Greg Gibson Vice President, Regulatory Affairs



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> 10 CFR 50.4 10 CFR 52.79

November 18, 2008

UN#08-075

ATTN: Document Control Desk U.S. Nuclear Regulatory Commission Washington, DC 20555-0001

Subject: UniStar Nuclear Energy, NRC Project No. 759 Nine Mile Point 3 Nuclear Power Plant Submittal of Supplement to Final Safety Analysis Report Section 2.5

Reference: Greg Gibson (UniStar) to Document Control Desk (NRC), "Submittal of Combined License Application for the Nine Mile Point 3 Nuclear Power Plant; and Application for Withholding of Documents," dated September 30, 2008.

This letter is provided as a supplement to the Combined License Application (COLA) for the Nine Mile Point 3 Nuclear Power Plant (NMP3NPP)(Reference). The supplemental information responds to NRC comments related to Final Safety Analysis Report (FSAR) Section 2.5, Geology, Seismology, and Geotechnical Engineering, of the NMP3NPP COLA.

In response to these comments, the text and figures in FSAR Section 2.5 have been updated to provide clarifications and additional information. A copy of the updated electronic files indicating these changes in redline-strikeout is provided in Enclosure 1. An electronic copy of two test reports for Resonant Column Cyclic Torsional Shear Testing is also provided in Enclosure 1. Oversized printed copies of figures that are more readily readable on larger paper are provided in Enclosure 2.

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DO79 NRO UN#08-075 November 18, 2008 Page 2

If you have any questions, or need additional information, please contact me at (410) 470-4205.

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

Executed on November 18, 2008

Greg Gibson

Enclosures: 1) Updated Electronic Files for FSAR Section 2.5 (1 Disk) 2) Printed Figures

cc: U.S. NRC Region I (w/o Enclosure 2)

U.S. NRC Region II (w/o Enclosure 2)

U.S. NRC Resident Inspector, Nine Mile Point Nuclear Power Plant, Units 1 and 2 (w/o Enclosure 2)

NRC Environmental Project Manager, U.S. EPR Combined License Application (w/o Enclosure 2)

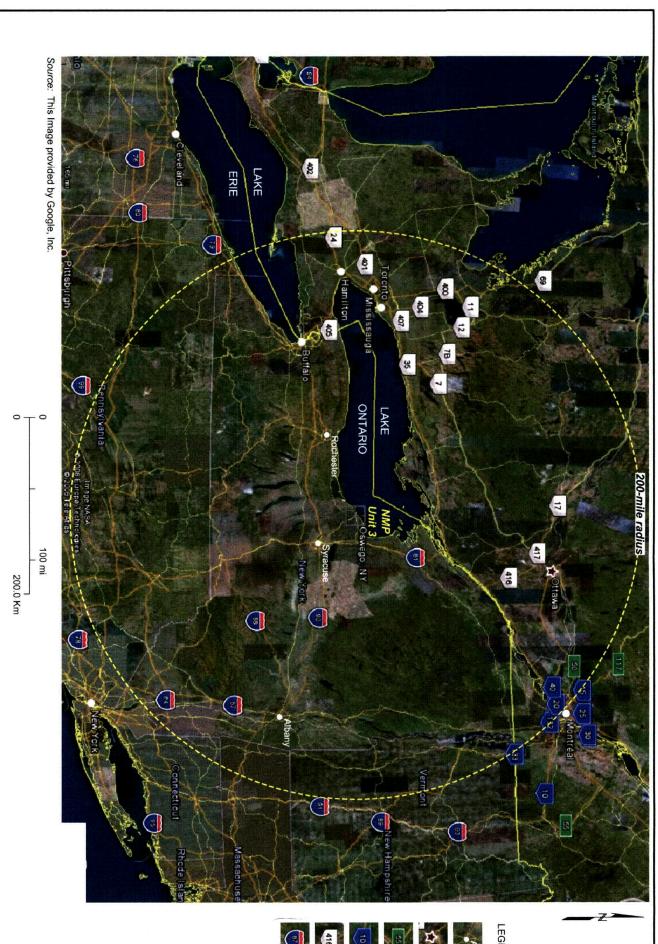
NRC Project Manager, U.S. EPR Combined License Application (w/o Enclosure 2) NRC Project Manager, U.S. EPR Design Certification Application (w/o Enclosure 2) Enclosure 1

Updated Electronic Files for FSAR Section 2.5

(1 Disk)

Enclosure 2

Printed Figures

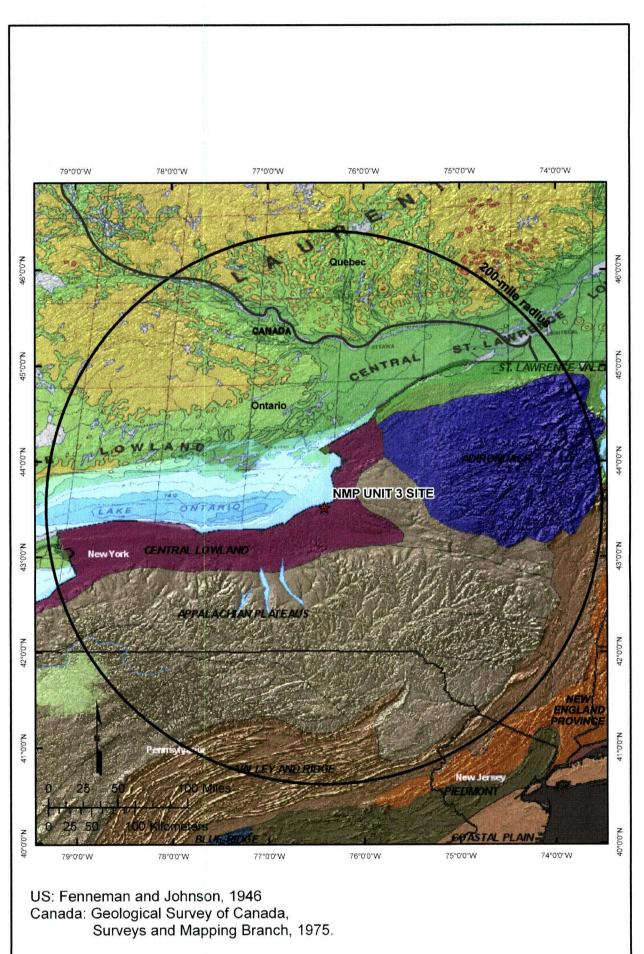




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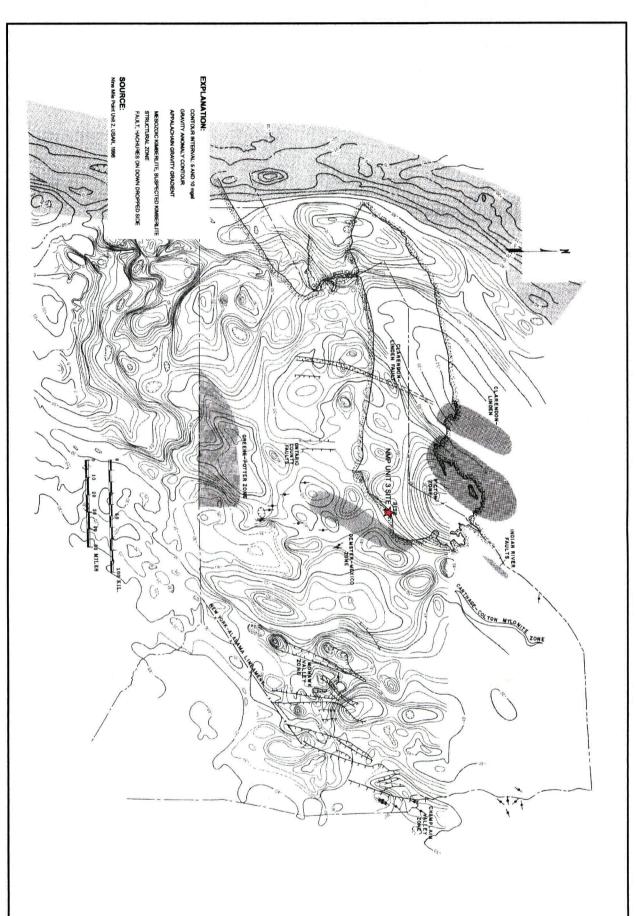




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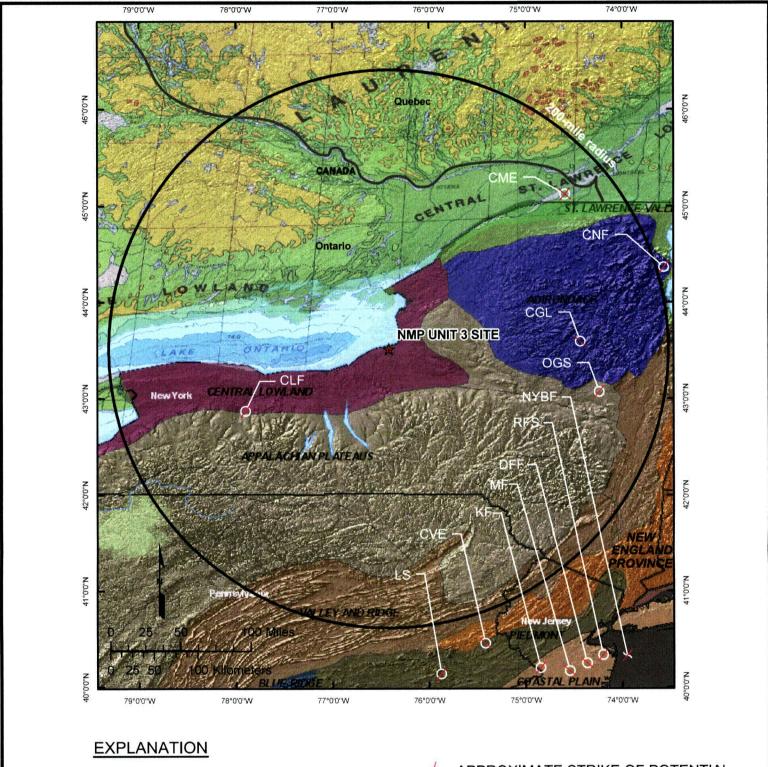


