

# ***U.S. Air Force Medical Service***

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## **Field Industrial Hygiene: One CENTAF BEE's Experience**



**Lt Col Allen Naugle  
56 AMDS/SGPB  
Luke AFB, Arizona  
11 May 2004**

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# Welcome to ~~Saddam~~ Baghdad International Airport

United States Air Force

**THIS IS A KILL ZONE**

**STOP AT ENTRY CONTROL POINT**

**DO NOT PROCEED UNTIL TOLD TO DO SO**

**DEADLY FORCE AUTHORIZED**

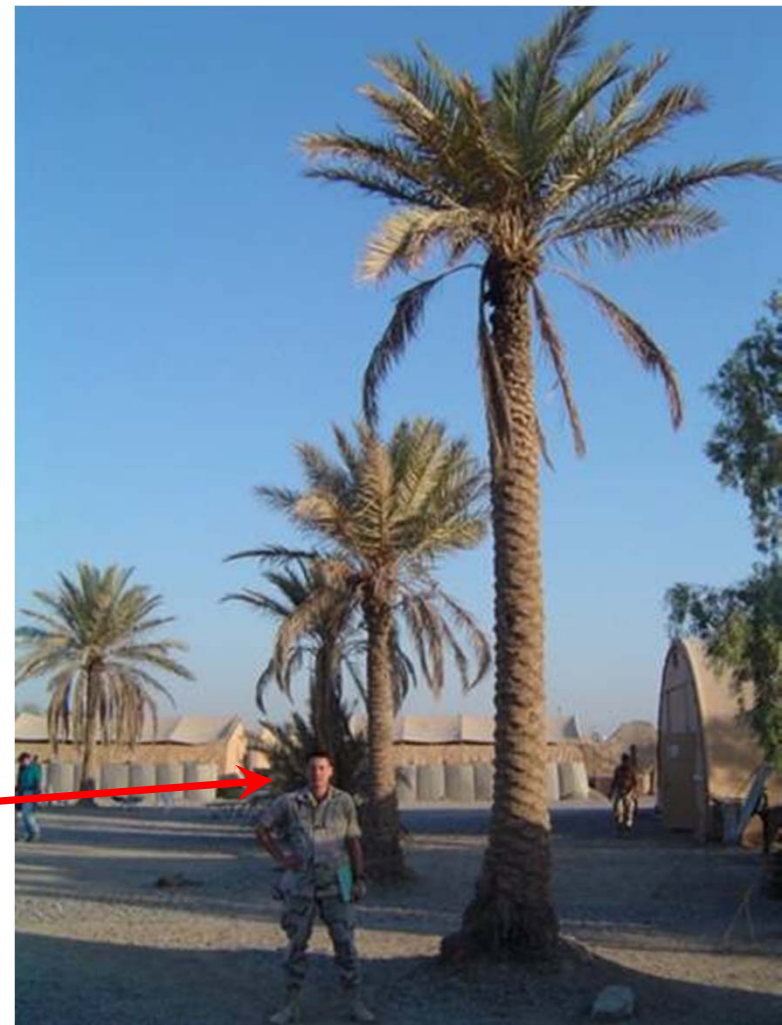




# *What I'm Going to Tell You*

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- **CENTAF IH Program Implementation**
- **IH On The Ground**
- **My Thoughts**
  - **and mine alone...**
- **Credit where credit's due:**
  - **Lt Col Mark Smallwood**
  - **MSgt Rick Glisson**



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# *My \$0.02 worth, Part One*

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- **Industrial hygiene procedures were not standardized**
  - **Dependent on BEE/tech on the ground**
- **EOH data/risks not documented consistently**
  - **Exposure data summary for each separate exposure group not practical nor needful**
- **Home station medics needed exposure/risk answers**
- **Nominal guidance for Environmental Baseline Survey/ Environmental Health Site Assessments (EHSA)**
- **GEMS not perfect, but useable**
  - **Long-term documentation of exposure is critical driver**

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# ***CENTAF Industrial Hygiene***

- Implements AF *BEE IH Guidance*
- Unique challenges of contingency environment
  - Walk through first week
  - Professional judgment
  - Short reports
- GEMS is the “approved” system



