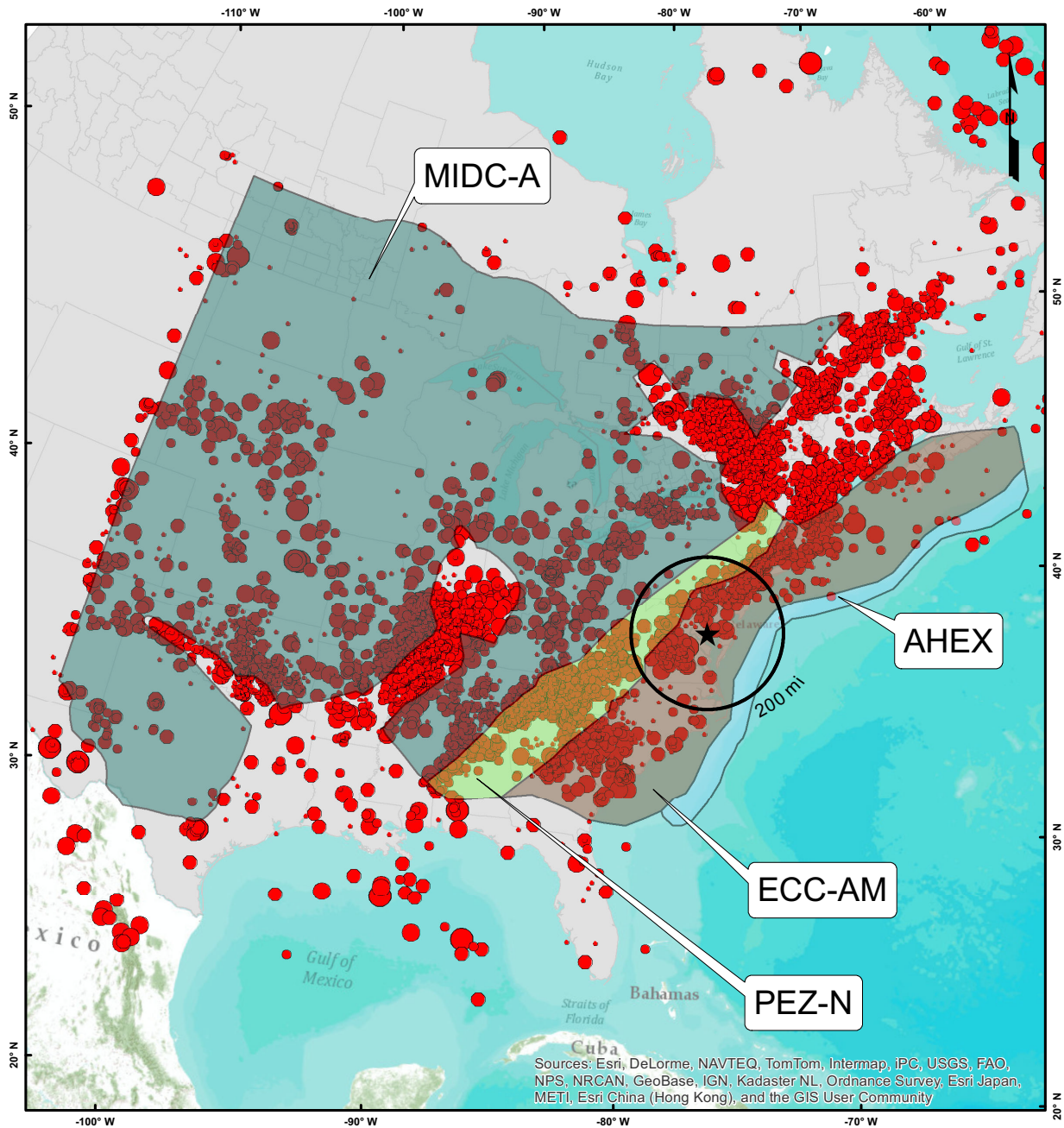
DATUM: NAD 83

Reference(s):
1. EPR/DOE/NRC (2012)

09-4179-GIS-A007

CC3-12-0169,
CC3-10-270

Figure 2.5-50 — {Seismotectonic Zones Showing the Case where the Rough Creek Graben is not Part of the Reelfoot Rift (RR) and the Paleozoic Extended Zone is Narrow (PEZ-N)}

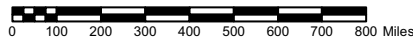


Legend

- ★ Site
- 200 Mile Radius
- AHEx
- ECC-AM
- MIDC-A
- PEZ-N

Earthquake Magnitude (E[M])

- 2.2 - 2.7
- 2.8 - 3.1
- 3.2 - 3.8
- 3.9 - 4.8
- ≥4.9

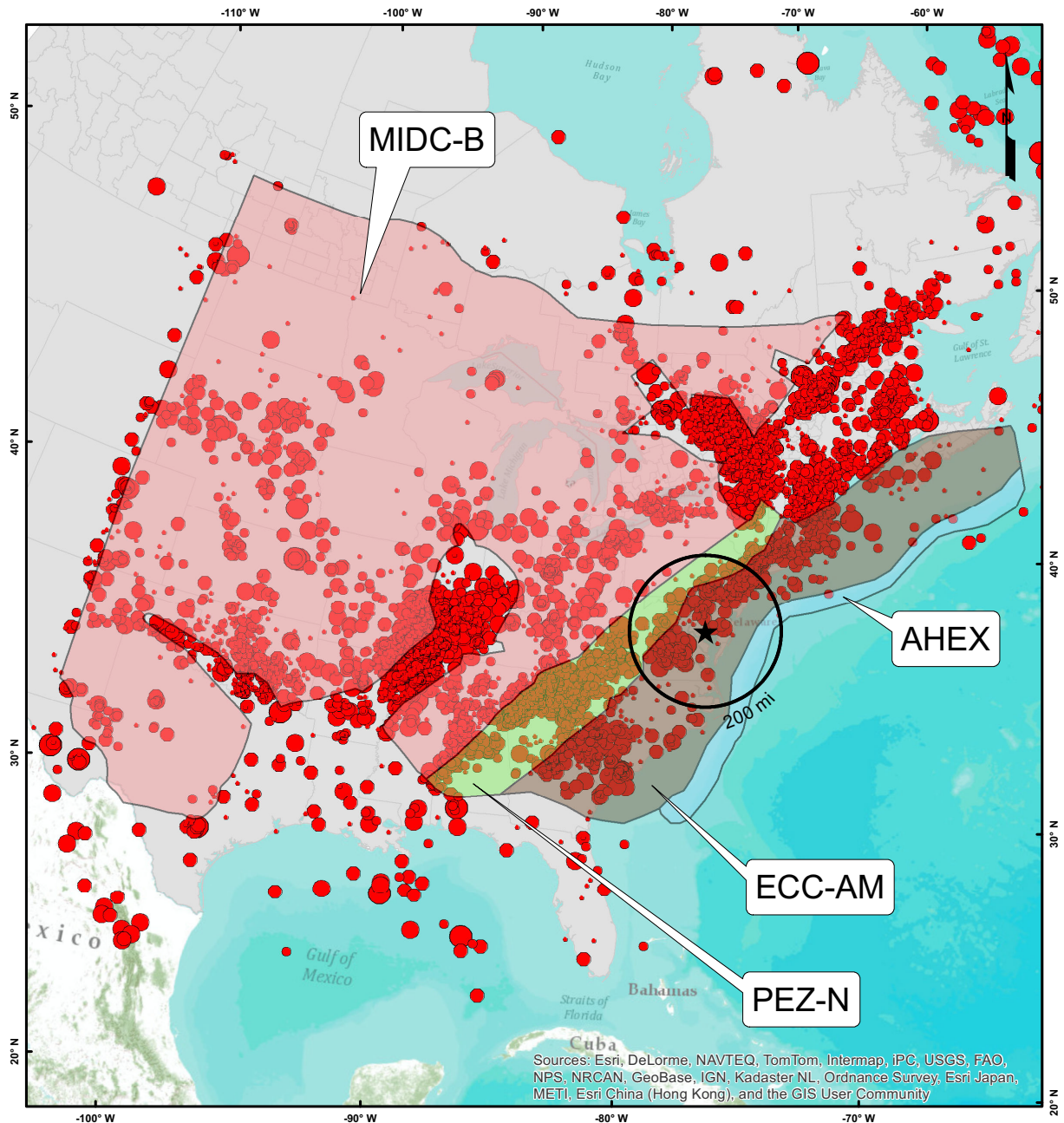


DATUM: NAD 83

Reference(s):
1. EPRI/DOE/NRC (2012)
09-4179-GIS-A008

CC3-12-0169

Figure 2.5-51 — {Seismotectonic Zones Showing the Case where the Rough Creek Graben is Part of the Reelfoot Rift (RR-RCG) and the Paleozoic Extended Zone is Narrow (PEZ-N)}



Legend

- ★ Site
- 200 Mile Radius
- AHEX
- ECC-AM
- MIDC-B
- PEZ-N

Earthquake Magnitude (E[M])

