PROJECT MANGEMENT PLAN EXAMPLES

Prepare Detailed Work Packages Examples

Example 71

8.2.5 Work Processes

Work associated with nuclear safety functions will be planned, authorized, and performed following approved technical standards, instructions, procedures, and other control documentation commensurate with the complexity and risk posed by the task.

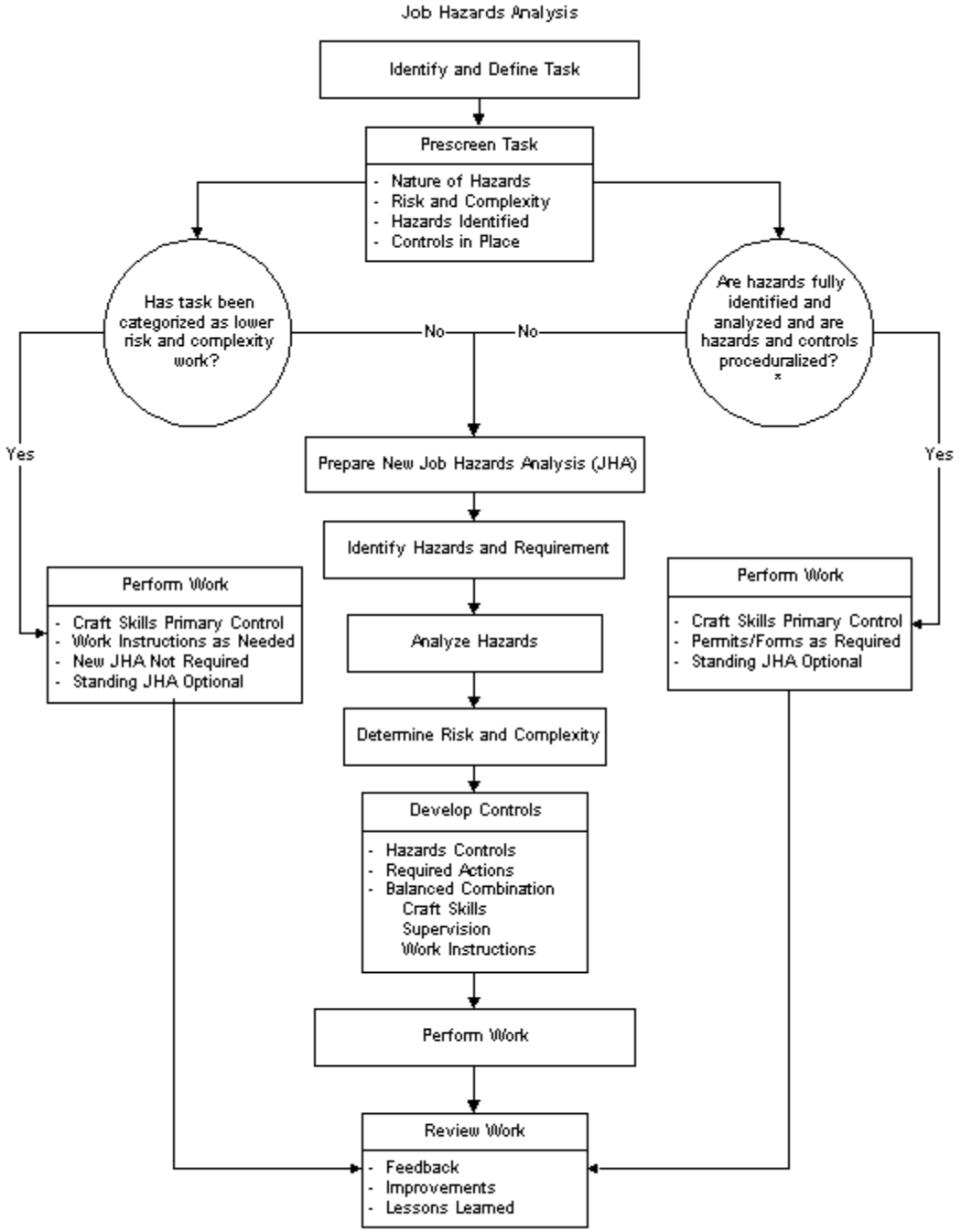
The calibration program governs the process that ensures quality of the calibration and maintenance of process monitoring equipment. Equipment found to be out of calibration is tagged and not used until re-calibrated.

