

# EH&S Risk Discovery, Prioritization and Management Process

John H. Gamble, P.E.  
MD Anderson Cancer Center

Vision



Design



Metrics



Tools



Methods



Outcomes



...Anticipate Risk and Manage It!



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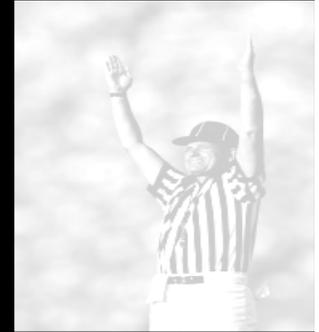
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**Vision**

## HAVE

By 12/31/06 have an updated and functional EHSMS Web Site that is integrated into the EH&S intranet site and meets third party scrutiny

## BE

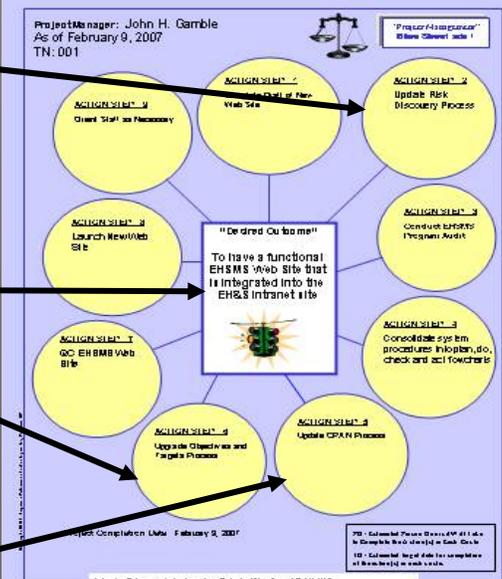
Be Highly Skilled and Mission Driven through Identifying, Prioritizing and Managing Campus Wide EH&S Risks

Risk Assessment Process

WHY

Objectives & Targets

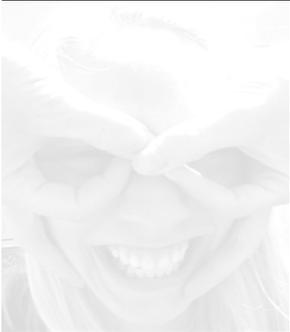
CPAN



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WHO

Houston  
Smithville  
Bastrop

WHERE

Physical Plant Facilities,  
Patient Care, Adm. &  
Research Areas

HOW

Establishment of an EH&S Department Working Group  
Needs Assessment and System Development  
Management Participation and Feedback  
Regulatory Applicability Review  
Process and Work Flow

WHAT

A Campus Wide Review and  
Characterization of EH&S  
Risks

WHEN

Annual Review of  
Aspects and Hazards  
during the Fall of 2006

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## Metrics

### CORRECTIVE AND PREVENTIVE NOTICE (CPAN)

- ✓ DNV Audit Findings
- ✓ Annual EHSMS Audit Findings

### OBJECTIVES & TARGETS

- ✓ Environmental Impacts
- ✓ Health & Safety Impacts

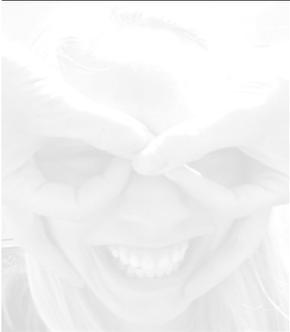
### MANAGEMENT REVIEW

- ✓ Suitability
- ✓ Adequacy
- ✓ Program Effectiveness
- ✓ Management Discretion

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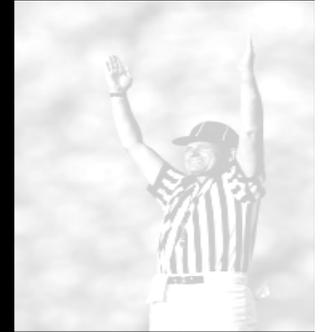
Tools



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## TOOLS

- ✓ Regulatory Applicability Matrix
- ✓ Compliance Calendar
- ✓ Plan Reviews
- ✓ Lab Inspections
- ✓ Shop Inspections
- ✓ Food Safety Inspections
- ✓ Storm Water Inspections
- ✓ SPCC Inspections
- ✓ Construction Safety Inspections
- ✓ Asbestos Remediation
- ✓ Emergency Plans
- ✓ FDA Product Recalls
- ✓ RCRA Inspections
- ✓ Exposure Assessments
- ✓ Environmental Due Diligence
- ✓ ADA Inspections

