FIGURE 4.6
CASKS IN ROCK Caverns
STORAGE Caverns - PART PLAN
(FROM FIGURE 4.5)
1. Receive and verify module transportation cask package (includes storage cask, impact limiters, and tie-down equipment).

2. Position transportation package below processing 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 and transfer to store.

10. Cask transporter positions final cask on lower tier of row.

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


Figure 4.9 (Sheet 1 of 2)
Sequence diagram
Casks in rock caverns
Existing cask receipt and emplacement
CASK TRANSPORTER DELIVERS 4TH CASK TO TRANSFER POSITION BELOW STORE CRANE

CASK TRANSFERRED TO UPPER TIER STORAGE POSITION

REMAINING UPPER TIER CASKS DELIVERED BY CASK TRANSPORTER AND POSITIONED BY STORE CRANE

LOADING SEQUENCE CONTINUED WITH CASK TRANSPORTER POSITIONING LOWER CASKS

RETURN CASK TRANSPORTER TO PROCESS AREA AWAITING RECEIPT OF NEXT STORAGE CASK

FIGURE 4.9 (SHEET 2 OF 2)
SEQUENCE DIAGRAM
CASKS IN ROCK CAVERNS
EXISTING CASK RECEIPT AND EMPLOYMENT
13. Module cask progressed through cask closure, inspection, and validation operations

14. Completed cask collected by cask transporter

15. Cask positioned within rock cavern

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

Figure 4.10 (Sheet 2 of 2)
Sequence diagram
Casks in rock caverns
Module cask loading and emplacement
1. BASKET TRANSPORTATION CASK RECEIVED AT CES PROCESS FACILITY

2. REMOVE CASK FROM TRANSPORT VEHICLE AND LOAD ONTO BASKET CELL BOGIE USING PROCESSING BUILDING CRANE

3. TRANSFER BASKET CASK BELOW SHIELDED CELL READY FOR BASKET TRANSFERS

4. TRANSFER BASKETS (QUANTITY 3) FROM TRANSPORTATION CASK AND PARK IN SHIELDED CELL

5. REPEAT BASKET RECEIPT OPERATIONS UNTIL MINIMUM 9 BASKETS ARE PARKED WITHIN CELL

6. LOAD EMPTY BASKET STORAGE CASK ONTO BOGIE FOR TRANSFER TO SHIELDED CELL

7. REMOVE BASKET STORAGE CASK LID WITHIN LIDDING AREA OF SHIELDED CELL SUITE

8. TRANSFER BASKET STORAGE CASK BODY BELOW SHIELDED CELL CASK LOADING PORT

9. TRANSFER BASKETS FROM INCELL PARK POSITION INTO BASKET STORAGE CASK (QUANTITY 7)

10. MOVE LOADED BASKET STORAGE CASK FROM LOADING PORT TO LIDDING POSITION, INSTALL CASK LID & TRANSFER CLAMP

11. TRANSFER LIDDED CASK INTO CASK PROCESSING AREA

12. BASKET CASK PROGREES THROUGH CASK CLOSURE INSPECTION AND VALIDATION OPERATIONS

FIGURE 4.11 (SHEET 1 OF 2) SEQUENCE DIAGRAM CASKS IN ROCK CAVERN BASKET CASK LOADING AND EMPLACEMENT