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Roundtable 210 EH&S  
Management Systems – Return on  
Investments: Dreams or  
Prolonged Nightmares?

Topic: Making IH Hazard Assessments  
Simple through Automation – Is this  
Possible?

# Introduction

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This presentation will discuss personal experiences gained over 20 years developing, implementing, and supporting both successful and sometimes not so successful Industrial Hygiene solutions. Also included are several screen examples on proven ways to implement effective software for qualitative health risk assessments.

# Keys To Success

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- Communication.
- Adaptability.
- Management Support.
- User Buy-In.

# Communication

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- Consensus among “Subject Matter Experts”.
- Translating ES&H Needs to IT.
- Managing Expectations.
- Leadership.

# Adaptability

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- Flexible Program Design.
  - Changing Standards.
  - New Requirements.
- Database Design Portability.
  - Technology Changes.
  - Scalability.

# Management Support

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- Demonstrate Success.
- Address Political Hot Topics.
  - Asbestos.
  - Beryllium.
  - Historical Records.
- Support Policies and Procedures.
- Funding.

# User Buy-In

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- Convert User Feedback into Solutions.
  - New Program Features.
- Ease of Use.
- Training and Documentation.
- Strong Support for Power Users.

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# Examples for implementing a Qualitative Health Risk Assessment Software

This section provides example screens and features for implementing a more effective Qualitative Health Risk Assessment Software

# Qualitative Health Risk

CTS701:Health and Safety Surveys Main Menu

Health and Safety Surveys

Please choose the option you would like to use

**Survey Option**

- Add a new Survey
- Select a Survey

**Survey Type**

- Compliance Assessment Survey
- Health Risk Assessment ( Qualitative )
- Industrial Hygiene Sampling ( Quantitative )

Enter a Health Risk Assessment survey each time you evaluate potential risk of exposure for hazards related to the field of Industrial Hygiene. Examples typically include chemical, physical, biological and ergonomic hazards.

**Integrate Qualitative Assessments into a menu process that addresses other database areas the IH's will use. This helps keep them familiar with where to go and what the available options are.**

# Survey Management

CTS082: Health Risk Assessments

Select Survey ID: DP00002 Date: 02/21/2006 Title: UNIT 1 OPERATIONS

View: Work description Hazard Source Rating/Interpretation ALARP

HRA Type	Hazard/Material	SR	ER	CCR	CR	IG	Interpretation	Effective
JOB-TASK	BERYLLIUM OXIDE	5	2	3	2	14	YELLOW	N
JOB-TASK	ERGONOMICS - KNEELING, SQUATTING, STANDING ON 1 LEG, COI	3	2	4	2	10	YELLOW	Y
JOB-TASK	HEAT STRESS	3	1	4	1	4	GREEN	Y
JOB-TASK	ILLUMINATION	1	1	4	1	2	GREEN	U
JOB-TASK	NOISE LEVEL	3	3	2	1	6	GREEN	N
JOB-TASK	SLIPS, TRIPS, AND FALLS	2	1	4	1	3	GREEN	U

Make sure navigating through survey records is reasonably easy. Be sure to manage user expectations.

Buttons: Survey Report, HRA Report, View Lists, Print Item, HRA, Add, Edit, Delete, ALARP/RAP, Copy HRA, Survey, Coversheet, RAP List, Close

# Work Hazard

CTS082: Edit Health Risk Assessment

Work Hazard | Work Description | Hazard Properties | Frequency | Control Strategy | Control Categories | Exposure Rating | Interpretation

DP00002 UNIT 1 OPERATIONS

Job Category: OPERATOR   !

Task Category: CLEANING SLUDGE   !

Health Hazard

Hazard/Material: NOISE LEVEL   !

Description: NOISE LEVEL

Describe any additional material

Cancel

Use validation lists with quick access to list management for power users. Give power users greater control of lists in the beginning and try to pre-populate as many lists as you can.

