

**ACOEM Corporate Health
Achievement Award
2003**

**BAE SYSTEMS
Information & Electronic Warfare Systems**

**Robert C. Godefroi, M.D.
Medical Director**

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Manager, Medical Services**

“We Protect Those Who Protect Us”

Topics

BAE SYSTEMS Information & Electronic Warfare Systems (IEWS) Overview

Healthy People

- Ergonomics Program
- Ambulatory Health Clinics

Healthy Environment

- Chemical/Material Review Process

Healthy Company

- State of Mind Program/Research

Management and Leadership

Conclusion

Questions

Information & Electronic Warfare Systems (IEWS)

BAE SYSTEMS



*Their job is to fly into harm's way.
Ours is to make sure they fly out of it.*

“We Protect Those Who Protect Us”

Information & Electronic Warfare Systems (IEWS)

- **IEWS is headquartered in Nashua, New Hampshire.**
- **IEWS employs 5,400 people at major locations in Nashua, Merrimack and Hudson, N.H.; Lansdale, Pa.; Lexington, Mass.; Pomona, Calif.; Yonkers, N.Y.; Fort Worth, Texas; Manassas, Va.; and Washington, D.C.**
- **Approximately one-half of the workforce are engineers or program management personnel, about one-third are manufacturing personnel, and the rest are support personnel.**
- **IEWS is ISO 9001 and ISO 14001 registered**
- **Sales/Revenue 2002: \$3.7 billion***

*Sales/Revenue shown for BAE SYSTEMS North America

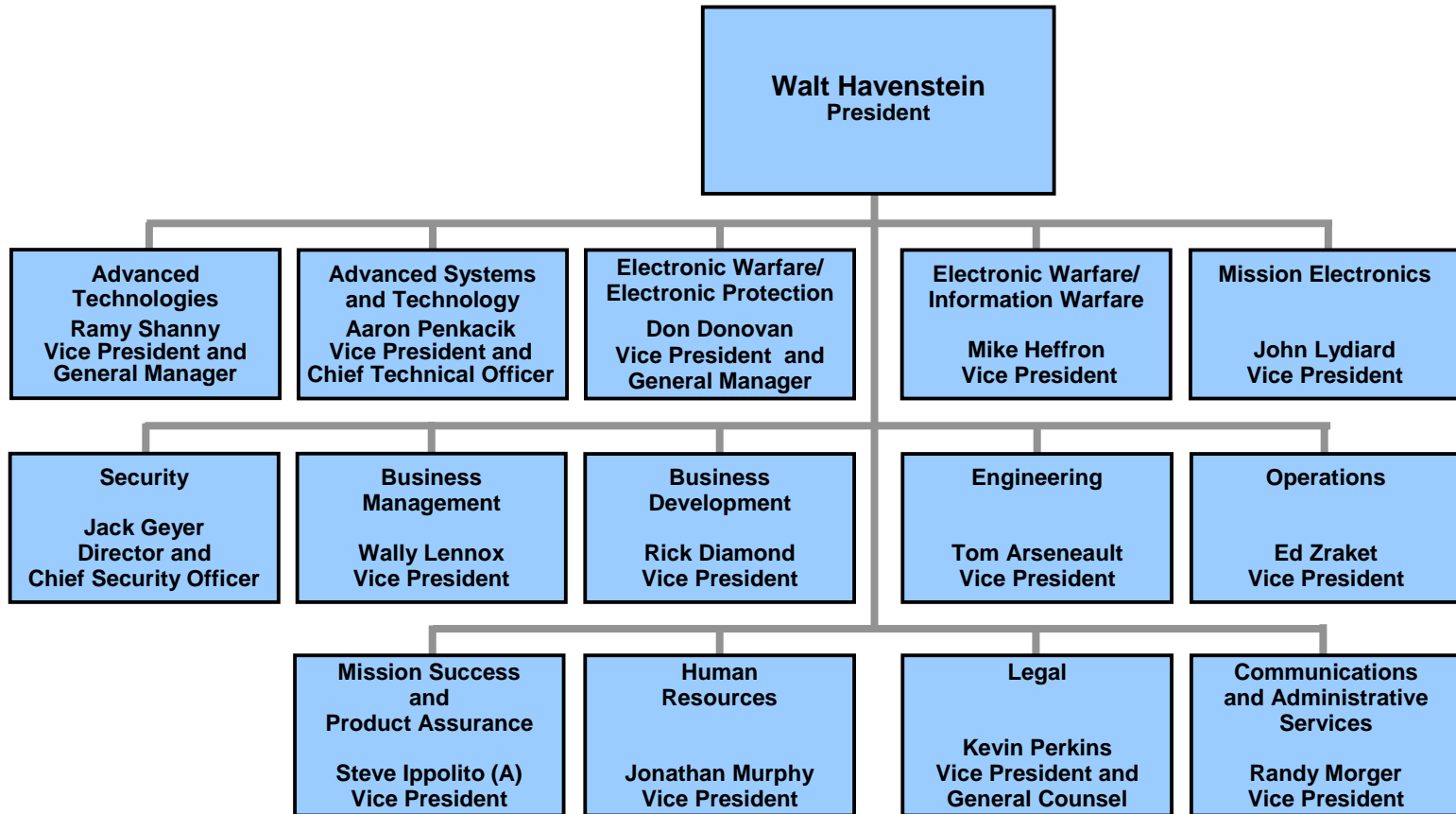
Information & Electronic Warfare Systems (IEWIS)