- 2.2 - 2.7
- 2.8 - 3.1
- 3.2 - 3.8
- 3.9 - 4.8
- ≥4.9

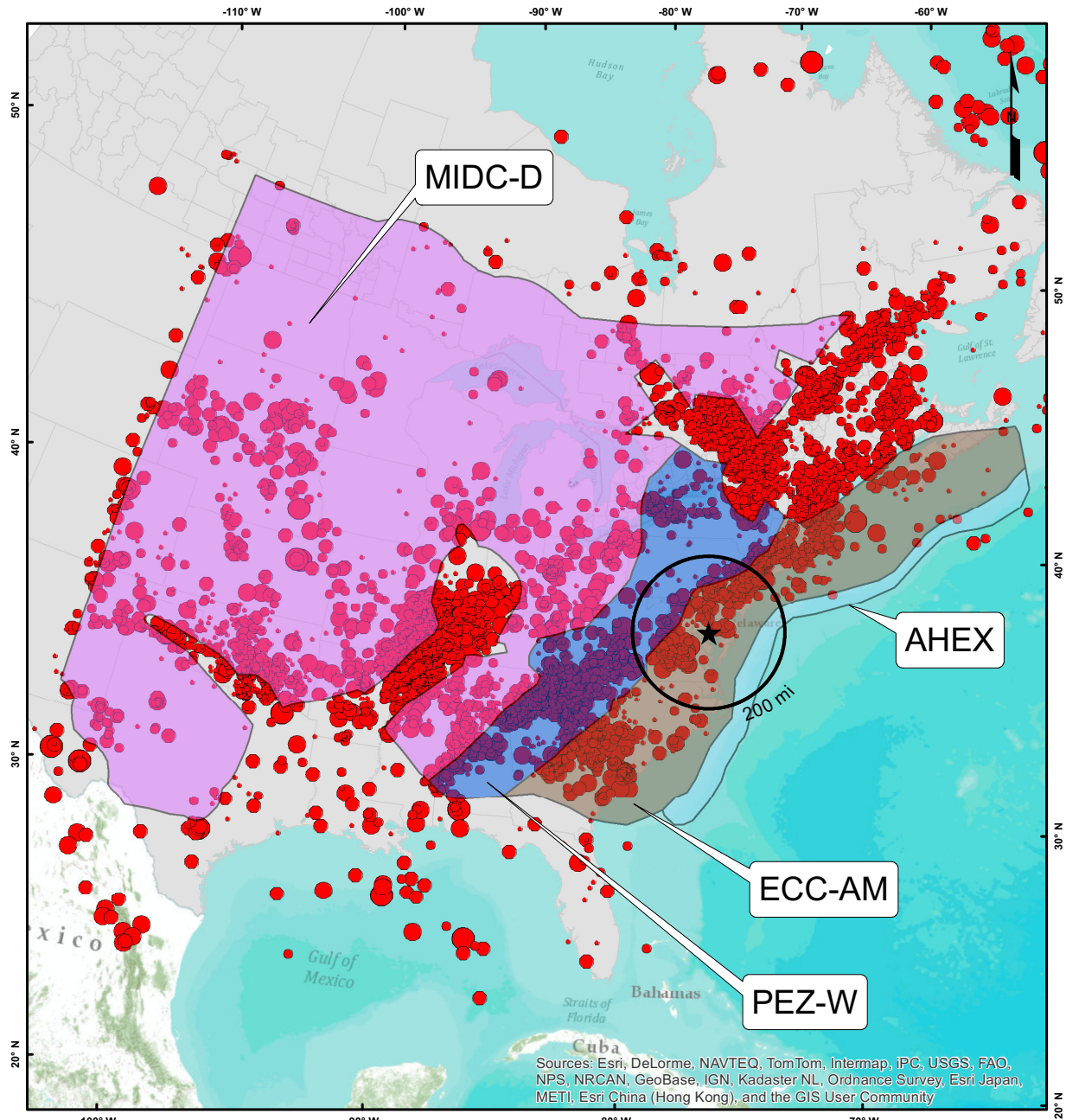


DATUM: NAD 83

Reference(s):
1. EPRI/DOE/NRC (2012)
09-4179-GIS-A009

CC3-12-0169

Figure 2.5-52 — {Seismotectonic Zones Showing the Case where the Rough Creek Graben is not Part of the Reelfoot Rift (RR) and the Paleozoic Extended Zone is Wide (PEZ-W)}



Legend

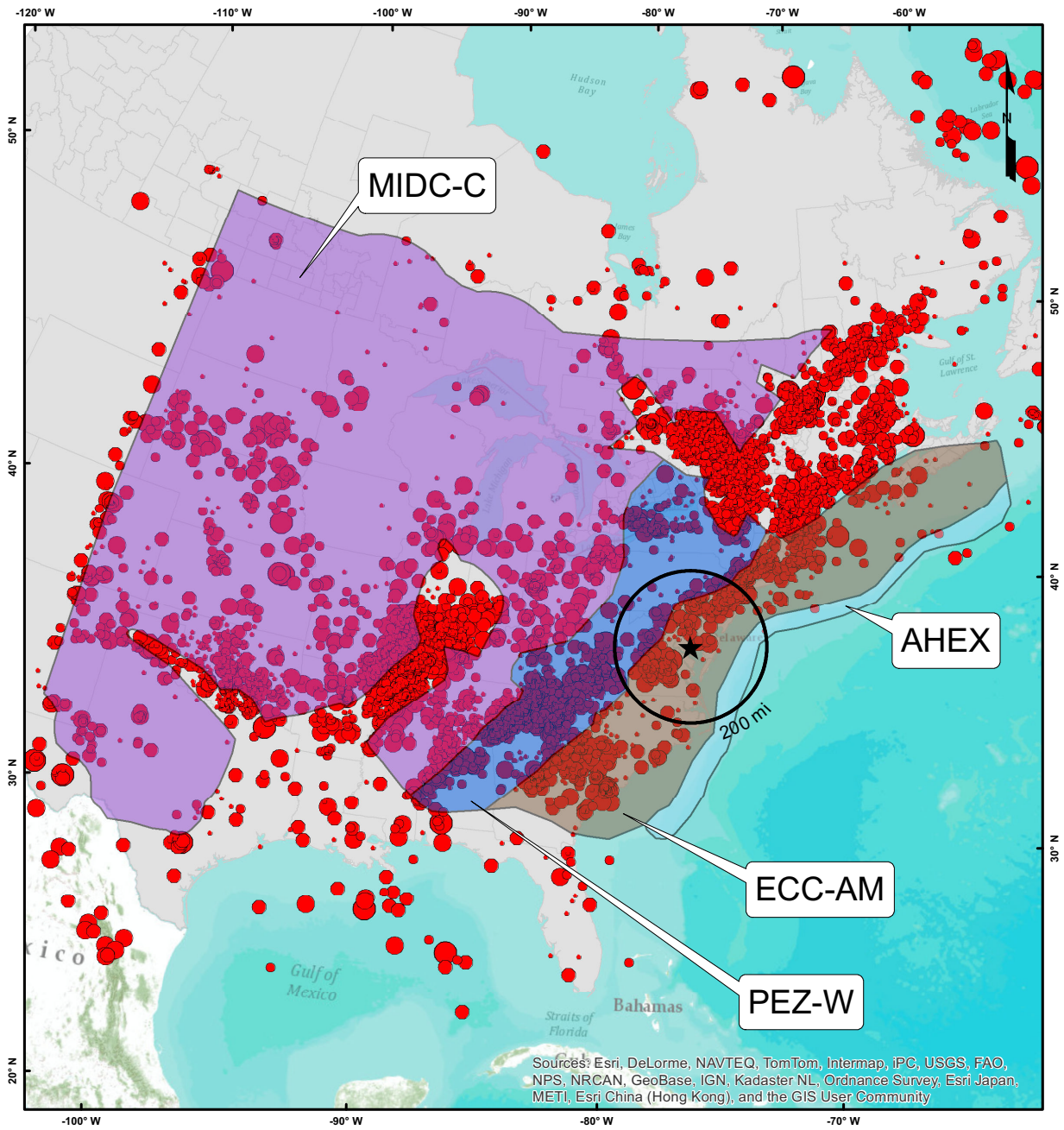
- ★ Site
 - 200 Mile Radius
 - AHEX
 - ECC-AM
 - MIDC-D
 - PEZ-W
- | Earthquake Magnitude (E[M]) | |
|-----------------------------|-----------|
| ● | 2.2 - 2.7 |
| ● | 2.8 - 3.1 |
| ● | 3.2 - 3.8 |
| ● | 3.9 - 4.8 |
| ● | >=4.9 |

Reference(s):
1. EPR/DOE/NRC (2012)

09-4179-GIS-A011

CC3-12-0169

Figure 2.5-53 — {Seismotectonic Zones Showing the Case where the Rough Creek Graben is Part of the Reelfoot Rift (RR-RCG) and the Paleozoic Extended Zone is Wide (PEZ-W)}



Legend

- ★ Site
- 200 Mile Radius
- AHEX
- ECC-AM
- MIDC-C
- PEZ-W

Earthquake Magnitude (E[M])

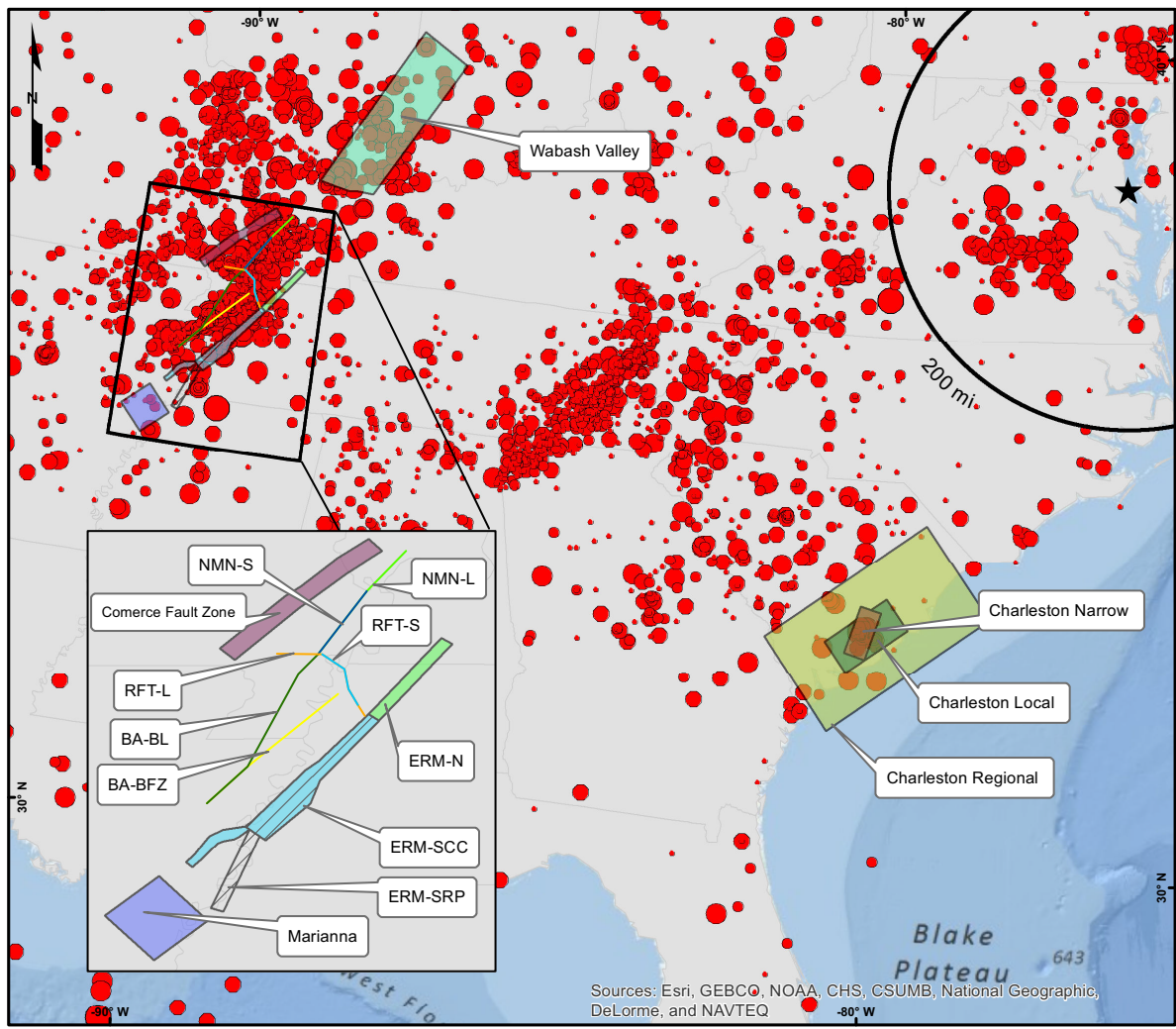
- 2.2 - 2.7
- 2.8 - 3.1
- 3.2 - 3.8
- 3.9 - 4.8
- ≥4.9

