



**Public Service**

16805 WCR 19 1/2; Platteville, Colorado 80651

Public Service  
Company of Colorado

April 12, 1996  
Fort St. Vrain  
P-96028

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

ATTN: Mr. Michael F. Weber, Chief  
Decommissioning and  
Regulatory Issues Branch

Docket No. 50-267

**SUBJECT: FSV Final Survey Plan -- Aggressive Decontamination Methods**

REFERENCE: PSCo Letter, Fisher to Weber, dated October 12, 1995 (P-95077)

Dear Mr. Weber:

This letter provides supplemental information to clarify Public Service Company of Colorado's (PSCo) position regarding aggressive decontamination of embedded piping system surfaces at Fort St. Vrain (FSV). In the referenced letter, PSCo requested NRC approval to fill embedded pipes with grout where they cannot be decontaminated to less than the site-specific guideline values using aggressive decontamination methods. PSCo described typical decontamination processes, but we have not previously defined a minimum effort that we would consider as aggressive decontamination. This letter is submitted in response to questions raised by Messrs. Clayton Pittiglio and David Fauver of your staff.

As indicated in the referenced letter, PSCo and the Westinghouse Team (WT) use several different techniques to decontaminate embedded piping sections, depending on various factors such as accessibility of the pipe opening, configuration of the pipe, size of the pipe, level of contamination, form of contamination, and ALARA considerations.

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PSCo/WT define aggressive decontamination for embedded piping system surfaces as follows:

A. For Systems With High Potential for Contamination

At least four passes of grit blasting, hydrolazing, or abrasive balls will be performed on embedded pipes in this category that do not meet the Site Specific Guideline Values (SGLVs).

Systems in this category include piping exposed to:

- Primary coolant (e.g., PCRV instrument and relief valve penetrations),
- Shield water (e.g., core support floor tubes),
- Radioactive liquid or gaseous wastes, and
- Debris from contaminated equipment or spent fuel (e.g., equipment storage well and fuel storage well vents and drains).

B. For Systems With Low Potential For Contamination

Pipes will be at least wiped or wire brushed until the ends are free of visible slurry or residue and until a cloth passing through the pipe meets a criterion equivalent to 75% of the removable SGLV (750 dpm/100 cm<sup>2</sup>). This is determined by adjustment of the wipe measurement for the size and length of the pipe being surveyed, and for the efficiency of the detector; an additional factor of 10% is applied for conservatism. For example, for 1-inch diameter, 10 foot long pipes, the acceptance criterion is determined as follows:

$750 \text{ dpm}/100 \text{ cm}^2 \times 75\% \times 10\% \text{ (For Conservatism)} \times 20\% \text{ (Efficiency of LMI 43-68 Detector)} \times 25 \text{ (Area Factor -- surface area is approximately } 2500 \text{ cm}^2) = 281 \text{ cpm}$ ; as a conservative measure, 250 cpm above background is actually used.

Systems in this category include piping exposed to concrete cutting slurry during decommissioning, such as PCRV cooling system sidewall tubes, tendon tubes, and miscellaneous penetrations. These pipes include removable contamination, with low potential for fixed contamination.

PSCo/WT consider that these decontamination methods represent an appropriately aggressive effort to reduce removable contamination levels to much less than the SGLVs and total contamination levels as low as reasonably achievable. Based on our current measurement data, total contamination levels in embedded pipes after decontamination are typically less than 4,000 dpm/100 cm<sup>2</sup> (average) and 12,000 dpm/100 cm<sup>2</sup> (individual

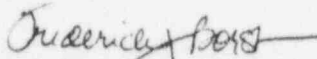
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are typically less than 4,000 dpm/100 cm<sup>2</sup> (average) and 12,000 dpm/100 cm<sup>2</sup> (individual measurement). However, for those embedded pipes in a survey unit where the SGLVs are not met after aggressive decontamination, PSCo proposes to fill them with grout, as described in the referenced letter.

PSCo/WT are performing the above aggressive decontamination program on all contaminated embedded piping at Fort St. Vrain; however, there are a few pipe sections whose configuration or other obstructions physically preclude complete decontamination or surveying. For example, PSCo identified in our March 5, 1996, response to NRC comments (P-96009), that approximately 10 out of 276 core support floor column tubes were found to be coated with epoxy or to have other obstructions that precluded effective hydrolazing. Other obstructed pipes may be identified as our decontamination efforts progress, and they will be decontaminated to the extent reasonably possible. These exceptions are very few and will be documented in the Final Survey Report.

If you have any questions regarding this information, please contact Mr. M. H. Holmes at (303) 620-1701.

Sincerely,



Frederick J. Borst  
Decommissioning Program Director

FJB/SWC

cc: Regional Administrator, Region IV

Mr. Robert M. Quillin, Director  
Radiation Control Division  
Colorado Department of Public Health and Environment