Figure 2.5-39—{Potential Quaternary Features in the Site Region}

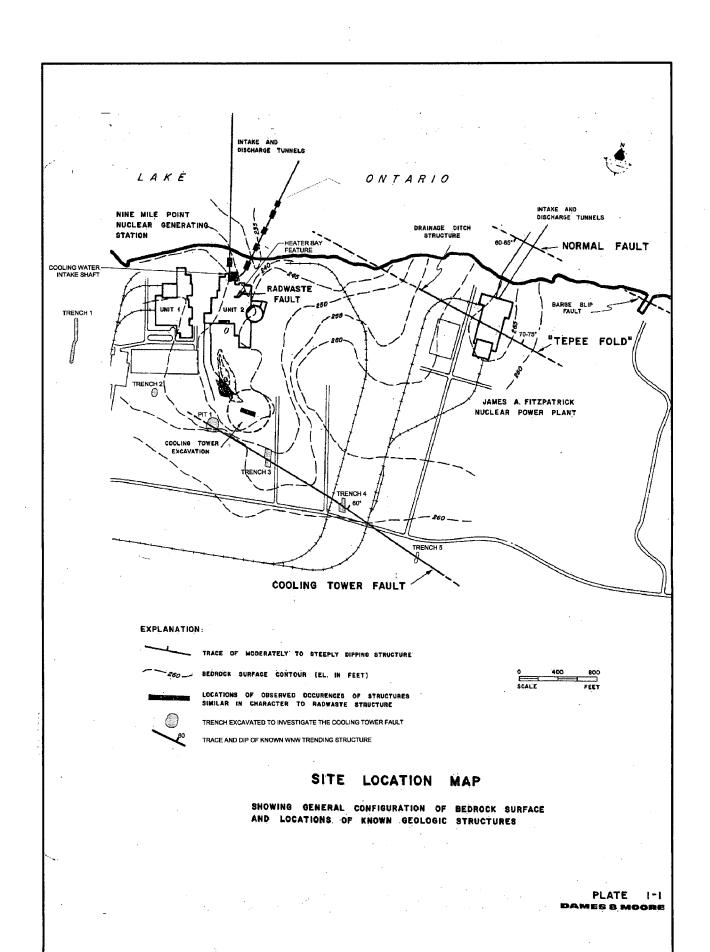
FEATURES* COMPILED FROM CRONE AND WHEELER (2000) AND WHEELER (2006) (1) CLARENDON-LINDEN FAULT ZONE (CLF) (2) CORNWALL-MASSENA EARTHQUAKE (CME) (3) CATLIN LAKE-GOODNOW POND LINEAMENT (CGL) (4) CHAMPLAIN LOWLANDS NORMAL FAULTS (CNF) (5) OFFSET GLACIAL SURFACES (OGS) (6) RAMAPO FAULT SYSTEM (RFS) (7) KINGSTON FAULT (KF) (8) DOBBS FERRY FAULT ZONE (DFF) / = APPROXIMATE STRIKE OF POTENTIAL QUATERNARY FEATURE OR FAULT-PLANE SOLUTION

(9) MOSHOLU FAULT (MF)
(10) NEW YORK BIGHT FAULT (OFFSHORE) (NYBF)
(11) CACOOSING VALLEY EARTHQUAKE (CVE)
(12) LANCASTER SEISMIC ZONE (LS)

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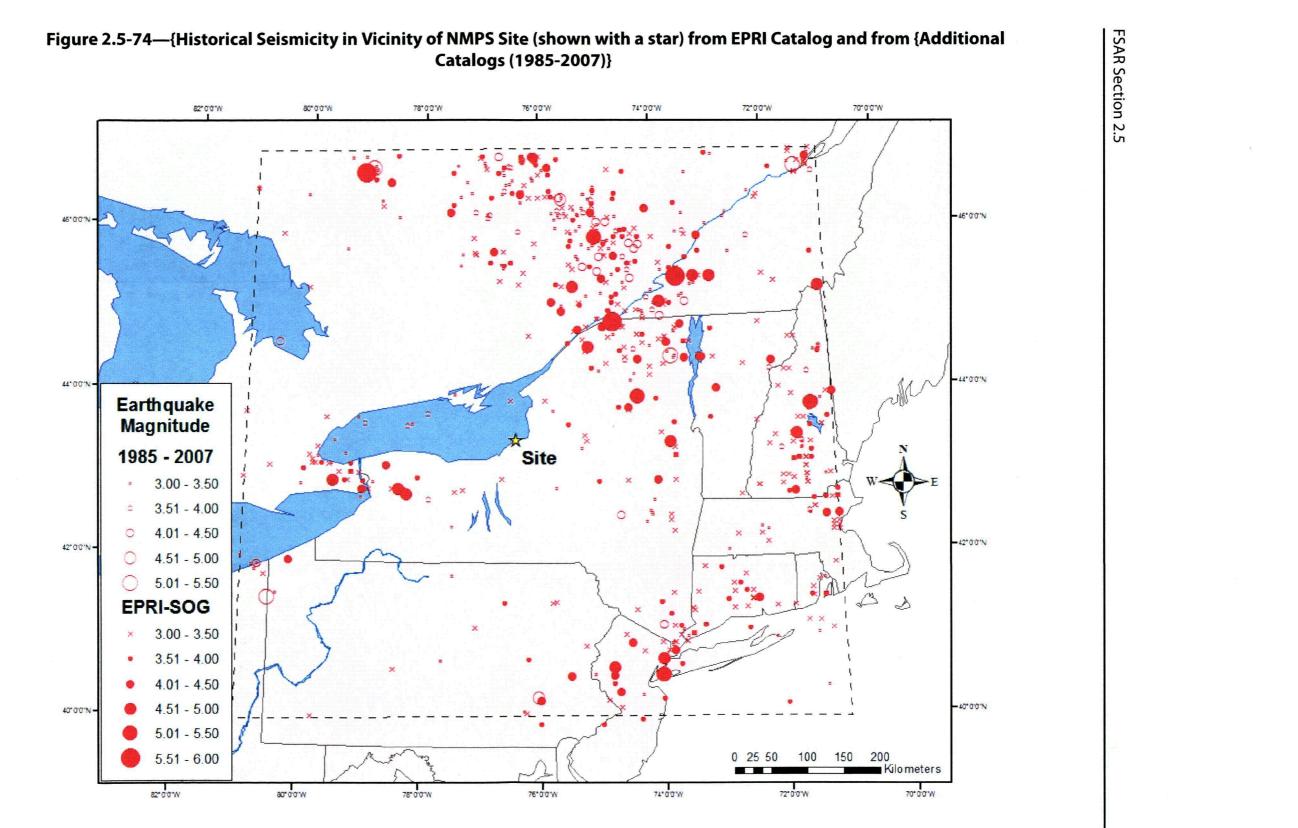
Geology, Seismology, and Geotechnical Engineering





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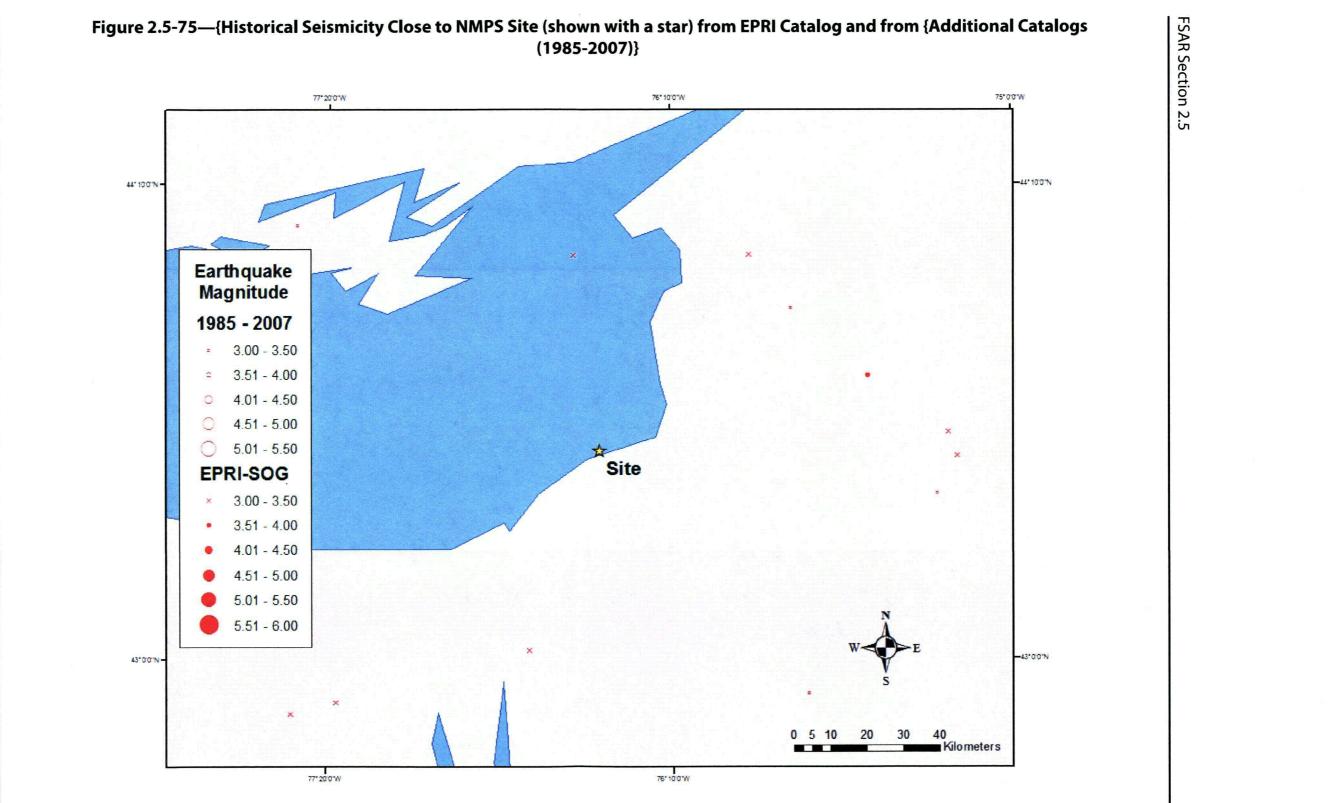
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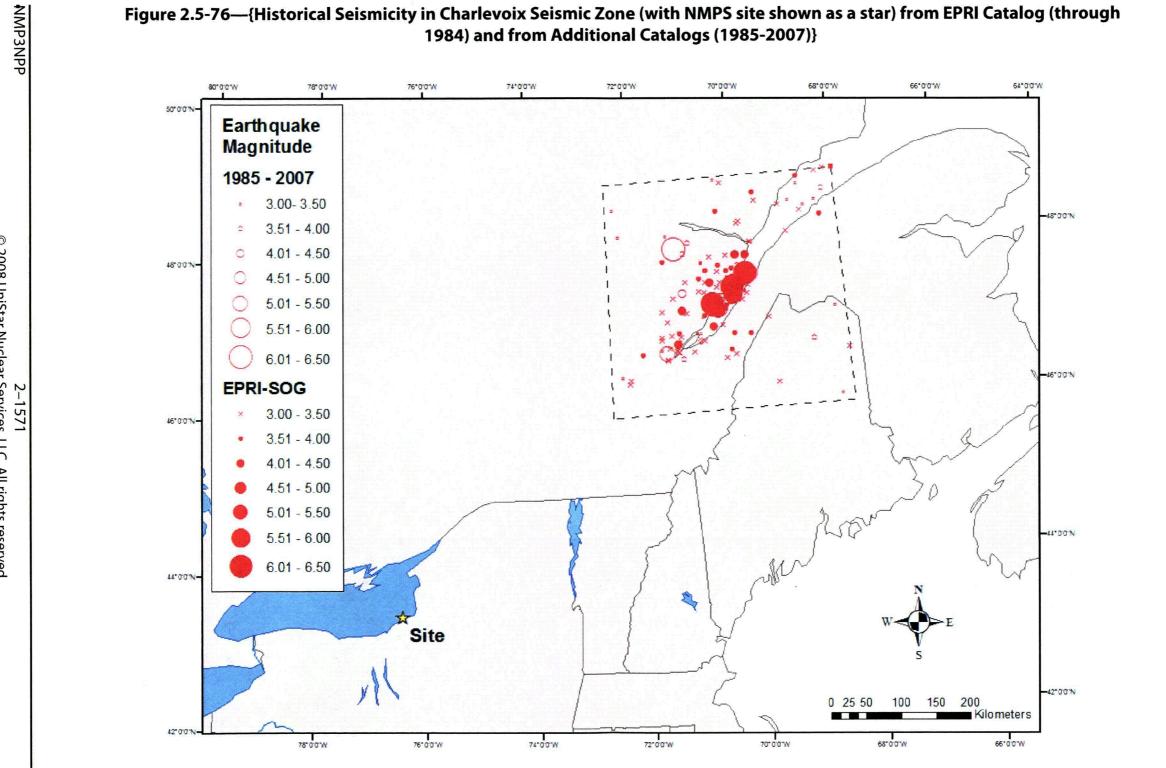