Reference(s):
1. EPRI/DOE/NRC (2012)

09-4179-GIS-A010

CC3-12-0169

Figure 2.5-54 — {RLME Sources Considered for the PSHA of the CCNPP Unit 3 Site}



Sources: Esri, GEBCO, NOAA, CHS, CSUMB, National Geographic, DeLorme, and NAVTEQ

Legend

DATUM: NAD 83



★ Site

□ 200 Mile Radius

Fault

- NMN Extended: NMN-L
- NMN Short: NMN-S
- NMS: BA-BFZ
- NMS: BA-BL
- RFT Extended: RFT-L
- RFT Short: RFT-S

Source Zone

- Commerce Fault Zone
- ERM-N
- ERM-SCC
- ERM-SRP
- Marianna
- Charleston-Local
- Charleston - Narrow
- Charleston - Regional
- Wabash Valley

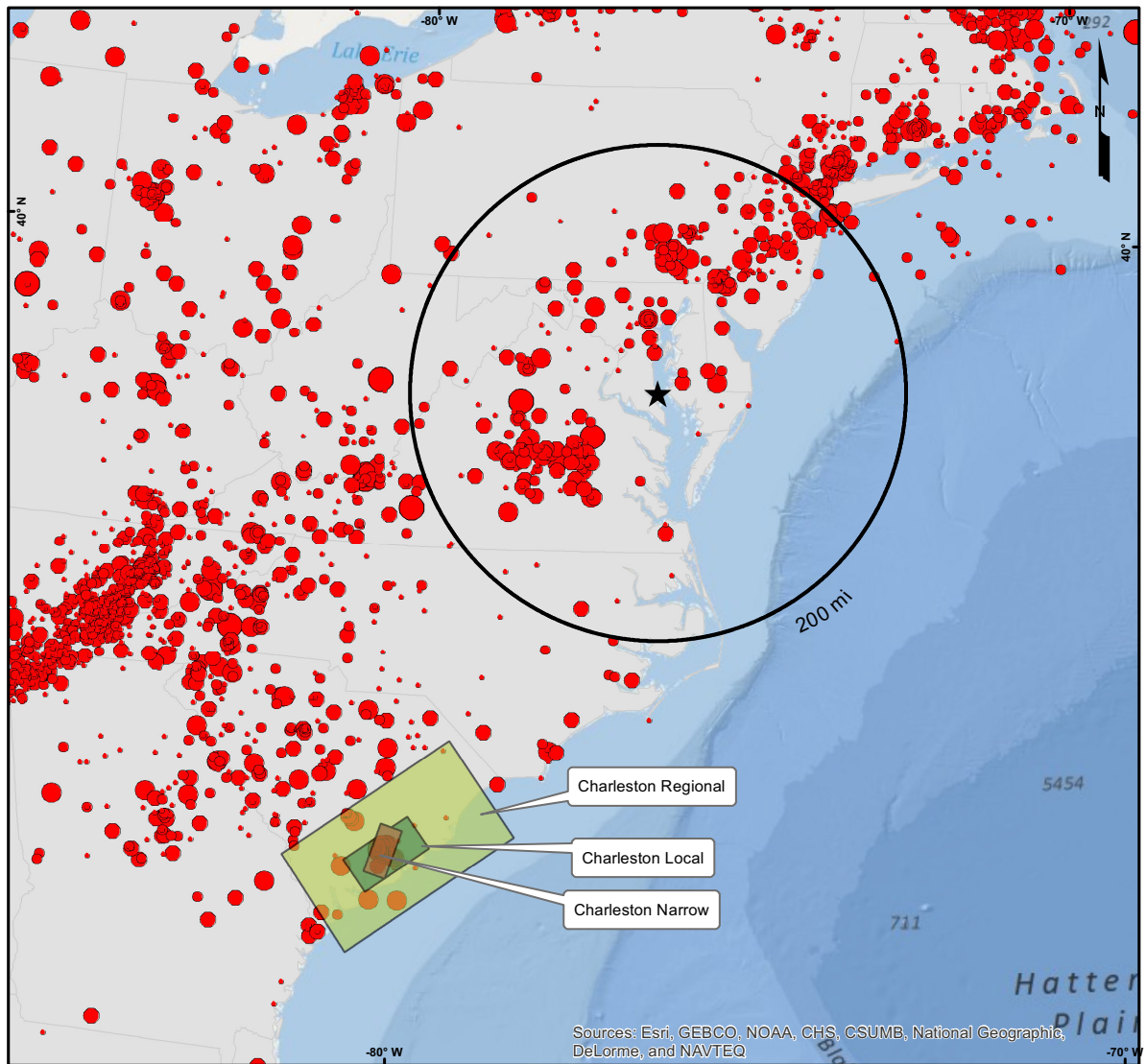
Earthquake Magnitude (E[M])

- 2.2 - 2.7
- 2.8 - 3.1
- 3.2 - 3.8
- 3.9 - 4.8
- ≥4.9

Reference(s):
1. EPRI/DOE/NRC (2012)

09-4179-GIS-A012

Figure 2.5-55 — {Alternative geometries of Charleston RLME Source}



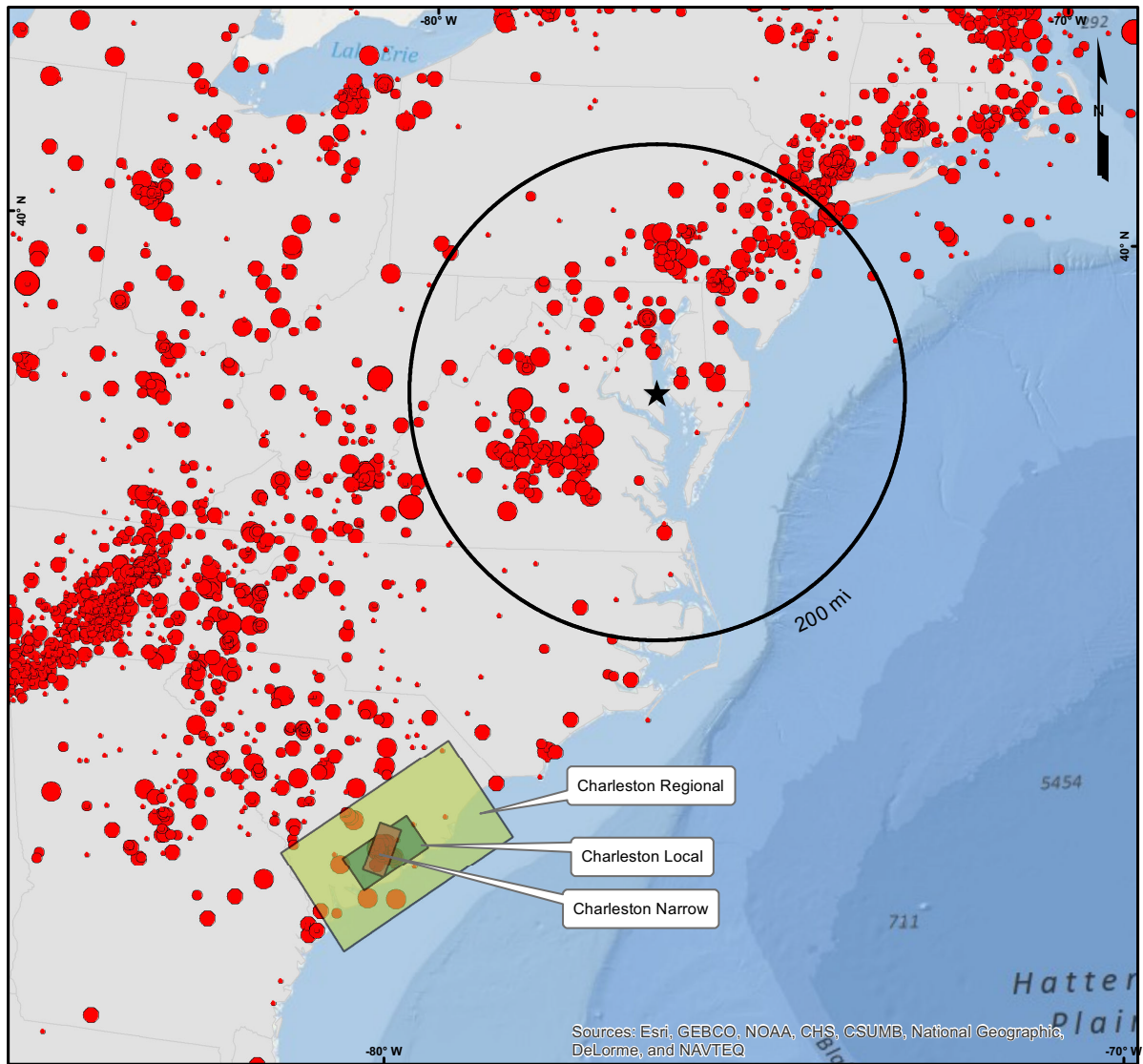
Legend

- | | |
|-------------------------|-------------|
| ★ Site | |
| □ 200-mile Radius | |
| ■ Charleston - Local | • 2.2 - 2.7 |
| ■ Charleston - Narrow | • 2.8 - 3.1 |
| ■ Charleston - Regional | • 3.2 - 3.8 |
| | • 3.9 - 4.8 |
| | • ≥4.9 |
- Earthquake Magnitude (E[M])** DATUM: WGS84

Reference(s):
1. EPR/DOE/NRC (2012)