HNF-PRO that implement DOE-Order 5480.19, and HNF-PRO-233, -298, and others determined applicable, will be evaluated and necessary facility specific procedures developed to complement them for implementation.

10.2 Personnel Safety

The core of the work planning process as related to personnel safety will be the computer-based Job Hazard Analysis technique (Figure 10-2). The JHA tool is expected to be available by the end of the second quarter of FY 1998. Full implementation will be aggressively pursued to obtain maximum benefit for near term significant work activities.

Figure 10-2. Job Hazard Analysis Process



* Procedure must be compliant with Technical Procedure Standard, WHC-CM-5, Section 12, having incorporated hazards and controls from a through hazard analysis process.

Example 72

8.8 DEACTIVATION WORK DEVELOPMENT AND AUTHORIZATION STRATEGY

Current Work Development and Authorization

The work control process currently in effect at 9206 is a function of its current mission, i.e. in-process storage facility for HEU materials and the controls put in place at the Y-12 Plant since stand down, with consideration of the 9206 exclusion from the Y-12 Plant PBR activities. The process currently includes continuing operations for "those critical processes needed to maintain the health, safety and environmental envelope of the building," the utilization of "Special Operations Packages" for specific work tasks, and utilization of the USQD process. Maintenance work is performed in accordance with the process defined 'in the FMO work control procedures, e.g. use of Maintenance job Request (MJR).

Goal and Objectives for the Revised Process

Given the current facility conditions, processes for work development and authorization, and the planned facility mission; an effort was undertaken to develop a work instruction and authorization strategy/process. Key goals in the process development were a technically defensible grading process to determine the level of readiness evaluation warranted for deactivation subprojects, and to integrate:

- Level of Hazards and Controls,
- Safety Documentation,
- Work Planning Documentation, and
- Graded Readiness Evaluation and Approvals

Additionally, the graded approach to readiness evaluation planning would be based on guidance from Appendix 1 of DOE-STD-3006-95, *Planning and Conduct of Operational Readiness Reviews.* Specifically the guidance identifies the following items for consideration in grading readiness evaluations:

- Importance to Safety, Safeguards and Security,
- Magnitude of Hazards,
- Life Cycle of Facility,
- Program Mission of Facility,
- Facility Characteristics,
- Circumstances of Shutdown; and
- Other Considerations.

The information and guidance contained in DOE-STD-1 120-98, *Integration of Environment, Safety and Health Into Facility Disposition Activities,* combined with the lessons learned from other successful DOE disposition projects, were utilized in the determination of grading criteria for the process. Additionally, the grading process for sub-project readiness evaluation is largely based on the current Y-12 procedure, Y-10-190*, New Activity Start-up Requirement.* These documents provide a solid basis from which the program could be tailored for the 9206 disposition activities.

Further consideration in development of a work development and authorization process was given to tying the process to the end point closure process and to tailor the process to one-time deactivation tasks. Recognizing that many of the tasks will have commonality regarding the type of activity while varying the location and specifics; the goal was to ensure that only the changes and their magnitude would drive additional evaluation thus avoiding repeated re-evaluation of the same task and hazards.

Operational Readiness Overview

In meetings with contractor and DOE personnel a two-tiered approach to the operational readiness for 9206 deactivation was discussed.

The first tier in the evaluation of 9206 for readiness is completion of an Operational Readiness Review (ORR) to address the general facility readiness. This review will evaluate programs and systems identified in the new authorization basis documents and facility activities related to the current storage operations.

The second tier is the evaluation of deactivation subprojects (as identified in Section 4 of this program plan) to determine the appropriate level of readiness review. Two separate screening tools will be used to make this determination with the screening tool being determined by the type of activity involved in the subproject. For subprojects that involve the resumption of a process from previous operations Y10-190*, New Activity Start-up Requirements,* will be used. All other subprojects will be evaluated using the screening form included in this document.