Culture

- IEWS strives to be the “Employer of Choice” for our employees and a good partner for our local communities.
- We have a strong tradition of community service and involvement, not only at the corporate level, but also at the employee level.
- In 2002, employees and IEWS contributed \$2.6 million to area civic, charitable, and educational institutions, including:
 - FIRST (For Inspiration and Recognition of Science and Technology)
 - United Way
 - Make-a-Wish Foundation
 - Juvenile Diabetes Research Fund



Information & Electronic Warfare Systems (IEWS)



Human Resources reports directly to the IEWS President.

IEWS Medical Services

Mission Statement:

Promoting health and wellness to our most valuable resource – our employees.

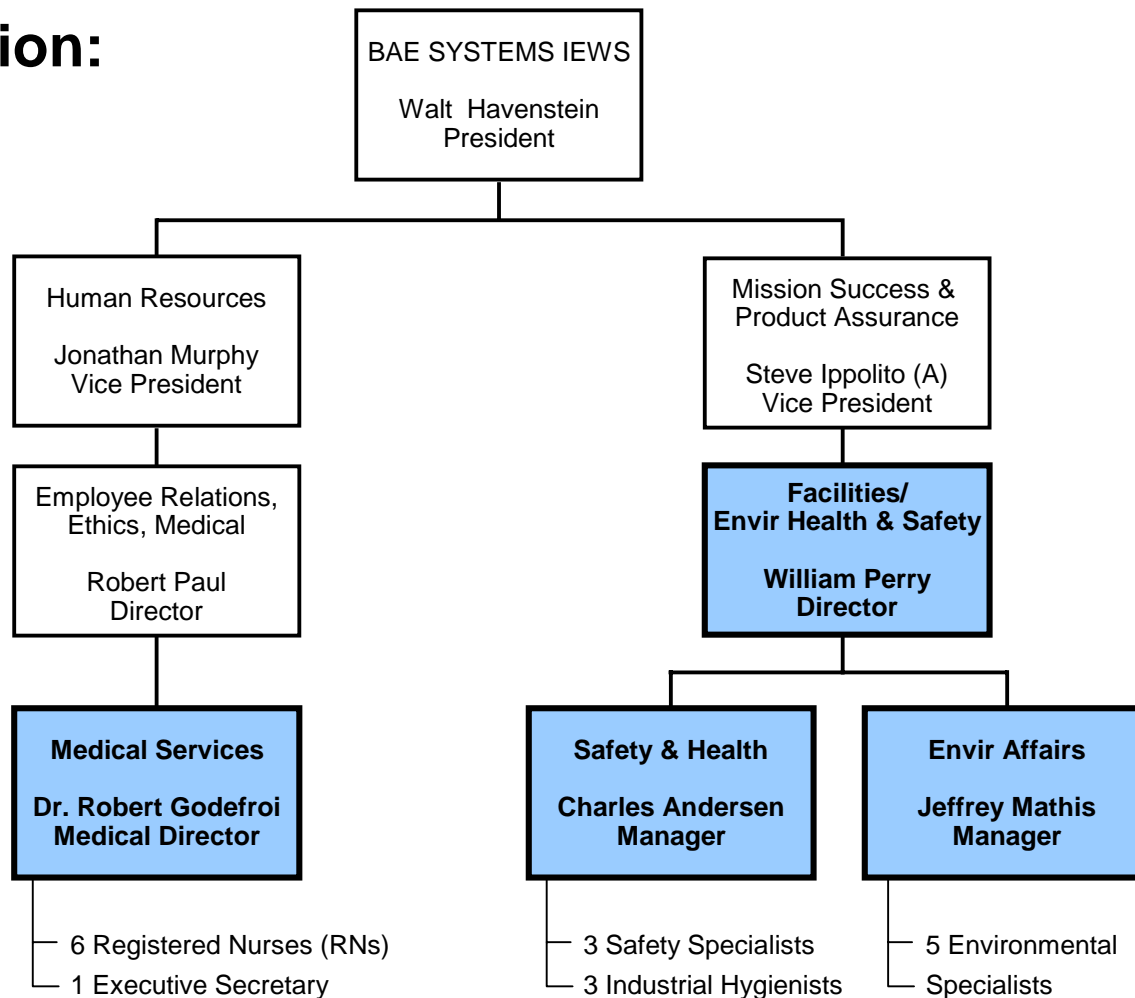
Our goal is to:

- provide quality health care,
- improve health and safety of our employees,
