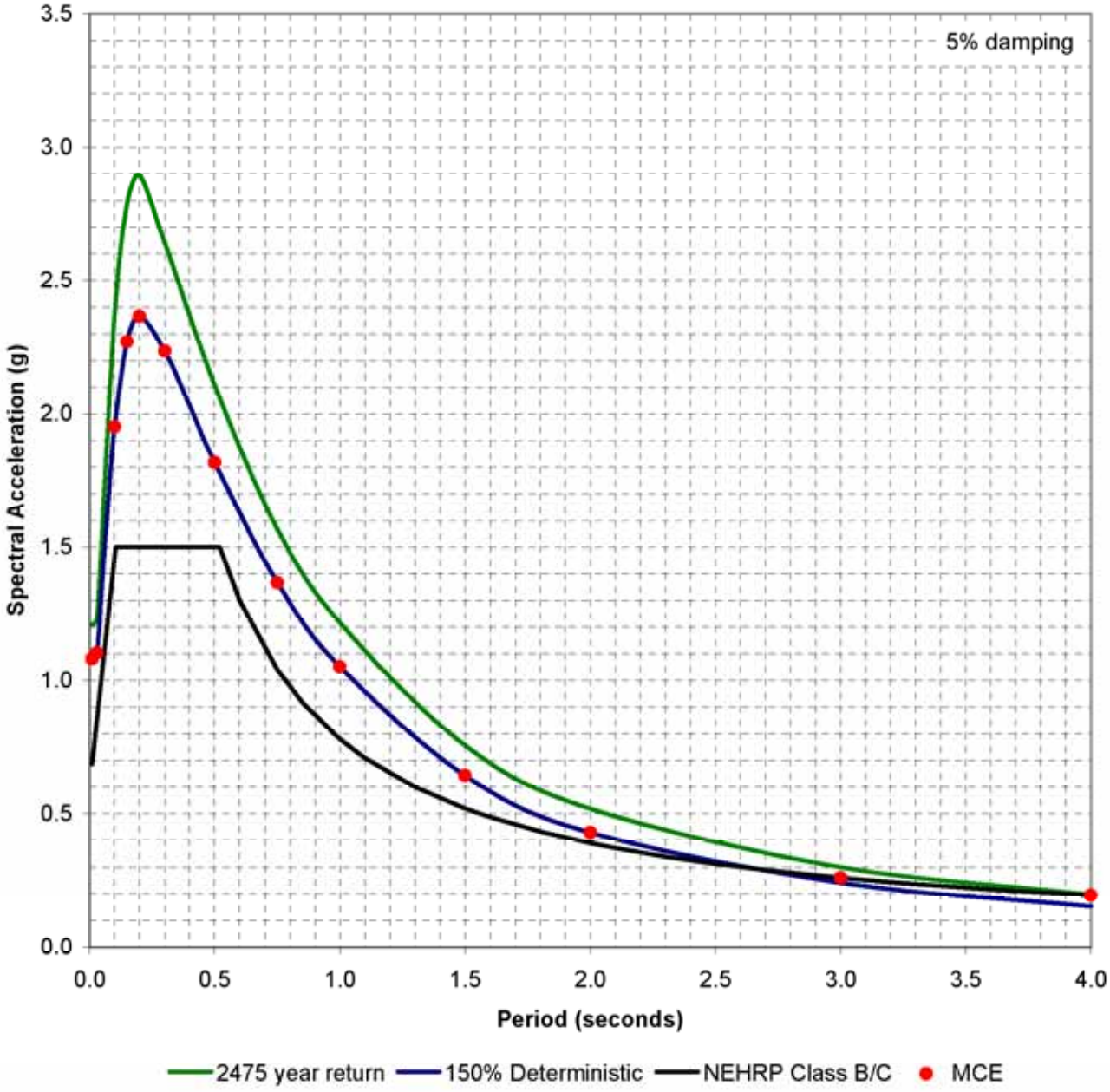
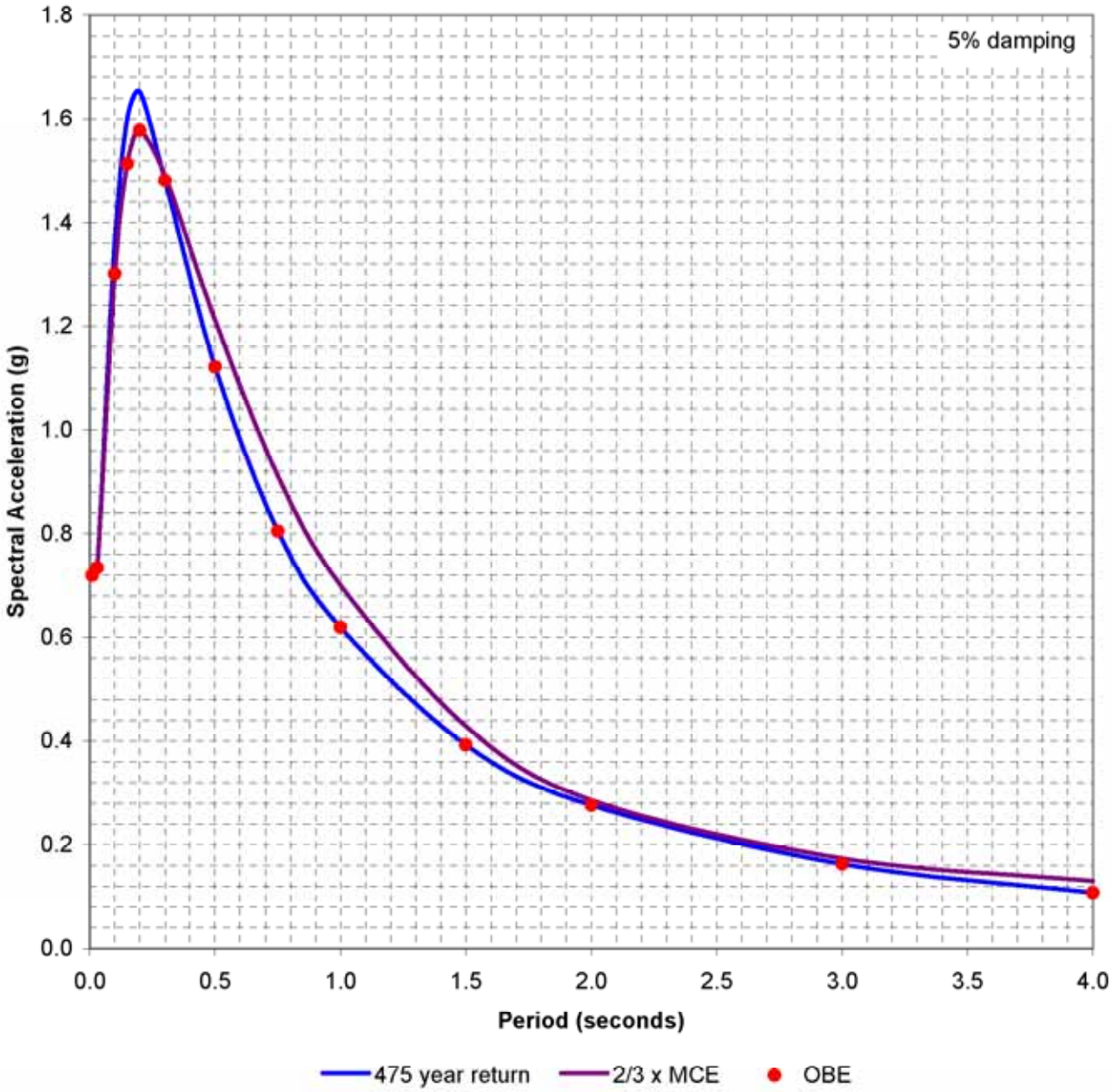


