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John C. Stennis Space Center
Risk Management Procedural Requirements

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Document History Log

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Revision A	12/15/08	Buddy Newbold x 8-3152	Complete revision to basic document to implement integrated Risk Management and provide framework that integrates risk-informed decision making and risk-management process within the organizational structure of the Center.
Revision A-1	October 2010	Mike Rewis 8-2663	Changed all references of acronym for the responsible Office from S&MA to SMA. Corrected typographical and grammatical errors throughout document. Updated Center Director signature block. Updated Appendix C. Removed Appendix E.

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PREFACE

P.1 PURPOSE

a. This SPR implements the requirements for integrated risk management for Stennis Space Center (SSC), its directorates/offices, and its programs and projects. Defining a tailored risk management process that integrates Risk-Informed Decision Making (RIDM) and Continuous Risk Management (CRM) for SSC is the principle purpose of this document.

b. The purpose of addressing risk management at the Center level is to ensure all risks are identified, captured, and communicated in a common way across the Center. The integrated Risk Management (RM) process set forth in this document provides bottom-up, detailed, continuous assessment of risk, provides support for the identification and mitigation of institutional risks and integrates risk management activities within the SSC organizational structure across the Center and supports RIDM capabilities Center-wide.

P.2 APPLICABILITY

a. This directive applies to all SSC Directorates and Mission Support Offices.

b. This directive applies to NASA SSC contractors to the extent specified by their respective contracts.

c. For programs/projects/tasks (as defined by NPR 7120.5) residing at SSC, the requirements in this SPR should be treated as additional requirements to risk identification and managing responsibilities related to specific NASA Program and Project goals and objectives.

d. This document defines the methods and tools used in the CRM process and defines the practice to be used within SSC.

e. In this SPR, a requirement is identified by “shall,” a good practice by “should,” permission by “may” or “can, and descriptive material by “is” or “are” (or another form of the verb “to be”).

P.3 AUTHORITY

a. NPD 1000.0, NASA Governance and Strategic Management Handbook.

b. NPD 1001.0, 2006 NASA Strategic Plan.

c. NPR 7120.5, NASA Program and Project Management Processes and Requirements.

d. NPR 8000.4, Agency Risk Management Procedural Requirements.

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e. NPD 8700.1, NASA Policy for Safety and Mission Success.

f. SPD 7120.1, SSC Institutional Risk Management.

g. SPLN-1200-0002, Technical Authority Implementation Plan.

P.4 APPLICABLE DOCUMENTS

None

P.5 MEASUREMENT/VERIFICATION

Compliance with requirements cited in this SPR will be monitored through the Stennis Space Center Office of Safety and Mission Assurance (SMA) by objective evidence tracked through:

a. Periodic review of directorate/office Level Top Risk Reports.

b. Periodic review of SSC Management Councils and Review Board records.

c. Periodic review of directorate/office level RM and RIDM processes.

P.6 CANCELLATION

SPR 7120.1, Basic-1 dated October 27, 2004

Signature on File

Arthur E. Goldman
Director

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CHAPTER 1. INTRODUCTION

1.1 Risk Management at Stennis Space Center (SSC)

a. Risk Management (RM) is a method of managing that concentrates on the identification and controlling of the events that have a potential of causing an undesired event. It is a proactive, risk-informed approach to enable and enhance the decision makers' effective selection of key decision alternatives with implementation and follow-through. In this document RM is defined in terms of RIDM and CRM. The purpose of integrating RIDM and CRM into a coherent framework at the Center is to foster proactive risk management across the Center to better inform decision-making through better use of risk information.

b. This SPR implements RM based upon a "corporate model" utilizing existing organizational structure and reporting. This approach leverages the NASA Strategic Management Process and assures communication across the entire Center utilizing management councils, directorate and office reviews, and an automated risk information application database to support RIDM. As a result, the RM process and organization directly correlates with the established organizational structure and provides a simple to use, scalable, and documented process. Utilizing the Integrated Risk Management Application (IRMA) to document the process allows the Manager to create and maintain an information environment where risk information is collected in a coherent manner across the Center and can proceed up from the sub-directorate level through the directorates and offices to the Center Level.

1.2 SSC Integrated Risk Management Process

a. The directorate/office shall provide organizational integration and communication.

b. Sub-directorate organizations shall be responsible for carrying out a sustained effort to implement RM and RIDM by adopting best practices within their organization to support directorate/office implementation of the requirements set forth in this document. This includes implementation of these processes for divisions within the directorate as well as within the established contractor reporting mechanisms for contractors supporting the mission of the directorate or office. The process is depicted in greater detail in Appendix B of this document.