- prevent future health problems.



IEWS Medical Services

Organization:

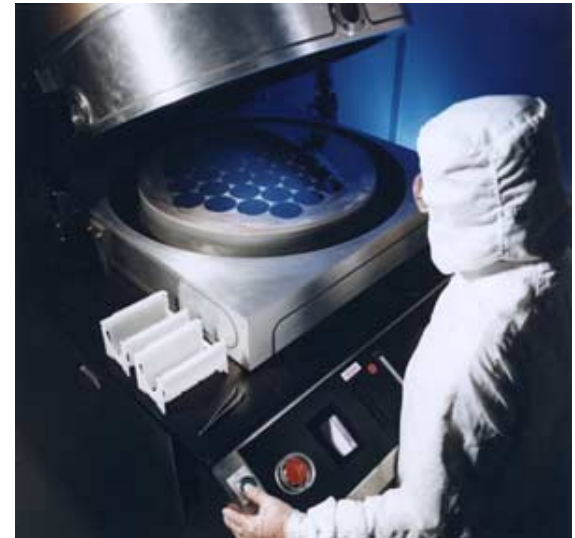


Health, safety, and environmental functions are divided between the Medical Department and Environmental Safety and Health (ESH) organizations.

Healthy People – Ergonomics Program

Issue:

- **Injuries experienced at IEWS have historically been cumulative traumas of the upper extremity.**
- **Approximately 40% of all injuries and illnesses were related to cumulative trauma disorders (CTDs).**



Healthy People – Ergonomics Program (cont.)

Intervention:

- In 1993, IEWS established an Ergonomics Task Force and instituted an Ergonomics Program.
- The Ergonomics Program created partnerships with engineering organizations to:
 - Implement ergonomic changes to workstations.
 - Emphasize ergonomics training of employees and supervisors.
 - Perform more work site evaluations.