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# *Envmtl & Occ Health Workplace Exposure Data Summary (EOHWED)*

- SF 600 format (doc speak)
- Summary of EHSA
  - Summarizes EOH risks
  - Authored by PAM team
  - 2 page document
  - For every bed down site
- Designed for medical record to document exposures/risks
- Specific OHWED for <5% workers with industrial exposure not captured in EOHWED



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# ***Environmental Health Site Assessment***

- **New terminology for EBS**
  - **Review/updated each deployment**
  - **Entered into TOM-EBS**
- **Exposure information for site**
  - **Soil, air, water samples**
  - **CHPMM sample results**
  - **Risk assessment**
  - **Infectious disease risk**
- **Most sites have sufficient EHSA done**
  - **Summarize what's known**
  - **Better risk documentation**
  - **Dust/burning data needed over time**
  - **Minimal additional sampling needed**



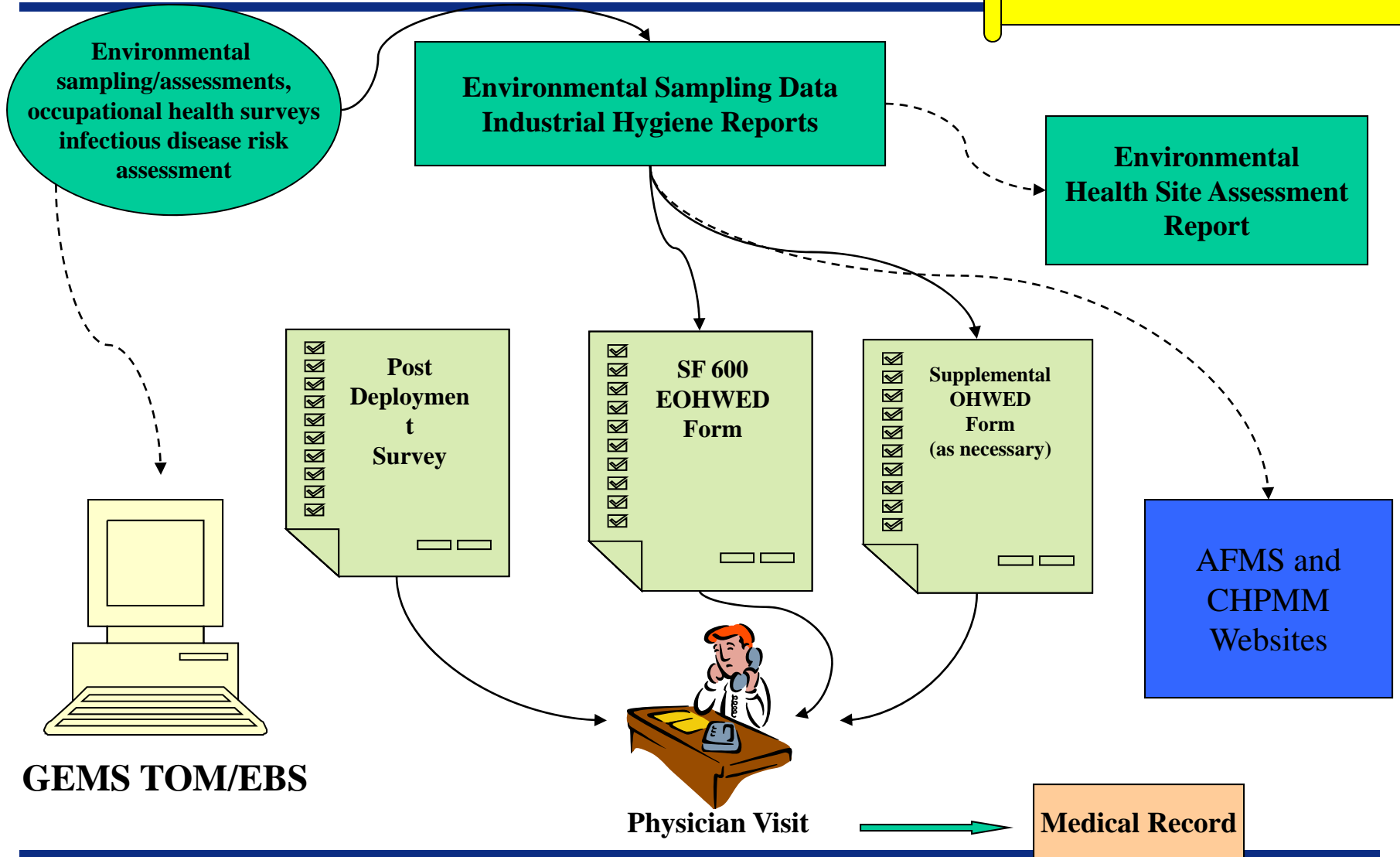
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# Documentation of Envmtl and Occ Health Exposures

