



**ENERGY
NORTHWEST**

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December 21, 2010
GO2-10-178

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

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
LICENSE RENEWAL APPLICATION**

Reference: Letter No. GO2-10-11, dated January 19, 2010, WS Oxenford (Energy Northwest) to NRC, "License Renewal Application"

Dear Sir or Madam:

In a December 13, 2010 telephone conversation with the NRC Project Manager for the Columbia Generating Station (Columbia) license renewal application, Energy Northwest committed to providing additional information regarding the environmental assessment of electric fields associated with the 115-kV transmission line that serves as a backup power source for the station.

Included in Attachment 1 is the electric field profile for the 115-kV line. Also included in this attachment is information on conductor geometry. For comparison, Attachment 2 includes similar information for the 230-kV and 500-kV lines that link Columbia to the Bonneville Power Administration's (BPA) H.J. Ashe Substation. This information was obtained from the BPA and was used in the assessment of induced currents in Section 4.13 of the environment report that was submitted with the referenced letter.

If you have any questions or require additional information, please contact Abbas Mostala at (509) 377-4197.

A143
NRC

**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
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I declare under penalty of perjury that the foregoing is true and correct. Executed on the date of this letter.

Respectfully,

A handwritten signature in black ink, appearing to read 'SK Gambhir', written over a horizontal line.

SK Gambhir
Vice President, Engineering

Attachments: 1. Electric Field Profile – Columbia 115kV to Benton/FFTF Tap
2. Electric Field Profile – Columbia 230/500kV to Ashe

cc: NRC Region IV Administrator
NRC NRR Project Manager
NRC Senior Resident Inspector/988C
EFSEC Manager
RN Sherman – BPA/1399
WA Horin – Winston & Strawn
D Doyle – NRC NRR (w/a)
BE Holian – NRC NRR
RR Cowley – WDOH

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Attachment 1

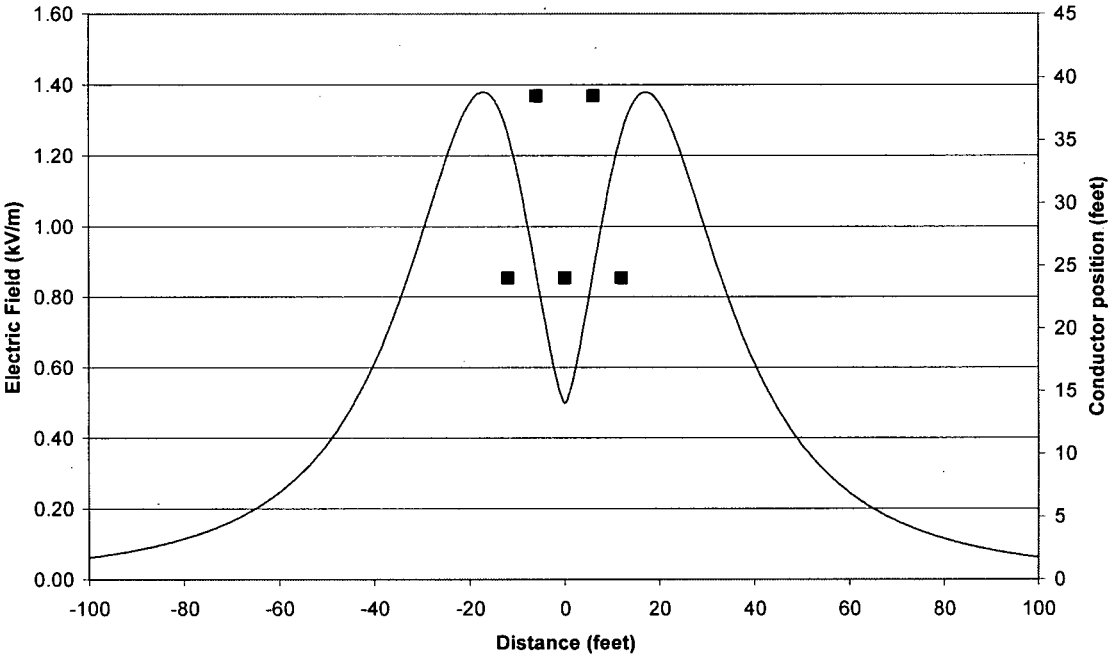
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Attachment 1