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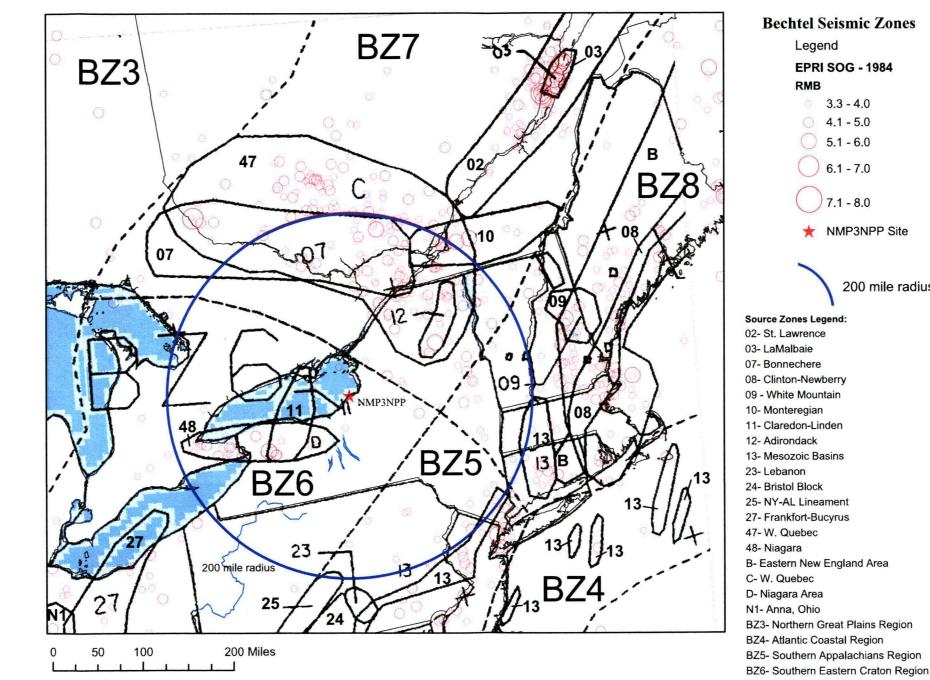


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200 mile radius line

BZ7- Northern Eastern Craton Region BZ8- Northern Appalachians Region

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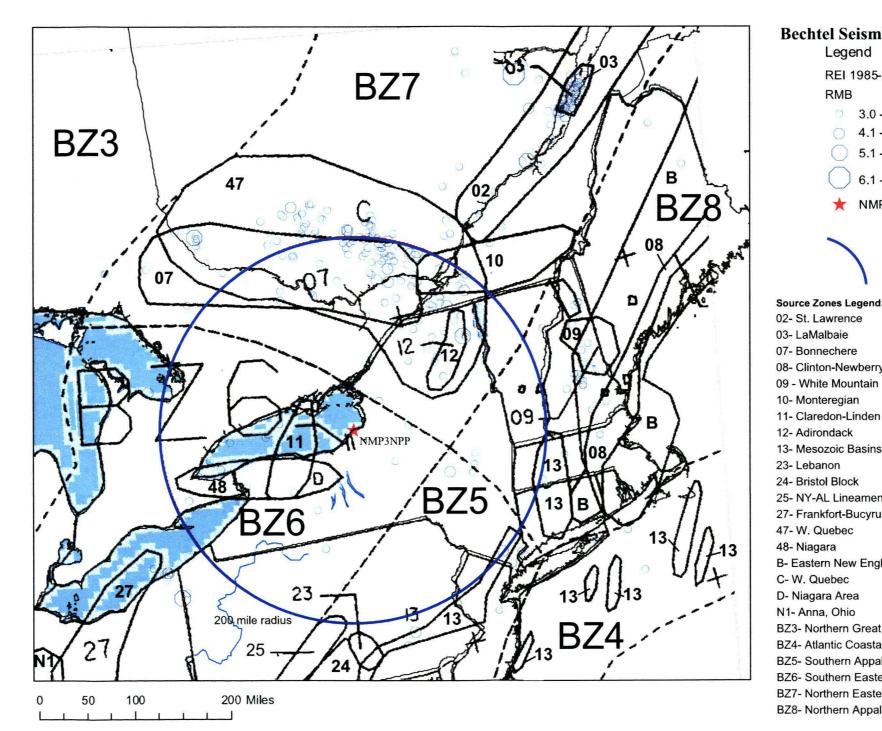


Figure 2.5-78—{Bechtel Seismic Source Zones and 1985-2007 Catalog Update}

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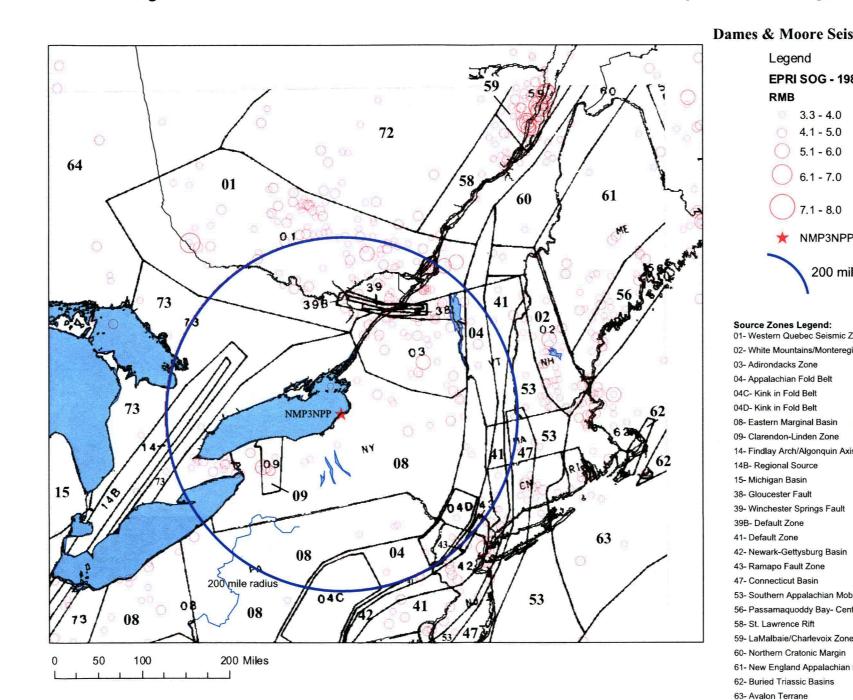


Figure 2.5-79—{Dames & Moore Seismic Source Zones and EPRI-SOG pre-1985 Catalog}

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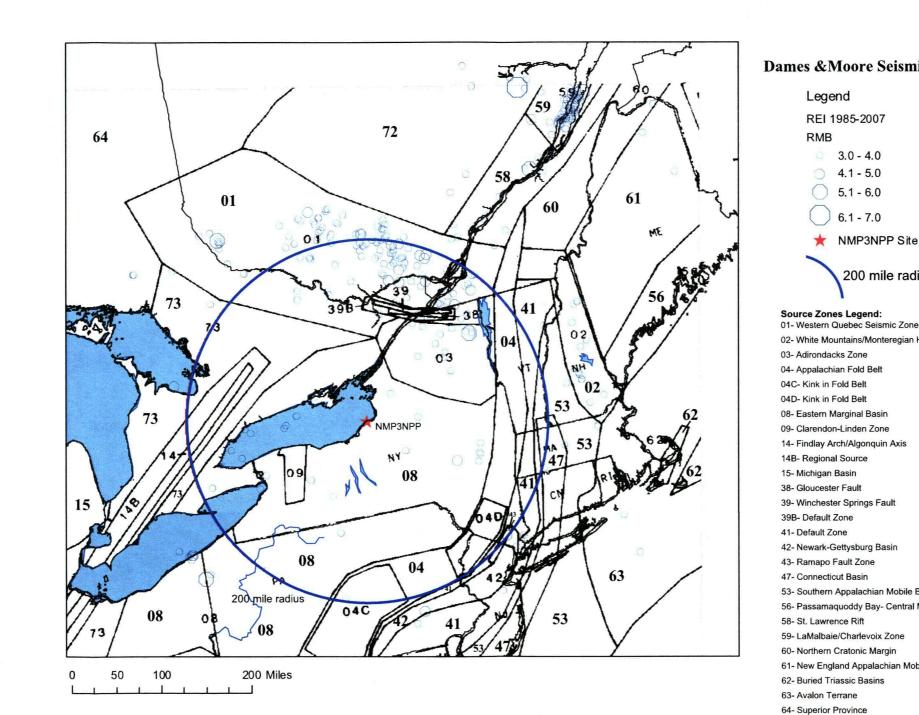
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Source Zones Legend: 01- Western Quebec Seismic Zone		
02- White Mountains/Monteregian Hills		
03- Adirondacks Zone		
04- Appalachian Fold Belt		
04C- Kink in Fold Belt		
04D- Kink in Fold Belt		
08- Eastern Marginal Basin		
09- Clarendon-Linden Zone		
14- Findlay Arch/Algonquin Axis		
14B- Regional Source		
15- Michigan Basin		
38- Gloucester Fault 39- Winchester Springs Fault		
39B- Default Zone		
41- Default Zone		
42- Newark-Gettysburg Basin		
43- Ramapo Fault Zone		
47- Connecticut Basin		
53- Southern Appalachian Mobile Belt		
56- Passamaquoddy Bay- Central Maine Coast Zone		
58- St. Lawrence Rift		
59- LaMalbaie/Charlevoix Zone		
60- Northern Cratonic Margin		
61- New England Appalachian Mobile Belt		
62- Buried Triassic Basins		
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Dames & Moore Seismic Zones