**Current Process**



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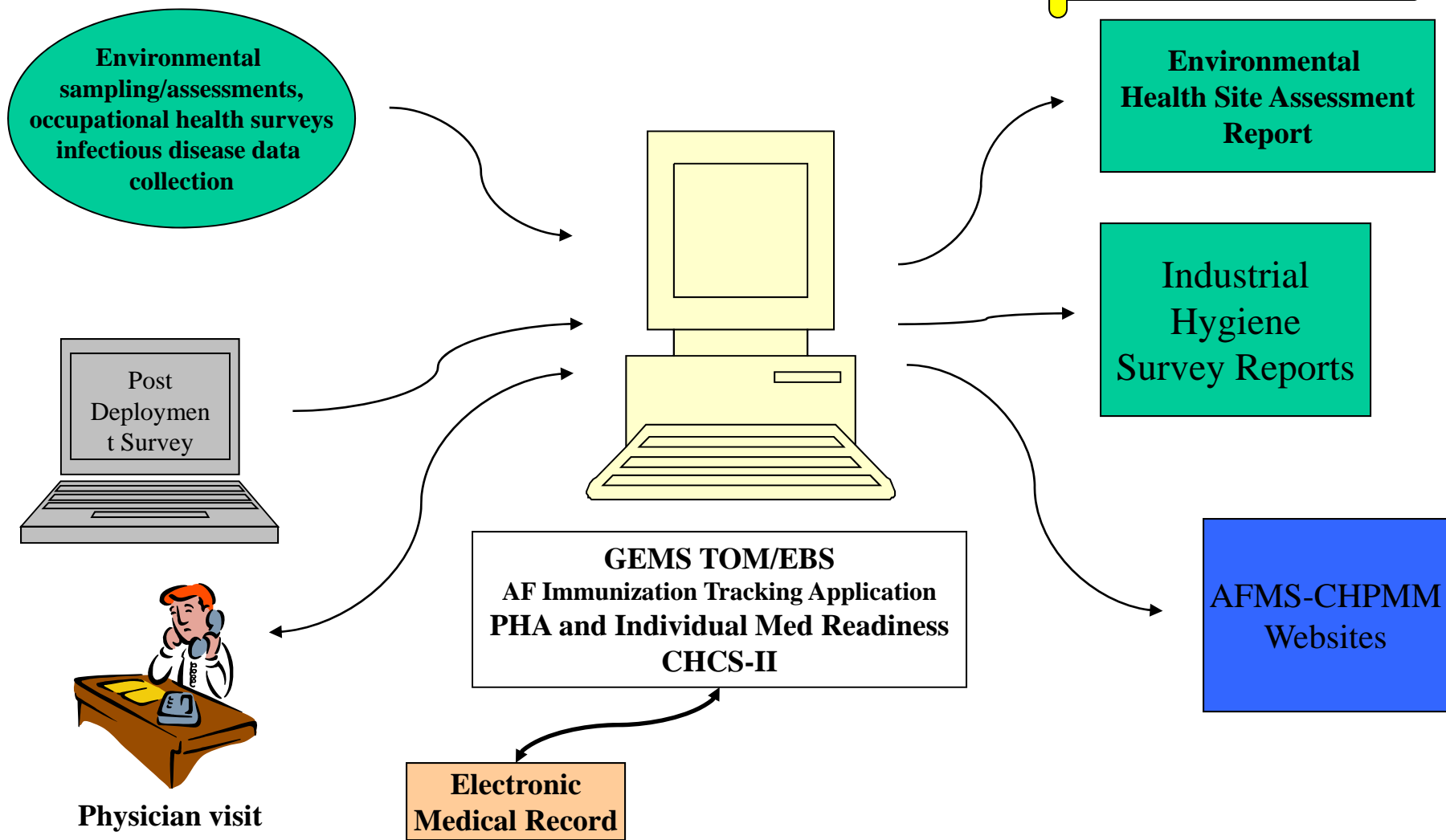