MAXIMUM CONSIDERED EARTHQUAKE (MCE) HORIZONTAL RESPONSE SPECTRUM
N. Pipeline Location
Preliminary Seismic and Geologic Hazards Evaluation
BHP Billiton

PLATE 4.3a



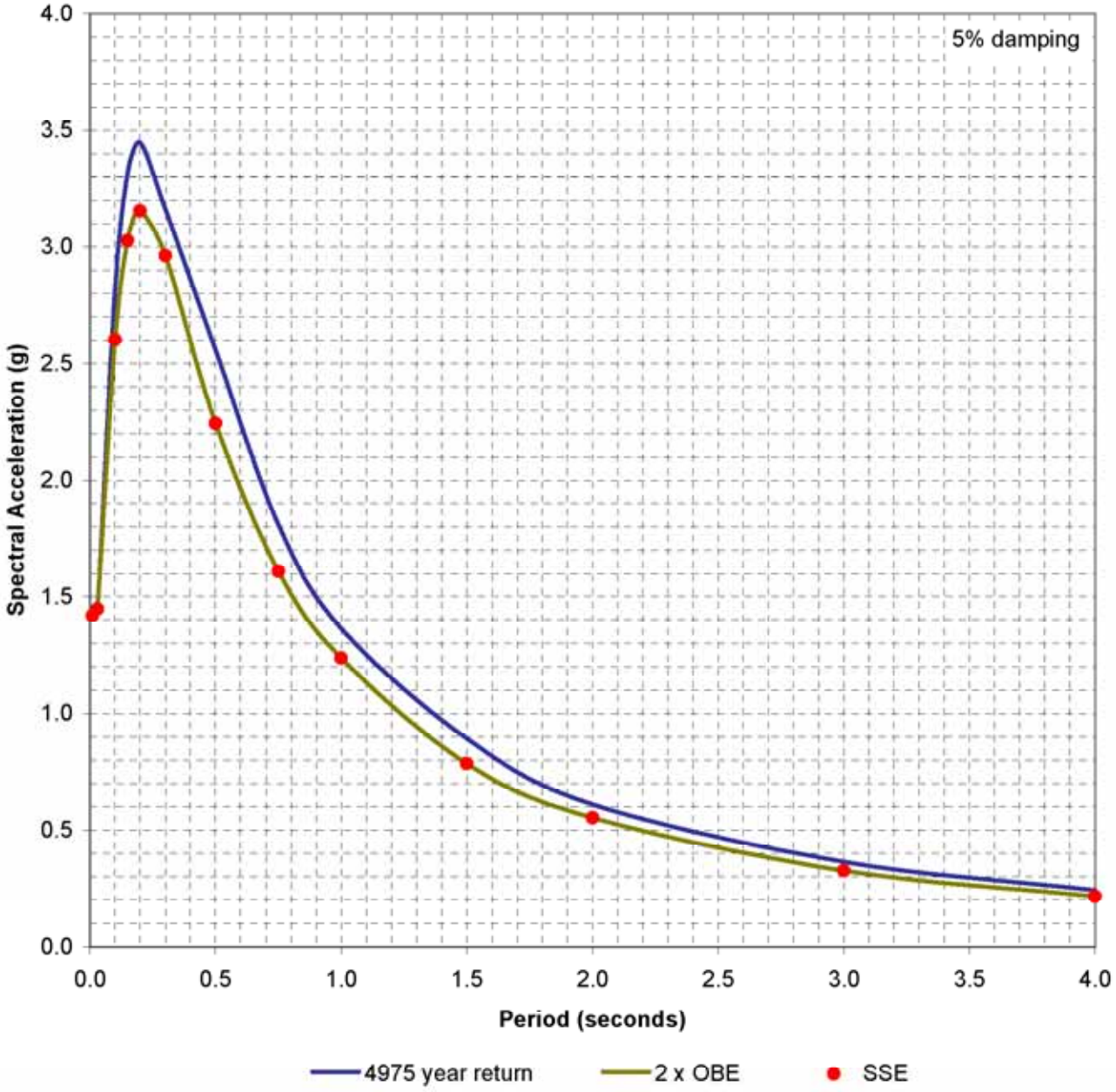
OPERATING BASIS EARTHQUAKE (OBE) HORIZONTAL RESPONSE SPECTRUM

N. Pipeline Location