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200 mile radius line

02- White Mountains/Monteregian Hills

53- Southern Appalachian Mobile Belt 56- Passamaquoddy Bay- Central Maine Coast Zone

61- New England Appalachian Mobile Belt

72 Eastern Canada Province 73 Southern Canada Province FSAR Section 2.5



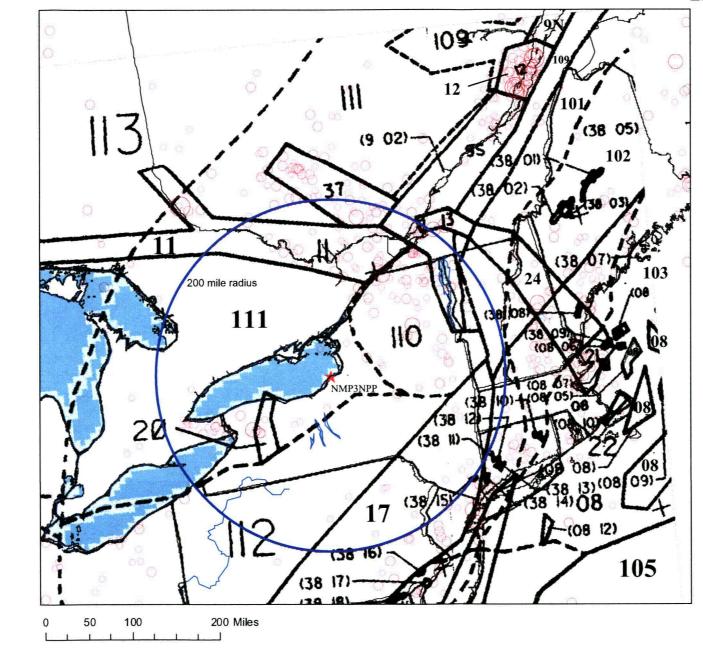


Figure 2.5-81—{Law Engineering Seismic Source Zones and EPRI-SOG pre-1985 Catalog}

200 mile radius line Source Zones Legend: 8- Buried East Coast Mesozoic Basins 9N- St. Lawrence Valley Rift 9S- St. Lawrence Valley Rift 11- Ottawa-Bonnechere Graben 12- Charlevoix-LaMalbaie Area 13- Monteregian Hills Area 17- Eastern Basement 20- Clarendon-Lindon Structure 21- Intersection N.E. Mass. Thrust Fault System with White Mt. Intrusives 22-Wentworth Hypothesis Reactivated E. Seaboard Normal Faults 24- White Mt. Intrusives 37- Ottawa Area 38- Mafic Plutons 101- Western New England 102- Central New England 103- Eastern New England 105- North Coastal Plain 109- St. Lawrence Lowlands 110- Adirondacks 111- Laurentian Block 112- Ohio-Pennsylvania Block 113- Lake Huron 114- Wisconsin Block

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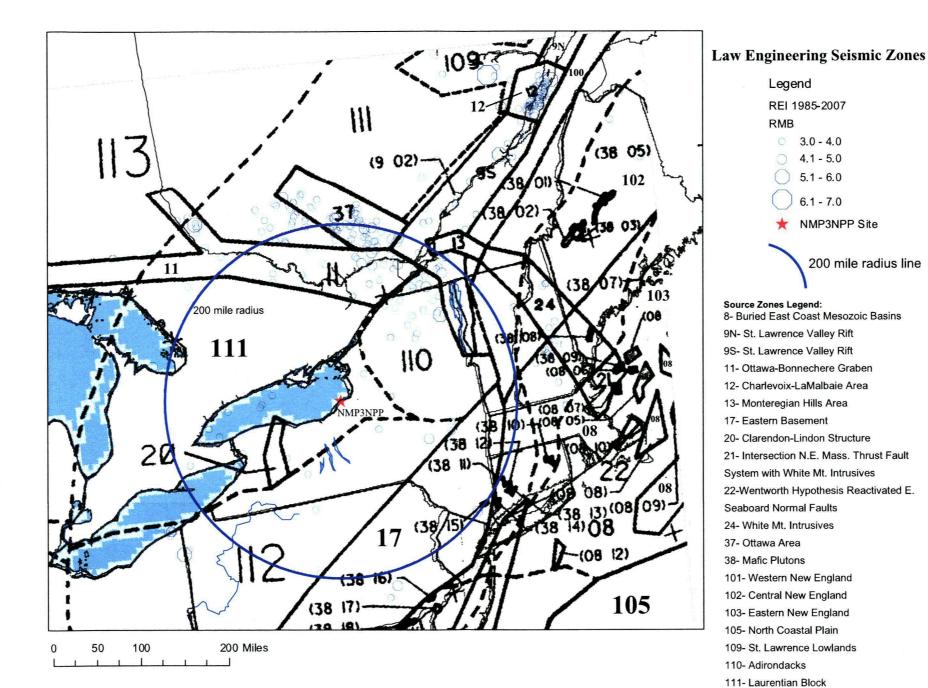


Figure 2.5-82—{Law Engineering Seismic Source Zones and 1985-2007 Catalog Update}

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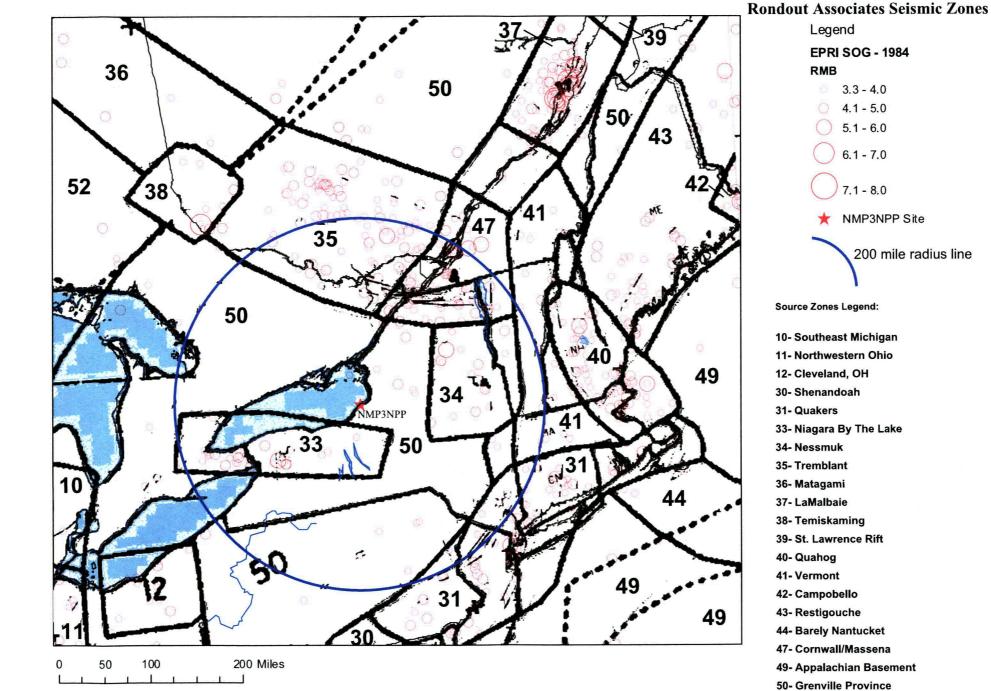
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112- Ohio-Pennsylvania Block

113- Lake Huron 114- Wisconsin Block FSAR Section 2.5



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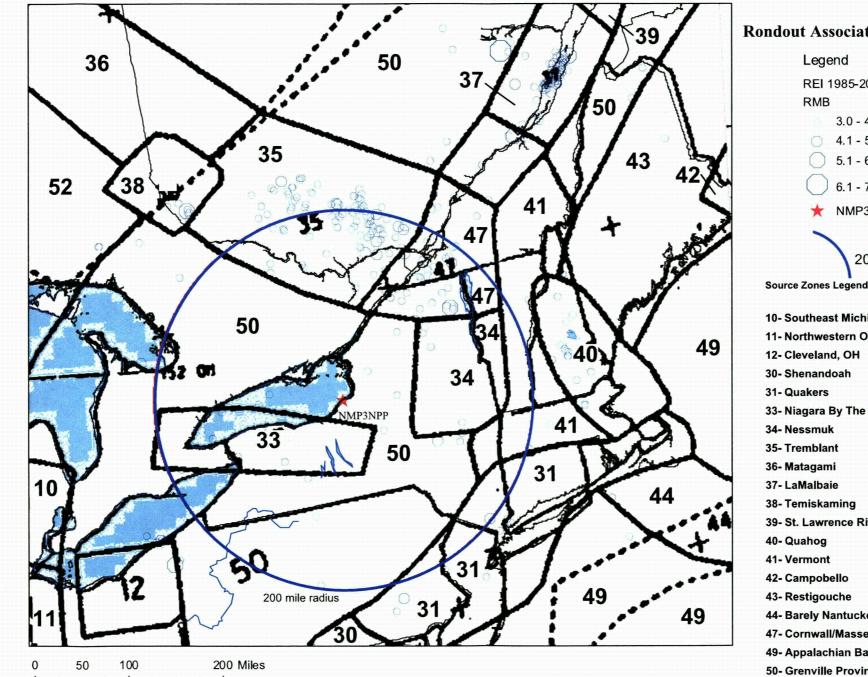
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52- Pre-Grenville Precambrian Craton