Electric Field Profile – Columbia 115kV to Benton/FFTF Tap

Electric Field Profile

Hanford No. 2 Tap to Benton - FFTF 115kV



TRANSMISSION LINE GEOMETRY INFORMATION
(To Be Completed for Each Transmission Line)

Circuit Name : Hanford No. 2 tap to Benton : FFTP

Voltage : 115kV

Number of Circuits : 1

Conductor Name : Penguin

of Subconductors Per Phase: 1

Subconductor Diameter : 0.563

Subconductor Spacing : N/A

Phasing Arrangement (include diagram) : see attached phasing diagram

Vertical Phase Spacing : see attached phase spacing diagram

Horizontal Phase Spacing : see attached phase spacing diagram

Attachment Height at Tower : see profile drawing

Minimum Ground Clearance at Midspan : used 24 feet for calcs. see profile dwg.

Shield Wire Diameter and Spacing : diameter=0.386; see phase spacing diagram

Shield Wire Configuration : Grounded or Sectionalized & Insulated

Right-Of-Way Width : 90 feet

Placement Within ROW (include diagram) : centered see plan drawing

Distance to Other Transmission Lines (include diagram) : N/A

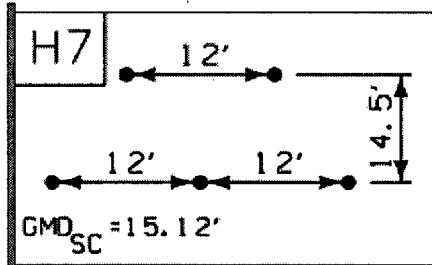
Other/Special Information :

Completed by : Danna Vermeers

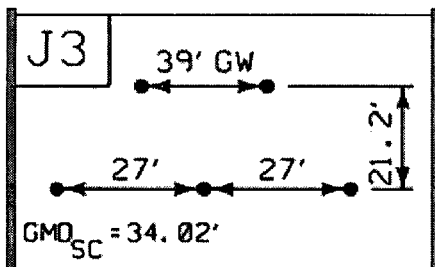
Date : 06/30/2008

Phase Spacing

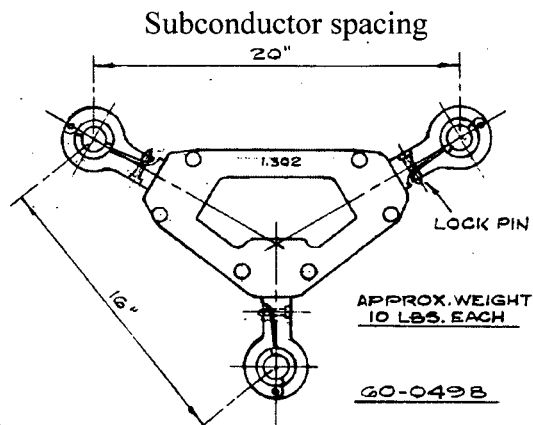
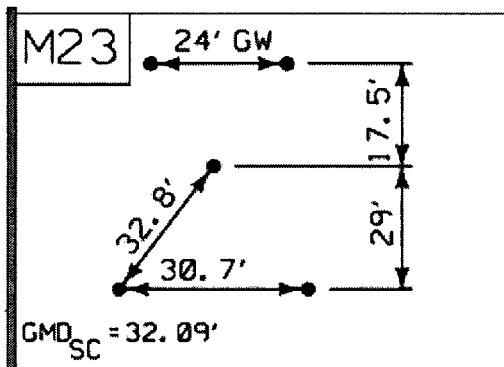
Hanford No. 2 Tap to Benton – FFTF



