

MONTICELLO NUCLEAR GENERATING PLANT

NORTHERN STATES POWER COMPANY

Monticello Process Control Program
For Waste Solidification

Revision 3

Prepared by: L. D. Bukhary ALARA Review: Cas Medina Date: 6/15/83
Reviewed by: Nancy North Q.A. Review: J. J. Malone Date: 6/16/83
Operations Committee Final Review: Mtg. No. 1212 Date: 6/23/83
Approved by: M. H. Clouty Date: 6-30-83

8503050048 830830
PDR ADOCK 05000263
R PDR

LIST OF CURRENT PAGES

| <u>PAGE</u> | <u>REVISION</u> | <u>APPROVAL DATE</u> |
|-----------------------|-----------------|----------------------|
| List of Current Pages | 3 | June 23, 1983 |
| Table of Contents | 3 | June 23, 1983 |
| Pages 3 through 6 | 0 | January 26, 1983 |
| Page 7 | 1 | February 24, 1983 |
| Pages 8 through 14 | 0 | January 26, 1983 |
| Page 15 | 3 | June 23, 1983 |
| <u>APPENDIX A</u> | | |
| Page 1 | 3 | June 23, 1983 |
| Page 2 | 2 | March 14, 1983 |
| Page 3 | 3 | June 23, 1983 |
| Pages 4 through 7 | 0 | January 26, 1983 |
| Page 8 | 3 | June 23, 1983 |
| Pages 9 through 12 | 0 | January 26, 1983 |
| Page 13 | 2 | March 14, 1983 |
| Pages 14 through 15 | 0 | January 26, 1983 |
| Pages 16 through 17 | 3 | June 23, 1983 |
| Pages 18 through 19 | 0 | January 26, 1983 |
| Page 20 | 2 | March 14, 1983 |
| <u>APPENDIX B</u> | | |
| Pages 1 through 8 - | 0 | January 26, 1983 |

TABLE OF CONTENTS

| <u>SECTION</u> | <u>PAGE</u> |
|---|-------------|
| 1.0 PURPOSE | 2 |
| 2.0 INSTALLED ATCOR SOLIDIFICATION SYSTEM | 3 |
| 3.0 ABSORPTION OF LIQUID WASTES | 13 |
| 4.0 REVISIONS | 15 |

FIGURES

- 1 INSTALLED ATCOR SYSTEM
- 2 CNSI PORTABLE CEMENT SYSTEM

APPENDICES

- A Chem-Nuclear Systems, Inc. Process Control Program
- B Delaware Custom Material Process Control Program

2.5 Operation

To ensure a representative sample of waste is obtained the phase separator should be put on recycle for approximately 20 minutes prior to drawing a sample.

Once the sample is obtained, it is analyzed for isotopic content and pH. If pH is greater than 5.0, no adjustments need be made. If the pH is less than 5.0, it must be increased to between 5.5 and 7.0 with the addition of lime. Adjustments to pH, if required, should be made to the liquid to be added.

After sampling, the spent resin is centrifuged into "B" hopper, which already contains a specific amount of liquid (pH adjusted, as necessary) for solidification. Solidification is then verified and the drums are capped and stored for burial.

2.6 Verification of Solidification

Representative barrels of each batch are to be inspected to verify solidification and the absence of free water. A drum may be considered solid when the cemented mass offers significant resistance to penetration by a hammer, or similar object. Absence of free water may be determined visually.

If solidification fails to take place, the process shall be suspended until the cause is determined and remedies are defined.

2.7 Cure Time

Cure time is normally 48 hours.

2.8 Sample Solidification of Spent Resins and Filter Media

2.8.1 Sampling Requirements

Sample solidification shall be conducted for at least every tenth batch of spent resins and filter media.

2.8.2 Prerequisites

Before drawing a specimen from a phase separator for sample solidification, the contents must be adequately mixed to achieve a representative mixture.

2.8.3 Sample Preparation

Obtain a specimen from a phase separator in the required volume. The volume required will be approximately 200 ml for each sample mixed.

NOTE: Depending on dose rates, a smaller sample may be used.

4.0 REVISIONS

Revisions to the PCP shall be made in accordance with Technical Specification 6.5.D.

The following item shall be reviewed to determine applicability prior to the revision:

IEIN 83-14. Dewatered Spent Ion Exchange Resin Susceptibility to Exothermic Chemical Reaction.