Preliminary Seismic and Geologic Hazards Evaluation

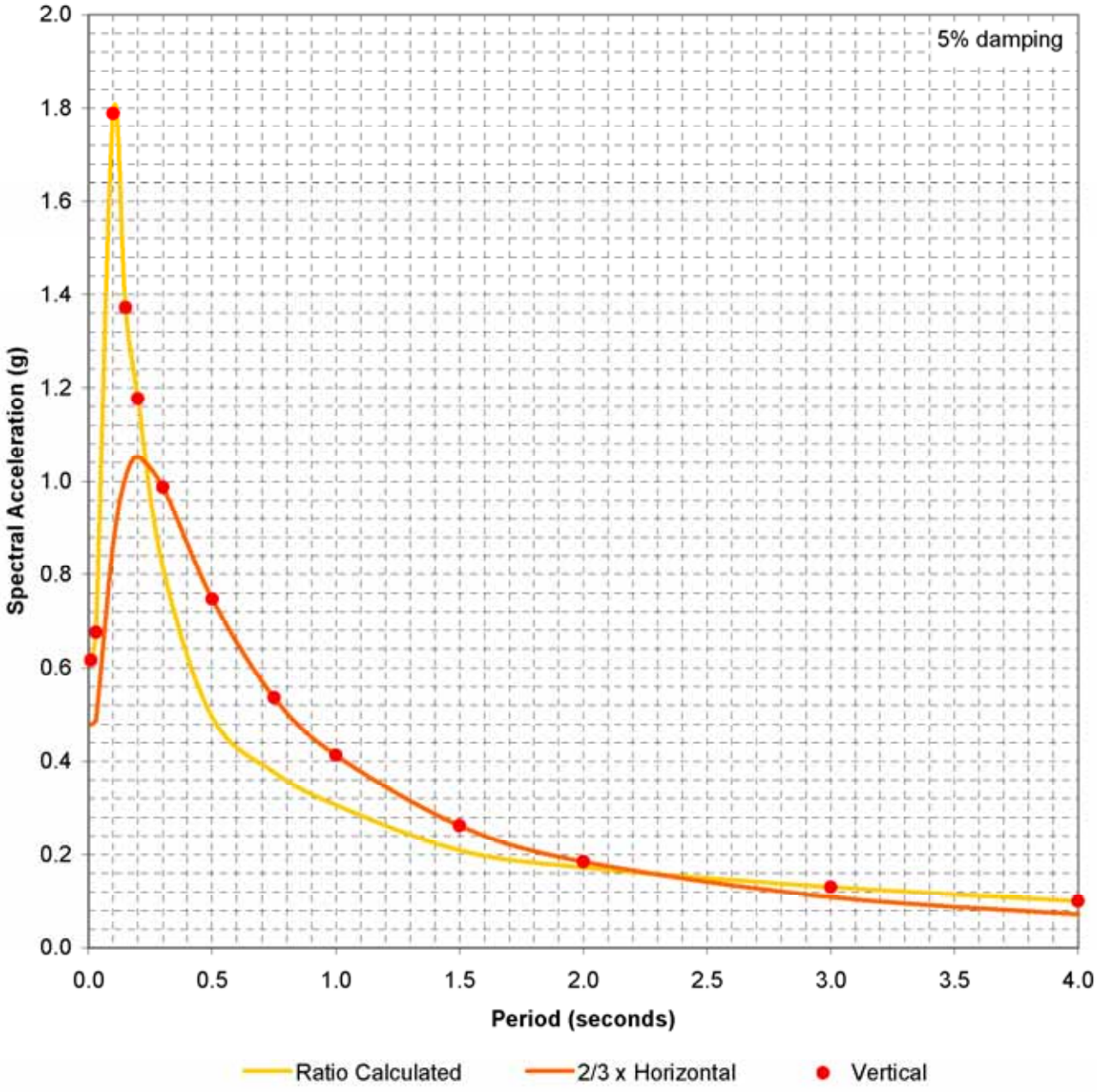
BHP Billiton

PLATE 4.3b



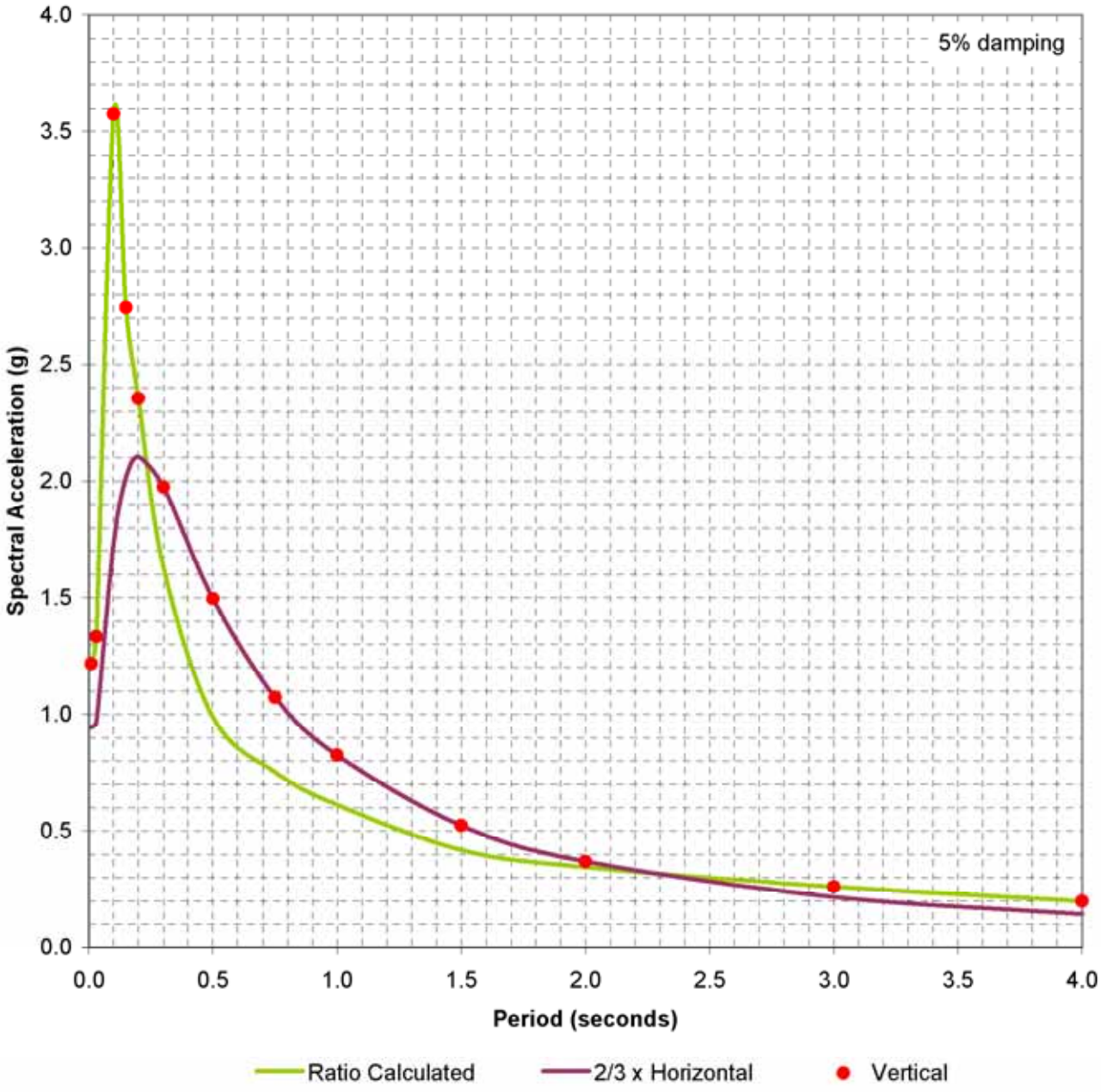
SAFE SHUTDOWN EARTHQUAKE (SSE) HORIZONTAL RESPONSE SPECTRUM
N. Pipeline Location
Preliminary Seismic and Geologic Hazards Evaluation
BHP Billiton