Healthy People – Ergonomics Program (cont.)

Results:

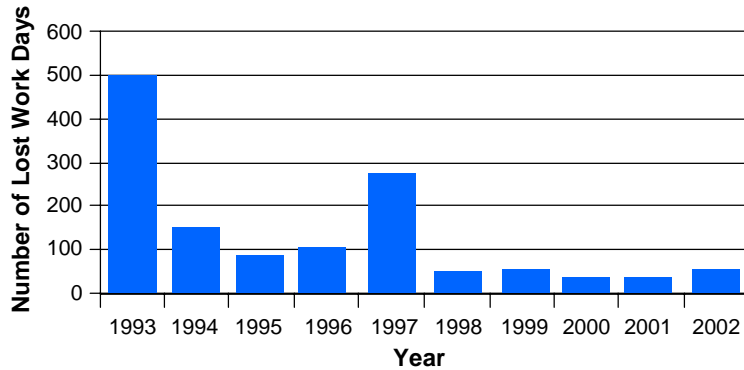


Figure 1. OSHA Recordable Cumulative Trauma Disorder (CTD) Lost Work Days

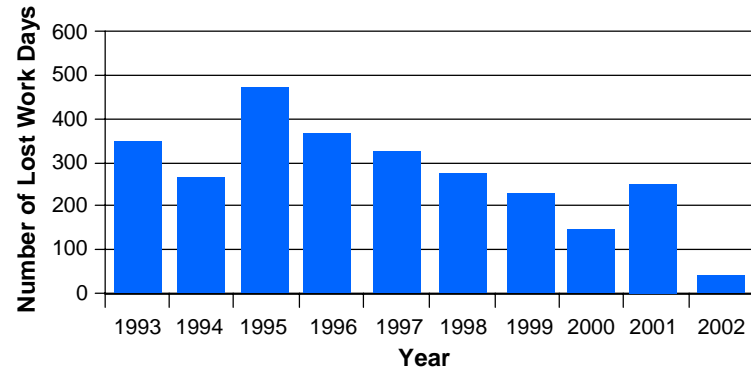


Figure 2. OSHA Recordable CTD Cases

Both the number of CTD Lost Work Days and CTD cases have declined as a result of our Ergonomics Program

Healthy People – Ergonomics Program (cont.)

Results (cont.):

Workers Compensation Costs (% of Payroll)				
Entity	1999	2000	2001	2002
IEWS	0.30%	0.34%	0.18%	0.25%
Industry Average (SIC 36)	0.54%	0.63%	(Data Not Available)	(Data Not Available)

Figure 4. Our Workers Compensation Costs as a Percentage of Payroll are Consistently Under the Industry Average

Workers Compensation Incident Rates				
Entity	1999	2000	2001	2002
IEWS	1.46	1.21	1.47	1.36
Industry Average (SIC 36)	5.7	5.7	5.7	(Data Not Available)

Figure 5. Our Workers Compensation Incident Rates are Lower than the Industry Average

Severity Rates (Cases Involving Days Away from Work)				
Entity	1999	2000	2001	2002
IEWS	0.46	0.36	0.35	0.17
Industry Average (SIC 36)	1.2	1.2	1.2	(Data Not Available)

Figure 4. The Severity Rate for Cases Involving Days Away from Work is Substantially Lower than Industry Average

Workers Compensation costs have declined steadily from 0.69% to 0.25% of payroll, achieving cumulative cost savings of over \$7.7 million.

Healthy People – Ergonomics Program (cont.)

“The Medical Department has been instrumental in responding to and implementing Ergonomic solutions as they have arisen. Very often an issue arises after a person is feeling bad. The quick arrival and in many cases instantaneous solutions offered have put the people at ease and back to work with minimal impact.”

*Brian Croteau, Production Supervisor
IEWS Operations Business Area*



Healthy People – Ambulatory Health Clinics

Issue:

- **How could the Medical Department best support the company’s goal to be the “Employer of Choice” for our highly skilled workforce?**
- **For example, an employee spends on average three hours of time away from work for a visit to his or her physician.**

Healthy People – Ambulatory Health Clinics (cont.)