Ashe Tap to AEC Midway – HEW No. 2



Ashe – Hanford



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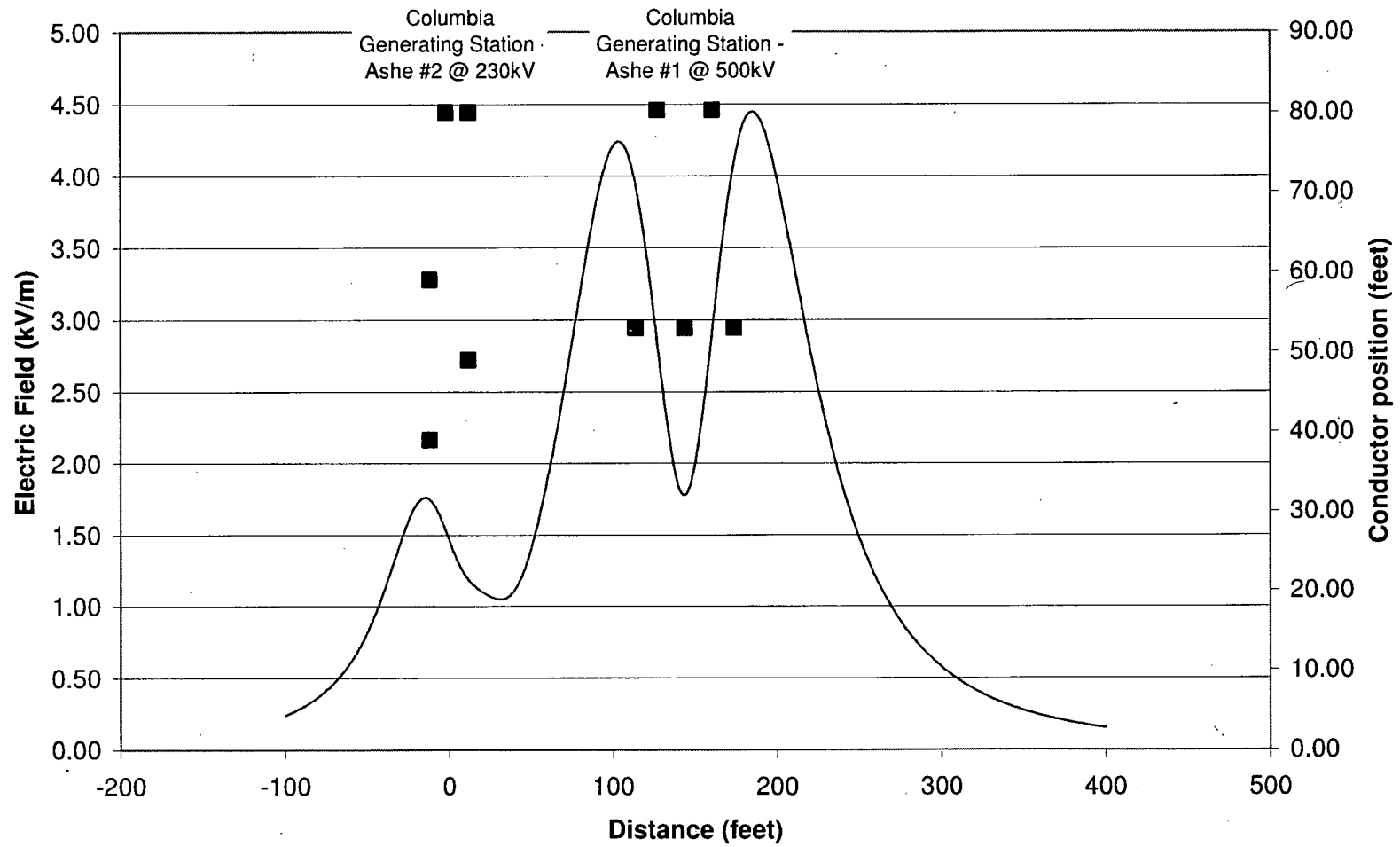
Attachment 2

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Attachment 2

Electric Field Profile – Columbia 230/500kV to Ashe

Electric Field Profile



TRANSMISSION LINE GEOMETRY INFORMATION
(To Be Completed for Each Transmission Line)

Circuit Name : Columbia Generating Station - Ashe #1

Voltage : 500 kV

Number of Circuits : 1

Conductor Name : Bunting

of Subconductors Per Phase : 3

Subconductor Diameter : 1.302

Subconductor Spacing : see attached hardware assembly

Phasing Arrangement (include diagram) : See attached phasing diagram

Vertical Phase Spacing : see attached phase spacing drawing

Horizontal Phase Spacing : see attached phase spacing drawing

Attachment Height at Tower : see attached profile drawing

Minimum Ground Clearance at Midspan : 53' (worst case) see attached profile

Shield Wire Diameter and Spacing : diameter = 0.386" see attached phase spacing

Shield Wire Configuration : Grounded or Sectionalized & Insulated

Right-Of-Way Width : Combined with Columbia Generating Station - Ashe #2 281.5'

Placement Within ROW (include diagram) : see attached plan drawing

Distance to Other Transmission Lines (include diagram) : see attached plan drawing

144 feet centerline to centerline to Columbia Generating Station - Ashe #2

Other/Special Information :