PLATE 4.3c



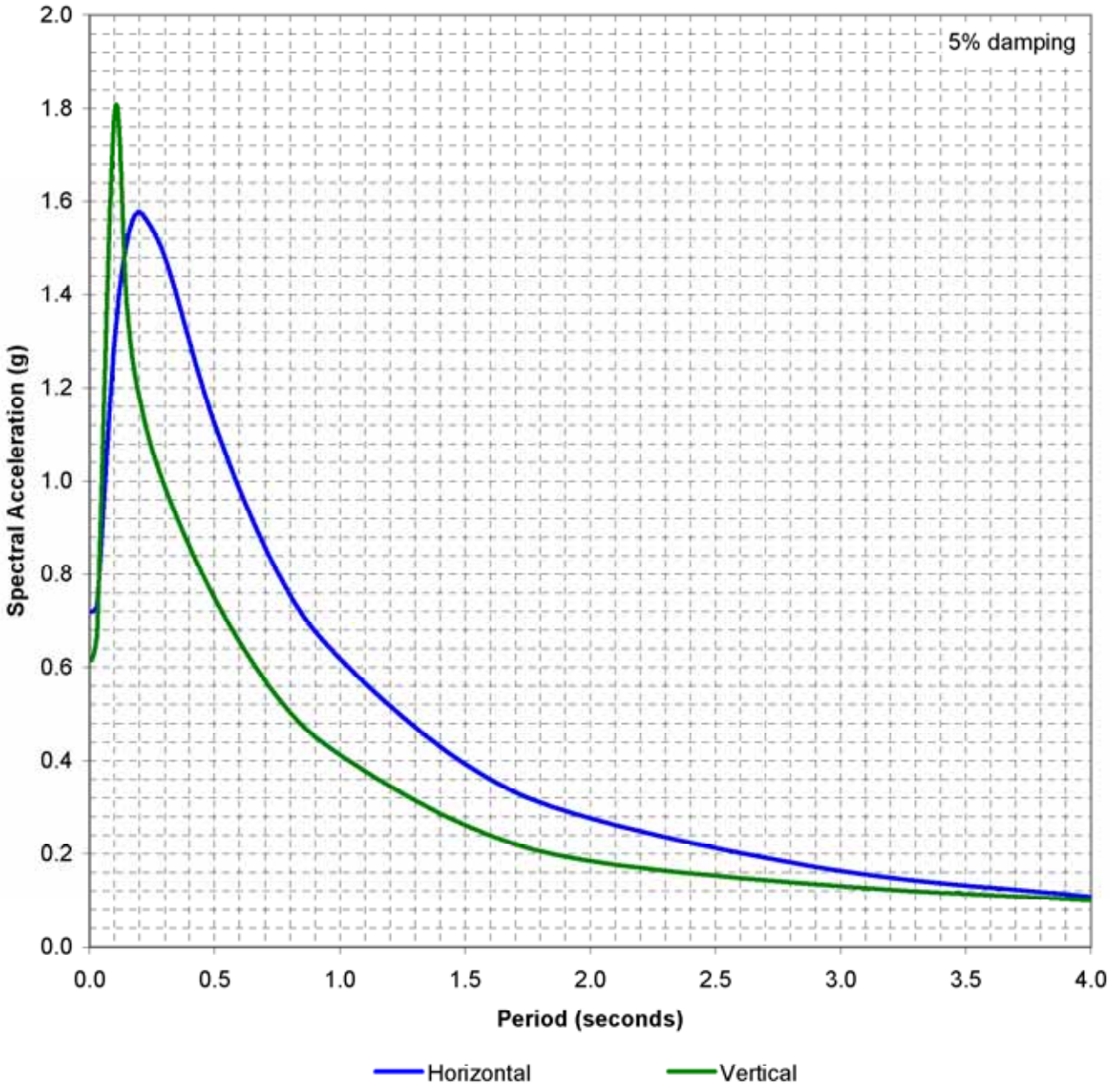
OBE VERTICAL RESPONSE SPECTRUM
N. Pipeline Location
Preliminary Seismic and Geologic Hazards Evaluation
BHP Billiton