1.3 Risk Informed Decision Making (RIDM)

a. RIDM is a deliberative process to provide risk information as an element in decision-making and takes place at many different venues and many different organizational levels across the Center, including boards and panels and management reviews. RIDM provides the decision maker with an assessment of related risk to support management decisions. The ultimate decision is *informed* and not solely based upon the risk assessment information provided by the

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RIDM process. RIDM shall be embedded as a routine portion of management reviews and implemented by directorates/offices in order to support decision-making at that level.

b. All SSC risks shall be identified and entered into IRMA and assessed based upon likelihood, impact and consequence utilizing the standardized SSC risk impact criteria (Appendix D) supported by IRMA**.**

c. Independent risk assessments may be conducted as a part of an organizations risk-informed process utilizing analysis techniques (i.e., Monte Carlo analysis, Fault-Tree analysis, network analysis, etc.).

d. The results of analyses shall be documented in IRMA by the risk assessment provider in support of the SSC RIDM process and shall include an assessment utilizing the standard SSC impact criteria.

1.4 Continuous Risk Management (CRM)

NASA uses a specific process for the management of risks. This process is referred to as CRM. All directorates and offices shall implement a CRM process aimed at identifying, analyzing, planning, tracking, controlling, communicating and documenting risks. This process supports integration of organizational performance measures within a comprehensive decision-making framework and is complementary to those activities mentioned above and aligns with SSC's established reporting requirements. Coupling the CRM process to the decision process focus and provides accountability of the RIDM processes. The collective benefit is a risk-management process that supports better decisions across the Center. A brief summary of the CRM paradigm is provided in Appendix E.

1.5 Risk Reporting

a. Each directorate/office shall establish and maintain both a Top Risk Report and a current Watch List. The Watch List generally represents risks that are not yet imminent or have been rated as having very low impact and consequence. These risks are routinely monitored or "Watched" for early indications of increasing risk. The Top Risk Report consists of all risks rated as red or yellow (NASA Probability Impact Diagram) by the organizational element.

b. Each directorate/office shall designate their Top Risks and Watch List within the IRMA database and submit its Top Risk Report and Watch List to the SSC Risk Review Panel for review.

c. To maintain consistency across the Center, standard reports shall be provided by the organizational unit supporting identification of decision alternatives and risk informed decision-

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making. Reports should include: Top Risk Report 5x5 Probability- Impact Diagram, Top Risk List with Risk Title, Detailed Risk Statement, and Risk Owner, and a Watch List.

d. Each directorate/office shall escalate risks within IRMA for decisions within the organizational unit and report its Top Risks and Watch List to the SSC Joint Management Council (JMC) Risk Review Panel for review and submission to the JMC for approval by the Center Director. This process provides support for risk analysis of decision alternatives at the Center-level.

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CHAPTER 2. RISK MANAGEMENT ROLES AND RESPONSIBILITIES

2.1 Stennis Space Center (SSC)

SSC consists of mission directorates and mission support offices that support management of critical Center functions. Each directorate/office shall identify their organizational risks based upon performance measures and mission support requirements. Each directorate and mission support office shall establish and implement RM and RIDM consistent with requirements set forth in this document.

2.2 Center Director

A key institutional role of the Center Director is service across directorates and mission support office needs, determining how best to support various efforts hosted at the Center and communicating any issues to the next higher organizational element. Directorates/Offices shall support these practices by exercising their organizational mission and responsibilities as defined by mission statements and organizational structure. The Center Director shall be responsible for management of risks at the Center. These responsibilities include:

a. Providing appropriate levels of authority, resources and funding necessary for implementation.

b. Serving as the ultimate risk acceptance/disposition official for SSC organizations.

c. Incorporating reviews of top level risks into recurring SSC Joint Management Council and Center-level review boards to support risk analysis of decision alternatives and assessment of organizational performance requirement baselines.

2.3 Directorate and Office Managers

Each Directorate and Office manager shall be responsible for implementing, managing and reporting risks within their organization utilizing the process identified in this SPR. These responsibilities include:

a. Designating an organizational risk point-of-contact (POC) to facilitate the process and ensure compliance with SSC's Integrated Risk Management requirements.

b. Ensuring that risks are identified and analyzed and that key decisions of the organization are risk informed.

c. Management of organizational institutional risk that solely affects their sub-organizational elements shall be carried out within individual directorates/offices.