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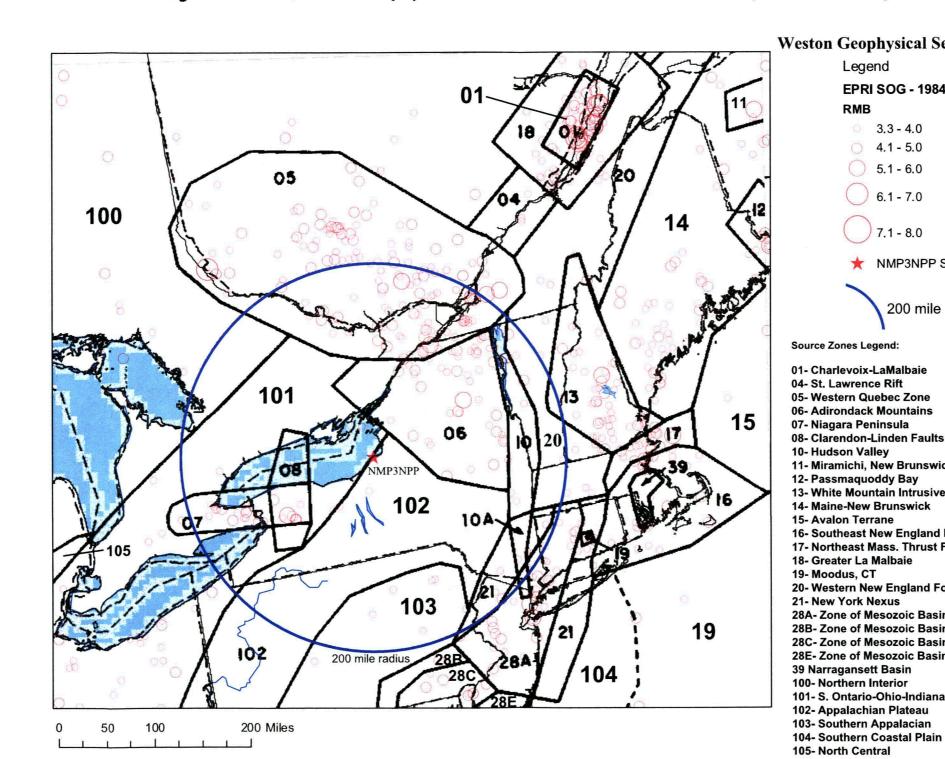
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- 6.1 7.0
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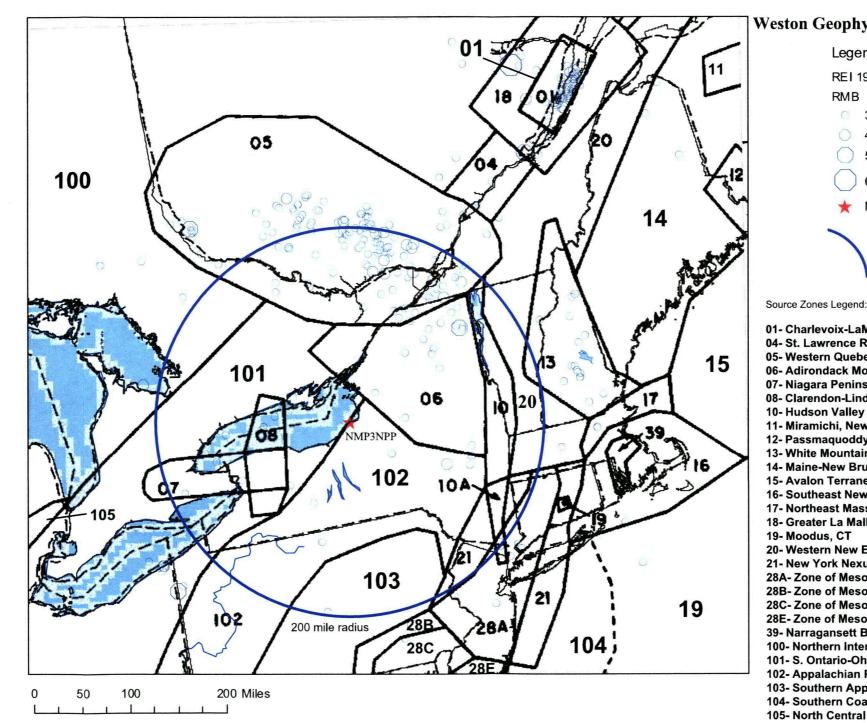
- **08- Clarendon-Linden Faults**
- 11- Miramichi, New Brunswick 13- White Mountain Intrusives
- 16- Southeast New England Platform 17- Northeast Mass. Thrust Fault

20- Western New England Foldbelt

28A- Zone of Mesozoic Basins 28B- Zone of Mesozoic Basins 28C- Zone of Mesozoic Basins 28E- Zone of Mesozoic Basins 101- S. Ontario-Ohio-Indiana

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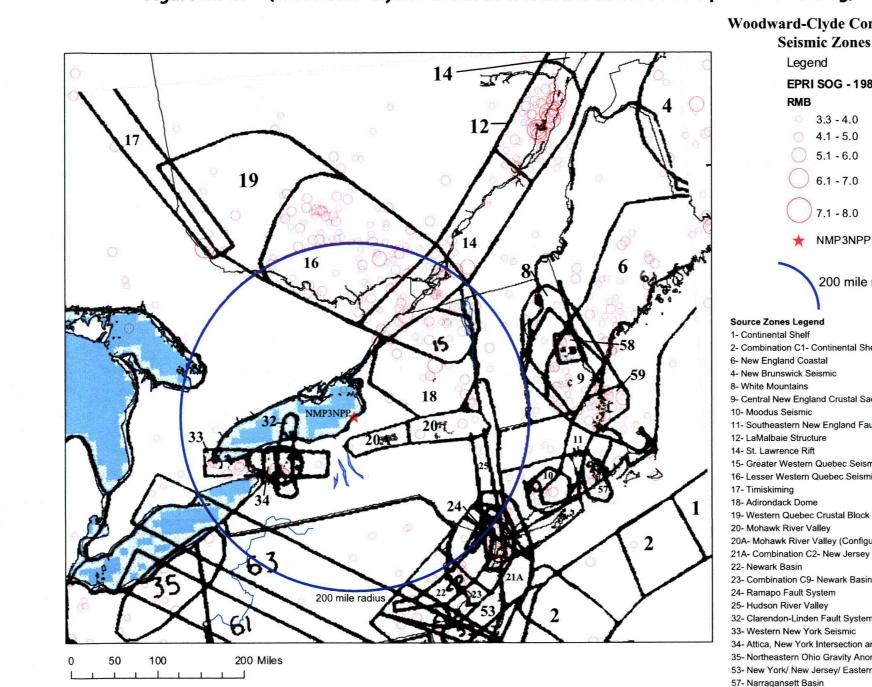


Figure 2.5-87—{Woodward-Clyde Seismic Source Zones and EPRI-SOG pre-1985 Catalog}

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61- Pittsburgh/ Washington Lineament

58- Ossipee, NJ Pluton and NOTA 59- Cape Ann, MA Default

63- Tyrone/Mt. Union Lineament

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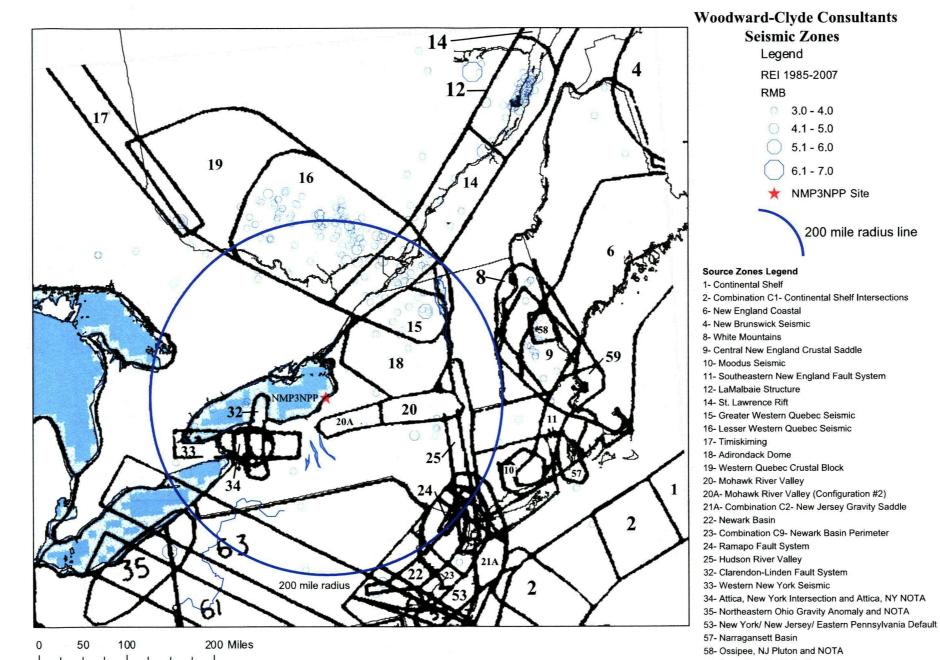


