MANAGING RISK AT INACTIVE SRS FACILITIES (U)

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The Facilities Decommissioning Division (FDD) of the Westinghouse Savannah River Company (WSRC), managed by B&W, has developed a methodology to manage the risks associated with inactive facilities in a manner that best utilizes the available funding to effect the maximum amount of risk reduction. The SRS Inactive Facility Risk Management Program provides for analyzing, prioritizing, and taking Risk Reduction (R^2) actions on individual hazards to augment the traditional approach of conducting deactivation projects on a facility by facility basis. This approach has been implemented at SRS because the vast majority of facility deactivation funding is required to satisfy minimum Surveillance and Maintenance (S&M) requirements for inactive facilities and to transition additional facilities into the inactive status, leaving little resources available to support facility deactivation projects. The Program includes the following significant elements:

a) A two phased process for preparation of facility hazard assessment reports. The first step consists of a simple process for screening facilities to establish a macro basis for establishing relative risk ranking of inactive facilities. The second step, conducting more detailed hazard assessments, is scheduled according to the resulting rankings, from the highest to the lowest ranked facilities.
b) A process for establishing priorities for addressing identified hazards based on DOE's ES&H Risk-Based Prioritization Model (RPM). The process, which provides a consistent site-wide basis for establishing priorities, utilizes an accepted methodology, is user friendly, and provides a numerical basis that clearly distinguishes high-risk from low-risk hazards with consideration of both consequences and probability of occurrence.
c) Defined numerical thresholds for rating hazards as unacceptable risks, significant risks, or insignificant risks. This determination provides justification for funding of individual R^2 actions.
d) A process for evaluating, selecting, planning and executing R^2 actions. The cost effectiveness of alternative R^2 actions is determined by dividing the cost to perform the R^2 action by the numerical risk reduction that results from the R^2 action ($\$/\Delta$Risk).

The SRS Inactive Facility Risk Management Program provides a logical, cost-effective approach to manage risks. The program offers the following advantages over the conventional approach of managing disposition actions on a facility by facility basis:

- Accomplishes the maximum reduction of risk for the dollars spent,
- Allows the highest risk hazards to be addressed early, independent of the facility in which they are located,
- Allows the limited funding available to be used to address the greatest risks,
- Does not require resources or time to prepare complete facility deactivation plans.
- Provides a consistent site-wide basis for establishing priorities.

INTRODUCTION

Several facilities at DOE's Savannah River Site (SRS) have become inactive over the years. Some facilities were shutdown in an orderly manner and have been placed in an appropriate condition for long term storage. Other facilities were essentially abandoned in place without a proper surveillance and maintenance (S&M) program. These facilities are now in varying states of decay and present hazards to the workers, the public and the environment.

Shortly after the Facilities Decommissioning Division (FDD) was created to manage inactive facilities at SRS, FDD developed the Inactive Facilities Risk Ranking and the Prioritization Program to identify, prioritize, and implement remedial actions to reduce risk at inactive SRS facilities. The program was not intended to be a formal deactivation program, but rather to define near term actions to reduce the overall risks for the higher risk facilities and to reduce the cost of ongoing surveillance and maintenance activities. This initial program is described in the "SRS Inactive Facilities Risk Ranking and Prioritization Program" (1) and the "Process to Manage SRS Inactive Facilities" (2).

The program defined, prioritized, and implemented remedial actions generated from the various assessment reports, with decisions based primarily on the experience/ judgment of staff personnel. While the process satisfactorily accomplished its intended function, it was somewhat subjective in that there was no set criteria, either quantitative or consensual, to rank the hazards or to evaluate proposed remedial actions. In addition, the selection process did not provide a means to differentiate between acceptable and unacceptable risks.

As part of the program's built-in mechanism for continuous improvement, FDD organized a team [the Risk-Reduction (R^2) Action Prioritization Team (RAPT)] to incorporate a risk-based prioritization method into the program to prioritize hazards and R^2 actions at inactive SRS facilities. Team members included subject matter experts on facility risk ranking and assessments as well as personnel familiar with authorization bases and chemical/radiological hazards. The "Prioritization Method for Risk Reducing (R^2) Actions at Inactive SRS Facilities" (3) documents the efforts of the RAPT Team, which included a survey of prioritization methods, an evaluation of those methods, and a demonstration of how the selected method could be integrated into the FDD disposition process.