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d. Ensuring that sub-organizational risks are identified and that interdependencies are either managed at the current level or elevated.

e. Assisting in the development and management of risks through participation in appropriate councils and review boards.

f. Reporting risks to the Center Director, SSC Joint Management Council, JMC Risk Review Panel, and other review boards as required.

g. Providing appropriate levels of authority, resources and funding necessary for implementation within their respective directorates and offices.

h. Provide support to the JMC Risk Review Panel.

i. Ensuring risk owners and other personnel obtain risk management training, as appropriate. Description of required training modules is found in Appendix F.

j. Ensuring the development and coordination of internal directorate/office risk management plan utilizing the template provided in Appendix G. The Directorate/Office Manager or designated representative signature is required to reflect approval. Other signatures may be added if applicable. The concurrence of the Office of Safety and Mission Assurance Manager or designee is required on all directorate/office-level plans.

k. Conducting a monthly review of risks, aimed at identifying, analyzing, tracking, controlling, and documenting risks within their organization.

2.4 SSC Office of Safety and Mission Assurance

The Office of Safety and Mission Assurance shall be responsible for implementing a Center-level integrated risk management program and establishing risk management guidelines, processes and common standards throughout SSC. The Office of Safety and Mission Assurance (SMA) shall serve as the process owner for Integrated Risk Management at SSC. SMA's specific responsibilities include:

a. Providing appropriate Center level RM and RIDM policy, guidance and expertise.

b. Appointing Center-level Integrated Risk Manager.

c. Ensuring that appropriate training is provided on applicable risk management policies, tools, and processes.

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d. Performing independent internal assessments and verification of SSC organizational elements RM and RIDM process as directed by the Center Director and/or the SSC Joint Management Council.

e. Providing RM support as necessary for communicating risk management issues to organizations outside of NASA.

f. Acting as the IRMA configuration manager and administrator for SSC.

g. Providing technical risk management support to SSC management councils and review boards through participation in deliberations regarding risk management as required and providing periodic reports on the status and results of its on-going Risk Management Program assessments.

h. Providing technical risk management expertise to directorate and mission support offices Risk Point-of-Contact.

i. Establishing and conducting an on-going assessment and verification process for the SSC Integrated Risk Management Program to monitor the wellness of the overall program, assure optimal use of the IRMA database and review program capabilities as well as produce periodic reports developed for management reviews and independent risk management assessments conducted by directorates/offices.

2.5 Center Integrated Risk Manager

The Center Integrated Risk Manager shall be responsible for providing directorates/office-level risk management support to planning, risk identification, risk analysis, risk tracking, risk mitigation, and reporting. Responsibilities include:

a. Serving as the lead for SSC integrated risk management team.

b. Providing RM expertise in support of RIDM and CRM processes implementation and integration activities across the Center.

c. Providing specific training on IRMA, SSC integrated risk management, and CRM.

d. Providing and maintaining a risk database to identify, track, analyze, mitigate, and report risks.

e. Providing technical RM support to SSC JMC and review boards as required.

f. Supporting the development and maintenance of the Center Top Risk Report and Watch List.

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g. Providing RM expertise to Directorate/Office Risk Point-of-Contact in support of organizational implementation of RM and RIDM.

h. Conducting RM audits of directorate offices risk management practices and procedures, for best practices and integration opportunities, and make the results of these audits available to Center Senior Management.

2.6 Directorate/Office Organizational Risk Point-of-Contact

Each Directorate and Office shall assign an individual(s) to serve as its Risk Point-of-Contact (RPOC), with the following responsibilities:

a. Ensuring the development, implementation and maintenance of the organizational element's risk management plan, IRMA database, RIDM and CRM processes.

b. Maintaining cognizance of all risk management issues for subordinate organizational levels and serving as the point-of-contact for risk issues elevated from subordinate organizational elements.

c. Coordinating RM activities with S&MA, SSC management councils, and review boards.

d. Completing both SSC IRMA training and SSC Risk Point-of-Contact Training. A brief description of these training modules is provided in Appendix F.

e. Ensuring all risk-owners and other individuals who require an account in IRMA complete the SSC IRMA training.

2.7 SSC Joint Management Council and Center Review Boards

a. The deliberative process that takes place within these forums is the central element of RIDM at the Center. The responsible official (e.g., Chair, Executive Secretary) for the SSC Joint Management Council, the JMC Risk Review Panel, and other Center review boards shall establish risk communication protocols (including the frequency and content of reporting) that satisfy the needs and requirements of this document.

b. This communication may be accomplished using the standard risk reports or other risk-informed communication inputs to support decision-making within the specific council or review board. These processes shall be coordinated with the SSC Office of Safety and Mission Assurance. See Appendix C for the JMC Vetting Process.