# Hazard Ratings

CTS082: Edit Health Risk Assessment

Work Hazard | Work Description | Hazard Properties | Frequency | Control Strategy | Control Categories | Exposure Rating | Interpretation

DP00002 UNIT 1 OPERATIONS  
OPERATOR CLEANING SLUDGE  
BERYLLIUM OXIDE

Occupational Exposure Limit (OEL)

Assessment Type	Result Type	Limit	Unit
PERSONAL AIR	8 HOUR TWA	0.2	UG/M3

Estimated exposure level: LOW

Exposure Assessment Rating

Hazard Severity Rating	Exposure Rating	Certainty Rating
5	2	2

Exposure Control Rating

3	Control Chart Priority
2	Control Band
14	Information Gathering Rating

Assessment comments: [ ]

Flag this HRA for routine exposure monitoring?  
 Yes  No

Apply consensus standards like AIHA when dealing with severity and risk – but make it flexible. Consensus standards will change. Build a risk model that can work over time.

# Action Tracking

CTS702:Remedial Action Listing

Remedial Actions

Please choose the remedial action list to review/update

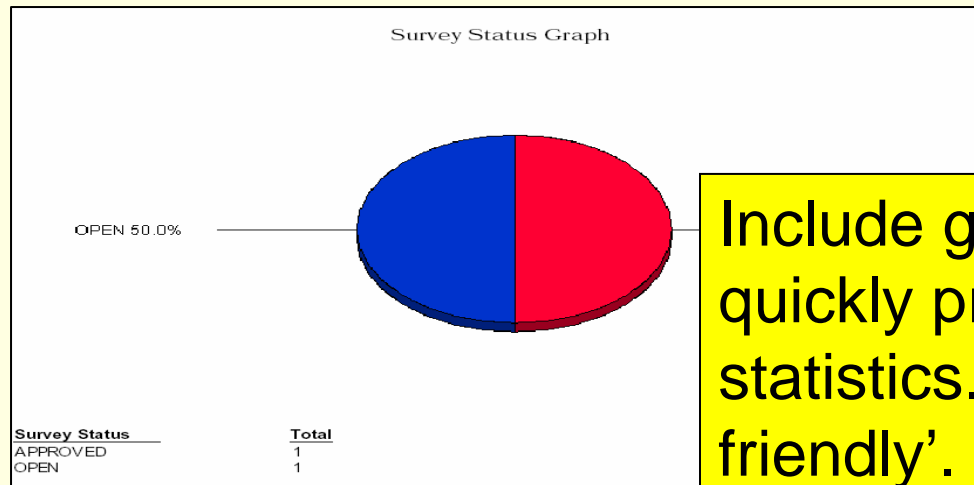
**Remedial Action Type**

- Compliance Deficiencies ( open )
- Recommendations ( open )

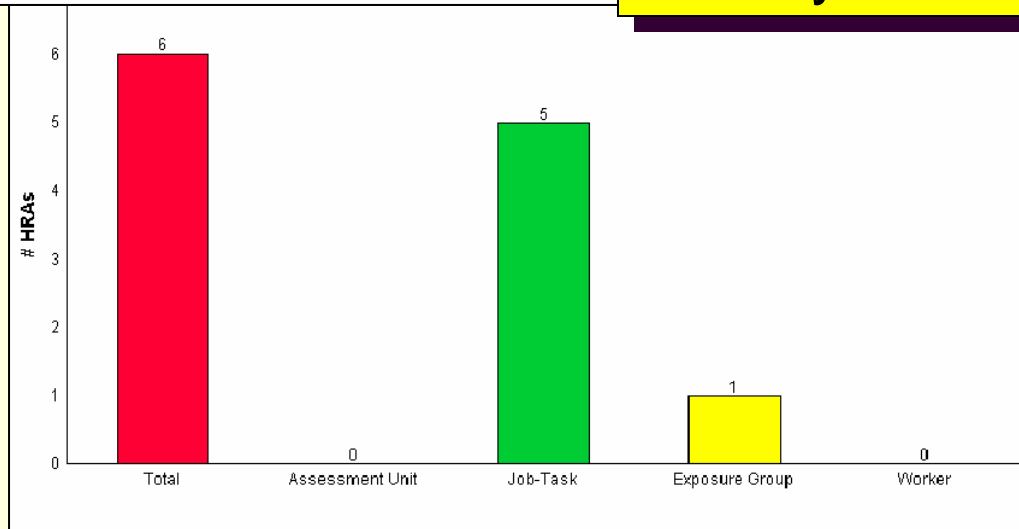
Select this option to view open recommended remedial actions as suggested by safety and health professionals during the performance of sampling and health risk assessment surveys. These recommendations are intended to provide risk-reduction actions that should be reviewed by management for consideration.

