FIGURE 1.2
SHIELDED CELL LAYOUT
CASKS AND VAULTS IN STORAGE BUILDINGS.

(modified to fit page constraints)
SECTION ‘A–A’
FROM FIG. 1.5

FIGURE 1.6
STORAGE CASKS AND VAULTS
IN STORAGE BUILDING
SECTIONAL VIEW (CASKS).
1. Receive and verify module transportation cask package (includes storage cask, impact limiters and tie-down equipment)

2. Position transportation package below process building crane and release tie-downs

3. Raise transportation package from transporter and locate and secure into rotate frame

4. Rotate transportation package through 90° to return storage cask to its correct orientation

5. Release impact limiter wire rope securing assemblies and remove the top impact limiter

6. Lift the storage cask out of the bottom impact limiter and park in the set-down area using the process building crane

7. Return impact limiters, wire rope assemblies and tie-down equipment to the donor site using the road transporter

8. Check the storage cask for damage/defects

9. Collect cask from set-down position with cask transporter

10. Travel cask transporter to storage building and position storage cask within store

11. Return cask transporter to process area awaiting receipt of next storage cask

**Figure 1.8**

Sequence diagram: Casks and vaults in storage buildings: existing cask, receipt and emplacement.
1. Irradiated Fuel Transportation Cask (IFTC) received at CES Facility

2. Transfer IFTC from Transportation Vehicle onto Module Cell Bogie

3. Transfer IFTC to Module Reception Port on Underside of Shielded Cell

4. Transfer Fuel Modules (Quantity 2) from IFTC into Shielded Cell

5. Replace Empty IFTC onto Transportation Vehicle for Return to Reactor Site

6. Repeat Loading Process for a Second IFTC (Total 4 Modules)

7. Load "New" Module Storage Cask onto Module Cell Bogie

8. Transfer Module Storage Cask into Cask Lidding Area, Remove Cask Lid and Retain

9. Locate Module Storage Cask at Loading Position Below Shielded Cell

10. Load Modules into Module Storage Cask (Quantity 4)

11. Replace Module Storage Cask Lid and Install Module Lid Transfer Clamp

12. Transfer Lidded Cask into Cask Processing Area

Figure 1.9 (Sheet 1 of 2)
Sequence Diagram
Casks and Vaults in Storage Buildings
Cask Loading and Emplacement
13. MODULE STORAGE CASK PROGRESSSED THROUGH CASK CLOSURE INSPECTION AND VALIDATION OPERATIONS

14. COMPLETED CASK COLLECTED BY CASK TRANSPORTER

15. CASK POSITIONED WITHIN STORAGE BUILDING

16. RETURN CASK TRANSPORTER TO PROCESS AREA WAITING RECEIPT OF NEXT STORAGE CASK

FIGURE 1.9 (SHEET 2 OF 2)
SEQUENCE DIAGRAM
CASKS AND VAULTS IN STORAGE BUILDINGS
CASK LOADING AND EMBLACEMENT
13. Send transfer bogie to storage vault building and position adjacent to vault.

14. Load basket transfer flask onto roof gamma gate.

15. Open both gamma gates and lower basket into storage position within vault.

16. Raise transfer flask winch and close both gamma gates.

17. Reposition transfer flask onto vault.

18. Repeat loading sequence for further 9 baskets, to complete vault liner loading.

19. Install vault shield plug housing onto vault roof gamma gate.

20. Open gamma gate and lower shield plug into vault liner.

21. Close gamma gate and remove & park housing.

22. Remove vault roof gamma gate.

Install and seal vault liner seal plate onto vault.

Figure 1.10 (Sheet 2 of 2)
Sequence Diagram
Casks and Vaults in Storage Buildings
Vault Loading, Basket Receipt & Emplacement