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CHAPTER 3. RISK MANAGEMENT ACTIVITIES

3.1 Risk Assessments

All SSC organizational elements shall use the SSC assessment criteria embedded in IRMA to support their risk assessment process and the 5x5 Probability Impact Diagram (PID) depicted in Appendix D. This scorecard provides a common reference framework across the Center and enables a coherent risk data comparison.

3.2 Risk Tracking

Each directorate/office shall track their risks in IRMA. The intent of risk tracking is to ensure that all risks are identified, captured, and communicated within the appropriate hierarchical units at the Center. This assures that appropriate risk information is available for decision-makers at all levels to support successful risk mitigation.

3.3 Risk Mitigation Planning

a. Risk mitigation plans shall be developed within the IRMA database and include the specifics of what should be done, when it should be accomplished, and who is responsible.

b. All risks rated as red or yellow shall have a mitigation plan developed and documented in IRMA. Each plan may have several mitigation tasks (as required to adequately address the identified risk) that need to be performed by different owners.

c. Organizational units should re-evaluate known risks on a periodic basis. Specifically, at the successful completion of a mitigation step the likelihood and consequence of the risk shall be adjusted accordingly.

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APPENDIX A ACRONYMS AND DEFINITIONS

A.1 Acronyms

CRM	Continuous Risk Management
IRMA	Integrated Risk Management Application
JMC	Joint Management Council
NPD	NASA Policy Directive
NPR	NASA Procedural Requirements
PID	Probability Impact Diagram
POC	Point-of-Contact
RIDM	Risk Informed Decision Making
RM	Risk Management
RRP	Risk Review Panel
SMA	Safety and Mission Assurance
SSC	John C. Stennis Space Center
SPD	Stennis Policy Directive
SPR	Stennis Procedural Requirements

A.2 Definitions

Word	Definition
Acceptable Risk	The risk that is understood and agreed to by the directorate/office Risk Point-of-Contact,
Candidate Risk	A potential risk that has been identified and is pending approval by the Risk Pont-of-Contact.
Closed Risk	A risk that is no longer a risk to the organizational unit. For example, a risk related to a given procurement may be closed after the procurement is complete.
Consequence	An assessment of the credible, potential impact / result(s) of a risk. It is the part of the risk statement that focuses on the intermediate and long-term impact of a risk and describes the key, negative outcome(s) of the current conditions.

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Word	Definition
Continuous Risk Management (CRM)	The process that identifies risks; analyzes their impact and prioritizes them; develops and carries out plans for risk mitigation or acceptance; tracks risk and the implementation of plans; supports informed, timely, and effective decisions to control risks and mitigation plans; and assures that risk information is communicated and documented.
Top Risk	Those undesirable events having both high probability and high impact/severity.
IRMA	Integrated Risk Management Application
Impact	The Impact is the effect that a risk has on an activity, and a given risk may have multiple impacts. For example, the risk title might be "Failure of subcontractor". This might have multiple impacts on different activities, each with a different cost and time impact and probability.
Issue	An undesirable event that has occurred or will occur and its occurrence cannot be stopped / directly controlled.
JMC	Center level risk decision making authority. The JMC serves as the central element for risk informed decision making at the Center level.
Likelihood	The probability that a risk will occur.
Mitigation	Taking action to reduce the severity of a risk, either by reducing the probability of it occurring, or by reducing the level of impact if it does occur, or both.
Mitigation Plan	A plan, which you put in place to mitigate a risk impact. The plan consists of a number of responses, and can act to mitigate more than one risk impact. For example, a mitigating plan, which involves staff training or safety initiatives, could act to mitigate a number of risks within your organization.
Open Risk	A risk that has not been closed or accepted.
Probability	The likelihood of a risk impact occurring.
PID	Probability-Impact Diagram
Problem	A problem is a risk that has already occurred.