PLATE 4.3d



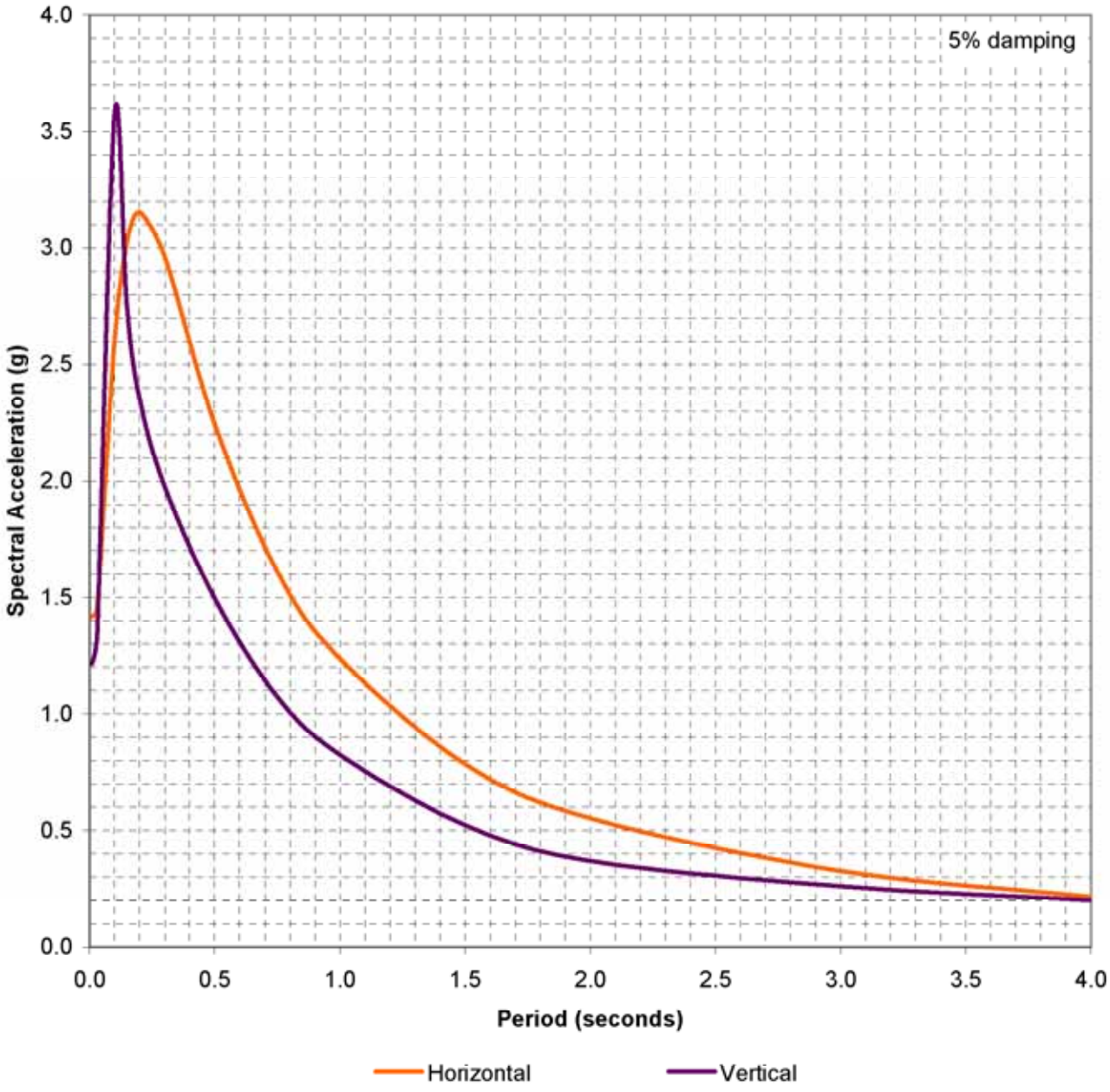
SSE VERTICAL RESPONSE SPECTRUM
N. Pipeline Location
Preliminary Seismic and Geologic Hazards Evaluation
BHP Billiton