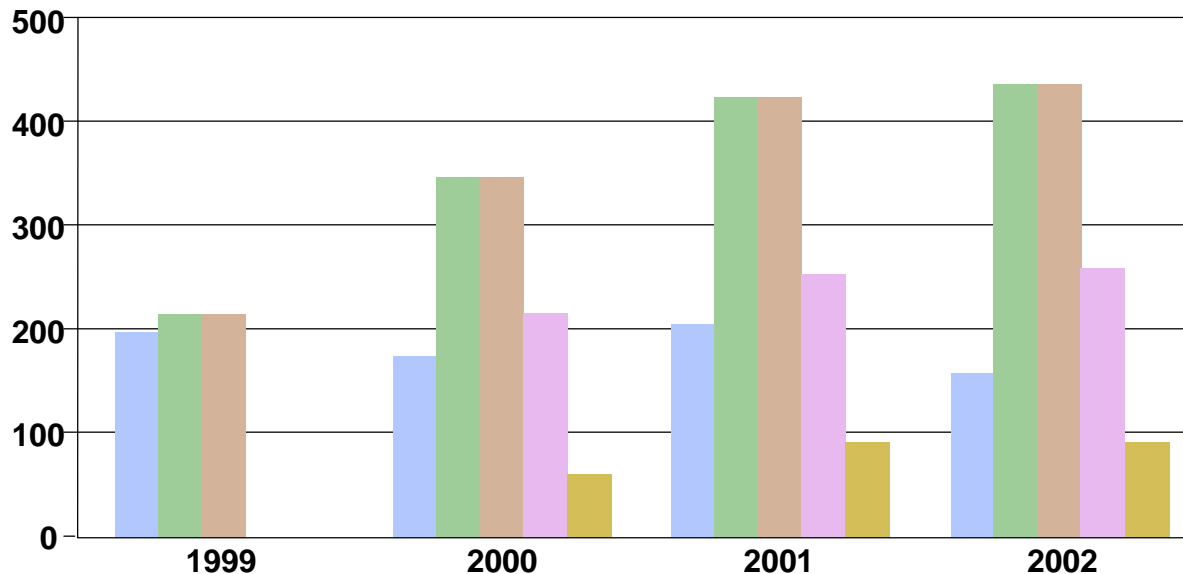
Intervention:

- **Ambulatory Health Clinics were opened at all New Hampshire sites, affording healthcare to employees for work and non-work related medical problems at no cost.**
- **Employees are triaged by the nurses and are seen in consultation by the company medical director.**
- **Free prescription medications are dispensed on-site in many cases.**
- **As appropriate, employees are referred to their primary care provider or a specialist for further evaluation and treatment.**

Healthy People – Ambulatory Health Clinics (cont.)