INACTIVE FACILITY RISK MANAGEMENT PROCESS

The RAPT recommendations have been incorporated into the "SRS procedure for Risk Ranking and Prioritization of Disposition Activities" (4). As illustrated in Figure 1, the process consists of the following major elements:

a) Determine Facility Risk Ranking
b) Hazards Identification
c) Hazards Evaluation
d) Planning Risk Reduction Actions
e) Conduct Risk Reduction Actions
f) Continuing Hazards Management

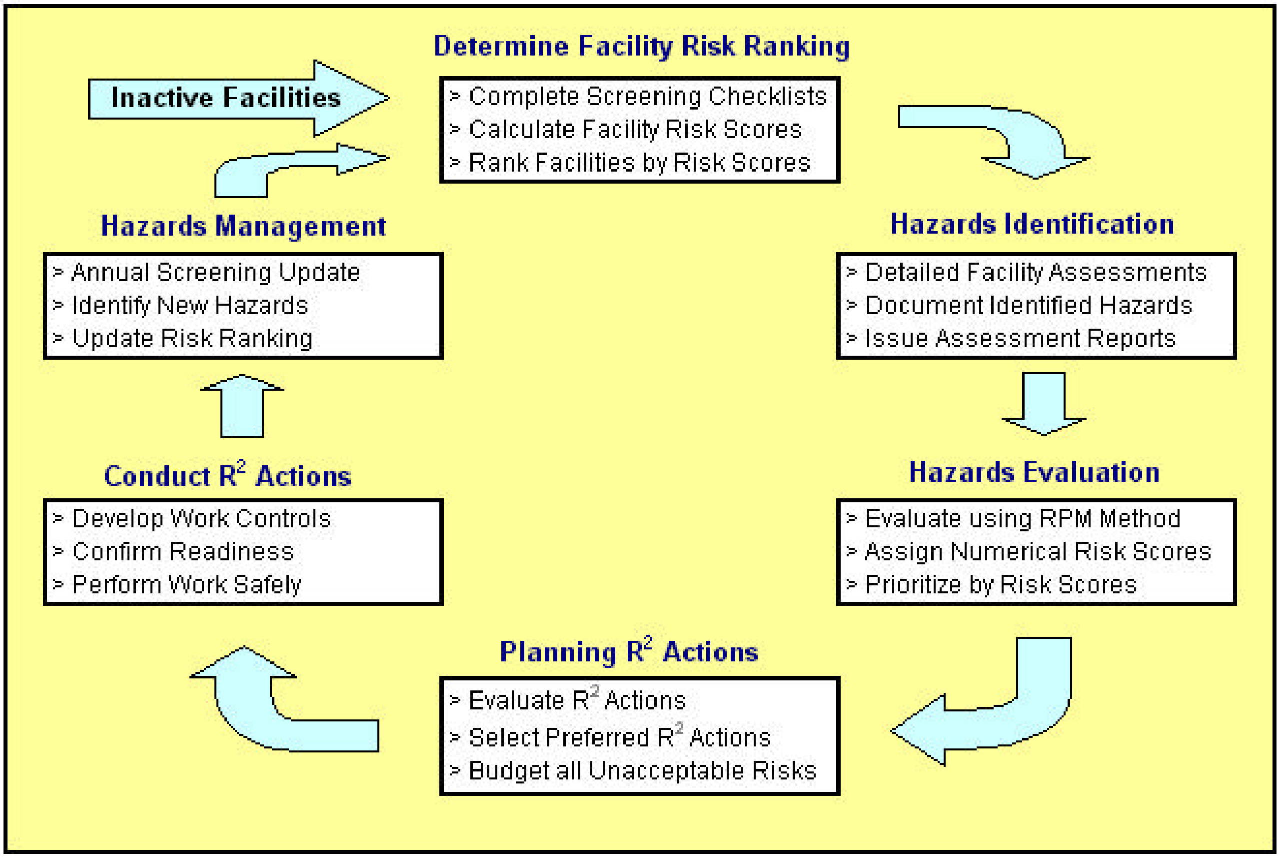


Figure 1
SRS Inactive Facility Risk Management Process

Determine Facility Risk Ranking

In order to obtain a macro assessment of each of the 130 inactive facilities listed in the 1996 SRS Surplus Facilities Inventory Assessment (SFIA), a simple yes/no Facility Review Checklist was developed (See Figure 2). This checklist provided for obtaining information on a facility's structural condition, occupancy, industrial safety, radiological and the hazardous material conditions for potential adverse effect on workers, the public and the environment. Cognizant personnel who were considered "most knowledgeable" of facility conditions completed the checklists. Data from the checklists was used in an algorithm that calculated a numerical score to quantify the relative risk of each facility. Facilities were then listed by risk from the most hazardous to the least hazardous.

Hazards Identification

Detailed Assessments were then scheduled for facilities ranked as highest risk. Detailed Assessments of the top ten facilities were performed in FY-98, and an additional fifteen assessments were scheduled for FY-99. A total of 29 Detailed Assessments have been conducted to date. A core team of personnel experienced in radiological and hazardous facility safety, with support from cognizant engineering, operations and maintenance personnel, planned and conducted the detailed facility assessments.

FY99 FACILITY REVIEW CHECKLIST

Facility #: ________ Facility Name: ________

Area ____ Structure Number ________ Structure name ________

Structure Class ________ Structure Type ________ Lifecycle ________

Division: ________ Department ________ Facility Custodian: ________

Facility Reviewer (print name) ________ Review date ________ Revision date ________

Facility Counci POC ________ **Structure_ID** Risk ranking score

Worker Occupancy