09-4179-GIS-A013

Figure 2.5-56 — {New Madrid Fault System RLME Source}



Legend

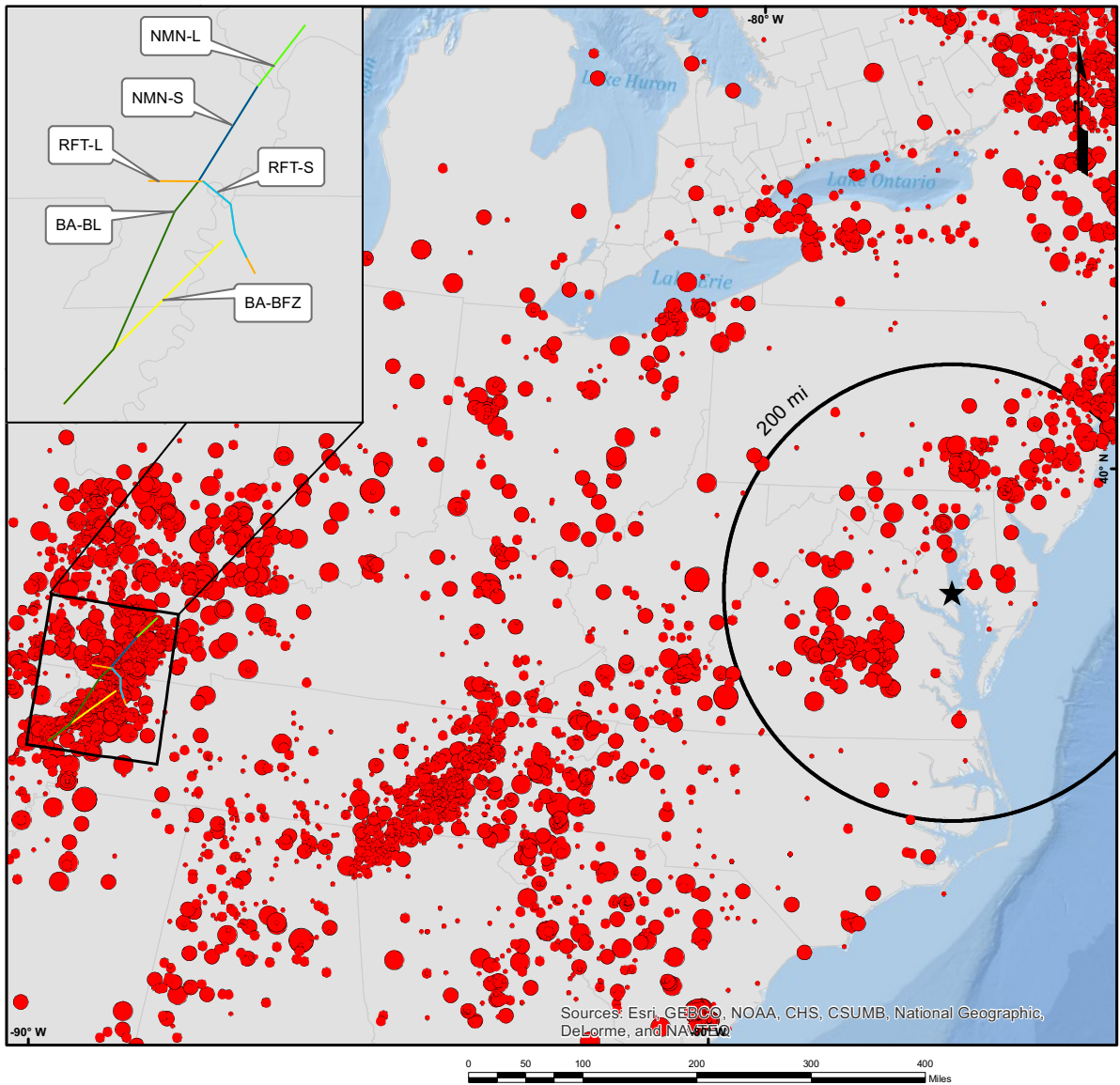
- | | | | |
|---|-----------------------|---|-----------|
| ★ | Site | | |
| □ | 200-mile Radius | • | 2.2 - 2.7 |
| ■ | Charleston - Local | • | 2.8 - 3.1 |
| ■ | Charleston - Narrow | • | 3.2 - 3.8 |
| ■ | Charleston - Regional | • | 3.9 - 4.8 |
| | | • | >=4.9 |

Reference(s):
1. EPRI/DOE/NRC (2012)

09-4179-GIS-A013

CC3-12-0169

Figure 2.5-57 — (Eastern Rift Margin, Wabash Valley, Marianna, and Commerce{



Legend

- ★ Site
 - Fault**
 - NMN Extended: NMN-L
 - NMN Short: NMN-S
 - NMS: BA-BFZ
 - NMS: BA-BL
 - RFT Extended: RFT-L
 - RFT Short: RFT-S
- | Earthquake Magnitude (E[M]) | |
|-----------------------------|-----------|
| • | 2.2 - 2.7 |
| • | 2.8 - 3.1 |
| • | 3.2 - 3.8 |
| • | 3.9 - 4.8 |
| • | >=4.9 |
- 200 Mile Radius

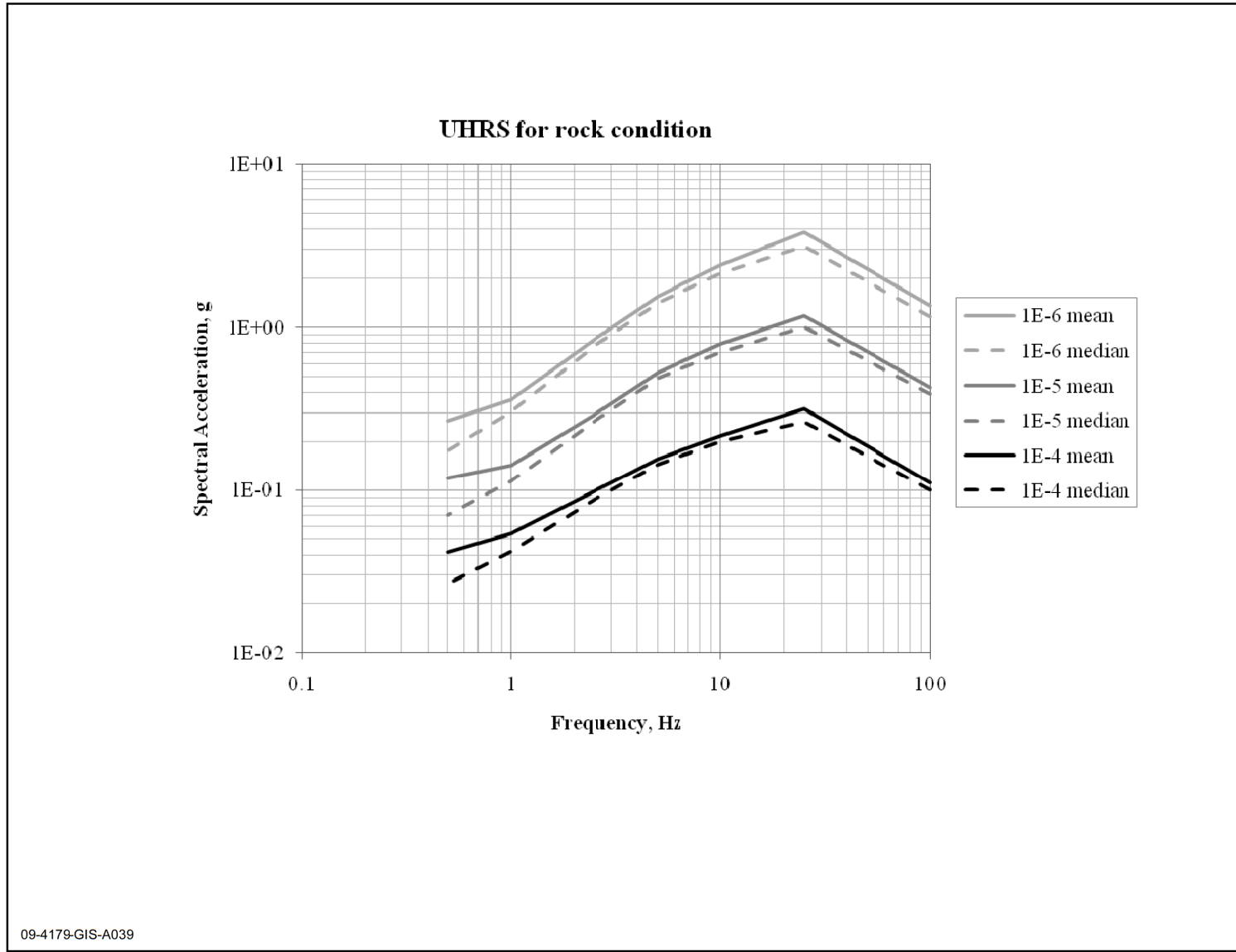
Reference(s):
1. EPRI/DOE/NRC (2012)