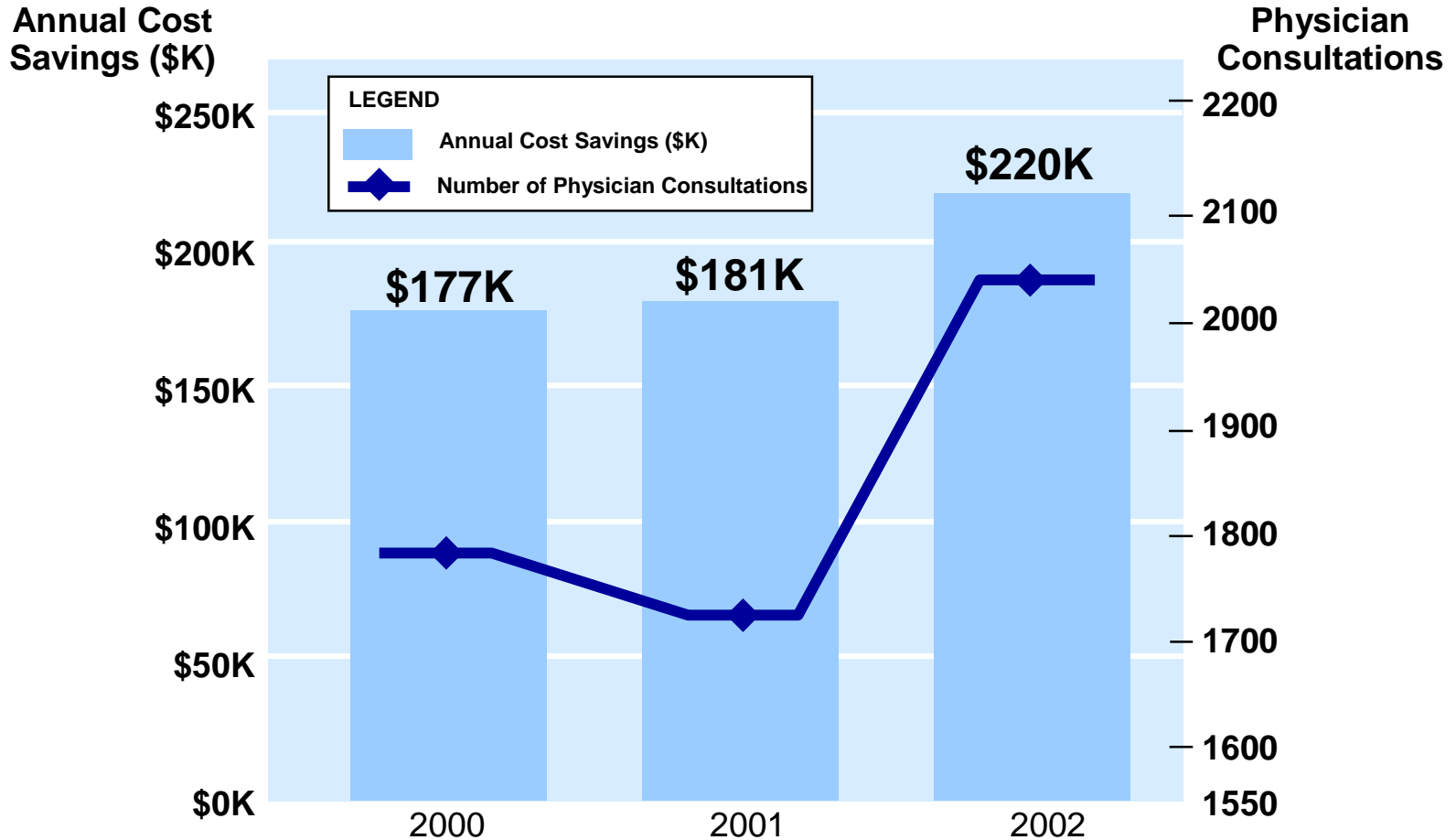
Results:

	1999	2000	2001	2002
Prostate Cancer Screening	202	178	204	159
Cholesterol Screening	217	349	426	440
Diabetes Screening	217	349	426	440
Executive Physicals	–	217	260	262
Respiratory Physicals	–	62	93	90



Ambulatory Health Clinics have supported increased wellness screenings for important health problems common to many employees.

Healthy People – Ambulatory Health Clinics (cont.) Results (cont.):



Ambulatory Health Clinic trends over the last three years show greater use and cost savings.

Healthy People – Ambulatory Health Clinics (cont.)

“The Health Clinic has saved me significant time and allowed me to keep my focus on my job. I obtain allergy shots weekly from Dr. Godefroi and the Nursing staff. A drive to my allergist’s office in Manchester from NCA would cost me 40 minutes each way. I have also received assistance from the Health Clinic during the transition from emergency surgery back to full time work. I am impressed with the staff’s professionalism and their patient interface skills, as well as the high level of care provided in a convenient location. This unique quality service is one more reason BAE SYSTEMS maintains its Employer of Choice rating in recruiting and retaining a talented workforce.”