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# Documentation of Environmental and Occupational Health Exposures

**Future ???**



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# ***CENTAF IH Situation***





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# *Heat Stress*

- **BEE daily WBGT monitoring**
- **Tallil AB high: 134F**
- **BIAP high: 128F**
- **Troops educated**
  - **Signs and symptoms**
  - **Water intake**
  - **Work/rest cycles**
- **Heat-related injury documented**
- **Sun exposure**
  - **Minimized by sunscreen**
  - **Proper uniform wear**
  - **Hats, sunglasses**



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# ***Airborne Dust***

- **High throughout Middle East**
- **Some sites exceed EPA's NAAQS for PM-10**
- **Eye, nose, throat irritation, sneezing , coughing, sinus congestion and aggravation of asthma**
- **No long term health risks based on <2 years exposure**



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# ***Hazardous Noise***

- **Comparable exposures to home station**
  - **Flightline/industrial workers**
  - **On hearing conservation program**
  - **Hearing protection worn**
- **Watch environmental noise (i.e. generators)**
- **Watch for separate exposure groups not on HCP**
  - **TCN escorts, flightline security are potentials**



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## *Airborne Emissions - Petroleum Production/ Other Industrial Activities*



- **Burn out, trash disposal were a serious air pollution problem**



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# Hazardous Waste Sites

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- Most AF site report no evidence of pre-existing hazardous waste sites
- Some hazardous materials found in theater
  - But some were quite nasty
- All sites characterize exposure of AF troops to airborne chemicals as minimal to non-existent



IR-192 w/ DU; MAG Shed Barrel



Missile site - two miles from AB Northern Iraq



Red Fuming Nitric Acid UST

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# *Chemical Hazards*

- **Minimal chemical use**
  - Fuels, limited painting
- **PPE same as home station**
- **Container labeling!**
  - Horseplay a recurring problem
- **No reported exposures above AL or OEL**



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# Radiation - RF and Ionizing Bloodborne Pathogens

- Types of exposure - same as home station
- No worker identified as exceeding permissible exposure limits



U.N. Bombing Mass Casualty Event in Baghdad

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# ***Nuclear, Biological or Chemical (NBC) Weapon Exposure***

- Iraqi Surveillance Group
- Troop concerns exist
  - Communication
  - Negative documentation

*No evidence of any use, storage, release, or exposure of NBC agents to US personnel*



**Falsely Rumored Bio/Chem Weapons Lab**



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# Depleted Uranium (DU)

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- CENTAF troops not exposed to DU dust/fragments
- Urine bioassays required for personnel:
  - Struck by DU or in/near DU-hit vehicle
  - Rescue/recovery in DU-hit vehicles
- “No Gulf War veterans that have been medically followed have experienced any illnesses attributable to DU exposure”  
ASD Policy, 30 May 03



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# ***Confined Space Entry***

## **Watch:**

- **Communications pits**
  
- **Fuel cell entry**



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# *Naugle's \$0.02 worth, Part Two*

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- **It's a lot less complicated, but a lot more challenging**
- **Professional judgment vice measurements**
  - **We relied on Army PM team envmtl measurements**
  - **AF PAM NBC assets heavy (threat based), primary BEE role**
  - **Integrated vs. attached IH/PM capability seemed to enhance our assessment abilities**
    - **BEEs organic to host base medical group**
- **Longitudinal exposure record**
  - **EOHWED significant leap forward in risk communication**
  - **USACHPPM EBS information was invaluable**
- **More inter-service PM communication, coordination**
  - **Will there ever be 'enough?'**
- **Getting better with each rotation**

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*Finally...*

**Questions?**

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