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RLMEs}

CC3-12-0169

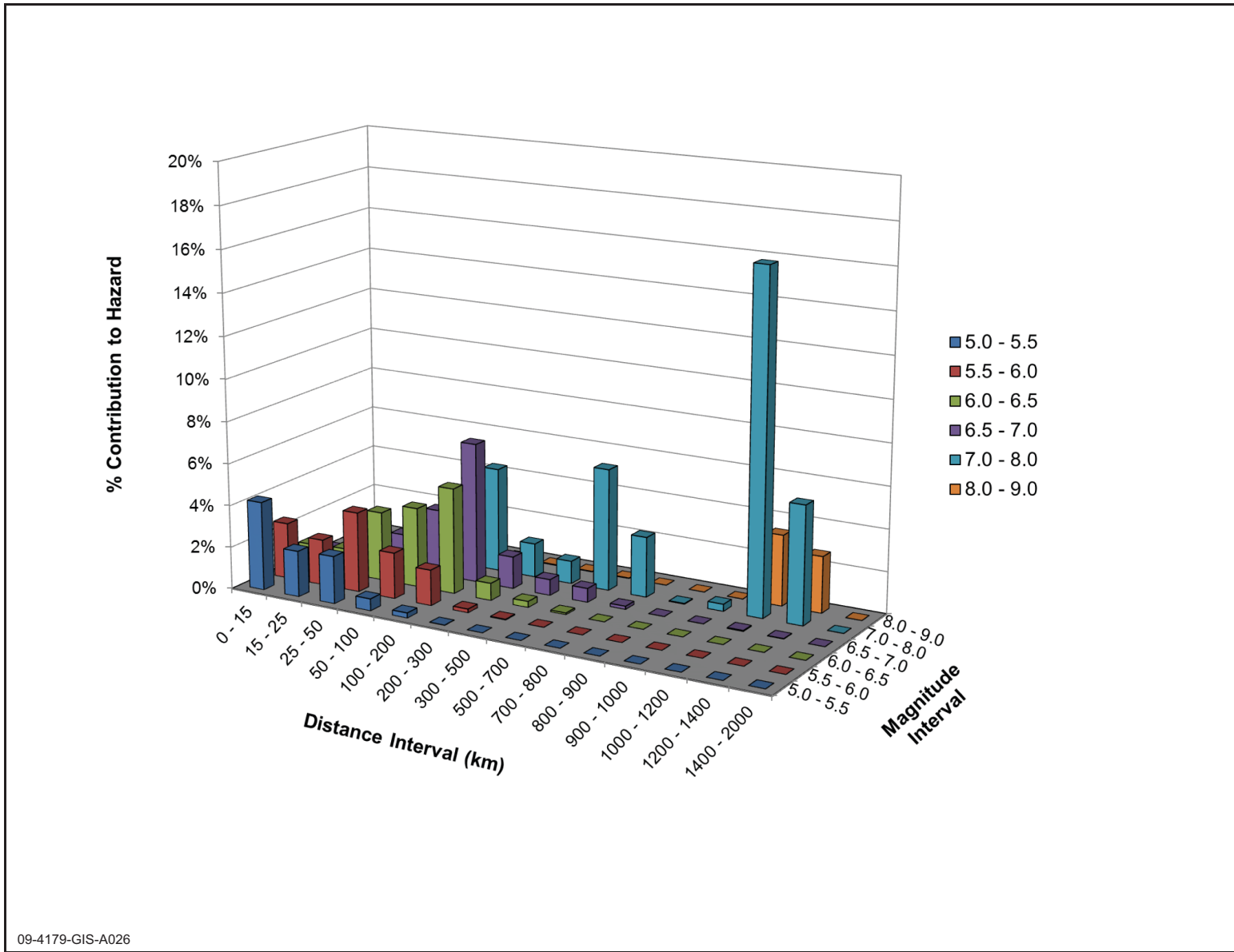
Figure 2.5-58 — Uniform Hazard Spectra for Rock Conditions at Seven Structural Frequencies for which Ground Motion Equations are Available



