



Pacific Gas and Electric Company

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DEPARTMENT OF NUCLEAR PLANT OPERATIONS
DIABLO CANYON POWER PLANT UNIT NO(S) 1 AND 2

TITLE: ADMINISTRATIVE PROCEDURE
PROCESS CONTROL PROGRAM

APPROVED: _____
PLANT MANAGER DATE

IMPORTANT TO ENVIRONMENTAL QUALITY

SCOPE

The purpose of the Process Control Program (PCP) is to define the necessary program guidance used at DCPD to ensure that SOLID RADIOACTIVE WASTE MANAGEMENT activities, in packaging radioactive waste for disposal, conform to the Code of Federal and State Regulations and the Waste Burial Site License Criteria.

RESPONSIBILITIES

1. The Plant Manager has the overall responsibility for the Solid Radioactive Waste activities at DCPD.
2. The Manager of Chemistry and Radiation Protection is responsible for the implementation of the requirements of this procedure.
3. The Radwaste Engineer is responsible for the development and implementation of procedures relating to the requirements of this procedure.
4. QC is responsible for verification of compliance with the Quality requirements.

PREREQUISITES

This procedure with the attachments and any changes thereto requires review by the Plant Staff Review Committee and submission to the U. S. N. R. C. in the Semi-annual Effluent Report for the period in which the changes were made.

PROCEDURE

1. GENERAL

It is the policy of Pacific Gas and Electric Company to conscientiously apply emphasis and attention to those activities associated with generation, processing, packaging, storage and disposal of radioactive waste generated at the Diablo Canyon

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Power Plant and to maintain a high level of assurance that radioactive waste products meet or exceed the applicable Federal and State regulations and the Radioactive Waste Burial Site License Criteria.

2. WET WASTE

a. LIQUID/WET WASTE

Liquid / Wet wastes at DCPD are processed to a condition meeting shipping and disposal criteria on Free Standing Water (FSW). Specific instructions on processing and required FSW limits are contained in plant procedures and/or qualified vendor procedures. These procedures are to be approved by the P.S.R.C. prior to implementation.

b. CONTAINERS, SHIPPING CASKS AND PACKAGING

Solid radioactive waste is processed, packages and shipped in accordance with DCPD procedures and/or qualified vendor procedures which have been approved by the P.S.R.C. These procedures provide specific instructions which ensure the container, shipping casks and packaging methods comply with the applicable Code of Federal Regulations, State Regulations and the Radioactive Waste Burial Site License Criteria.

c. SHIPPING AND DISPOSAL

Solid radioactive waste is prepared, loaded and shipped to a Federal and/or State Licensed Radioactive Waste Disposal Facility (Burial Ground) in accordance with DCPD procedures and/or qualified vendor procedures which have been approved by the P.S.R.C. These procedures provide specific instructions which ensure the shipments meet the intended Burial Site License Requirements as well as applicable Federal and State Regulations.

d. LABORATORY MIXING OF SAMPLES

Qualified vendor procedures approved by the P.S.R.C. provide written instructions on sampling, processing and handling for the determination of process parameters prior to the actual solidification. These procedures contain the description of the laboratory mixing methods used for these samples.

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e. SOLIDIFICATION PROCESS

Qualified vendors used by DCPD for the radioactive waste solidification are required to provide the Process Control Program and written procedures. Further, the vendors are required to have a topical report, as referenced, on the waste forms which will be solidified at DCPD. This topical report should demonstrate compliance with the NRC requirements for waste form. These documents should include:

- 1) Description of the solidification process
- 2) Type of solidification used
- 3) Process control parameters
- 4) Parameter boundary conditions
- 5) Proper waste form properties
- 6) Specific instructions to ensure the systems are operated within established process parameters.

f. SAMPLING PROGRAM FOR SOLIDIFICATION

Vendors, utilized by DCPD for radioactive waste solidification, are required to include in their approved procedures, requirements to sample at least every tenth batch to ensure solidification and to provide actions to be taken if a sample fails to verify solidification. These procedures and changes thereto must be approved by the P.S.R.C. prior to use.

g. FREE STANDING WATER (FSW)

Vendors utilized by DCPD to process wet wastes are required to include in their procedures provisions to verify that the FSW Criteria in the Federal and State regulations and the Burial Site License Criteria are met for the specific type of waste being processed. These procedures and changes thereto must be approved by the P.S.R.C. prior to use.

h. CORRECTIVE ACTIONS FOR FREE STANDING WATER

Vendors utilized by DCPD to process wet wastes are required to include in their approved procedures provisions for correcting processed waste in which free standing water in excess of the FSW Criteria is detected. These procedures and changes thereto must be approved by the P.S.R.C. prior to use.

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1. EXOTHERMIC PROCESSES

Vendors utilized by DCPD for radioactive waste solidification are required to include in their approved procedures specific process control parameters for exothermic solidification methods that must be met before capping the container. These procedures and changes thereto must be approved by the P.S.R.C. prior to use.

3. OILY WASTE

Oily wastes at DCPD are processed in accordance with approved vendor procedures. These procedures specify the proper methods to treat oily wastes to comply with Federal and State regulations and applicable Burial Site License Criteria. These procedures and changes thereto must be approved by the P.S.R.C. prior to use.

4. SPECIAL CASES

Based upon previous industry experience, DCPD foresees the potential for situations arising that may be beyond existing plant capabilities. Anticipating this possibility, provisions are made herein to accommodate such situations in a timely manner by using special techniques or processes. These special cases would be controlled as follows:

- a. Implementing procedures would be developed comparable to those used for normal plant solid waste activities based on the guidance of this PCP and incorporating the applicable provisions for process control and testing.
- b. The implementing procedure would receive P.S.R.C. approval prior to use.
- c. Use of this provision and supporting information would be included in the next Semi-annual Effluent Report to the NRC.

REFERENCES

1. Title 10 Code of Federal Regulations
2. NUREG 0472 and 0473
3. NUREG-0800, 11.4 U. S. N. R. C. Standard Review Plan Solid Waste Management Systems
4. RCP RW-6 Process Control Program Dewatering

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ATTACHMENTS

1. C.N.S.I. Procedure SD-OP-003 (PCP) Solidification
2. C.N.S.I. Procedure DM-OP-022 (PCP) Demineralization
3. C.N.S.I. -DW-11118-01 Dewatering Topical Report
4. CNSI - 2(P) & (NP) 4313-01354-01P-A Rev. 2 Mobile Cement Solidification Topical
5. CNSI SD-OP-026 Rev. A Process Control Program for Cement/Oil Solidification
6. CNSI SD-OP-053 Rev. A Process Control Program for CNSI Acid Solidification

NOTE: The above attachments are stored in DCPD Library under CNSI Documents.

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CNSI Procedure SD-OP-003 (PCP) Solidification

This procedure is withheld from this copy. Refer to Document Control for most current copy.

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CNSI Procedure DM-OP-022 (PCP) Demineralization

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CNSI DW-11118-01 Dewatering Topical Report

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CNSI - 2(P) & (NP) 4313-01354-01P-A Rev. 2 - Mobil Cement Solidification
Topical

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CNSI SD-OP-026 Rev. A - Process Control Program for Cement/Oil
Solidification

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ATTACHMENT 6

CNSI SD-OP-053 Rev. A - Process Control Program for CNSI Acid
Solidification

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