- Building occupied or routinely entered (if entered state frequency as a comment) — O Yes O No O N/A
- Is the structure located within 100 feet of an occupied building or area — O Yes O No O N/A
- Are entry controls maintained — O Yes O No O N/A

Building/Structure Integrity

- Do hazards exist at building entry points — O Yes O No O N/A
- Structural damage to walls roofs & stairs — O Yes O No O N/A
- Signs of water/animal intrusion, roof leaks or groundwater entry — O Yes O No O N/A

Building Systems are Functional

- Utilities functional (electricity, HVAC, steam, lighting) — O Yes O No O N/A
- Fire protection operational (sprinklers, fire alarms, extinguishers) — O Yes O No O N/A
- Communications available (phone) — O Yes O No O N/A
- Public Address system operational — O Yes O No O N/A
- Routine waste handling/disposal (no waste accumulation) — O Yes O No O N/A

General Industrial Safety (hazards present)

- Tripping, falling, slipping — O Yes O No O N/A
- Striking / being struck (overhead hazards, clearances, ...etc.) — O Yes O No O N/A
- Drowning, suffocation, confined spaces — O Yes O No O N/A
- Electrocution & shock potential (high voltage, transformers, open boxes,...) — O Yes O No O N/A
- Noise & hearing protection required — O Yes O No O N/A

Personnel Exposure to Hazards

- Biological (animals, rodents, insects, ...) — O Yes O No O N/A
- Biological (mold, fungus, poor air quality) — O Yes O No O N/A
- Radiological contamination (internal uptake & external exposure) — O Yes O No O N/A
- Hazardous materials - non-rad (asbestos, mercury, cadmium) — O Yes O No O N/A
- Hazardous chemicals — O Yes O No O N/A
- Chemicals present not in SARA II Inventory (if yes, list type and quantity) — O Yes O No O N/A
- Chemicals stored in degrading containers — O Yes O No O N/A

Environmental Release

- Potential radiological release (air, ground, ground water) — O Yes O No O N/A
- Potential chemical spill (releases to air, ground, ground water) — O Yes O No O N/A
- Existing remediation programs in place — O Yes O No O N/A
- Potential hazardous material (asbestos, PCB, etc..) — O Yes O No O N/A

Process Systems

- Residual process material in tanks/ piping. If yes, list material types/locations below. — O Yes O No O N/A

Surveillance & Maintenance (S&M) Program

Estimated S&M (Check only one, annual S&M costs less than)