PLATE 4.3e



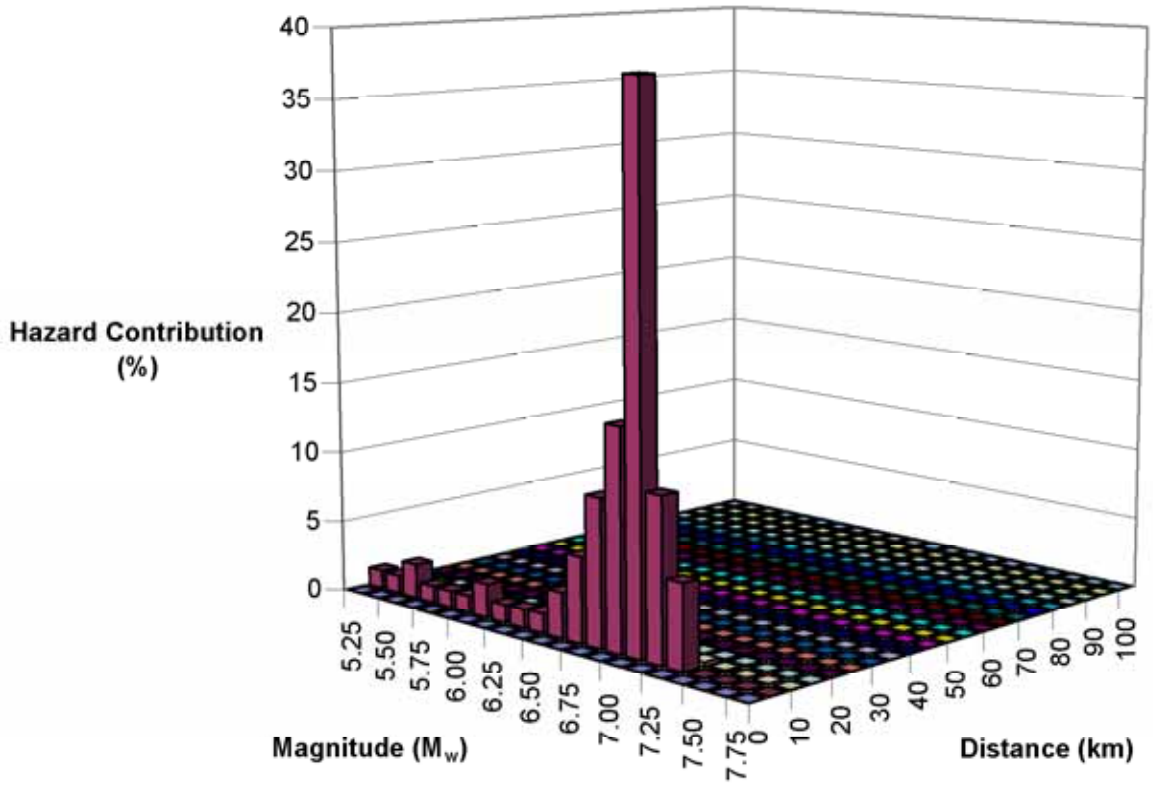
OBE DESIGN RESPONSE SPECTRA
N. Pipeline Location
Preliminary Seismic and Geologic Hazards Evaluation
BHP Billiton

PLATE 4.3f



SSE DESIGN RESPONSE SPECTRA
N. Pipeline Location
Preliminary Seismic and Geologic Hazards Evaluation
BHP Billiton