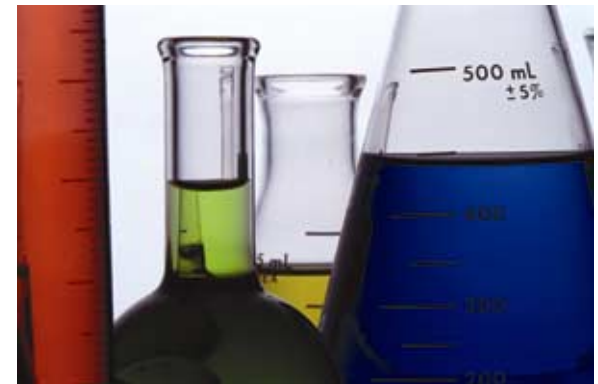
*Kevin Galeaz, Principal Electrical Engineer
IEWS Advanced Systems & Technology
Business Area*



Healthy Environment – Chemical/ Material Review

Issue:

- Due to the lack of a formal process, hazardous chemicals could potentially be procured and used in the company without the approval, knowledge, or supervision of the ESH and Medical departments.
- IEWS also wanted to eliminate or minimize the use of certain hazardous chemicals and to ensure better control of where and in what quantity these chemicals were being used.



Healthy Environment – Chemical/Material Review (cont.)

Intervention:

- **The Chemical/Material Review process was created to assist ESH in identifying all chemicals and hazardous materials received by IEWS and their intended use.**
- **The process also serves as a means for ESH to communicate any specific ventilation, personal protective equipment, handling and storage, disposal, emergency action and medical surveillance requirements to users.**

Healthy Environment – Chemical/Material Review (cont.)

Intervention (cont.):

- **Department and location-specific approval must be received through the Chemical/Material Process prior to ordering or using a chemical.**
- **The Chemical/Material Committee conducts a preliminary review of chemicals and hazardous materials utilizing information on the Material Safety Data Sheet (MSDS) and recommends appropriate disposition.**
- **The final decision to approve or disapprove the use of a chemical or hazardous material is made by the Medical Director.**

Healthy Environment – Chemical/Material Review (cont.)

Results:

- **During 2001, the Chemical/Material Review Committee reviewed 658 chemicals for use at IEWS; 5 chemicals were rejected.**
- **We eliminated the use of Class I ozone depleting chemicals (ODCs) in 1994 and have tasked each operating group to eliminate the use of all Class II ODCs.**
- **We eliminated the use of hazardous glycol ethers in 1997.**
- **We currently use very little Mercury and have an initiative underway to completely eliminate its use in the near future.**

Healthy Environment – Chemical/Material Review (cont.)

Results:

- **IEWS' ESH Policy is dedicated to “continuous improvement in providing a safer, healthier environment for our employees, environmental protection, and the prevention of pollution.”**
- **Our membership in EPA's Performance Track program demonstrates that our Environment, Safety, and Health Management System (EMS) is worthy of external recognition.**
- **According to EPA Administrator Christie Whitman, "Performance Track is an important public/private partnership ... Performance Track members demonstrate in their daily business operations that economic prosperity and environmental protection can go hand in hand."**

Healthy Environment – Chemical Material Review (cont.)

“There is great satisfaction in the realization that every chemical, before entering the BAE SYSTEMS facilities, has been scrutinized for personal and environmental hazards. Knowing that the CMR panel diligently ensures that the employees’ health and safety and our “Need to Know” is their top priority enables us to know that we are secure at work. We DO work for a company that does whatever it takes to protect us.”

*Theresa Baron, Laboratory Manager
IEWS Central Engineering*



Healthy Company – State of Mind Program/Research

Issue:

- **Increased use of our Employee Assistance Program (EAP) for Psychological Intervention**
- **Increase in workplace anger incidents**
- **Increase in domestic violence related incidents**

Healthy Company – State of Mind Program/Research (cont.)