The use of a two tiered approach is based on several key factors related to the 9206 project. These factors include:

- Length of the project,
- Dynamic facility conditions resulting from deactivation activities versus static facility conditions related to normal facility operations, and
- The similarity of activities to be performed such as glovebox clean out, system flushing, and NDA measurements.

This approach is consistent with the guidance in Section 3.4.1 and Fig.3 of DOE-STD-1120-98, *Integration of Environment, Safety and Health into Facility Disposition Activities* . In the referenced section and particularly Fig.3, the application of readiness review to activities is identified as well as a screening process for determining the level of readiness review. The screening forms discussed above were designed to perform the same function as the flow diagram in Fig. 3, however, in greater detail and with specific criteria for the 9206 facility and hazards.

General Facility Readiness (First Tier)

The general facility readiness to resume activities will be determined through completion of a graded ORR. The ORR will be developed and conducted using the current site programs, procedures and lessons learned from recent readiness activities.

One key element in the grading of this ORR will be utilization of the previous readiness review results.

Specifically, the recently completed EUO PBR, which excluded the 9206 facility, reviewed programs for 9212 restart that are also used by the 9206 facility. As a result, the 9206 facility ORR will review these programs only to the extent that they differ from the programs previously reviewed and with regards to the 9206 specific implementation. This approach is consistent with guidance in STD-1120 Section 3.4.1:

- "The scope and rigor of activities necessary to determine the 'readiness' of a facility disposition activity will vary depending upon the type and magnitude of hazards present, the complexity of the work to be performed, and the extent to which previous readiness evaluations addressed planned disposition work activities and hazards."

The level of detail necessary will be determined through development of the readiness review criteria as required by current procedures and DOE orders. These will be submitted to DOE for concurrence prior to performance of the readiness review. Following completion of the general facility readiness ORR, including completion of the DOE ORR activities, additional activities associated with the deactivation project will be authorized using the subproject readiness process. This process is discussed in the next section.

Subproject Readiness (Second Tier)

As part of the deactivation project development, the overall project has been broken into subprojects based on facility location, types of material and the types of activities involved. The subprojects are identified in Section 4 of this program plan.

The evaluation of subprojects to determine the appropriate level of readiness is largely driven by the differences between a deactivation project and an operating facility. Specifically, deactivation activities are generally one-time activities designed to significantly change the facility condition. This is in sharp contrast to facility process operations where the objective is generally to maintain facility conditions and perform repetitive tasks. In addition, the majority of deactivation tasks cannot be planned and evaluated prior to beginning the project due lack of adequate or potentially changing information on the system/space and due to changes in planned approaches during the project. As a result, for many aspects including readiness evaluation the application of a sub-project approach is the most effective and ensures the highest level of safety.

As was mentioned above in discussions with DOE, it was determined that the use of a subproject approach to evaluate readiness during the deactivation project would be appropriate. Key in this process is the development of screening/grading criteria to evaluate the subprojects and determine the appropriate level of readiness evaluation. Appendix E, "Deactivation Activity Start-up Evaluation," is the screening/grading form developed and being considered for use at the 9206 project.

As part of the form development process and to support the revision of the program plan, each subproject was evaluated using this process, resulting in a numeric score with the associated level of readiness evaluation required. The results are preliminary and the use of this approach will require reevaluation of each subproject at the appropriate time during the deactivation project. **NOTE** : It was recognized that subprojects may be further subdivided and then have the readiness screening applied. Once this final determination is made the appropriate level of readiness evaluation win be performed prior to beginning the sub-project activities.

In the application of this screening process to determine the preliminary rankings for the subprojects various assumptions were made. These assumptions included:

- The quantity of material involved in the subproject,
- The type of material involved,
- Planned activities,
- The need for additional controls, training or certifications, and
- The need for revision to or development of a new criticality safety evaluation.

These assumptions were identified and documented for each subproject evaluation, as appropriate. Some genetic assumptions were made for the majority of the subprojects and are identified as part of the screening form (Appendix E). Fig. 8.1 identifies the number and percentage of subprojects identified for each level of review performed using the screening process identified in Appendix E.