Word	Definition
Risk	Risk. The combination of 1) the probability (qualitative or quantitative) of an undesired event such as cost overrun, schedule slippage, safety mishap, or failure to achieve a needed technological breakthrough; and 2) the consequences, impact, or severity of the undesired event were it to occur.
Risk Acceptance	The determination that the consequences of an identified risk, should they occur, are acceptable without further mitigation.
Risk Informed Decision Making (RIDM)	Risk-informed decision making is a deliberative process in consultation with the organizational unit at the next lower level to inform management decision-making. RIDM requires the risk analysis of alternatives and the selection of a decision alternative that is *informed* by these results.
Risk Management (RM)	Risk Management. An organized, systematic decision-making process that efficiently identifies, analyzes, plans, tracks, controls, communicates, and documents risks.
Risk Point-of-Contact (RPOC)	Individual(s) responsible for providing Risk Management support to the directorate/office.
Risk Management Plan (RMP)	A Risk Management Plan (RMP) is the document that formally defines and establishes an organization's approach to conducting risk management including the organization's risk management strategy; organizational structure, relationships, and responsibilities for managing risk; guidelines and policies regarding processes, metrics and tools for executing and communicating an integrated risk management methodology; and the risk management resource investments required.
Risk Owner	The individual to whom the risk is assigned for purposes of responsibility and accountability.
Risk Review Panel	The RRP is the risk vetting agency of the JMC responsible for reviewing all risks submitted to the JMC and developing a proposed Center-level risk report and watch list for submission to the JMC.
Risk Score	A numeric representation of the overall risk severity, taking into accounts both the risk impact and the probability of that impact occurring.
Risk Statement	A descriptive statement that defines the condition of the risk and its consequence.

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Word	Definition
Top Risk Report	Risks that are deemed to have the greatest significance/impact. These are generally rated as Red or Yellow using the SSC Probability Impact Diagram.
Watch List	Risks in which the impacts (consequences) are tolerable given the current environment / circumstances. The impacts may be intolerable if the current environment / circumstances change, so these risks are monitored for possible change. These risks are generally rated as Green using the SSC Probability Impact Diagram.