O $100k O $500k O $1M O $10M O $50M

Status of S&M Plan (Check One)

O in place now O being developed O no defined plan O N/A

Status of Safety Basis (Check One)

O in place now O in place, not current O not defined O N/A

Hazardous Energy Review

Electric Power	O Isolated	O Controlled	O Unknown
Steam	O Isolated	O Controlled	O Unknown
Compressed Air	O Isolated	O Controlled	O Unknown
Compressed Gases	O Isolated	O Controlled	O Unknown
Residual Chemicals	O Isolated	O Controlled	O Unknown
Explosive Residues	O Isolated	O Controlled	O Unknown
Hi/Lo Pressure Water	O Isolated	O Controlled	O Unknown

Is immediate corrective action required? (If yes, contact facility custodian) — O Yes O No O N/A

Comments/Concerns:

6/2/99 R. Garneiwicz 5-4377

Figure 2
Facility Review Checklist

Each assessment included a review of the facility's operating history based on documentation as well as interviews with previous operations or maintenance personnel, a carefully developed facility inspection plan, a pre-tour briefing for all personnel involved, and an in depth walk down of the facility. Field data taken during the walk down and concerns addressed during the post walkdown out-briefing were immediately recorded for use in preparing Facility Assessment Reports. In addition to documenting the findings and conclusions of the assessment team, the Facility Assessment Reports included a listing of proposed mitigating actions along with a planning cost estimate and relative timing to implement action plans.

Hazards Evaluation

As previously discussed, the initial program did not include this step; proposed actions from the Assessment Reports were directly implemented based on good engineering judgement. This step was added at the recommendation of the RAPT to provide a formalized methodology to establish appropriate priorities to reduce hazards within the facilities.

Hazards Evaluation Selection Process

Since this is key element of the process, a description of the selection process is provided. In order to determine an appropriate risk-based prioritization methodology, the RAPT adopted the following objectives for the risk-based prioritization methodology:

- Adopt an existing risk assignment method, if available, that:
  - assigns (quantifies) risk for hazards in terms of both frequency (probability) and consequence,
  - is relatively simple and straightforward, and
  - establishes thresholds for defining hazards as unacceptable, significant, or insignificant
- Provide for the identification and evaluation of alternative risk reduction actions
- Provide a relative risk ranking of risk reduction actions
- Establish maximum risk reduction for minimal cost

To assess the feasibility of utilizing an existing risk assignment methodology, five recognized risk evaluation methodologies were selected for consideration:

- the Capital Asset Management Process Prioritization (CAMP),
- the ES&H Risk-Based Prioritization Model (RPM),
- the Laboratory Integration and Prioritization System (LIPS),
- the Management Evaluation Process (MEP), and
- the SFIA Threat-Based Priority Model.

The evaluation included a demonstration of each model on a common facility, reviewing the results of the demonstrations, and determining whether the model could be used by FDD to risk-rank hazards and R^2 actions. Based on the review, the team reached the following conclusions:

- With various degrees of tinkering, FDD could use any of the five models to risk-rank hazards/R^2 actions. All models generate a "benefit/score" that corresponds to risk; i.e. the "benefit/score" is a function of both probability and consequence.
- CAMP generated a unit-less risk score from 20 to 80, while RPM generated a unit-less risk score from 0.0001 to 3000. LIPS generated risk (termed "benefits" by the model) in terms of $'s. The

higher the $ value, the higher the risk. Finally, MEP qualitatively defined risk as "High," "Medium," or "Low."