PLATE 4.3g



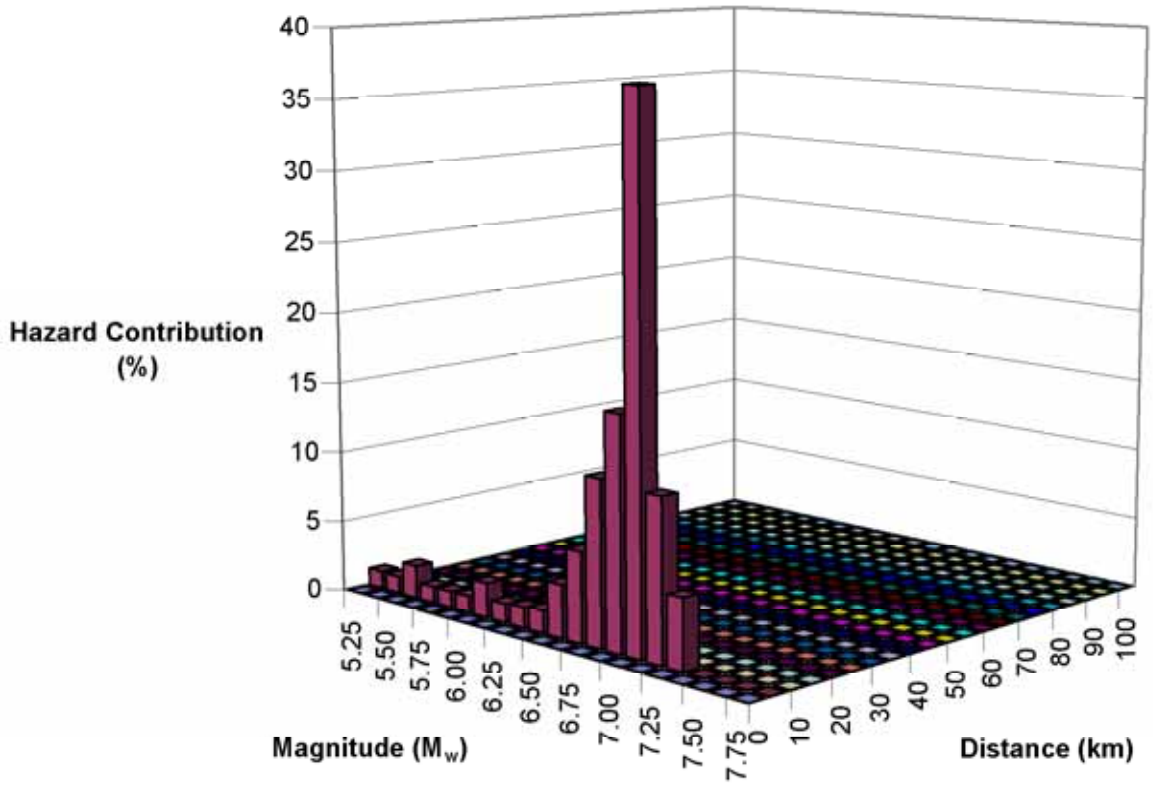
PGA HAZARD DEAGGREGATION FOR OBE

N. Pipeline Location

Preliminary Seismic and Geologic Hazards Evaluation

BHP Billiton

PLATE 4.3h



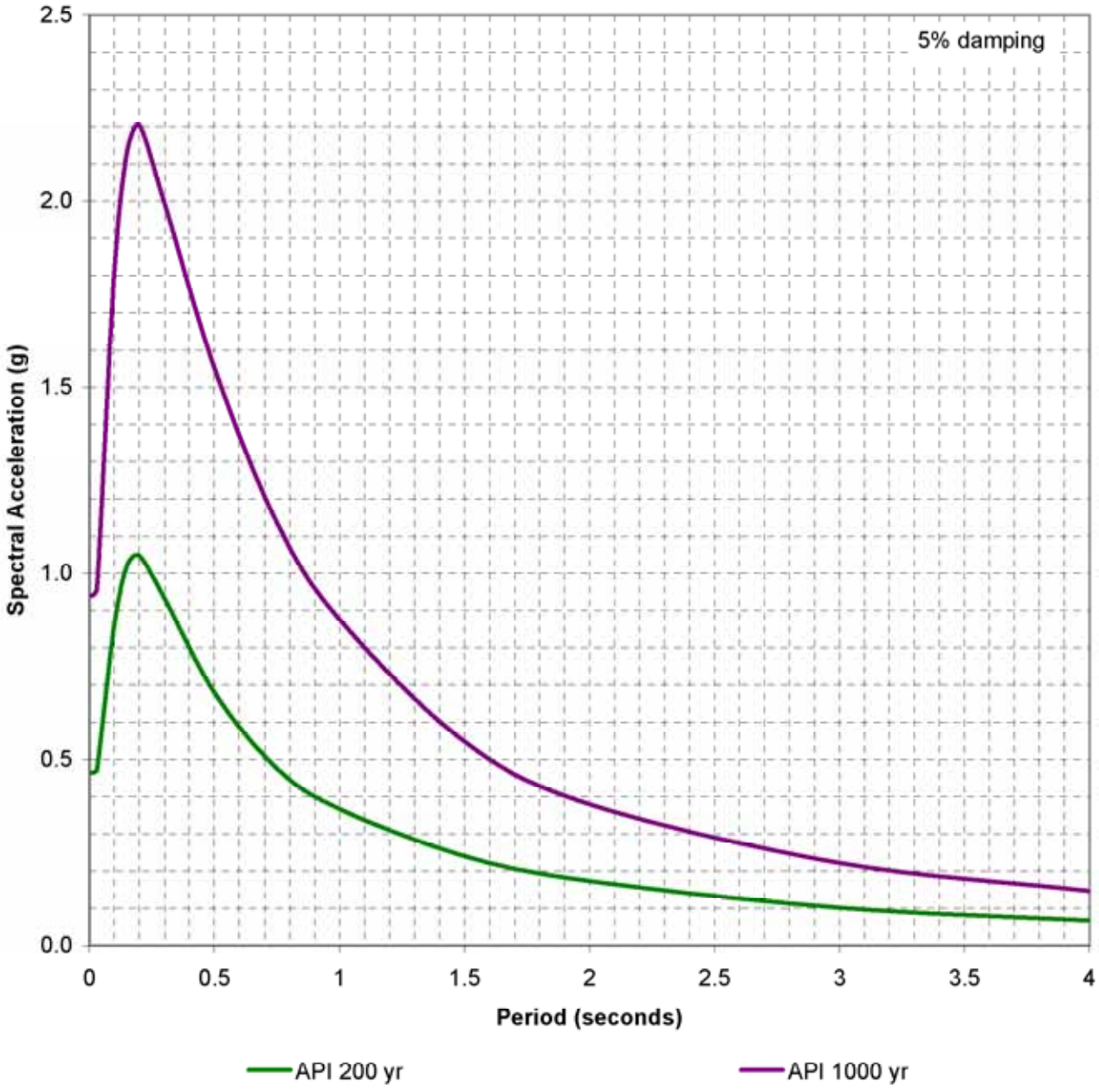
PGA HAZARD DEAGGREGATION FOR SSE

N. Pipeline Location

Preliminary Seismic and Geologic Hazards Evaluation

