ENERGY NORTHWEST

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GO2-11-073

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

References: 1) Letter, GO2-10-11, dated January 19, 2010, WS Oxenford (Energy Northwest) to NRC, "License Renewal Application"

2) Letter dated March 9, 2011, NRC to SK Gambhir (Energy Northwest), "Request for Additional Information for the Review of the Columbia Generating Station, License Renewal Application," (ADAMS Accession No. ML110610712)

Dear Sir or Madam:

By Reference 1, Energy Northwest requested the renewal of the Columbia Generating Station (Columbia) operating license. Via Reference 2, the Nuclear Regulatory Commission (NRC) requested additional information related to the Energy Northwest submittal.

Transmitted herewith in the Attachment is the Energy Northwest response to the Request for Additional Information (RAI) contained in Reference 2. No new or revised commitments are included in this response.

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

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NRR

I declare under penalty of perjury that the foregoing is true and correct. Executed on the date of this letter.

Respectfully,

SK Gambhir
Vice President, Engineering

Attachment: Response to Request for Additional Information

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

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

"Request for Additional Information for the Review of the Columbia Generating Station, License Renewal Application,"
(ADAMS Accession No. ML110610712)

RAI B.2.5-3

Background:

In its response to RAI B.2.5-2 dated January 28, 2011, the applicant stated that it would perform one inspection, to one out of the three in-scope buried diesel fuel oil storage tanks, "within the 10-year period prior to entering the period of extended operation (i.e., between year 30 and end of year 40) and in each 10-year interval of the period of extended operation (i.e., between year 40 and year 50, and again between year 50 and year 60)."

Issue:

The staff's position, to in-scope buried steel tanks without cathodic protection, is that each tank should be excavated and inspected during each 10-year period, beginning 10 years prior to the period of extended operation. The staff believes the number of inspections provide a reasonable assurance that the buried in-scope tanks will meet their current licensing basis (CLB) function(s).

Request:

(1) Since the tanks are not provided with cathodic protection, provide justification as to why inspecting 1 out of the 3 tanks during each 10-year period, beginning 10 years prior to the period of extended operation, will ensure that the CLB function(s) of the systems are maintained.

Energy Northwest Response:

The three buried diesel fuel oil tanks (DO-TK-1A, 1B, 2) at Columbia which are in the scope of License Renewal are not provided with cathodic protection. One inspection will be performed to one out of the three in-scope buried diesel fuel oil storage tanks within the 10-year period prior to entering the period of extended operation (i.e., between year 30 and end of year 40) and in each 10-year interval of the period of extended operation (i.e., between year 40 and year 50, and again between year 50 and year 60). By the end of year 60, all three diesel fuel oil storage tanks will have been inspected. Justification for inspecting only one tank at each 10 year interval is based on material, environment, location, ultrasonic examination, and soil samples as discussed below.

Material – all three of the diesel fuel oil storage tanks are carbon steel.

Environment – all three of the diesel fuel oil storage tanks are buried in Class 1 backfill.

Location – all three of the diesel fuel oil storage tanks are located in close proximity to one another. The centerline from DO-TK-1A and DO-TK-1B is 19'-6". The centerline from DO-TK-1B and DO-TK-2 is 20'-6".

Ultrasonic Examination (UT) – all three of the diesel fuel oil storage tanks receive an ultrasonic examination every 10 years. The last inspection was May 2005 for all three tanks. The next examination is scheduled for 2015. During the 2005 UT examination , the tanks were drained and inspected. After reviewing the results of the 2005 UT examinations for the three diesel fuel oil storage tanks, the worst case corrosion expectancy is for DG-TK-2 with a projected corrosion loss for 60 years of 0.0206". This is well below the corrosion allowance of 0.1875" for the tanks.

Soil Corrosivity – a Cathodic Protection (Requirement) Survey: Site Soil Corrosivity Assessment was prepared for Columbia in February 2007. This assessment included resistivity tests and soil analysis. The resistivity results for the area around the diesel building where the diesel fuel oil storage tanks are buried range from 14,363 ohm-cm to 34,470 ohm-cm. Typical soil resistivity based guidelines for soil corrosivity indicate little or negligible corrosion for soil resistivities above 10,000 ohm-cm. The chlorides were not detectable and the sulfates were 20 mg/kg (20 ppm). Chlorides > 1000 ppm and sulfates > 5000 ppm are considered very corrosive. The pH of the soil samples varied from 8.8 to 9.9 which is basic. A pH of < 5.0 is considered very corrosive. The sulfides were not detectable.

Therefore, the inspection of one diesel fuel oil storage tank per the 10 year period prior to the period of extended operation and the inspection of a different tank in each 10 year interval of the period of extended operation is sufficient to ensure that the intended function(s) of the diesel fuel oil storage tanks are maintained.