- The LIPS model went a step further than the other three models in that it sought to "identify the activities producing the most cost-effective risk reduction." The LIPS model achieved that end by merely dividing the cost ($) of the activity into the total benefit (the "risk" in terms of $'s) from implementing the activity.
- LIPS is used to identify activities producing the most cost-effective risk reduction, not to identify activities addressing the greatest hazard or source of risk. LIPS prioritizes the value of solutions, not the severity of problems. The system design is for the most cost-effective use of limited financial resources, not to mitigate the most serious hazards.
- LIPS is overly complicated with 7 pages of tables/matrices.
- MEP is fairly simple with only 3 pages of table/matrices. The tables/matrices have several categories (Mission Impact, Mortgage Reduction, and Social/Cultural Economic) that don't fit the RAPT's effort to develop a risk-based prioritization method. The MEP provides very little gradation of risk because it only uses three qualitative descriptors of risk, "High," "Medium," or "Low."
- CAMP is overly complicated/tedious with approximately 10 pages of tables/matrices. The methodology is primarily geared to prioritizing capital projects, not R^2 actions/activities.
- Based on the experience of several team members, the RAPT determined that the SFIA Threat-Based Priority Model was overly complicated, and that the RAPT should not further evaluate the model.
- The RPM appeared to best fit FDD's needs. The scoring system is broad and quantitative, and provides a sharp contrast between high and low hazards. The model is also fairly simple with only 18 "impacts" spread over 6 "categories." For each impact, there are four likelihoods: Very High, High, Medium, and Low. Each likelihood within a category has a corresponding score. See Table 1 for the scoring matrix from the RPM. Note that the "DOE Good Practices Guide" (5) provides additional details on how to use the matrix and further definition of categories and impacts.

The RAPT identified the DOE Limited Standard "Guidelines for Risk-Based Prioritization of DOE Activities" as a useful tool for evaluating the effectiveness of the 5 models, especially with regard to the eight (8) common characteristics of risk-based prioritization methods. The RAPT determined that the RPM met the minimum requirements of the standard. Because it met the standard and the team's objectives, the RAPT reached a consensus that FDD should adopt the RPM Model to prioritize hazards/R^2 actions.

The RPM Methodology

For each identified hazard, the RPM Model requires an assessment of the impact, or potential consequence, in each of the following six impact categories:

- Public Safety and Health,
- Site Personnel Safety and Health,
- Compliance,
- Mission Impact,

- Cost Effective Risk Management, and
- Environmental Protection

The RPM Model also requires, for each impact category, a determination of the Likelihood of Occurrence, or Probability, into one of four categories, as defined below:

A. Very High (1/yr)
B. High (0.1/yr)
C. Medium (0.01/yr)
D. Low (<0.01/yr)

Table I defines the overall Scoring Matrix for the RPM Model.

Validation of RPM Model

To further validate the RPM Model, the process was expanded to include four additional buildings (677-T, 779-A, 777-10A, and 235-F ABL), and a consolidated listing of ranked hazards for the five facilities was developed. A Filemaker-Pro input data sheet was developed to standardize and manage the numerous data sheets (Figure 3). Based on this review, the team made the following observations/ conclusions:

- The scoring was somewhat subjective with regard to likelihood. For example, scorers had difficulty differentiating between "very high" likelihood (expected to happen within a year) and "high" likelihood (expected to happen within 10 years).
- The team had some difficulty deciding between a "major non-compliance" (consequence 8 on the RPM matrix) and a "marginal non-compliance" (consequence 10 on the RPM matrix), and the "potential" for the non-compliance to occur.
- The team had some difficulty deciding between "consequences" in a category, and recommended that Subject Matter Experts such as IH, RCO, Fire Protection, and Environmental participate on the scoring team (or review output to verify selection of appropriate consequence).
- The team improved/optimized the Filemaker-Pro input forms for the scoring process. A copy of the input form is provided as Figure 3.
- Overall, the team was surprised as to the consistency amongst the various scorers. Since the process is somewhat subjective and reflects the values of scorers, there will always exist a slightly different ranking if different individuals complete the ranking.

The RPM process can work provided the scorers are knowledgeable of the hazards, fully understand the defined RPM categories, and work as a team to continuously calibrate individual scorers.