Figure 2.5-88—{Woodward-Clyde Seismic Source Zones and 1985-2007 Catalog Update}

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200 mile radius line

59- Cape Ann, MA Default

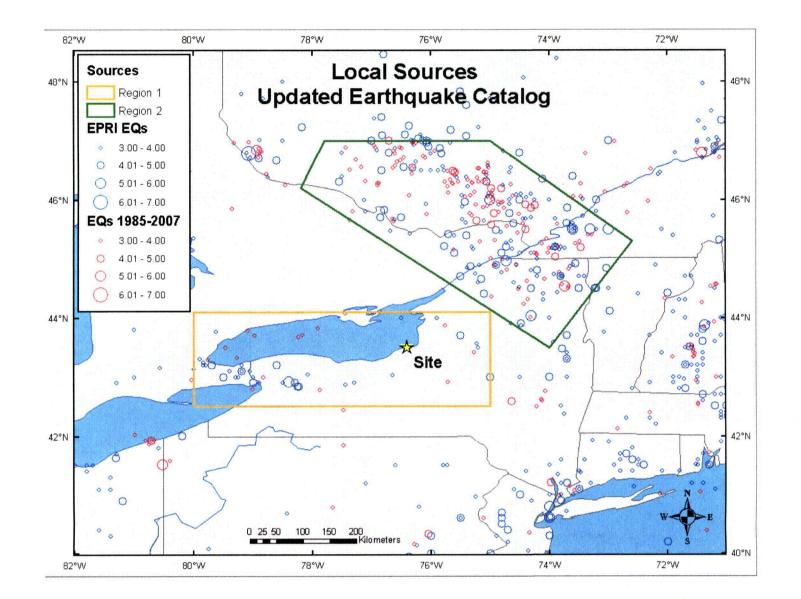
63- Tyrone/Mt. Union Lineament

61- Pittsburgh/ Washington Lineament

FSAR Section 2.5

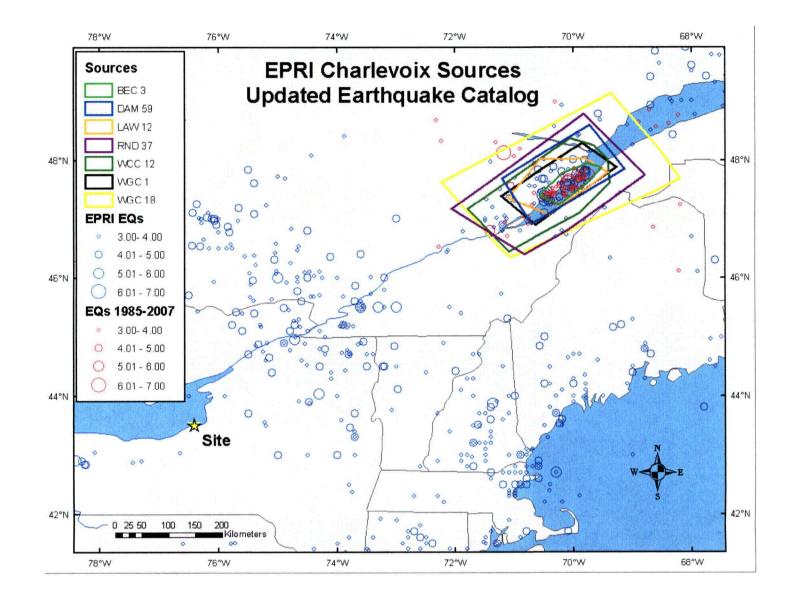


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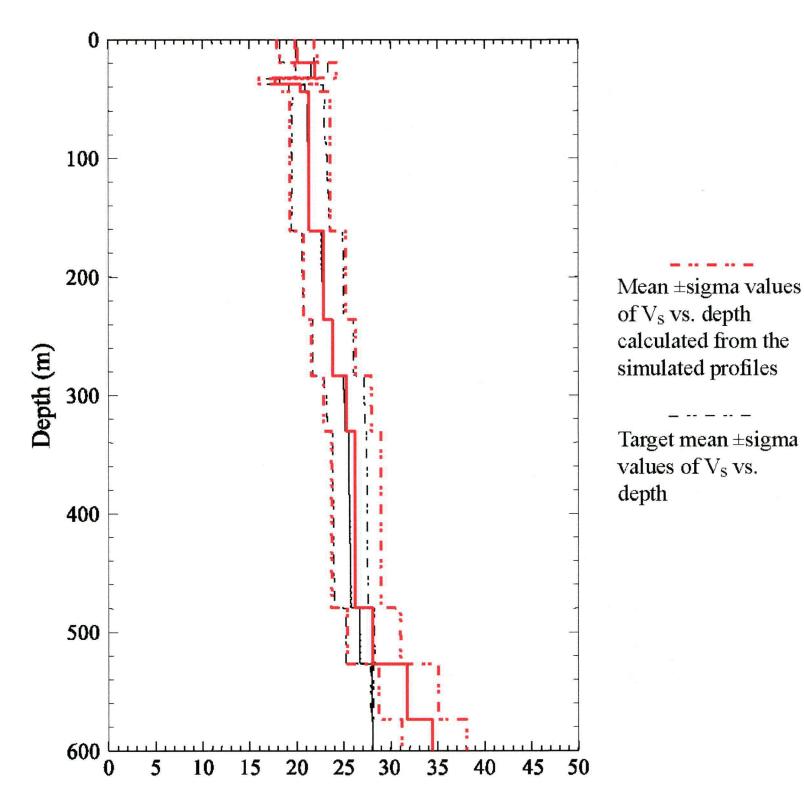


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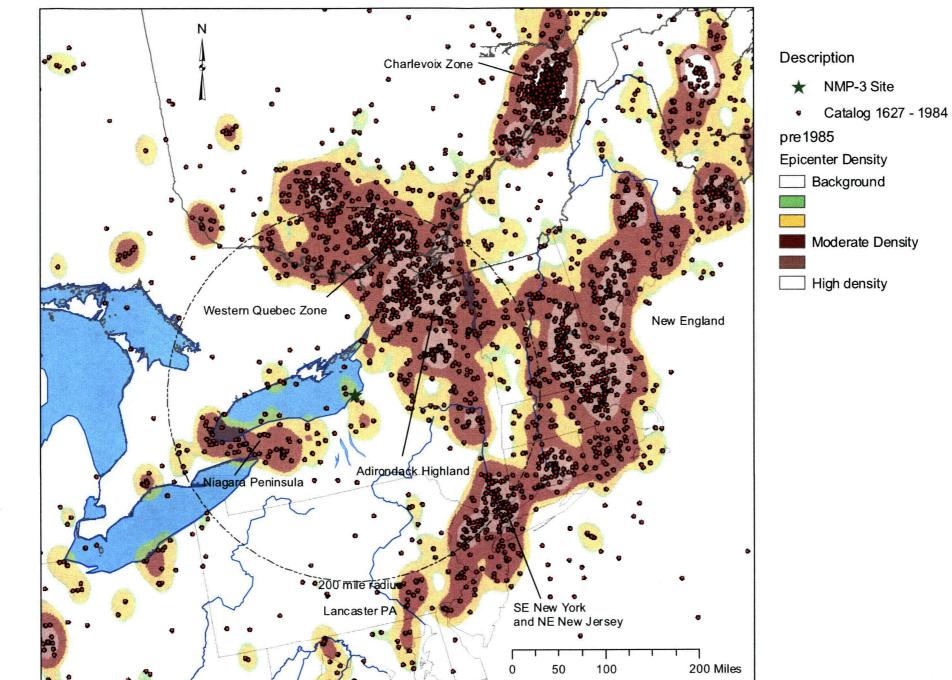
NMP3 GMRS Synth. Profiles: Mean +/- Sigma



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Figure 2.5-188—{Spatial Interpretation of Density Pattern of Seismicity for the Time Period 1627 through 1984}



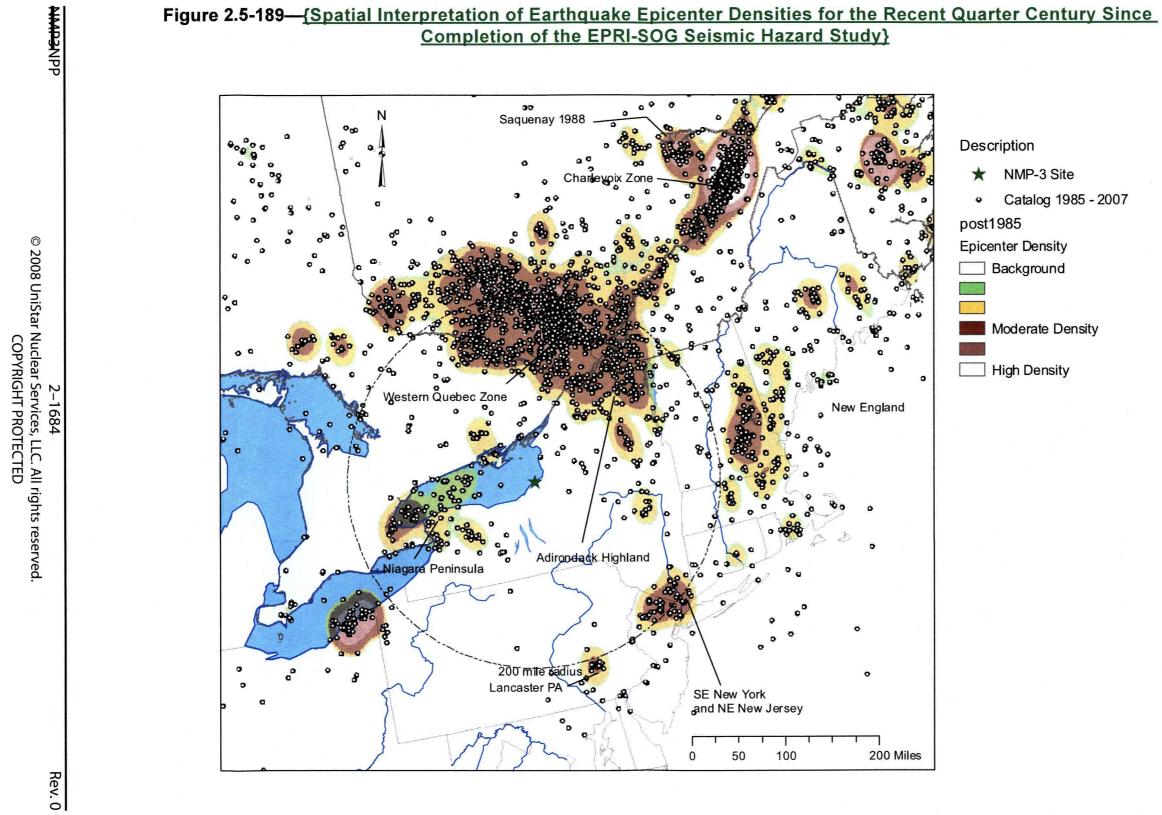
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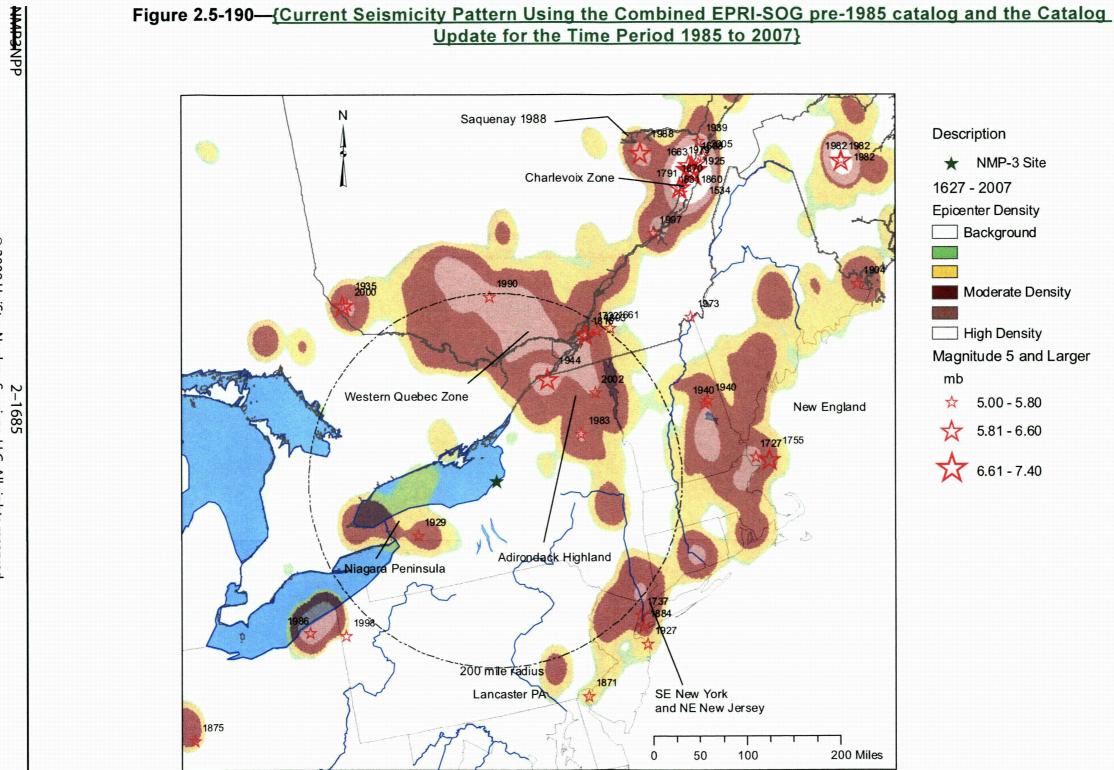
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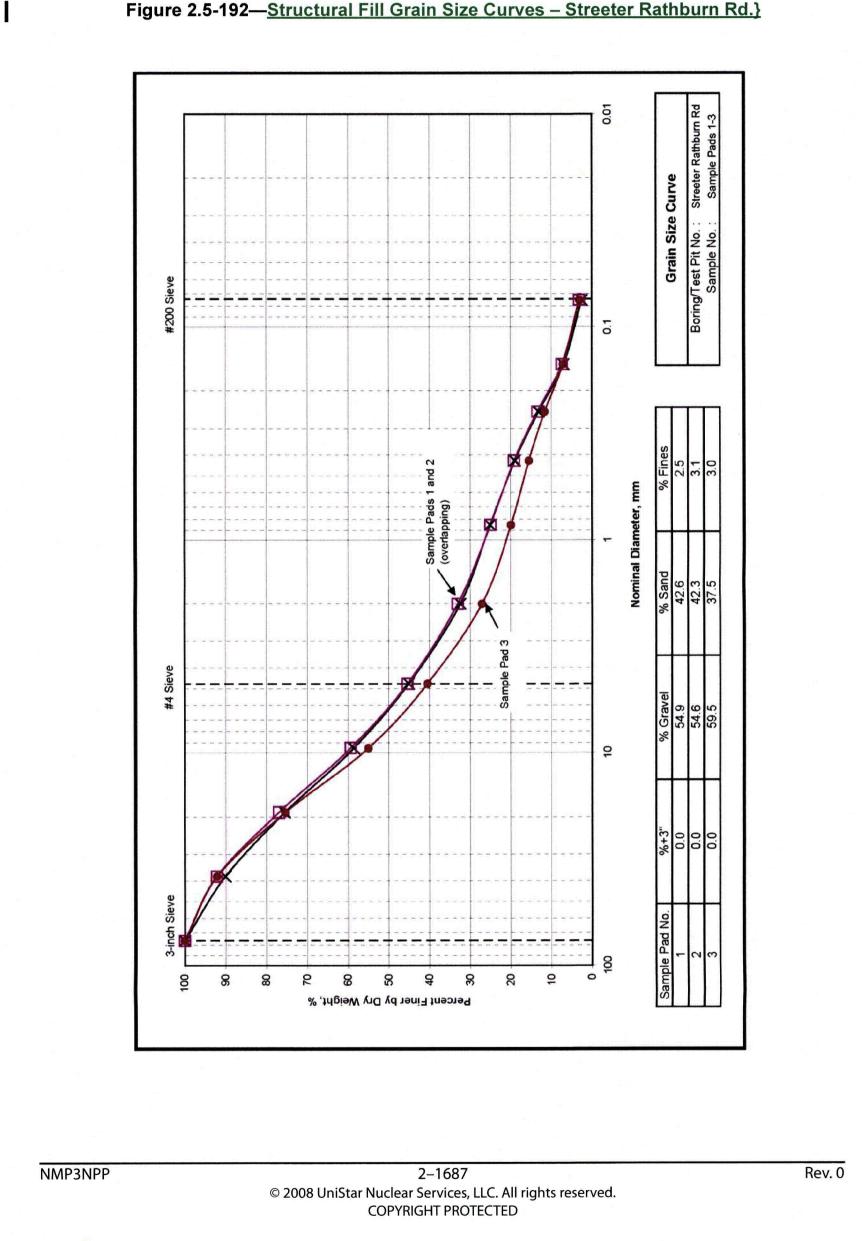