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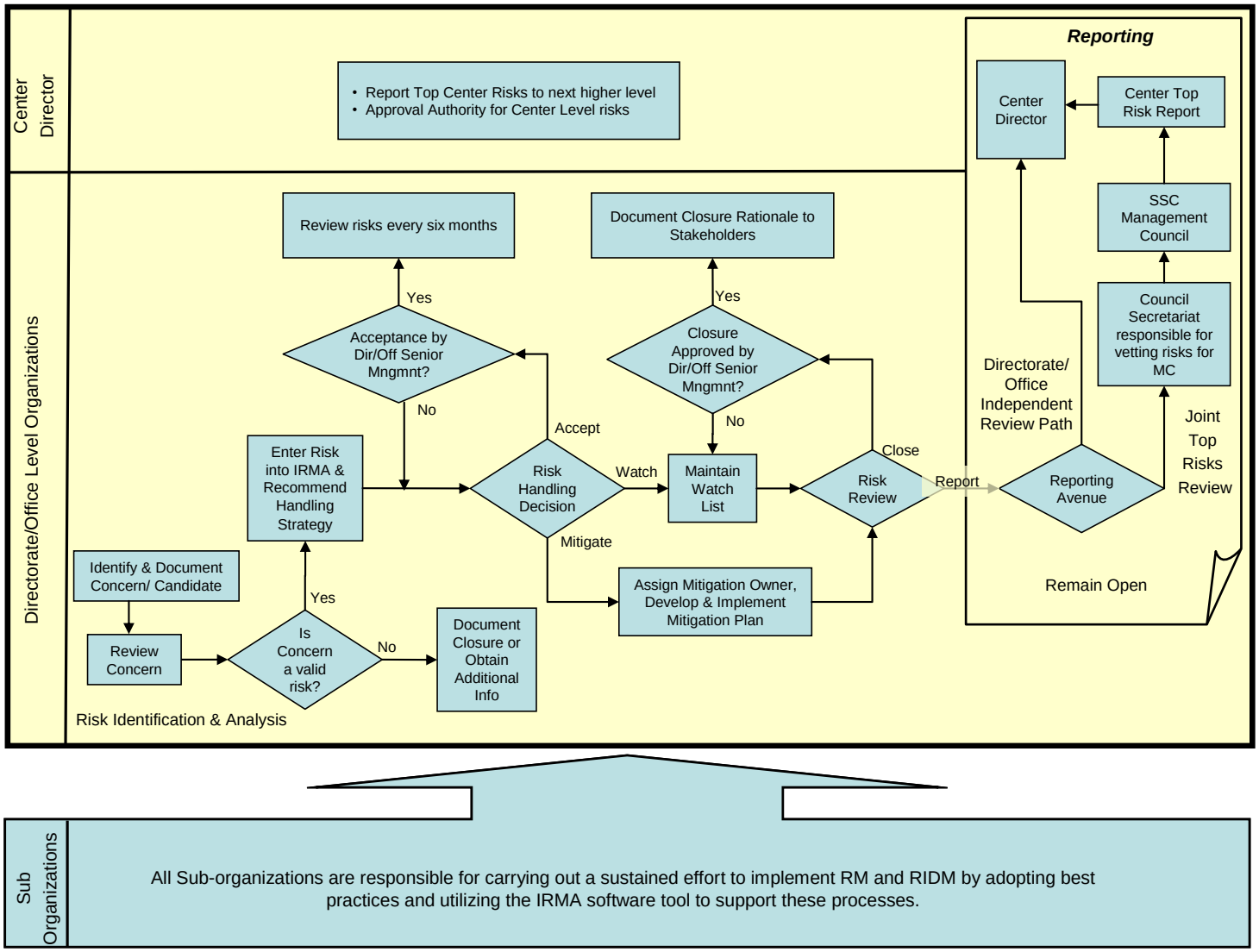
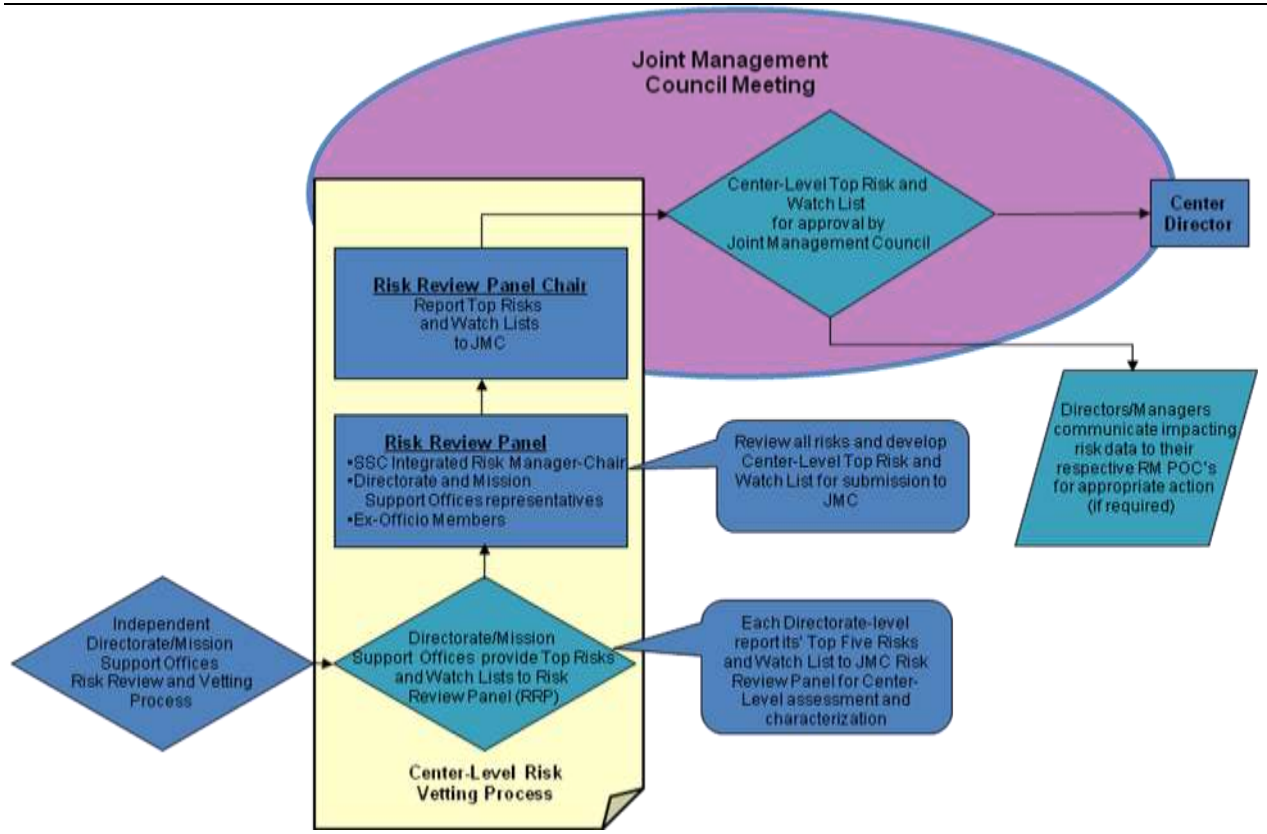
APPENDIX B SSC RISK MANAGEMENT PROCESS FLOW