09-4179-GIS-A039

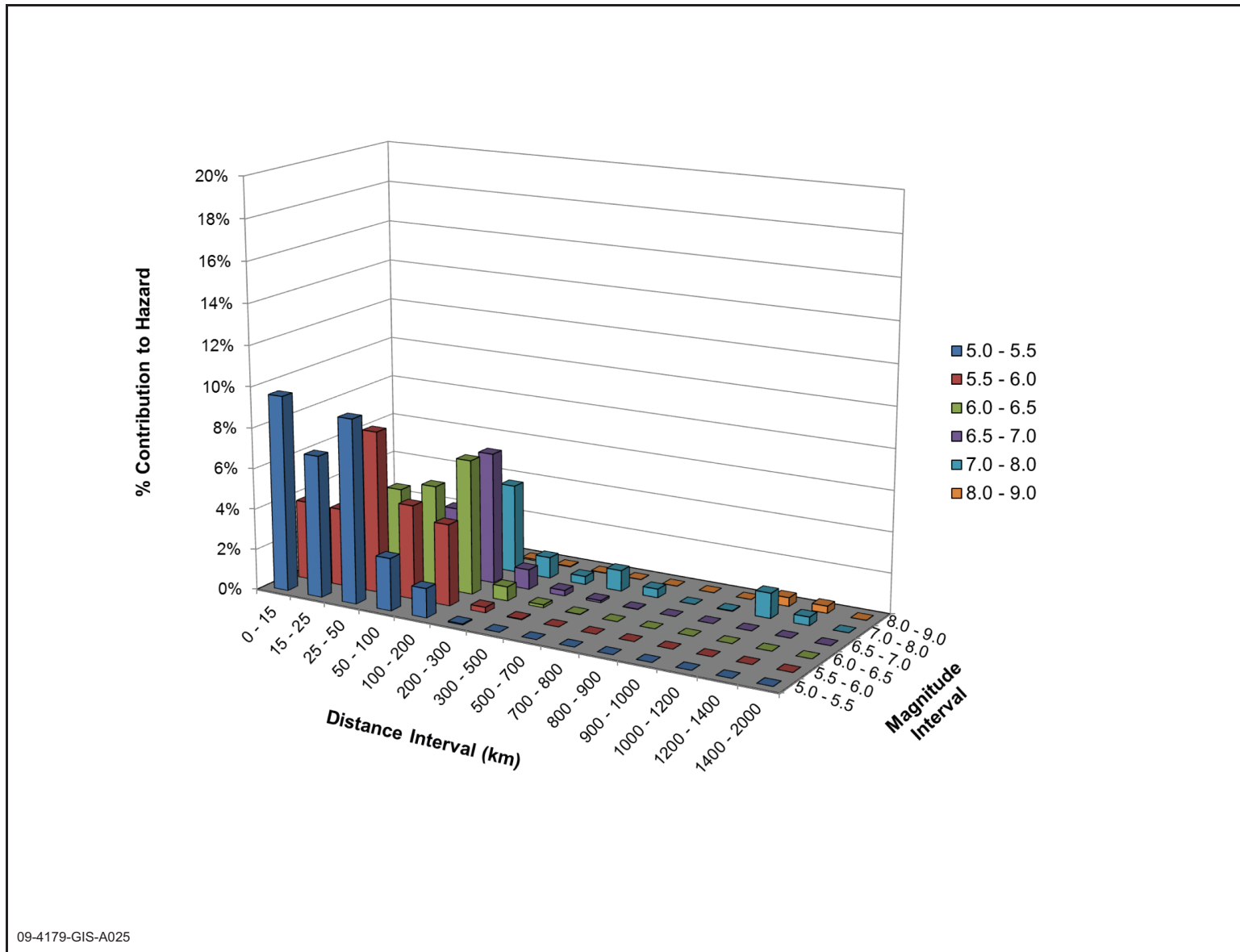
CC3-12-0169

Figure 2.5-59 — {Mean 10-4 Rock Deaggregation for 1 and 2.5Hz}



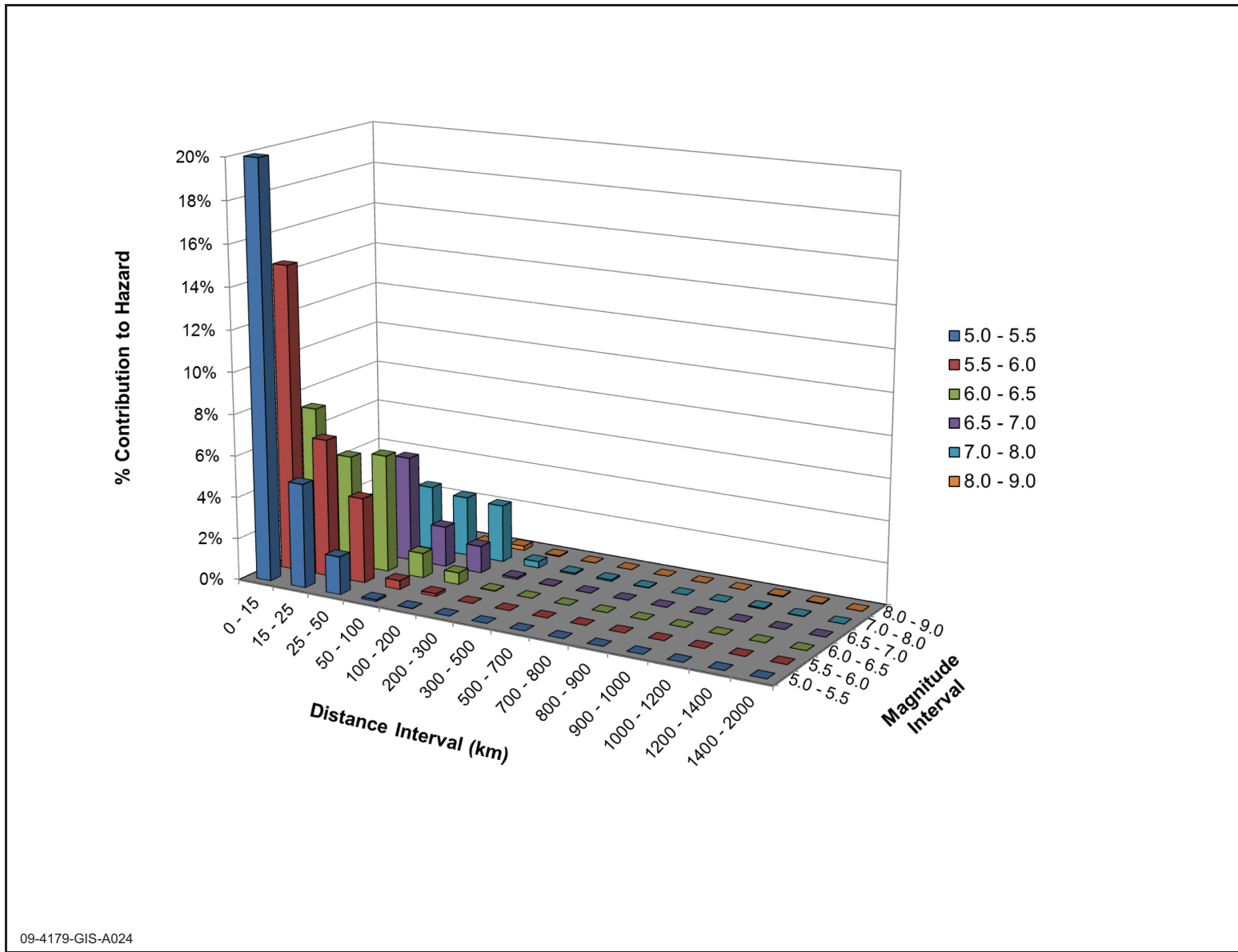
09-4179-GIS-A026

Figure 2.5-60 — {Mean 10-4 Rock Deaggregation for 5 and 10 Hz}



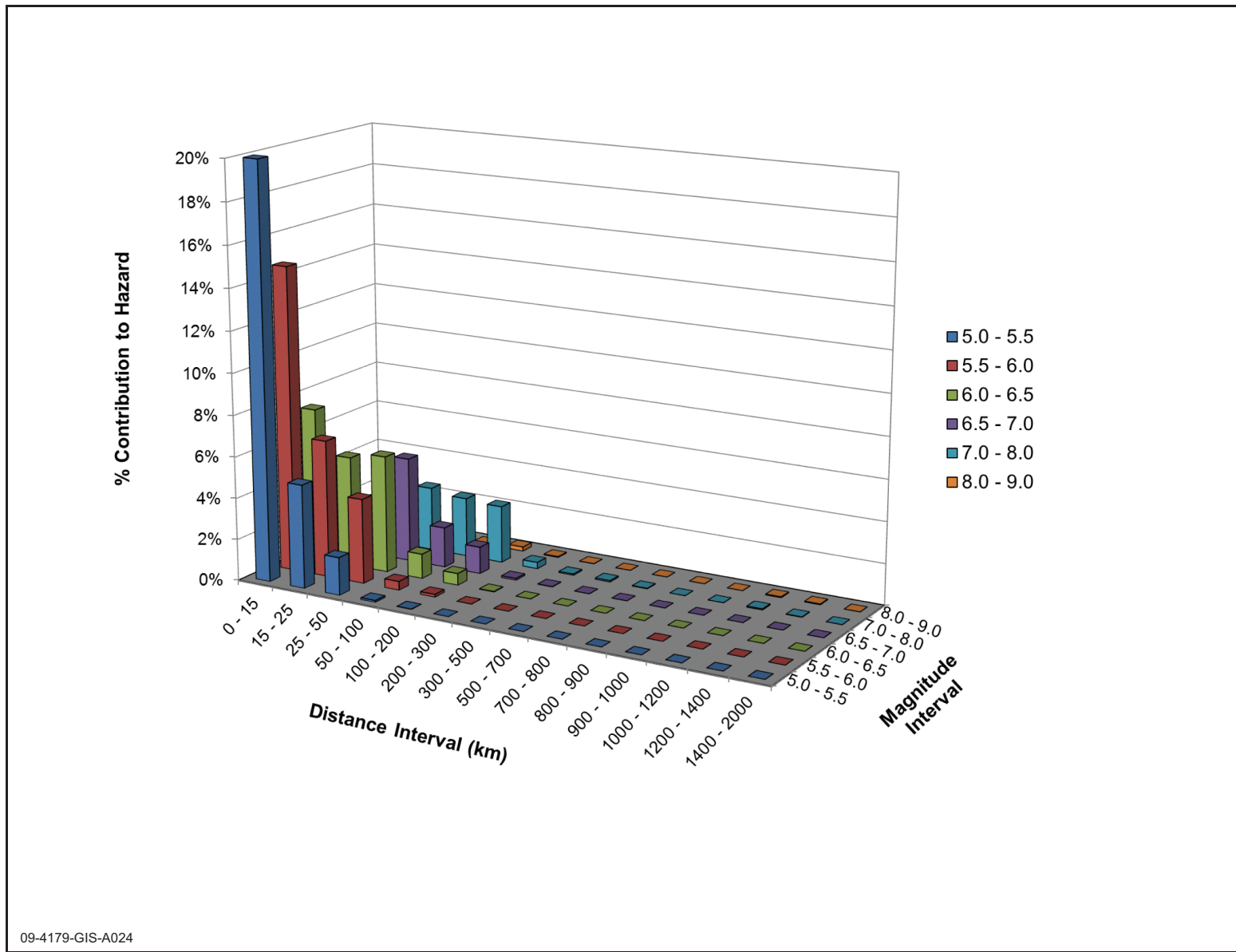
CC3-12-0169

Figure 2.5-61 — {Mean 10-5 Rock Deaggregation for 1 and 2.5 Hz}



09-4179-GIS-A024

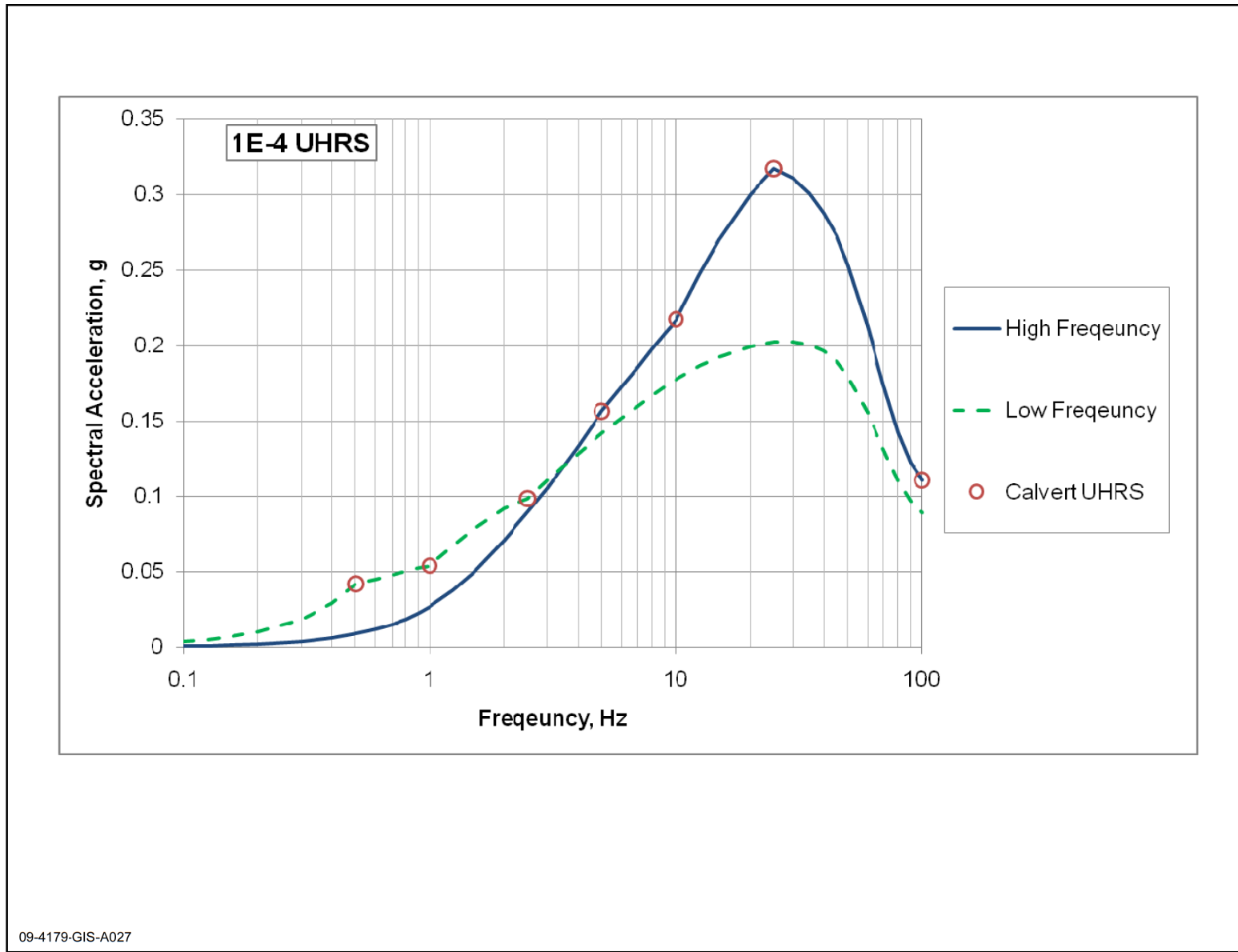
Figure 2.5-62 — {Mean 10-5 Rock Deaggregation for 5 and 10 Hz}



09-4179-GIS-A024

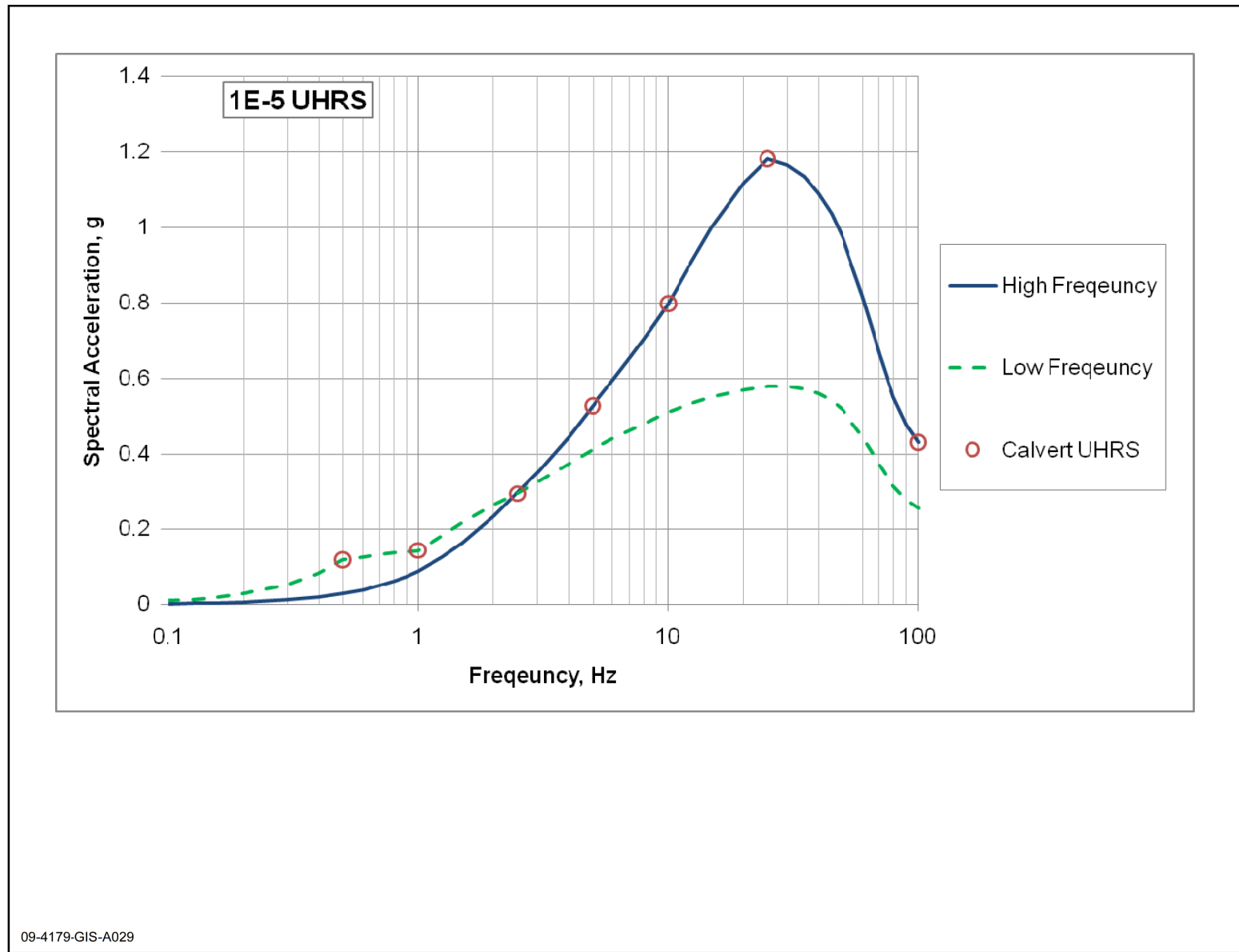
CC3-12-0169

Figure 2.5-63 — {10⁻⁴ Rock UHS Values and Smooth Spectra Fit to HF and LF Spectral Shapes}