Fig. 8.1 - Preliminary Screening Results Breakdown

Readiness Level	Number of Sub-Projects	Approximate Percentage
Routine	21	54%
Process Review	8	20 %
Program Review	7	18 %
Readiness Assessment	1	3 %
ORR	2	5 %

The level of reviews identified by the screening process and the relative numbers of each level are appropriate given the completion of the initial facility ORR. Based on the preliminary screening results two questions appear key in determining the readiness evaluation level:

Question 1: The material at risk is identified and is the major factor in the preliminary screening results.

Question 9: The need for a new Criticality Safety Evaluation (CSE) is a major factor in several screenings.

Both of these questions address the relative hazard and risk associated with the activity. These results are consistent with the guidance in the DOE orders and standards for application of the graded approach.

Deactivation Work Planning and Hazard Analysis (Task level)

In addition to the development of a process to determine the appropriate level of readiness evaluation, a process is being considered to grade the level of work documentation and hazard analysis for individual work activities. This process is performed in conjunction with the readiness evaluation determination (work task and subproject).

The end-points process was chosen to define the objectives that must be completed to meet the desired end-state for the building (discussed in detail in Section 7). The end-points feed into the sub-projects and make up a definition of the scope and objectives of the particular subproject. DWPs win be developed for each subproject or a portion of a subproject to describe how the particular end-points will be achieved. A flow diagram showing the anticipated DWP process is shown in Fig. 8.2 "Work And Hazards Analysis Level Flowchart". The DWP process is also discussed in DOE/EM-0318 Section 7, and is referred to as a "Definition Package." They are also very similar to the information found in both a change control package and in the "Activity Description" document discussed in Y10-190. This conforms to Integrated Safety Management (ISM) principles.

DWPs for the particular subproject are prepared by assigned process engineers and are expected to contain the following information:

Description of the Space / system

- What are the spaces, systems, or components that make up the subproject? What are the boundaries or interfaces with other systems?

  Applicable End-Point ID Numbers

  What are the end-points associated with the subproject? Provide a listing including identification numbers.

  Task Groupings / Scope

  What activities (physical, administrative, or documentation) will be performed to satisfy the end- points? How will the work be performed? Provide a definition on any sequencing that will be required. What technical work documents will be required (procedures, MJRs, Work Instructions)? What are the resource requirements (materials, craft, or safety discipline)?

  Applicable Job Hazards Identification / Analysis

  What are the hazards associated with performing the tasks? Provide the results of any job hazard identification and analysis performed (e.g. Y10-012, *Hazard Identification Planning for Maintenance and New Work Tasks* and Y70-043, *Job Hazard Analysis).* Are any special controls required during the performance of the activity? Provide documentation of satisfactory performance of a USQD.

  Readiness Evaluation Grading and Results

  What are the results of the subproject readiness evaluation? What level of approval will be required to begin activities?

  Proposed Evidence List

  What evidence will be provided to support readiness?