Establishing Risk Thresholds

The objective of this determination was to be able to "bin" identified hazards into one of the following categories:

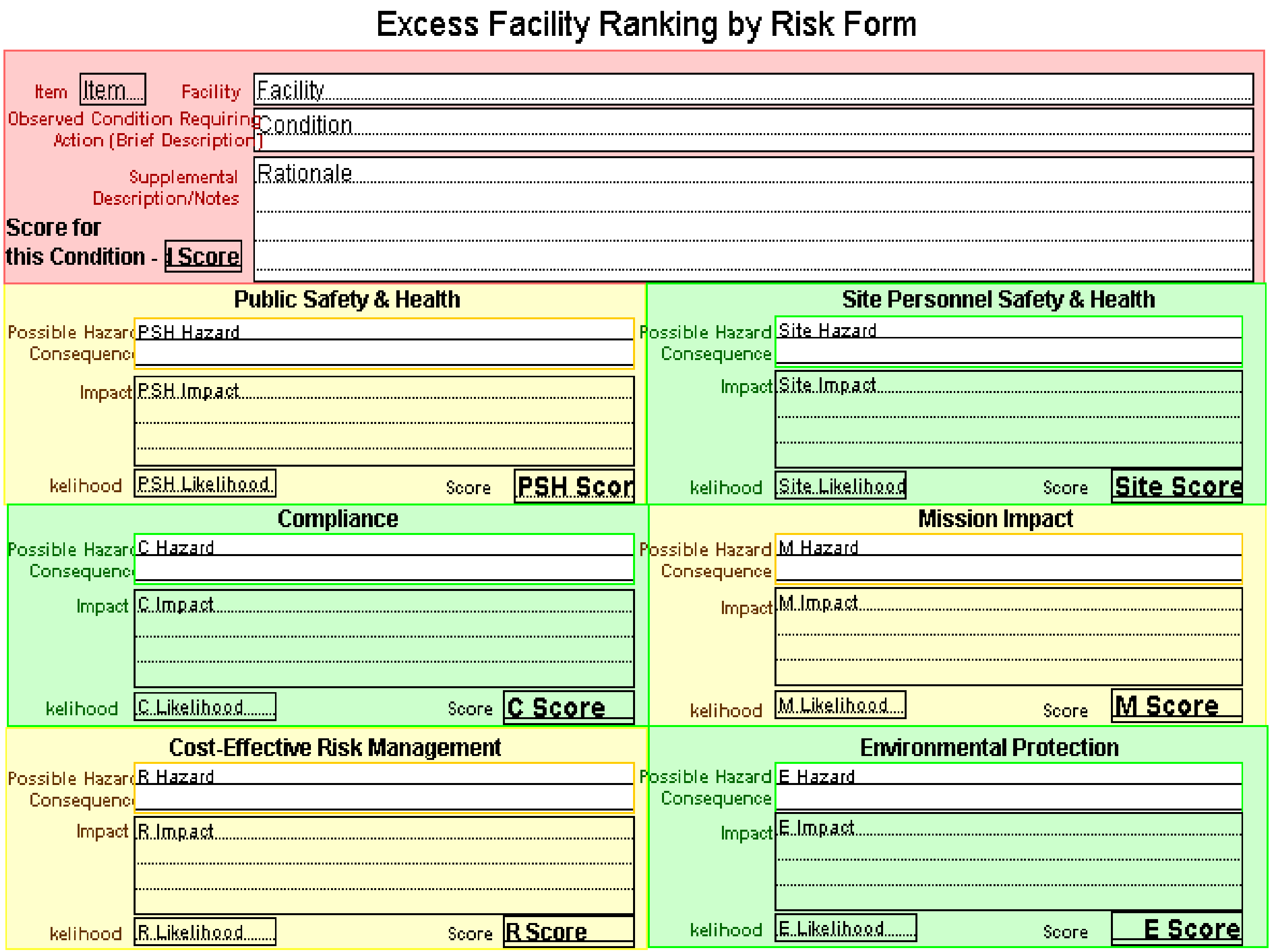
- Unacceptable, requiring that actions be taken in a timely manner to the reduce the risk to an acceptable level.
- Insignificant, requiring no risk reducing actions, or
- Significant, requiring further consideration for taking risk reduction actions.