If you make recommendations or identify compliance deficiencies during your surveys – close them. If management does not accept the recommendation – document this and use it as the close-out criteria. Don't make recommendations without follow-through.

# Statistics



Include graphs that you can quickly print to provide system statistics. Graphs are 'human friendly'.



# Medical Surveillance

DOE, J Q 123456  
Review Dates: 11-12-2000 to 05-05-2006

**Section 1: Medical Surveillance Programs**

ID	Medical Surveillance Program	Personal Samples > Medical Action < review dates >	SEG Samples > Medical Action < review dates >	SEG Hazard Risk 1, 2, or 3 < history >	IH Hazard Assessment Statement
M000002	ASBESTOS PROGRAM	No	No	No	Does not meet asbestos enrollment criteria
M000004	BERYLLIUM PROGRAM	Yes	Yes	No	Meets Beryllium program enrollment criteria
M000005	HEARING CONSERVATION PROGRAM	No	No	Yes	Meets hearing conservation program enrollment criteria

**Section 2: Personal Sampling - Samples taken on this person between the review dates**  
Summary set of personal monitoring samples collected on this worker between the review dates.

Agent	Total Samples	Void Samples	< 50% OEL	>= 50% OEL	OEL
BENZENE	1	0	0	1	2 MG/M3
BERYLLIUM OXIDE	3	0	3	0	0.1 UG/M3
NOISE (TWA 80)	4	0	2	2	80 DBA

**Section 3: Personal Sampling - Complete History for this Person**  
Summary set of personal monitoring taken on this worker.

Agent	Total Samples	Void Samples	< 50% OEL	>= 50% OEL	OEL
BENZENE	1	0	0	1	2 MG/M3
BERYLLIUM OXIDE	3	0	3	0	0.1 UG/M3
NOISE (TWA 80)	4	0	2	2	80 DBA

**Section 4: Exposure Group Sampling Summary between the review dates**  
Summary set of personal monitoring samples between the review dates taken on exposure groups to which this worker has been associated through hazard assessment surveys and/or sampling.

Agent	Total Samples	Void Samples	< 50% OEL	>= 50% OEL	OEL
BENZENE	1	0	0	1	2 MG/M3
BERYLLIUM OXIDE	4	0	3	1	0.1 UG/M3
NOISE (TWA 80)	4	0	2	2	80 DBA

**Section 5: Exposure Group Hazard Risk - Complete History for this Person**  
Hazards that may be a potential exposure concern based on Industrial Hygiene Hazard Assessment field reviews. The risk rating is for Control/Risk priority. A risk rating of 1 has the highest priority for control (i.e., priority 1).

Hazard	Source	Risk
NOISE LEVEL	EQUIPMENT IN THE AREA	2

Work to integrate your qualitative data with quantitative data and medical surveillance.

# Sample Planning

## Information Gathering Priority Report

### Information Gathering Priority RED

IG Priority	Operation/Work Description	Material	# Samples
27	EG-0001 002 UNIT ONE OPERATORS CLEANING SLUDGE PIT	BERYLLIUM OXIDE	4

### Information Gathering Priority YELLOW

IG Priority	Operation/Work Description	Material	# Samples
14	OPERATOR CLEANING SLUDGE	BERYLLIUM OXIDE	1
10	OPERATOR CLEANING SLUDGE	ERGONOMICS - KNEELING, SQUATTING, STANDING ON 1 LEG, CONTCAT STRESS ON THE LEGS	0

### Information Gathering Priority GREEN

IG Priority	Operation/Work Description	Material	# Samples
6	OPERATOR CLEANING SLUDGE	NOISE LEVEL	0
4	OPERATOR CLEANING SLUDGE	HEAT STRESS	0
3	OPERATOR CLEANING SLUDGE	SLIPS, TRIPS, AND FALLS	0
2	OPERATOR CLEANING SLUDGE	ILLUMINATION	0

Provide report summaries that compile and prioritize sampling and information gathering efforts

# Presentation Review

This section is a close-out review of the keys to success along with some comments by the presenter.

# Keys To Success

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- Communication.
- Adaptability.
- Management Support.
- User Buy-In.

# Review the Options

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If you needed a word processor, would you call your IT department and start a team to build one? Of course not.

You would do a market search to see if one met your needs at a reasonable cost.

You should do the same for ES&H. There are a number of very good – time proven - commercial packages available for ES&H.

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