CC3-12-0169

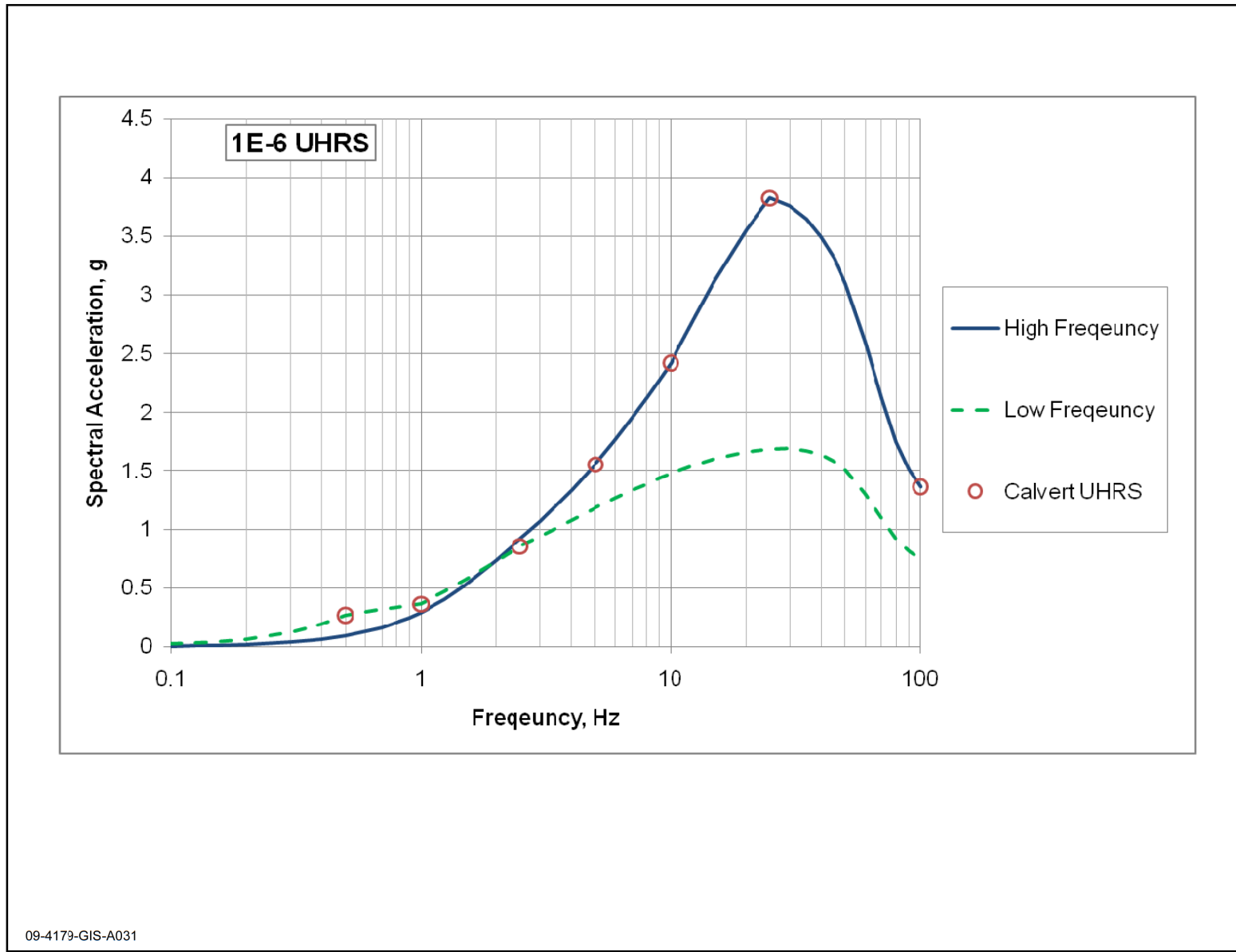
Figure 2.5-64 — {10-5 Rock UHS Values and Smooth Spectra Fit to HF and LF Spectral Shapes}



09-4179-GIS-A029

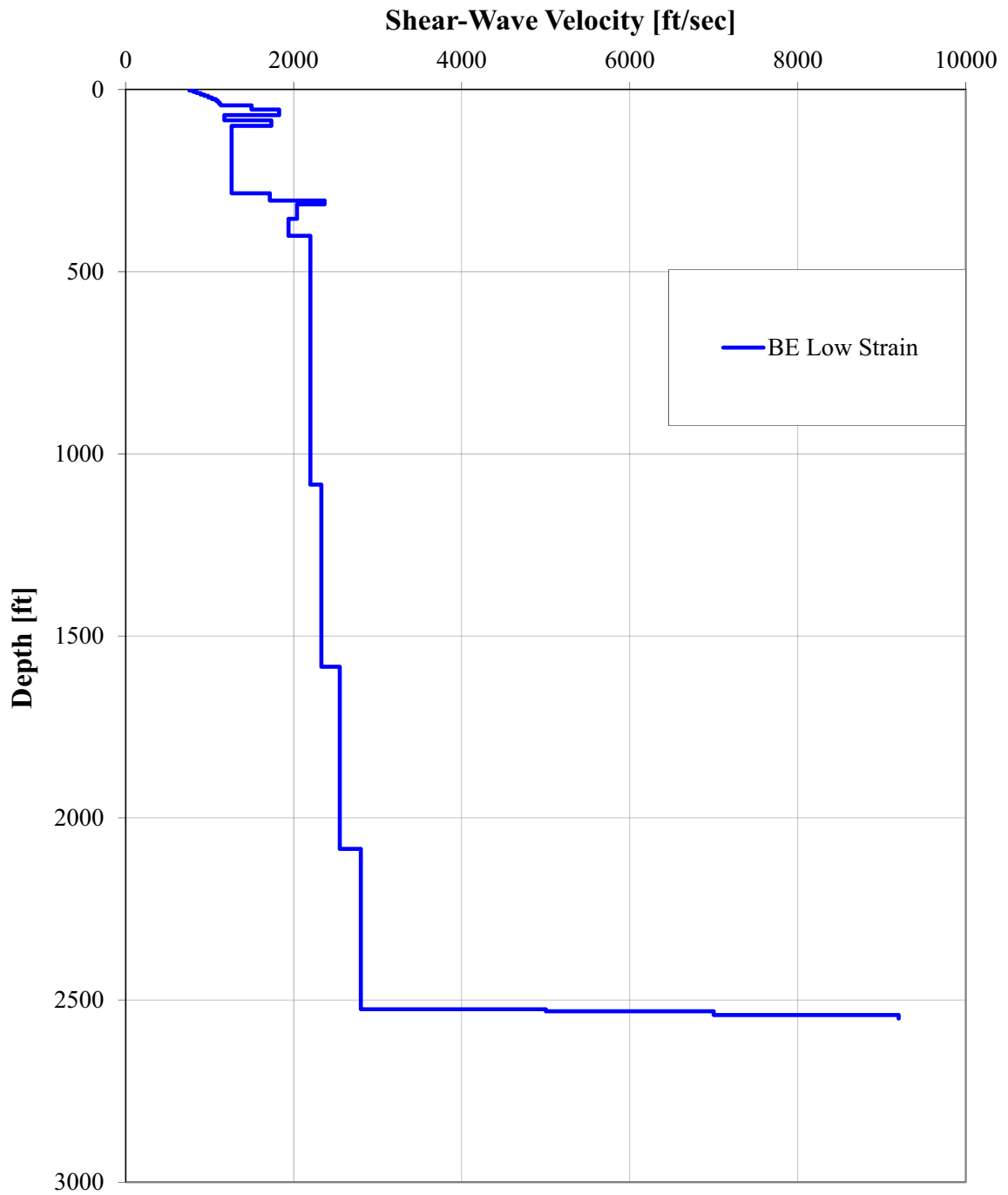
CC3-12-0169

Figure 2.5-65 — {10-6 Rock UHS Values and Smooth Spectra Fit to HF and LF Spectral Shapes}