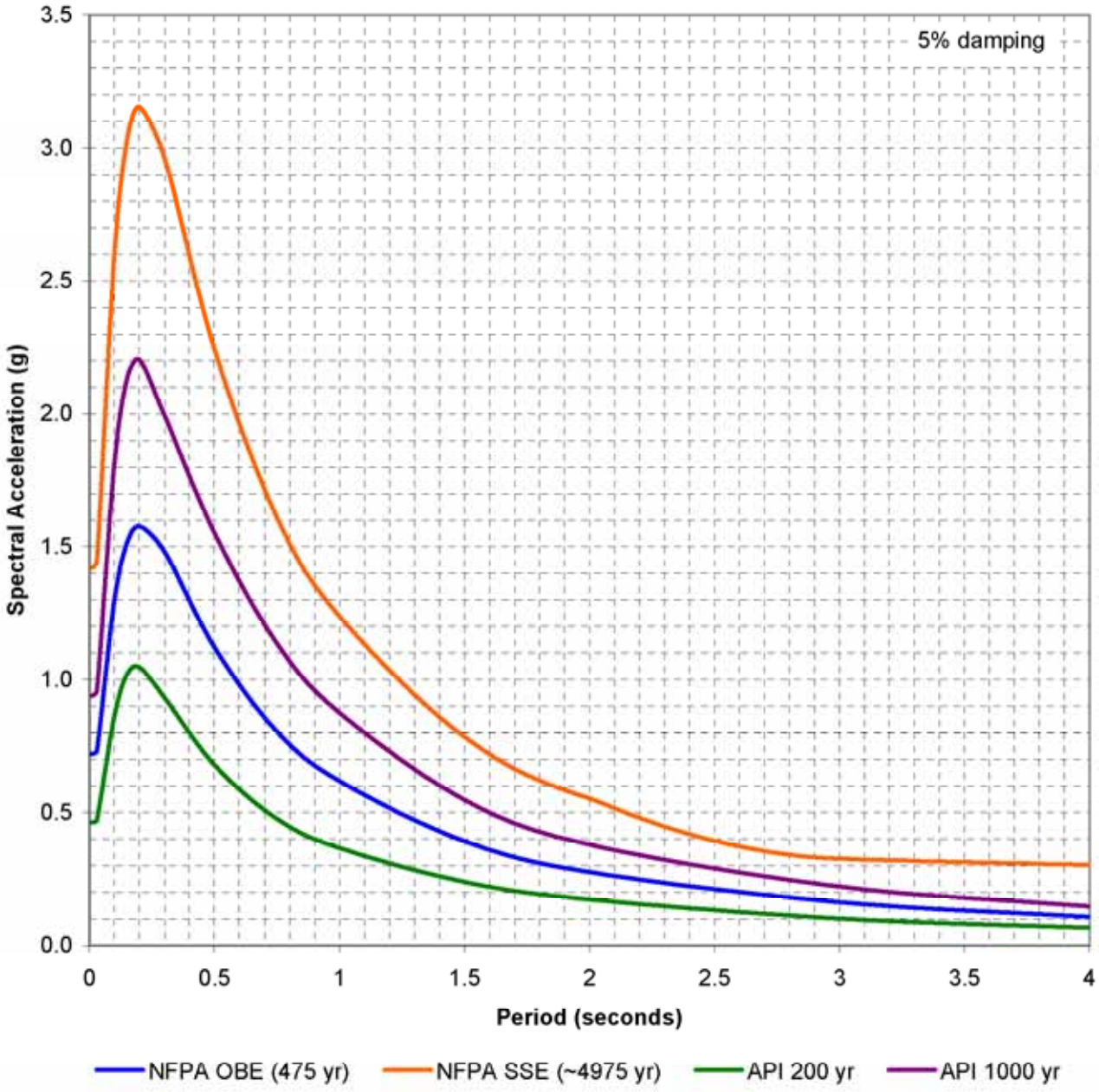
BHP Billiton

PLATE 4.3i



API RESPONSE SPECTRA
N. Pipeline Location
Preliminary Seismic and Geologic Hazards Evaluation
BHP Billiton

PLATE 4.3j



COMPARISON OF NFPA AND API RESPONSE SPECTRA
N. Pipeline Location
Preliminary Seismic and Geologic Hazards Evaluation
BHP Billiton

PLATE 4.3k