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**Aspects and Hazards Alignment Process**

Criteria for Establishing Objectives & Targets	Aspects and Hazards Alignment Process					Total
	Legal & Other Requirements	Technological Options	Financial	Business & Operational	Views of Interested Parties	
Legal & Other Requirements	3	3	3	3	3	15
Technological Options	3	3	3	3	3	15
Financial	3	3	3	3	3	15
Business & Operational	3	3	3	3	3	15
Views of Interested Parties	3	3	3	3	3	15
Management Discretion	3	3	3	3	3	15
<b>Total</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>75</b>

**Instructions:**  
 1- Add in the Criteria Descriptions on the left side (cells A2:A7).  
 2- Starting at the top row, compare the first criteria with each of the others in turn. If the value in the left column is more significant than the criteria it is being compared to, change the score in the box to "3". Otherwise, leave it as "1" and continue to the next comparison.  
 3- Once you have completed the first row, continue with the second row. Note that the corresponding score in the bottom (green) section is automatically changed when you change the top section (blue) score.  
 4- If your team cannot reach consensus, score the comparison as "3". You will need to manually change the corresponding bottom section score.

Date: October 1, 2006  
Revision: 1.0

**Summary of Significant Risks**

Category	Activity	Location	Aspects & Hazards	EH&S Impact	Risk Rating										Current Mitigation Measures																																							
					1	2	3	4	5	6	7	8	9	10																																								
Process	Process A	Area A	Aspect A	Impact A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Methods**

- BUSINESS VALUE**
- ✓ Forced Pairs Comparison
- PROCESS MAPPING**
- ✓ Activities, Products and Services
- ASPECTS AND HAZARDS**
- ✓ Environmental Impacts
- ✓ Health & Safety Impacts
- RISK ASSESSMENT**
- ✓ Operating Condition
- ✓ Frequency
- ✓ Probability
- ✓ Severity
- ✓ Control Effectiveness
- SIGNIFICANCE DETERMINATION**

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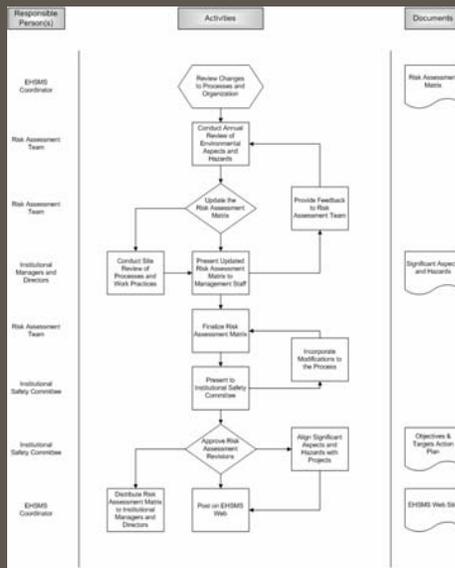
Tools



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Outcomes



Outcomes

## CREATE A SUSTAINABLE PROCESS

✓ Plan, Do, Check and Act

## IDENTIFY ALL EH&S RISKS

✓ Campus-wide Initiative

## PRIORITIZE RISKS

✓ All Environmental Media

✓ All Health & Safety Risks

## ASSESS THE BUSINESS VALUE

✓ Determine Intrinsic Value to MDACC

✓ Add in Multiplicative Risk Assessment Scores

## DRILL DOWN ON SIGNIFICANT RISKS

✓ Address through the Business Plan

✓ Objectives & Targets Tracking and Follow-up

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## System Functionality Details

