


Attachment 3  
to 0CAN020501


Process Control Program  
ENS-RW-105  
(Revision #2)

Title: Process Control Program

<b>Procedure Owner:</b>	<b>Mark L. Carver / Sr Nuclear Support Coordinator</b> (Print Name / Title)	
<b>Approved:</b>	 (Procedure Owner Signature)	<b>9/30/04</b> (Date)

<b>Effective Date</b>	<b>EN Common</b>	<input type="checkbox"/>		<b>Effective Date Exception</b>	<b>ANO</b>		<b>PNPS</b>	
	<b>ENN</b>	<input type="checkbox"/>			<b>ECH</b>		<b>RBS</b>	
	<b>ENS</b>	<input checked="" type="checkbox"/>	<b>10/01/04</b>		<b>GGNS</b>		<b>VY</b>	
					<b>IPEC</b>		<b>W3</b>	
					<b>JAF</b>		<b>WPO</b>	

<p><b><u>Basis Statement</u></b></p> <p>Change to Section 1.0, Purpose – adding information for the PCP program          Changed reference section to identify only non-site references for this document          Added definition for Batch in Section 3.0          Changes made in Section 4.0 &amp; 8.0          Moved text about vendor taking title of waste from Section 5.2.2 to 5.2.1          Updated Section 5.4 to match each site's approval authority list for the PCP and changes          Added Section 5.5 to include vendor related requirements          Updated procedure to match requirements of AD-101</p>
<p><b><u>Procedures Affected By This Revision</u></b></p> <p>None</p>
<p><b><u>Process Applicability Exclusion (ENN-LI-100) / Programmatic Exclusion (ENS-LI-101)</u></b></p> <p>All Sites: <input type="checkbox"/> Specific Sites: ANO <input type="checkbox"/> GGNS <input type="checkbox"/> IPEC <input type="checkbox"/> JAF <input type="checkbox"/> PNPS <input type="checkbox"/> RBS <input type="checkbox"/> VY <input type="checkbox"/> W3 <input type="checkbox"/></p>


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## 1.0 PURPOSE

The Process Control Program (PCP) shall contain formulas, sampling, analyses, test and determinations to be made to ensure that the processing and packing of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR Parts 20, 61 and 71, State Regulations, burial ground requirements, and other requirements governing the disposal of solid radioactive waste. The scope of the PCP is to assure that radioactive waste will be handled, shipped, and disposed of in a safe manner in accordance with approved site or vendor procedures, whichever is applicable.

## 2.0 REFERENCES

### 2.1 Entergy Nuclear - South

- [1] EN-QV-104, "Entergy Quality Assurance Program Manual Control"
- [2] Title 49, Code of Federal Regulations
- [3] Title 10, Code of Federal Regulations
- [4] Low-Level Waste Licensing Branch Technical Position on Radioactive Waste Classification, 11 May 1983
- [5] Disposal Site Criteria and License
- [6] Waste Processor Acceptance Criteria
- [7] LI-101, "10CFR50.59 Review Program"

## 3.0 DEFINITIONS

- [1] De-watering - The removal of water or liquid from a waste form, usually by gravity or pumping.
- [2] Batch - An isolated quantity of waste to be processed having essentially consistent physical and chemical characteristics.
- [3] Compaction - The process of volume reducing solid waste by applying external pressure.
- [4] Incineration - The process of burning a combustible material to reduce its volume and yield an ash residue.
- [5] Solid Dry Waste - Radioactive waste which exist primarily in a non-liquid form and includes such items as dry materials, metals, resins, filter media and sludges.

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- [6] **Solid Liquid Waste** - Radioactive waste that exist primarily in a liquid form and is contained in other than installed plant systems, to include such items as oil, EHC fluid, and other liquids.
- [7] **Solidification** – Conversion of liquid or liquid like materials, including wet solids, into a solid free standing form.
- [8] **Stability** – Structural stability per 10CFR61.2. This can be provided by the waste form, or by placing the waste in a disposal container or structure that provides stability after disposal.
- [9] **Volume Reduction** – any process that reduces the volume of waste. This includes but is not limited to, compaction and incineration.

#### 4.0 **RESPONSIBILITIES**

- 4.1 The Vice President Operations Support (VPOS) is responsible for the implementation of this procedure.
- 4.2 Each site Senior Nuclear Executive (SNE) is responsible for ensuring that necessary site staff implements this procedure.
- 4.3 The Low Level RadWaste (LLRW) Focus Group is responsible for evaluating and recommending changes and revisions to this procedure.

#### 5.0 **DETAILS**


An isotopic analysis shall be performed on every batch for each waste stream so that the waste can be classified in accordance with 10CFR61. The isotopic and curie content of each shipping container shall be determined in accordance with 49CFR packaging requirements. The total activity in the container may be determined by either isotopic analysis or by dose-rate-to-curie conversion.

##### 5.1 Solid Dry Waste Management

#### **NOTE**

If the provisions of the Process Control Program are not satisfied, suspend shipment of the defectively processed or defectively packaged solid waste from the site. Shipment may be accomplished when the waste is processed / packaged in accordance with the Process Control Program.

- 5.1.1 Solid waste may be packaged and processed either on-site or at a licensed off-site waste processing facility. The licensed off-site waste processing facility will take title to the waste and certify that it has been properly incinerated, solidified or vitrified prior to disposal.

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5.1.2 Solid waste will meet applicable regulatory requirements, vendor waste acceptance criteria and disposal site acceptance criteria.

5.1.3 Solid waste processing may include, but is not limited to compaction, incineration, bulk processing, dewatering, or any other acceptance technologies available.

## 5.2 Liquid Waste Management

**NOTE**

The solidification of liquid wastes will be verified with surveillance activities of an approved Process Control Program.