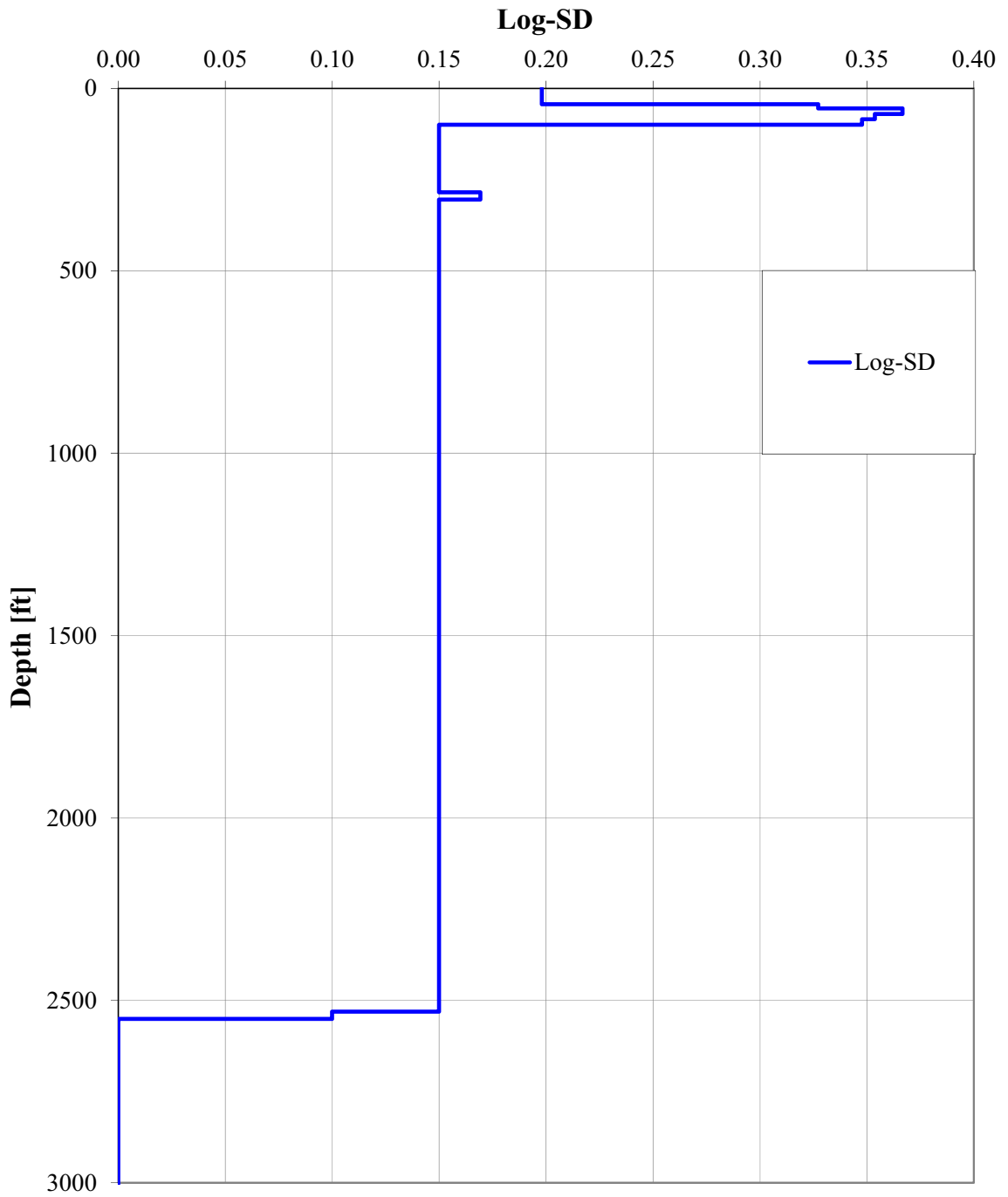
09-4179-GIS-A031

Figure 2.5-66 — {Low-Strain Best Estimate (BE) Shear Wave Velocity Profile}



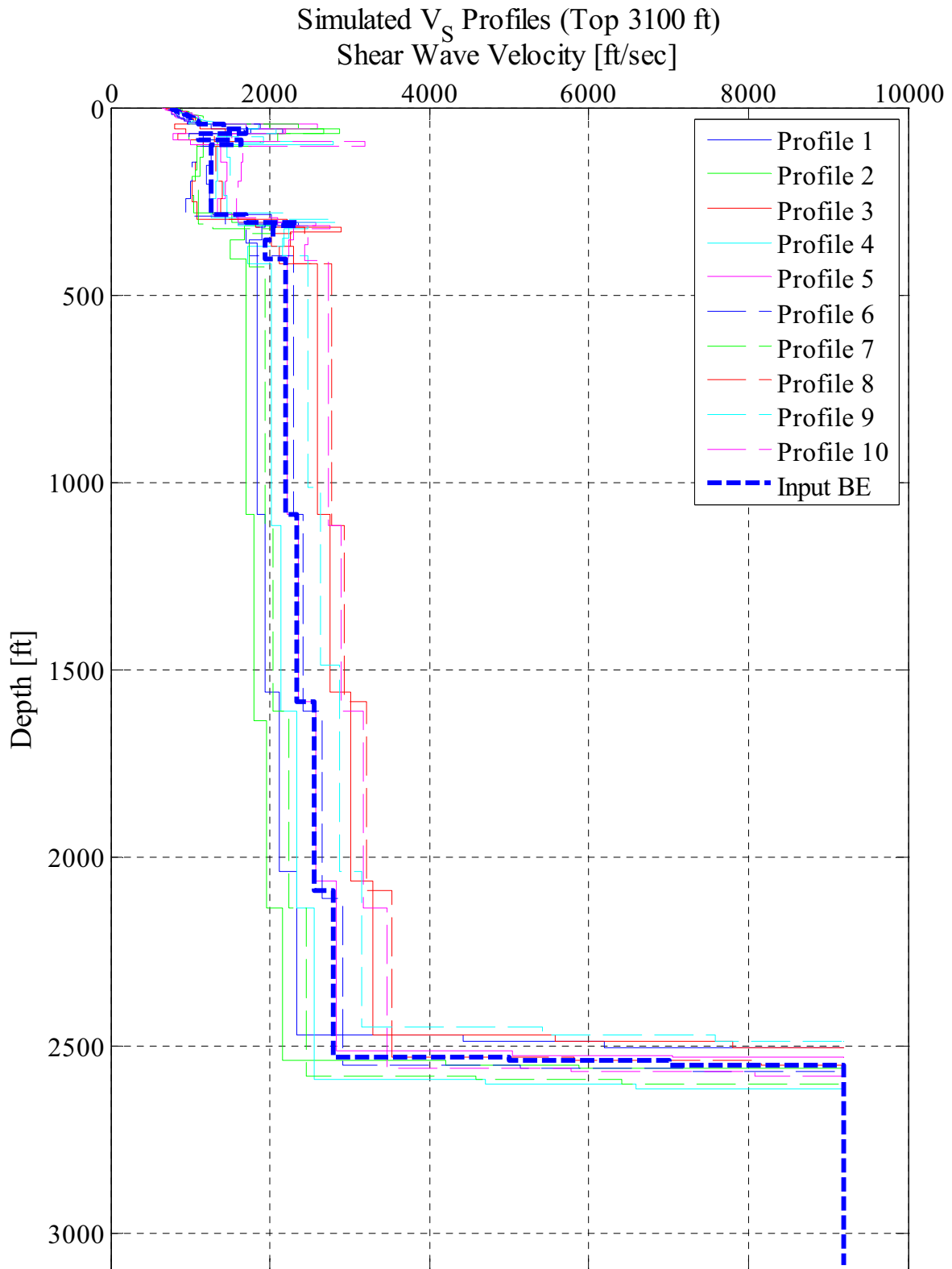
CC3-12-0169

Figure 2.5-67 — {Log-Standard Deviation for Low-Strain Shear Wave Velocity Profile}



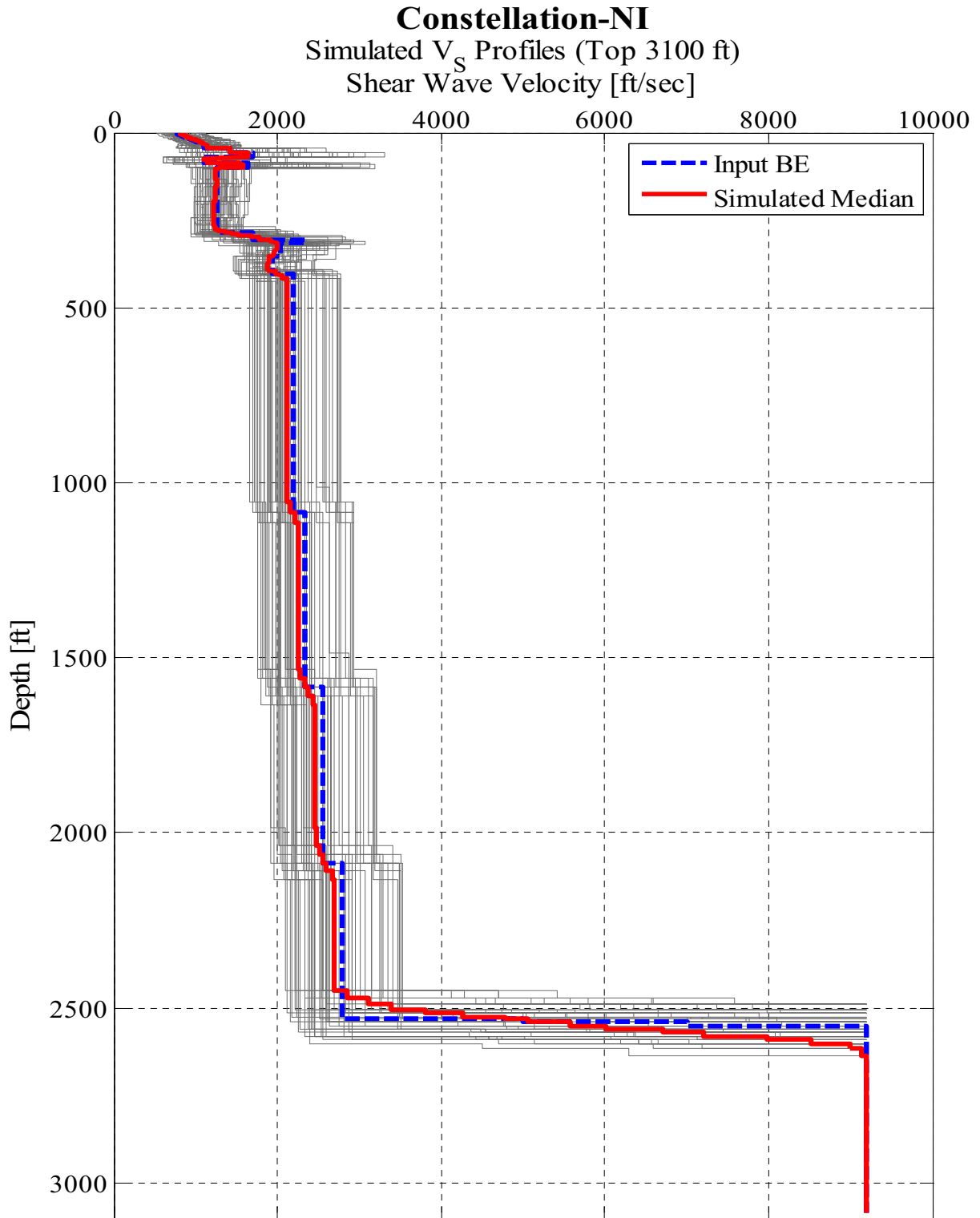
CC3-12-0169

Figure 2.5-68 — {{Shear Wave Velocity for Simulated Profiles 1 to 10 – (Halfspace at first occurrence of $V_s = 9200$ ft/sec)}}



CC3-12-0169

Figure 2.5-69 — Shear Wave Velocity for 60 Simulated Profiles – (Halfspace at first occurrence of $V_s = 9200$ ft/sec)



CC3-12-0169

Figure 2.5-70 — {Fill 1 Shear Modulus Reduction Curves for 60 Simulated Profiles}

