



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

May 23, 2003

Northern States Power Co.
Licensing and Management Issues
ATTN: Charles H. Fuller
Vice President, Operation
Xcel Energy
414 Nicollet Mall
Minneapolis, MN 55401-1927

SUBJECT: NOTIFICATION OF CESSATION OF LICENSED ACTIVITIES

By letter dated February 21, 2003, you informed NRC of your intent to cease licensed activities and terminate your Radioactive Materials License No. 22-08799-02. Additionally, the NRC staff had 2 telecons with a member of your staff, Mr. Joel Beres, Pathfinder Project Manager, on April 15, and May 7, 2003, to discuss potential options for decommissioning the Pathfinder facility. The discussion points included the following:

1. Pathfinder History
2. The screening criteria to determine the decommissioning group category, as outlined in NUREG 1757, "Consolidated NMSS Decommissioning Guidance." The group designation determines the extent of the decommissioning activities.
3. Radiological criteria for license termination as required by 10 CFR Part 20, Subpart E, for unrestricted use. The assistance of software programs, such as RESRAD for determining the derived concentration guideline levels (DCGLs) for the site, if the default screening criteria in NUREG 1757 are not satisfactory.
4. Characterization surveys, you may be able to confirm the 1991 data is still adequate or you may have to supplement the characterization data.
5. Depending on the group category of the Pathfinder project, a decommissioning plan (DP) and/or an environmental assessment (EA) would be required.

The NRC has specific requirements as specified in 10 CFR 30.36 for decommissioning facilities and partial release of facilities or sites and for terminating licenses. The information outlined below may be helpful in understanding these requirements. Enclosed is a copy of NUREG-1575, "Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)." MARSSIM provides detailed guidance for planning and performing radiation surveys conducted to demonstrate compliance with the radiological criteria for license termination (Subpart E of 10 CFR Part 20). In addition, the agency has issued NUREG-1757, "Consolidated NMSS Decommissioning Guidance," which is available on the NRC website at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1757/>. NUREG-1757, Volume 1 supersedes most of the NUREG/BR-0241, "NMSS Handbook for Decommissioning Fuel Cycle and Materials Facilities" and updates numerous portions of NUREG-1727, "NMSS Decommissioning Standard Review Plan."

If you meet any of the following conditions, you will be required to submit a Decommissioning Plan to NRC for review and approval prior to commencing decommissioning operations:

1. Although you could meet the screening criteria and have prerequisite expertise, equipment and facilities to remediate your facilities; however, you have not incorporated remediation procedures into your license. A license amendment is necessary to authorize the activities for decommissioning, and as such, you will need to submit a Decommissioning Plan.
2. Your facility has residual radiological contamination present in building surfaces and soils, but you can not meet, or choose not to use screening criteria, and the ground water is not contaminated. A site Decommissioning Plan is required and must characterize the location and extent of radiological contamination, land use, exposure pathways and critical group for the dose analysis.
3. Your facility has residual radiological contamination present in building surfaces and soils, and the ground water. You are able to demonstrate that residual radioactive material may remain at the site but within levels specified in NRC criteria for unrestricted use by applying site-specific criteria in a comprehensive dose analysis. A site Decommissioning Plan is required and must characterize the location and extent of radiological contamination, land use, exposure pathways and critical group for the dose analysis.

10 CFR 30.36(g)(1) describes several cases when submission of a Decommissioning Plan is required, such as when:

- Procedures would involve techniques not applied routinely during cleanup or maintenance operations;
- Workers would be entering areas not normally occupied where surface contamination and radiation levels are significantly higher than routinely encountered during operation;
- Procedures could result in significantly greater airborne concentrations of radioactive materials than are present during operation; or
- Procedures could result in significantly greater releases of radioactive material to the environment than those associated with operation.

When you reply to this letter, please identify the license and docket numbers specified below on your submittal. If you have questions or require clarification on any of the information discussed, you should contact a member of the Materials Licensing Staff at (817) 860-8100.

Sincerely,



Rachel S. Browder, Health Physicist,
Nuclear Materials Licensing Branch

Docket No.: 030-05004
License No.: 22-08799-02
Control No.: 469523

Enclosures:

1. NUREG-1575
2. NRC Form 314
3. Information That Should Be Submitted
to NRC Staff for Decommissioning &
Termination of Licensed Facilities
4. Survey Information to Support
License Termination

cc:

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**INFORMATION THAT SHOULD BE SUBMITTED
TO THE NRC STAFF FOR DECOMMISSIONING
AND TERMINATION OF LICENSED FACILITIES**

The following information is needed from licensees who request authorization from the NRC for the release of a room, building or outdoor area for unrestricted use:

- 1) A list of the radiological isotopes that were actually used at the site. To the extent possible (and reasonable), the quantities and dates of use of these isotopes should also be provided.
- 2) The physical form of each isotope, i.e., was it a sealed source or was the isotope used in a loose form.
- 3) Information regarding major radiological spills of any licensed isotopes such as the location of the spill(s) and pertinent radiological information about the spill(s). (Major spills for the purpose of this document means a spill that resulted in off-site contamination or any other spill where more than minimal decontamination effort is required, e.g., spills requiring assistance in cleanup and monitoring from persons other than the user.)
- 4) Information on any leaking sealed source used or stored at the site being released, including isotope, amount of leakage, contamination of other areas or personnel, description of cleanup, and disposition of the source. If no sources were determined to be leaking at the facility, the licensee should state this fact.
- 5) The results of the licensee's final surveys as required by 10 CFR Parts 30.35(j)(2), 40.42(j)(2), 70.38(j)(2), and 72.54(l)(2). This includes submitting data in the following units: gamma radiation in units of mSv/hr (μ R/hr) at one meter from surfaces, radioactivity in units of MBq/100cm² (dpm/100cm²) (removable and fixed) for surfaces, MBq/ml (mCi/ml) for water, and Bq/g (pCi/g) for soils and concrete.
- 6) The survey instrumentation used for the final survey along with the certification that each instrument has been properly calibrated and tested and the minimum detectable activity (MDA) for each instrument. This information is needed for instruments used for measuring exposure rates and for those used for analysis of wipes, soil and water samples, etc.
- 7) Maps and/or drawings which clearly indicate the locations where wipes and fixed measurements were taken. If contaminated drain lines (or other buried and inaccessible pipes) are an issue, blueprints or drawings should be included that show the locations of the drain lines, including where they originate and end.
- 8) If other than minimal contamination efforts are necessary, both the before and after decontamination survey data should be provided as part of the final survey report, including the locations of these areas.
- 9) The release criteria used as a basis for demonstrating the site can be released for unrestricted use.

- 10) If the licensee intends to leave certain portions of the site contaminated in excess of the release guidelines, a risk assessment of the potential dose consequences.
- 11) The disposition of radioactive waste resulting from any remediation efforts. Under normal circumstances the NRC will not conduct a closeout or confirmatory inspection until all waste (and other licensed materials/sources) have been removed from the site. If these materials have not been removed prior to the licensee's submittal of the final survey data, then these areas will have to be surveyed following removal of the waste and the data submitted and reviewed before an onsite inspection and/or license termination.

SURVEY INFORMATION TO SUPPORT LICENSE TERMINATION

In performing the decommissioning of its facility the licensee should first identify any areas in the facility that were involved in licensed material use by reviewing facility records and conducting a survey of the licensed material use area. This survey should be similar to the routine contamination surveys conducted under the licensee's radiological safety plan. The licensee should then remediate all surfaces in the areas at the facility that were involved in licensed material use or storage and dispose of all radioactive material and waste as discussed in the NRC regulations at 10 CFR 20 Subpart K.

If the licensee elects to demonstrate that its facility is suitable for unrestricted use by conducting a Final Status Survey, the licensee should design the survey so as to be of sufficient scope and quality to make this demonstration. In preparing for the Final Status Survey, the licensee should establish a method to identify individual measurement/sampling points, such as establishing reference grids on each surface in the indoor area that was involved in licensed material. At a minimum, the licensee's termination survey should consist of:

- 1) 100% scanning of all surfaces in the area at the facility where licensed material was used or stored using an appropriate radiation detection instrument (including scan sensitivity);
- 2) evaluations for total and removable radioactive material at each area exhibiting elevated radiation levels or at a frequency of one wipe comprising 100 cm² per grid; and
- 3) evaluations of radiation levels at one meter above surfaces.

Particular attention should be afforded any drains, air vents or other fixtures or equipment that may have become contaminated during licensed material use. This is especially significant in situations where renovations have occurred and potentially contaminated areas may be inaccessible under current conditions.

The information that should be submitted to the NRC to support the final status survey should consist of:

- 1) a brief description of the remediation activities undertaken by the licensee;
- 2) a detailed drawing of the licensed material use areas indicating the sampling locations;
- 3) a table showing the results of the radiation levels and removable contamination surveys keyed to the detailed drawing (organized by survey unit);
- 4) the training and qualifications of the individual(s) performing the decontamination and surveys; and
- 5) a description of the type of equipment used by the licensee to evaluate the wipes and perform the surveys. This description should include all information required to determine the appropriateness of the equipment for determining the radiological status of the facility such as last calibration date, type of radiations detected, sensitivity of detection, efficiency, etc.