Figure 2.5-192—Structural Fill Grain Size Curves – Streeter Rathburn Rd.}

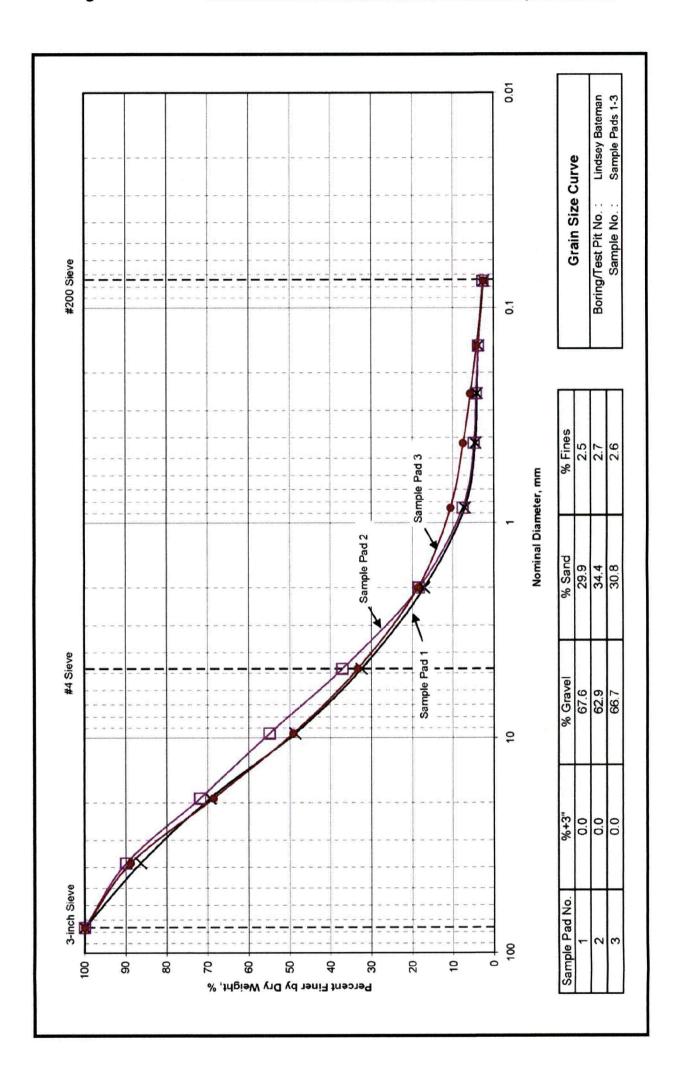


Figure 2.5-193—<u>Structural Fill Grain Size Curves - Lindsey Bateman</u>}

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Geology, Seismology, and Geotechnical Engineering