  Proposed Final State / Status

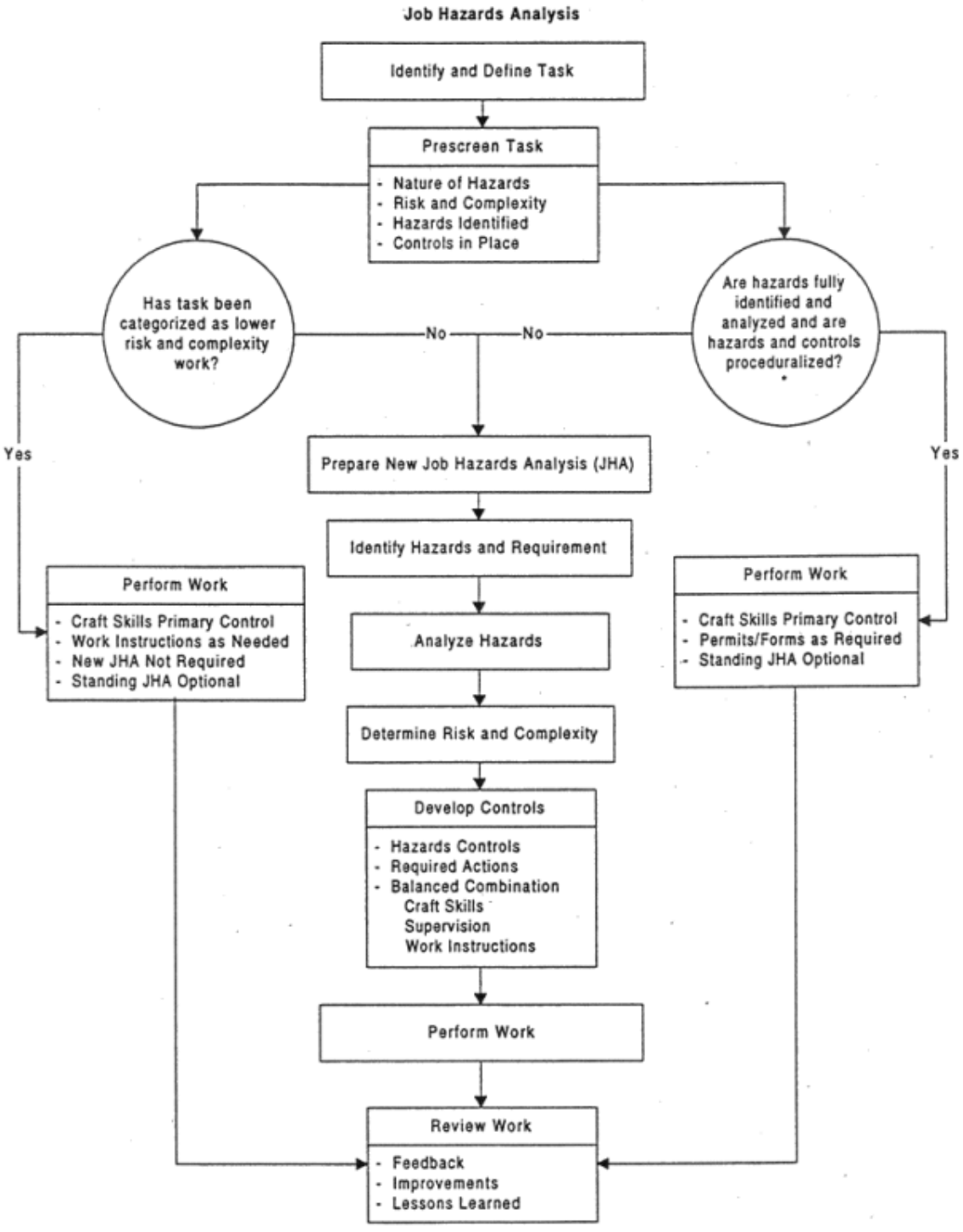
  What will be the condition of the space or system upon completion of the end-point closure? Will any equipment, used for deactivation activities, remain installed?

  As illustrated in Fig. 8.2, "Work And Hazards Analysis Level Flowchart", the Building 9206 OSB will review and approve each DWP. This approval returns the DWP to the process engineer to develop the evidence necessary to achieve readiness (item #6 above). After the appropriate readiness evidence is obtained, the review that was determined by the grading form would be performed. This process will be further defined in Y/MA-7477, "Deactivation Work Planning and Authorization."

SUMMARY

Application of this graded approach to determine the level of work documentation, review and approval, and hazard analysis is consistent with the approach used at several sites and facilities and is appropriate for the 9206 project. This process combined with the subproject level readiness evaluation determination will provide a process that is efficient for the project while ensuring that all planned projects and tasks are evaluated and approved at the appropriate levels.

The process presented here, while based upon sound judgment; DOE orders and standards; and lessons learned from other deactivation projects; will require concurrence with YSO for implementation and should be considered preliminary until such time. Many alternatives were and are being considered in the development of this approach, and it is expected that this approach will be implemented. Some implementation issues are outstanding will need to be resolved. Y/MA-7477, "Deactivation Work Planning and Authorization," is being developed to further define the work control and authorization process for deactivation.



Work And Hazards Analysis Level Flowchart

Fig. 8.2