### SUSTAINABLE PROCESS

Continuing Improvement

Objectives & Targets Alignment

Significant Risk Determination

Operations Management Review

Business Value Determination

EH&S Impact Determination

Risk Analysis

Regulatory Applicability Matrix

Regulatory Tracking

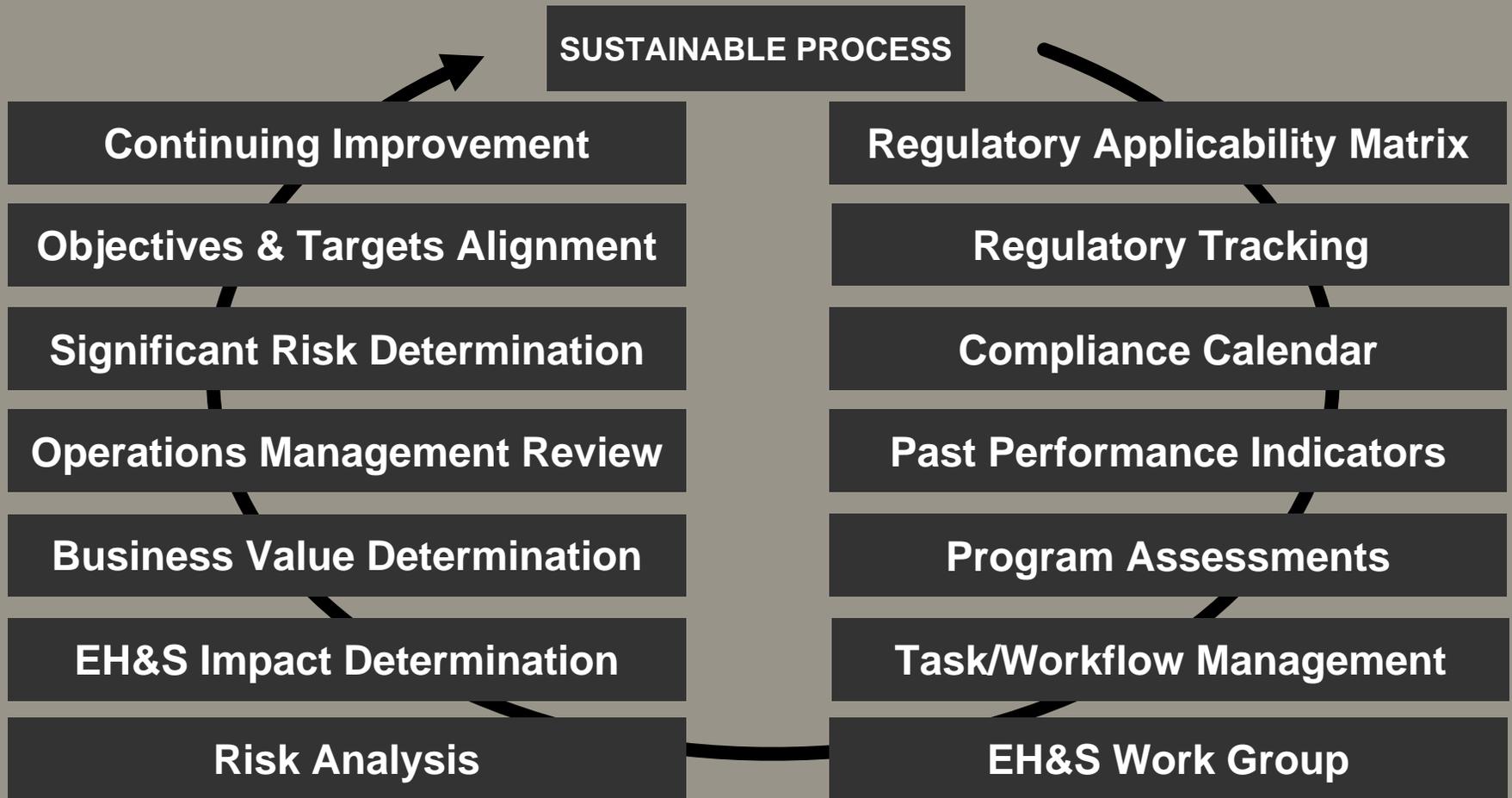
Compliance Calendar

Past Performance Indicators

Program Assessments

Task/Workflow Management

EH&S Work Group



EH&S Risk Discovery,  
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# The Management System Evolution

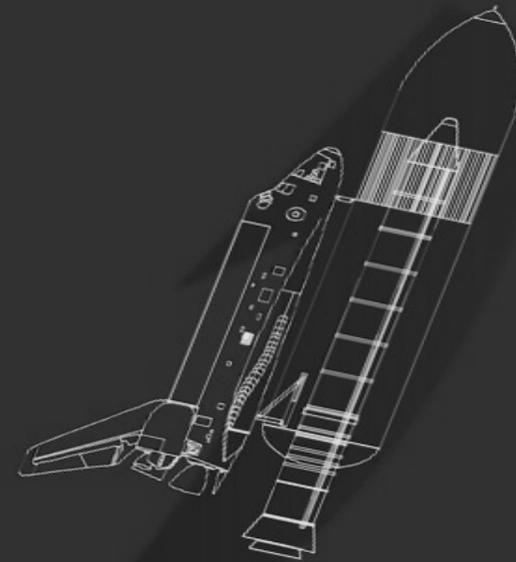
Risk Discovery Process:  
Management Approaches



“Fire Fighter”



“Compliance”



“Risk Management”  
An Integrated Approach