Completed by : Danna Vermeers

Date : 03/31/08

TRANSMISSION LINE GEOMETRY INFORMATION

(To Be Completed for Each Transmission Line)

Circuit Name : Columbia Generating Station - Ashe #2

Voltage : 230 kV

Number of Circuits : 1

Conductor Name : Drake

of Subconductors Per Phase : 1

Subconductor Diameter : 1.108

Subconductor Spacing : N/A

Phasing Arrangement (include diagram) : See attached phasing diagram

Vertical Phase Spacing : see attached phase spacing drawing

Horizontal Phase Spacing : see attached phase spacing drawing

Attachment Height at Tower : see attached profile drawing

Minimum Ground Clearance at Midspan : 48' (worst case) see attached profile

Shield Wire Diameter and Spacing : diameter = 0.386" see attached phase spacing

Shield Wire Configuration : Grounded or Sectionalized & Insulated

Right-Of-Way Width : Combined with Columbia Generating Station-Ashe #1 281.5'

Placement Within ROW (include diagram) : see attached plan drawing

Distance to Other Transmission Lines (include diagram) : see attached plan drawing

144 feet centerline to centerline to Columbia Generating Station - Ashe #1

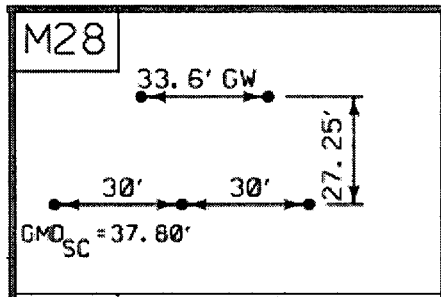
Other/Special Information :

Completed by : Danna Vermeers

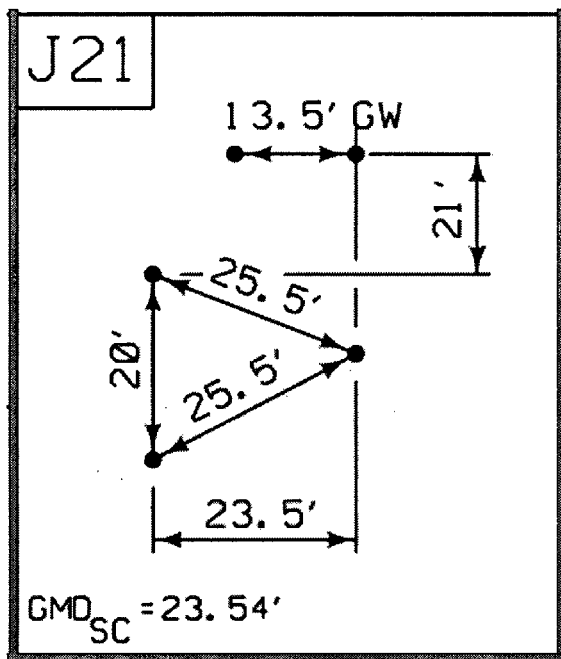
Date : 03/31/08

Phase Spacing

Columbia Generating Station – Ashe #1 500kV



Columbia Generating Station – Ashe #2 230kV



Khounnala, Shannon E.

From: McCauley, Donna E.
Sent: Thursday, December 09, 2010 12:17 PM
To: Atkinson, Dale K.
Cc: Coody, Donald R.; Nielson, Robert R.; Barfuss, Brad C.; Khounnala, Shannon E.; McNutt, Stephen C.; Jones, Brian D.; Vaughn, Steven L.; Gregoire, Donald W.; Apodaca, Danielle N.; Hammond, Georgia
Subject: Delegation of Authority - Robert R. Nielson - December 20-26, 2010

Robert R. Nielson, Supervisor, Environmental & Regulatory Programs will be away from Energy Northwest (EN) December 20-26, 2010, inclusive. Shannon Khounnala, Environmental/Regulatory Programs Specialist, will act as Supervisor, Environmental & Regulatory Programs during his absence. Mrs. Khounnala will have the full authority of the position except that which by policy cannot be delegated.

Should his return be delayed, this delegation will remain in effect until otherwise rescinded.

'Original signed and filed'

Donna McCauley | Executive Assistant, Employee Development/Corporate Services
☎ 509.377.2332 | F 509.377.4357 | MD PE03
Work Hours|6:00 am - 3:30 pm PST



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