Table I – Scoring Matrix for the RPM Model

(Reproduced from the DOE Good Practices Guide, GPG-FM-030, "Prioritization")

Impacts	Likelihood of Occurrence			
	A	B	C	D
	Very High	High	Med.	Low
	(1/yr)	(0.1/yr)	(0.01/yr)	<0.001/yr)
Category: Public Safety and Health				
1. Immediate or eventual loss of life/permanent disability	3000	300	30	0.3
2. Excessive exposure and/or injury	300	30	3	0.03
3. Moderate to low-level exposure	30	3	0.3	0.003
Category: Site Personnel Safety and Health				
4. Catastrophic – Injuries/illnesses involve permanent total disability, chronic or irreversible illnesses, extreme overexposure (e.g. 1000 rem), or death	2000	200	20	0.2
5. Critical – Injuries/illnesses result in permanent partial disability or temporary total disability > 3 months; serious overexposure (e.g., 100 rem)	200	20	2	0.2
6. Marginal – Injuries/illnesses result in hospitalization; temporary, reversible illnesses with variable but limited period of disability < 3 months; slight overexposure (e.g. 5-10 rem); exposure near limits (20-100%)	100	10	1	0.01
7. Negligible – Injuries/illnesses do not result in hospitalization; temporary reversible illnesses require minor supportive treatment; overexposures <20% of limits (e.g., <1 rem)	10	1	0.1	0.001
Category: Compliance				
8. Major noncompliance with Federal, State, or local laws; enforcement actions; or compliance agreements significant to ES&H and involving significant potential fines or penalties	150	15	1.5	0.015
9. Major noncompliance with Executive Orders; DOE Orders; or Secretary of Energy directives (Notices or Guidance Memoranda) significant to ES&H and not involving significant potential fines or penalties	75	7.5	0.75	0.0075
10. Marginal noncompliance with Federal, State, local laws; enforcement actions; compliance agreements; Exec. Orders; DOE Orders; or Secretary of Energy directives significant to ES&H	20	2	0.2	0.002
11. Significant deviation from good management practices	1	0.1	0.01	0.0001
Category: Mission Impact				
12. Serious negative impact on ability to accomplish major program mission	150	15	1.5	0.015
13. Moderate negative impact on ability to accomplish major program mission	75	7.5	0.75	0.0075
Category: Cost Effective Risk Management				
14. Significant avoidable cost due to degrading infrastructure, inefficient management systems/program implementation, or accident-related capital loss (total cost >$25M, or annual cost $1M-5M)	40	4	0.4	0.004
15. Moderate avoidable cost due to degraded infrastructure, inefficient management systems/program implementation, or accident-related capital loss (total cost <$25M, or annual cost $1M-5M)	15	1.5	0.15	0.0015
Category: Environmental Protection				
16. Catastrophic damage to the environment (widespread, long-term or irreversible effects)	2000	200	20	0.2
17. Significant damage to the environment (widespread, long-term or irreversible effects)	200	20	2	0.02
18. Minor to moderate damage to the environment (localized and short-term effects)	20	2	0.2	0.002

Figure 3 – RPM Data Entry Form



Excess Facility Ranking by Risk Form

Item [Item] Facility [Facility]
Observed Condition Requiring Action (Brief Description) [Condition]
Supplemental Description/Notes [Rationale]
Score for this Condition - [l Score]

Public Safety & Health
Possible Hazard Consequence [PSH Hazard]
Impact [PSH Impact]
kelihood [PSH Likelihood] Score [PSH Scor]

Site Personnel Safety & Health
Possible Hazard Consequence [Site Hazard]
Impact [Site Impact]
kelihood [Site Likelihood] Score [Site Score]

Compliance
Possible Hazard Consequence [C Hazard]
Impact [C Impact]
kelihood [C Likelihood] Score [C Score]

Mission Impact
Possible Hazard Consequence [M Hazard]
Impact [M Impact]
kelihood [M Likelihood] Score [M Score]

Cost-Effective Risk Management
Possible Hazard Consequence [R Hazard]
Impact [R Impact]
kelihood [R Likelihood] Score [R Score]

Environmental Protection
Possible Hazard Consequence [E Hazard]
Impact [E Impact]
kelihood [E Likelihood] Score [E Score]

To establish appropriate numerical thresholds, RPM numerical results for the categories of Public Safety and Health and Site Personnel Safety and Health were plotted against established risk acceptance curves from the SRS E-7 Manual. This Manual implements 10 CFR 100 regulations that define unacceptable risk levels for uncontrolled releases of radioactive and other hazardous materials. With few exceptions, an RPM score of 15 corresponds to the break between unacceptable and other significant risks on the curves. Accordingly, hazards with RPM scores > 15 were defined as unacceptable risks, and those with an RPM score of < 15 were categorized as significant. Hazards with an RPM score of < 1 were defined to be insignificant.