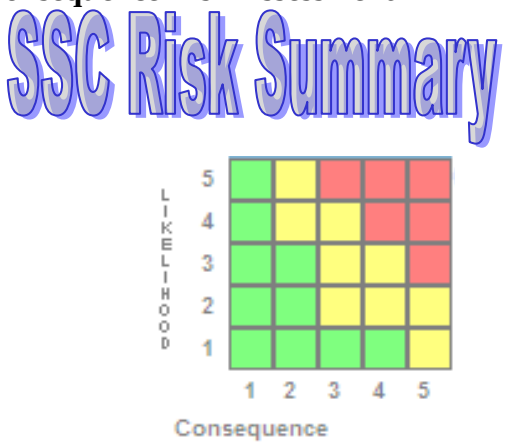
APPENDIX C JMC RISK VETTING PROCESS FLOW



APPENDIX D SSC RISK ASSESSMENT GUIDE

Likelihood/ Consequence Risk Assessment

LIKELIHOOD		LIKELIHOOD RATING
1	Very Low	Qualitative: Very unlikely to occur, management not required in most cases. Strong controls in place. Quantitative: <= 5% (for risks with primary impact on Cost, Schedule, or Performance) or <=E-5 (for risks with primary impact on Safety)
2	Low	Qualitative: Not likely to occur, management not required in all cases. Controls have minor limitations/uncertainties. Quantitative: <= 10% (for risks with primary impact on Cost, Schedule, or Performance) or <=E-4 (for risks with primary impact on Safety)
3	Moderate	Qualitative: May occur, management required in some cases. Controls exist with some uncertainties. Quantitative: <=33% (for risks with primary impact on Cost, Schedule, or Performance) or <=E-3 (for risks with primary impact on Safety)
4	High	Qualitative: Highly likely to occur, most cases require management attention. Controls have significant uncertainties. Quantitative: <=50% (for risks with primary impact on Cost, Schedule, or Performance) or <=E-2 (for risks with primary impact on Safety)
5	Very High	Qualitative: Nearly certain to occur, requires immediate management attention. Controls have little or no effect. Quantitative: >50% (for risks with primary impact on Cost, Schedule, or Performance) or >E-2 (for risks with primary impact on Safety)



IMPACT / CONSEQUENCE	Consequence Rating	Very Low	Low	Moderate	High	Very High
	LEVEL	1	2	3	4	5
	SAFETY	Magnitude of harm or discomfort to employees, contractors, or public is not greater than ordinarily encountered in daily life --Or-- Negligible damage to asset consistent with normal wear and tear. (Close call: < $1000 but which possesses a potential to cause a mishap)	Minor first-aid treatment (does not adversely affect personal safety or health) --Or-- Minor loss/damage to agency capabilities, resources or assets --Or-- Administrative regulatory non-compliance (scoped to safety, health and environment). (Type "D" Mishap: >$1000 but <$25,000)	Medical treatment for a injury or incapacitation --Or-- Moderate loss/damage to agency capabilities, resources or assets --Or-- Moderate regulatory non-compliance (scoped to safety, health and environment). ("C" Mishap: >$25,000 but < $250,000)	Severe injury or incapacitation --Or-- Major loss/damage to agency capabilities, resources or assets --Or-- Major regulatory non-compliance (scoped to safety, health and environment). ("B" Mishap: >$250,000 but <$1,000,000)	Death or permanent disability --Or-- Complete loss of critical agency capabilities, resources or assets. ("A" Mishap: >$1,000,000)
	PERFORMANCE	Nuisance. No impact on Center/Program Mission objective --Or-- No loss of Agency capability --Or-- Non-compliance with internal policy and procedures -- No corrective action or modification is needed to current or future Missions	Minor impact on Center/Program Mission --Or-- Minor loss of Agency capability --Or-- Administrative regulatory non-compliance -- Mild corrective actions or slight modifications are needed to achieve Program Mission goal, to maintain Agency capability, or remedy non-compliance to current or future Missions	Moderate impact on Center/ Program Mission goals --Or-- Moderate loss of Agency capability --Or-- Moderate regulatory non-compliance -- Corrective actions or modifications are available to achieve Program Mission goal, to maintain Agency capability, or remedy non-compliance to current or future Missions	Major impacts to Center/ Program Mission goals -- Or -- Major loss of Agency capability --Or-- Major regulatory non-compliance -- Corrective actions or modifications may be technically feasible. Program Mission goal, Agency capability, or non-compliance remedy cannot be achieved through available resources or time constraints to current or future Missions	Center/Program Mission goals are not achievable --Or -- Complete loss of critical Agency capability for current or future Missions
	SCHEDULE	Negligible impact with slight schedule adjustments. Impact can be compensated by available schedule with no change of end date (e.g., 1 month delay to major project milestones)	Negligible impact with slight schedule change. Impact cannot be compensated by available schedule and impacts end date (e.g., 1 to 3 month delay to major project milestones)	Moderate overall schedule impact (e.g., >3 month delay to major project milestone --Or-- 1 month delay to major program milestone)	Major overall schedule impact (e.g., 1 to 3 month delay to major program milestone)	Unable to achieve key/major milestone (e.g., >3 month delay to major program milestone)
	COST	Impact of < 0.1% to Mission functional/project budget --Or-- < $40K impact	Impact of > 0.1% and < 1% to Mission functional/project budget --Or-- > $40K and < $4M	Impact of > 1% and < 10% to Mission functional/project budget --Or-- > $400K and < $4M	Impact of > 10% and < 25% to Mission functional/project budget --Or-- > $4M and < $10M	Impact of > 25% to Mission functional/project budget --Or-- > $10M