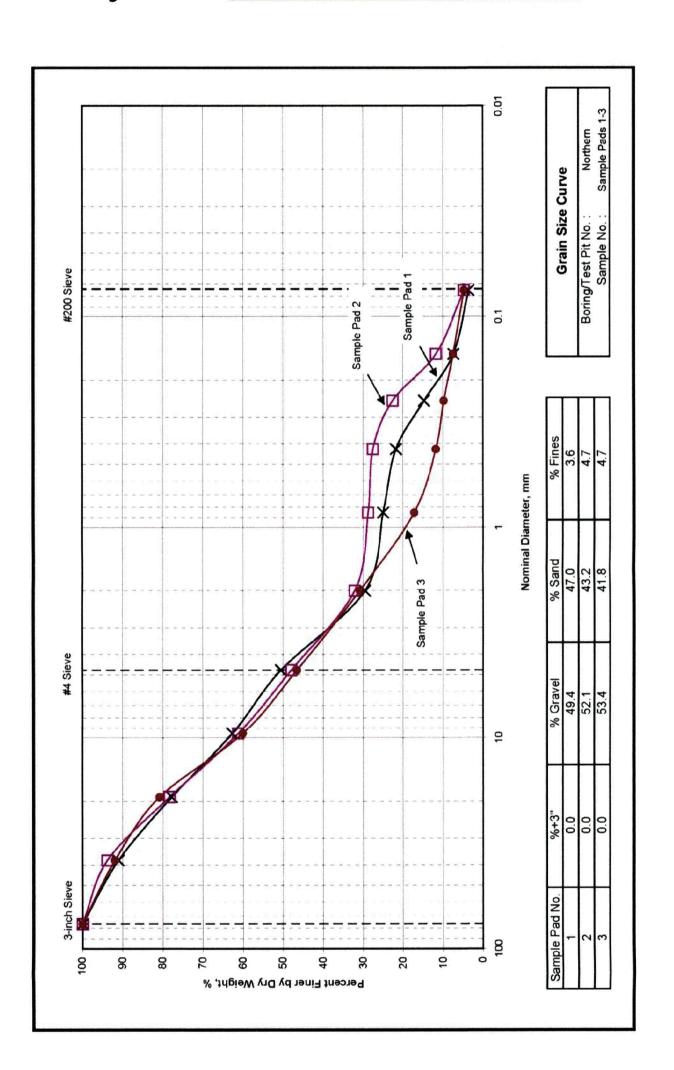
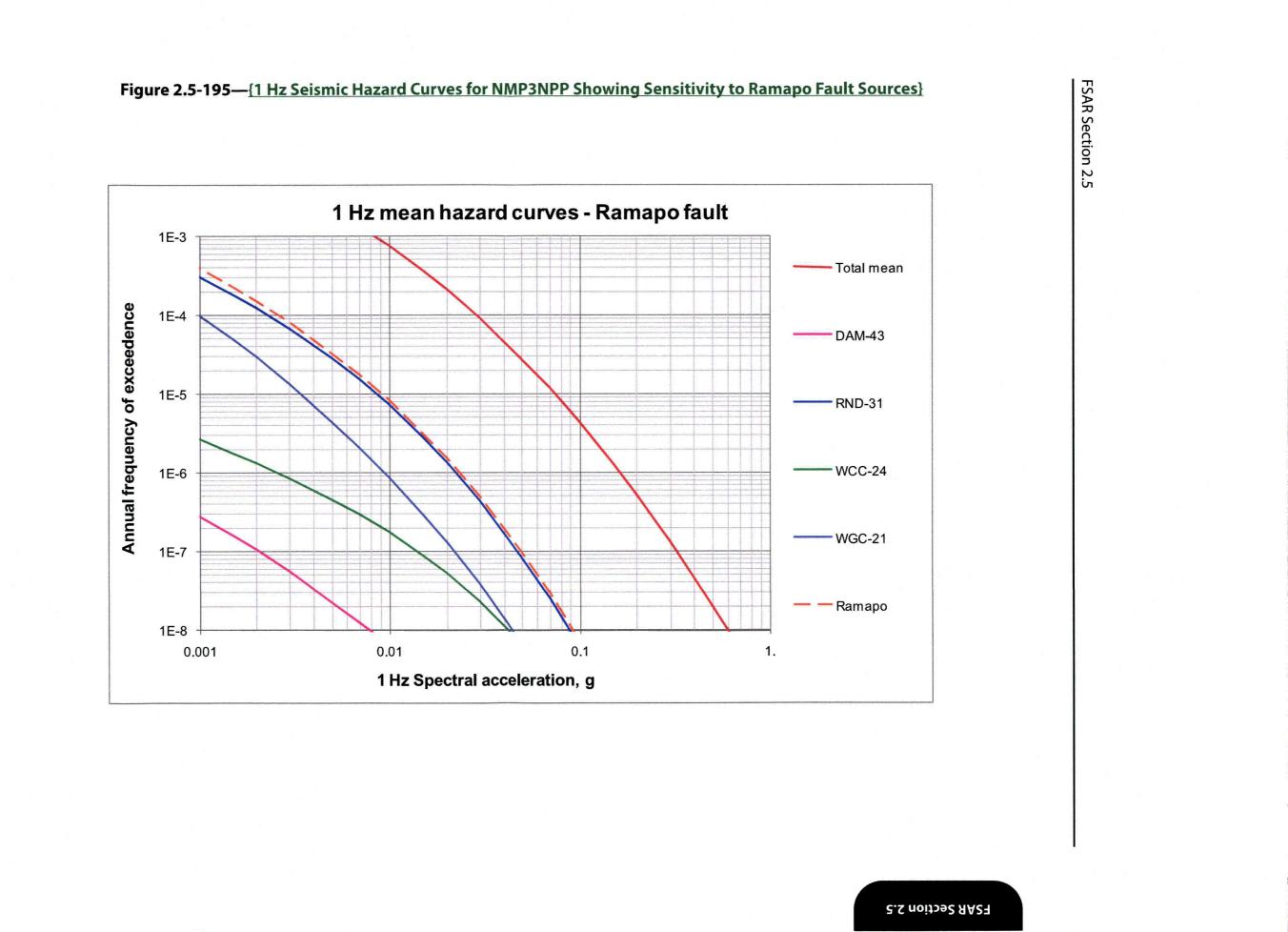
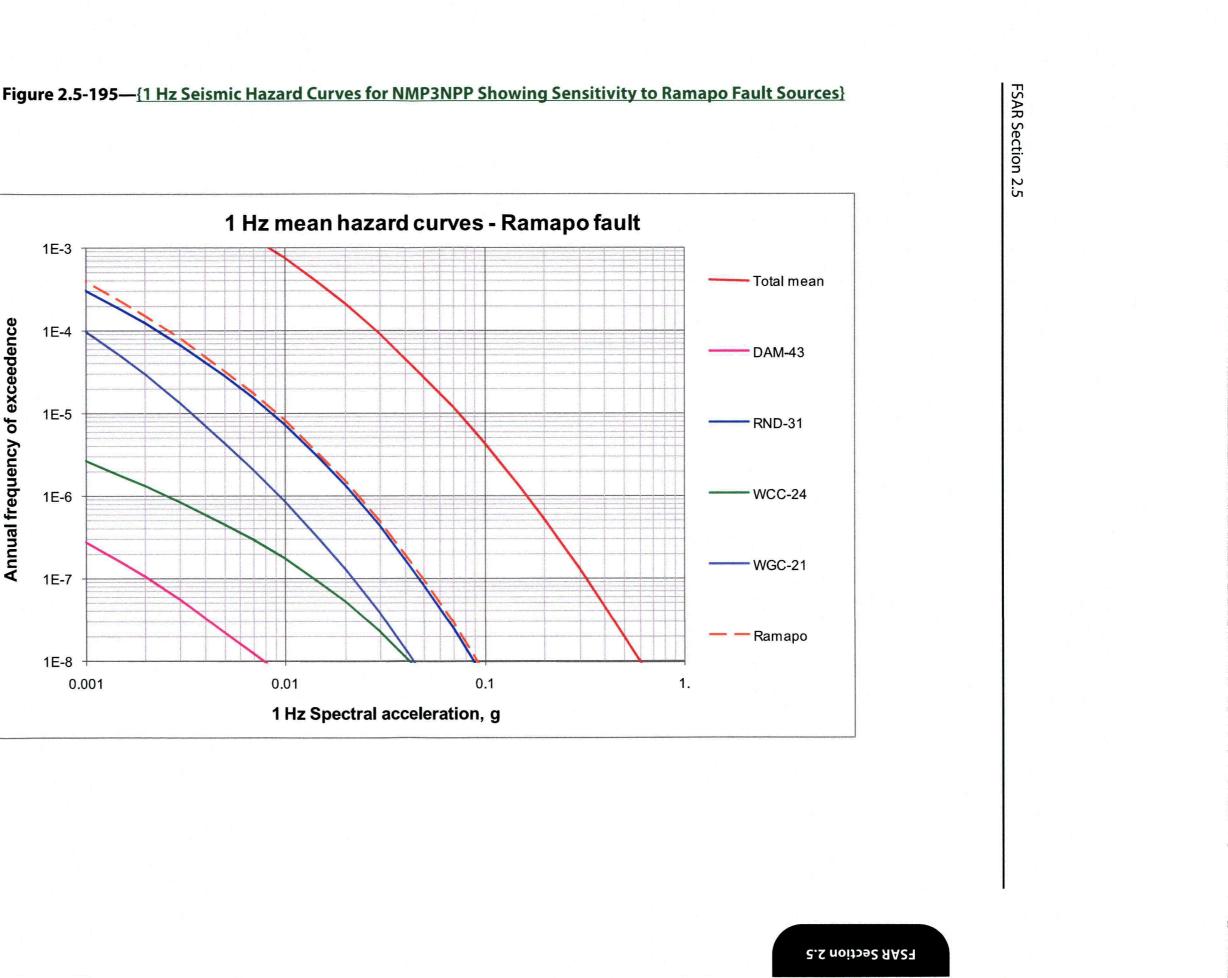


Figure 2.5-194—{Structural Fill Grain Size Curves - Northern}

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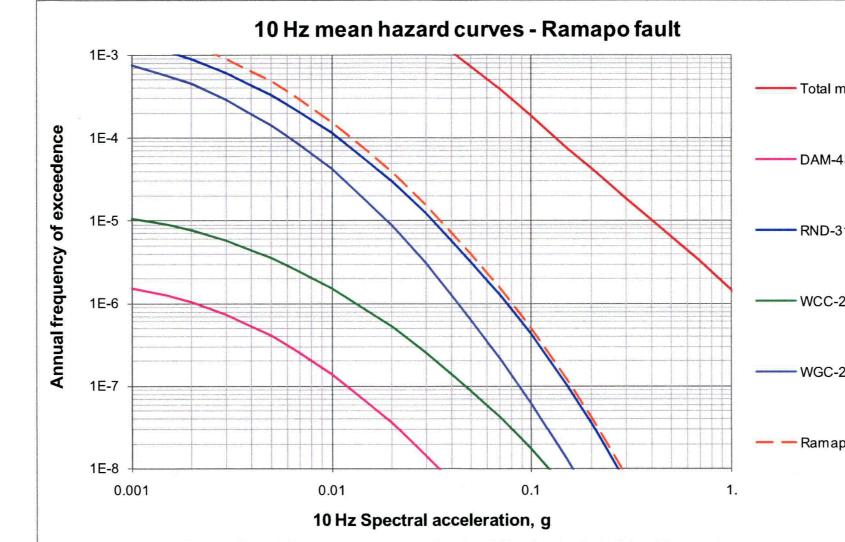


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Figure 2.5-196—{10 Hz seismic Hazard Curves for NMP3NPP Showing Sensitivity to Ramapo Fault So



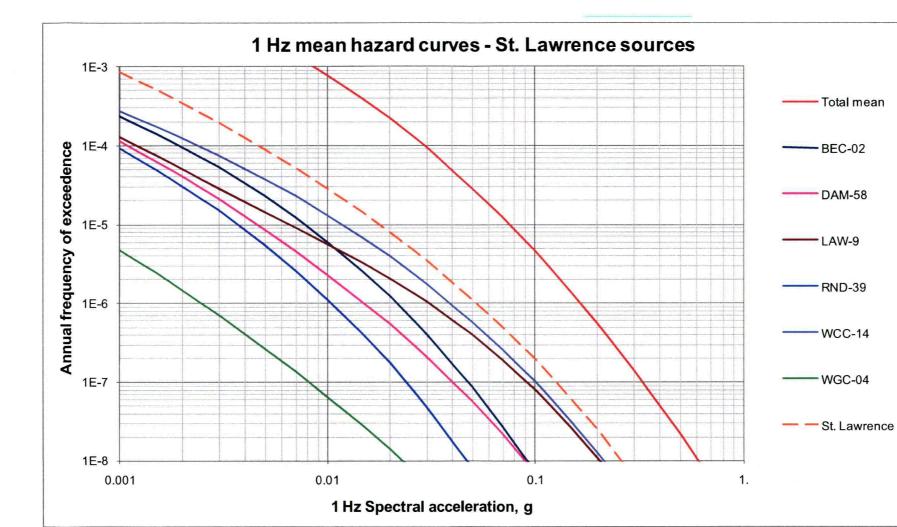
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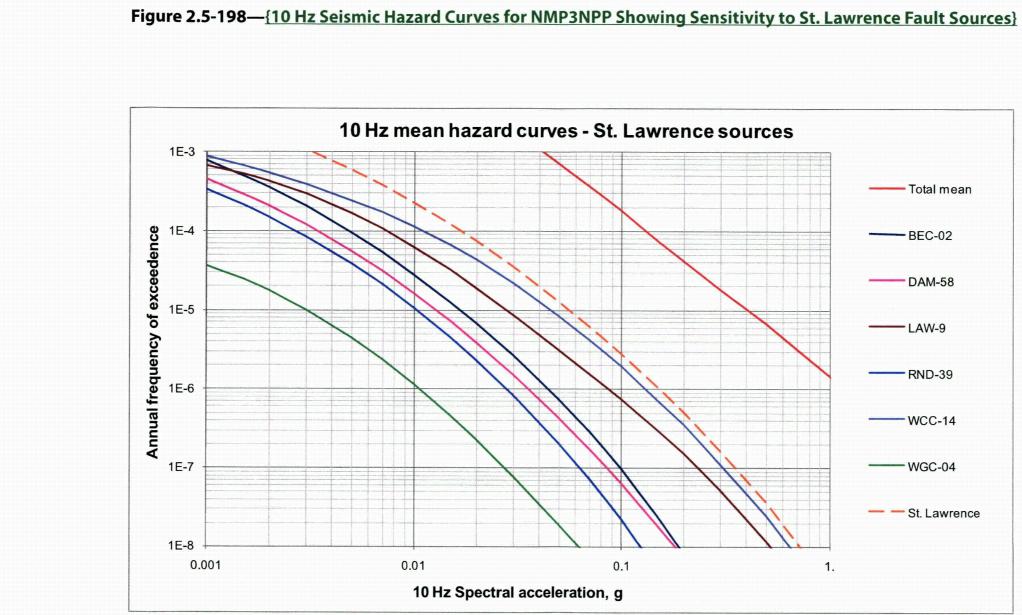




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The 18 Drawings referenced in the transmittal letter have been processed into ADAMS.

These drawings can be accessed by NRC Staff members within the ADAMS package or by performing a search on the Document/Report Number.