Planning R^2 Actions

Planning activities to remediate identified hazards are prioritized to address the highest ranked hazards first. Immediate corrective action is taken where imminent danger to workers or the environment exists. For all hazards ranked as unacceptable, alternative R^2 actions that will result in reducing the risk score to below the threshold of 15 are considered. Funding to accomplish selected R^2 actions for all unacceptable risks is requested as part of the annual budgeting process. In cases where the cost to reduce

unacceptable hazards to below a score of 15 in a single fiscal year is not feasible, a longer-range program is initiated to reduce the risk to acceptable levels.
For other significant risks with scores in the range of 1 to 15, the effectiveness of alternative R^2 actions is considered by dividing the cost for the risk reduction by the amount of risk reduction ($/Δ risk). Where life cycle cost trade-offs need to be considered, a costing method such as present worth analysis, life-cycle cost analysis, or payback period analysis is used to select the most cost-effective R^2 action.

Conduct R^2 Actions

Detailed procedures for accomplishing the R^2 actions are prepared in accordance with standard procedures that implement the SRS Integrated Safety Management System (ISMS) work planning process. After confirmation that initial conditions and work package preparations have been satisfied, the work is performed. Significant reductions in hazardous conditions have been accomplished during the first couple of years since the program was initiated, and the program has been favorably accepted by DOE and by the local Citizens Advisory Board. In certain cases, R^2 actions have also allowed a reduction in a facility's Hazard Category, thus allowing a reduction in the cost of Surveillance and Maintenance Activities required to maintain the facility in a safe condition.

Hazards Management

The program has been developed to incorporate feedback evaluations on an annual cycle. The risk ranking listing of inactive facilities is updated to reflect changes resulting from R^2 actions, changed conditions identified during periodic surveillances, and new facilities added to the inactive status. Additional detailed facility assessments are performed based on the updated facility risk ranking list, and the annual process is repeated.

OTHER RISK CONSIDERATIONS

The RPM model/process allows focus on hazards with high risk, and ensures that inactive facilities are maintained within a "safe" envelope. That is not to say that some facilities do not contain other significant hazards. In fact, significant hazards remain in several inactive facilities, but those hazards are generally low risk because compensatory action has been taken. That compensation, however, comes at a cost to implement either engineered or administrative controls. For hazards where compensatory action has been taken, the decision to implement new/modified R^2 actions is then subject to cost consideration.

It is also noted that due to natural, continuing deterioration of facility conditions, the risk for many hazards increases over time. Surveillance programs are designed to identify deteriorating conditions that are then evaluated on as part of the ongoing Surveillance and Maintenance Programs for each facility.

CONCLUSIONS

The SRS Inactive Facility Risk Management Program provides a logical, cost-effective approach to manage risks. The program offers the following advantages over the conventional approach of managing disposition actions on a facility by facility basis:

- Accomplishes the maximum reduction of risk for the dollars spent,
- Allows highest risk hazards to be addressed early, independent of the facility in which they are located,
- Allows the limited funding available to be used to address the greatest risks,
- Does not require resources or time to prepare complete facility deactivation plans.
- Provides a consistent site-wide basis for establishing priorities.

REFERENCES

1. R. A. Garniewicz, "SRS Inactive Facilities Risk Ranking and Prioritization Program", FDD-PMP-98-0101, 11/11/98.
2. "Process to Manage SRS Inactive Facilities", Manual C 2.1, Transition, Deactivation, and Decommissioning Procedure Manual, Revision 0, Effective Date: 6/3/98.
3. Prioritization Method for Risk Reducing (R^2) Actions at Inactive SRS Facilities (U), 6/7/99.
4. WSRC 1C Facility Disposition Manual, Procedure 103, Risk Ranking and Prioritization of Disposition Activities, Rev. 0, 9/30/99
5. Good Practices Guide, GPG-FM-030, "Prioritization", March 1996, DOE Office of Field Management, Office of Project and Fixed Asset Management.