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APPENDIX E CONTINUOUS RISK MANAGEMENT

The CRM paradigm depicts the different activities composing Risk Management. CRM provides ongoing assurance of progress towards the achievement of performance requirements. The model is represented as a circle to emphasize that risk management is a continuous process while the arrows show the logical and temporal flow of information between the activities in risk management. Communication is placed in the center because it is both the conduit through which all information flows and often the major obstacle to risk management. In essence, the paradigm is a framework for Risk Management. A brief summary of the Continuous Risk Management activities follows.

a. **Identify**. Before risks can be managed, they must be identified. Identification surfaces risks before they become problems and adversely affect a project. An effective approach for surfacing risks is by the application of a disciplined and systematic process that encourages personnel to raise concerns and issues for subsequent analysis.

b. **Analyze**. Analysis is the conversion of risk data into risk decision-making information. Analysis provides the basis for the project manager to work on the “right” risks.

c. **Plan**. Planning turns risk information into decisions and actions (both present and future). Planning involves developing actions to address individual risks, prioritizing risk actions and creating a risk mitigation plan.

d. **Track.** Tracking consists of monitoring the status of risks and actions taken to ameliorate risks. Appropriate risk metrics are identified and monitored to enable the evaluation of the status of risks themselves and of risk mitigation plans.

e. **Control**. Risk control corrects for deviations from planned risk actions. Once risk metrics and triggering events (“Triggering Events” are warning or control limits) have been chosen, there is nothing unique about risk control. Rather, risk control melds into project management and

relies on project management processes to control risk action plans, correct for variations from plans, respond to triggering events, and improve risk management processes.

f. **Communicate/Document**. Risk communication and documentation lies at the center of the model to emphasize both their pervasiveness and its criticality. Without an effective documentation system and successful communication, no Risk Management approach can be viable. While communication facilitates interaction among the elements of the model, there are higher level communications to consider as well. To be analyzed and managed correctly, risks must be communicated to and between the Directorates and Offices. This is accomplished via the SSC Joint Management Council and supported by the Risk Review Board process.

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APPENDIX F SSC RISK TRAINING

Training plays a critical role in communicating a cohesive risk culture across the Center. It provides a level of expertise in the concepts of risk management that is beyond the scope of this SPR, or any organizational element's risk management plan, and supports the understanding and use of best practices for effective risk identification, analysis, and handling. Performing organizations are responsible for implementing desired training beyond this level of expertise.

a. SSC IRMA training - This training is required for the identified organizational risk management point-of-contact and provides an overview of the Integrated Risk Management Application (IRMA) database, access instructions, screen layouts, field descriptions, and reporting guidelines. This training module is provided in distance learning format (SATERN course number SSC-001-08).

b. SSC Risk Point-of-Contact training - This instructor-led training module provides the skills and techniques used by the risk point-of-contact to assist in implementation of CRM and Risk-Informed Decision Making within the Directorate/Office.

c. Risk Owner training – Unique risk owner training requirements will be identified and provided by the Organizational Risk POC.

APPENDIX G SSC ORGANIZATIONAL RISK MANAGEMENT PLAN OUTLINE

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