Intervention:

- In the management/leadership literature “health” is commonly referred to as emotional intelligence or “EQ.”
- State of Mind is the phrase that we use to describe the work we have done over the last several years aimed at leadership EQ and organizational climate.
- Our work in State of Mind focuses on teaching people the fundamental principles for human psychological functioning.

Healthy Company – State of Mind Program/Research (cont.)

Intervention (cont.):

- **Over the last 3 years, our company has held numerous leadership team meetings focused on State of Mind principles.**
- **A significant number of our senior managers and leaders have attended 4-day intensive training seminars based on these principles.**
- **Two years ago, in conjunction with the West Virginia University School of Medicine, we began offering 2-day seminars called the “Stress Cure Program.” Over 200 employees have attended this training to date.**

Healthy Company – State of Mind Program/Research (cont.)

Results:

Directorate View – IDS 4 th Quarter 2001	IDS Q4 '99	IDS Q4 '00	IDS Q4 '01	Notes:
Job Clarity	3.8	3.8	3.8	20 Survey Questions/5 Choices: 1 - Not At All 2 - To A Little Extent 3 - To Some Extent 4 - To A Great Extent 5 - To A Very Great Extent
Job Quality	3.3	3.5	3.6	
Career Development	3.2	3.2	3.5	
Calmness and Reflection	2.9	3.1	3.3	
Teamwork	3.4	3.7	3.8	
Communication	3.2	3.2	3.3	
Commitment	3.0	3.2	3.4	
Positive Attitude	3.4	3.7	3.9	

BAE SYSTEMS IEWS Averages	Pre-Test First Morning Of Class	Post-Test End Of Day 2 Class	6-Month Follow-Up With No Further Intervention
Worry	3.5	2.6	2.0
Guilt	3.0	2.2	1.5
Resentment	2.7	2.1	1.5
Being Upset	3.3	2.5	2.0
Unresolved Grief	2.1	1.7	1.4
Driven-ness	3.7	3.1	2.5
Over-analysis	3.5	2.9	2.0

NOTE: Each item is on a scale of 1 to 5, with 5 meaning the factor was a major preoccupation for the person and 1 meaning the factor wasn't significant to the person at all.

Trend data indicates State of Mind Program is having a positive influence on the organizational climate at both the directorate and individual levels.

Healthy Company – State of Mind Program/Research (cont.)

“In today's competitive marketplace, a company's most important discriminator is its people and their ability to solve complex problems with creative and effective solutions. I have found that with a healthy state of mind, we can consistently tap into the vast creativity and wisdom that is available to all of us. While the traditional business approach is to manage the bottom line, I have found that if you nurture a healthy state of mind in your employees, business success and profitability take care of themselves.”

*Don Donovan, VP & GM
IEWs Electronic Warfare/Electronic Protection
Business Area*



Management and Leadership

- **In our company’s core values, we describe our people as “Our Greatest Strength.” This fundamental principle is reflected in everything we do at IEWS, including our management and leadership philosophy.**
- **Our management not only supports, but also participates in our wellness initiatives.**
- **Employee safety and health (physical, psychological and emotional) is a continuing top priority at IEWS.**

Conclusions

Our Work Continues...

- **A 2-year Cardiovascular Wellness Program was begun last month to identify and treat employees at increased risk for cardiovascular disease.**
- **The program consists of periodic on-site medical consultations aimed at lifestyle changes and appropriate medical intervention to treat risk factors.**
- **Individuals in the program undergo blood pressure, fasting blood sugar, lipid profiling (including a direct assay LDL cholesterol determination), smoking and high sensitivity C-reactive protein (HSCRP) screening.**

Conclusions (cont.)

Three tips for success:

1. **Seek partnerships to conduct health research.**
2. **Analyze your aggregate data to determine where you should focus health and wellness promotion.**
3. **Look at your costs and design your programs to lower these costs.**

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