5.2.1 Solid Liquid waste may be packaged and processed either on-site or at a licensed off-site waste processing facility. The licensed off-site waste processing facility will take title to the waste and certify that it has been properly incinerated, solidified or vitrified prior to disposal.

5.2.2 Solid Liquid waste will meet applicable regulatory requirements, vendor waste acceptance criteria and disposal site acceptance criteria.

5.2.3 Solid Liquid waste processing may include, but is not limited to incineration, solidification, or any other acceptance technologies available.

## 5.3 Quality Assurance

5.3.1 Reviews of solid waste activities performed under the guidance of the Process Control Program are completed through audits and selected monitoring activities.


5.3.2 Certain elements of the Entergy Quality Assurance Program Manual are applied to the Process Control Program.

## 5.4 Administrative Controls


5.4.1 Information on solid radioactive waste shipped off-site is reported annually to the Nuclear Regulatory Commission in the Annual Radioactive Effluent Release Report as specified by the Offsite Dose Calculation Manual (ODCM).

5.4.2 All changes to the PCP shall be documented. All records of reviews performed shall be retained as required by the Quality Assurance Program. The documentation of the changes shall:

5.4.2.1 Contain sufficient information to support the change with appropriate analyses or evaluations justifying the change.

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- 5.4.2.2 Include a determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State or other applicable regulations.
- 5.4.3 All changes in the Process Control Program and supporting documentation are included in each site's next Annual Radiological Effluent Release Report to the Nuclear Regulatory Commission with the following exception at Grand Gulf Nuclear Station. Grand Gulf Specific Requirement – PCP changes are not submitted to the NRC.
- 5.4.4 The changes to RW-105 shall become effective upon review and acceptance by the site's General Plant Manager except as listed below:
- 5.4.4.1 For Grand Gulf Nuclear Station, the changes to RW-105 shall be accomplished as specified in Grand Gulf Nuclear Station Technical Requirements Manual (TRM) Section 7.6.3.8. The changes shall become effective upon review and acceptance by the On-site Safety Review Committee (OSRC) and the approval of the GGNS Plant General Manager.
- 5.4.4.2 For River Bend Nuclear Station, the procedure approval along with changes to RW-105 shall be accomplished per the River Bend Nuclear Station Technical Requirements, Section 5.5.14.1. The changes shall become effective upon review and acceptance by approval from the River Bend Nuclear Station Plant Manager or Radiation Protection Manager.
- 5.4.4.3 For Waterford 3, the procedure approval along with changes to RW-105 shall be accomplished per Waterford 3 Technical Specifications 6.13.2. The changes shall become effective upon review and acceptance by the Waterford 3 General Plant Manager.
- 5.4.5 Each site will maintain applicable state and federal regulations (web based access is acceptable), vendor waste acceptance criteria and disposal site waste acceptance criteria.
- 5.5 Vendor Requirements
- 5.5.1 Vendors performing radwaste services under 10CFR61 and 10CFR71 requirements will be on the Entergy Qualified Supplier's List (QSL).
- 5.5.2 Vendors performing radwaste services on-site are to comply with the following:
- 5.5.2.1 Dewatering and solidification services shall have a NRC approved Topical Report or other form of certification documenting NRC approval of the processes and associated equipment/containers.

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5.5.2.2 All vendor procedures utilized for performing on-site radwaste services will be reviewed per the requirements of LI-101, technically by the applicable site's Radiation Protection organization and only be accepted per the approvals specified in Section 5.4.4.

5.5.2.3 All changes to vendor procedures for ongoing on-site radwaste services will be reviewed technically by the site's Radiation Protection organization and screened per the requirements of LI-101, "10CFR50.59 Review Program". Significant procedural changes will require the approvals specified in Section 5.4.4. During screening, the level of significance for procedural changes on equipment and process parameters may warrant the full 10CFR50.59 documentation and approval process.

#### PRECAUTIONS AND LIMITATIONS

None

#### 6.0 INTERFACES


None

#### 7.0 RECORDS

7.1 Documentation of pertinent data required to classify waste and verify solidification will be maintained on each batch of processed waste as required by approved procedures.

7.2 Documentation will also be maintained to ensure that containers, shipping casks, and methods of packaging wastes meet applicable Federal regulations and disposal site criteria. The records of reviews performed and documents associated with these reviews will be maintained as QA records.



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## 8.0 OBLIGATION AND REGULATORY COMMITMENT CROSS-REFERENCES

Document	Document Section	NMM Procedure Section	Site Applicability
ANO ODCM	L3.2.1.B	5.4.3	ANO
ANO1 Technical Specifications	5.6.3	5.4.1	ANO
ANO2 Technical Specifications	6.9.3	5.4.1	ANO
RBS Technical Requirements	5.5.14	*	RBS
RBS Technical Requirements	5.5.14.1	5.4.3.2	RBS
RBS Technical Requirements	5.5.14.2	5.4.3.2	RBS
RBS Technical Requirements	5.8.2	5.4.3.2	RBS
WF3 Technical Specifications	1.22	*	WF3
WF3 Technical Specifications	6.9.18	5.4.1	WF3
WF3 Technical Specifications	6.13.2.b	5.4.3.3	WF3
GGNS UFSAR, Chapter 16B.1 / TRM	7.6.3.8 paragraph 1	1.0	GGNS
GGNS ODCM	5.6.3.c	5.4.1	GGNS
GGNS UFSAR, Chapter 16B.1 / TRM	7.6.3.8 paragraph 2	5.4.2 5.4.4	GGNS

\* Covered by directive as a whole or by various paragraphs of the directive.

## 9.0 ATTACHMENTS

9.1 None