

75th Air Base Wing



Refrigerant Risk Management

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Report Documentation Page

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Overview



75TH AIR BASE WING

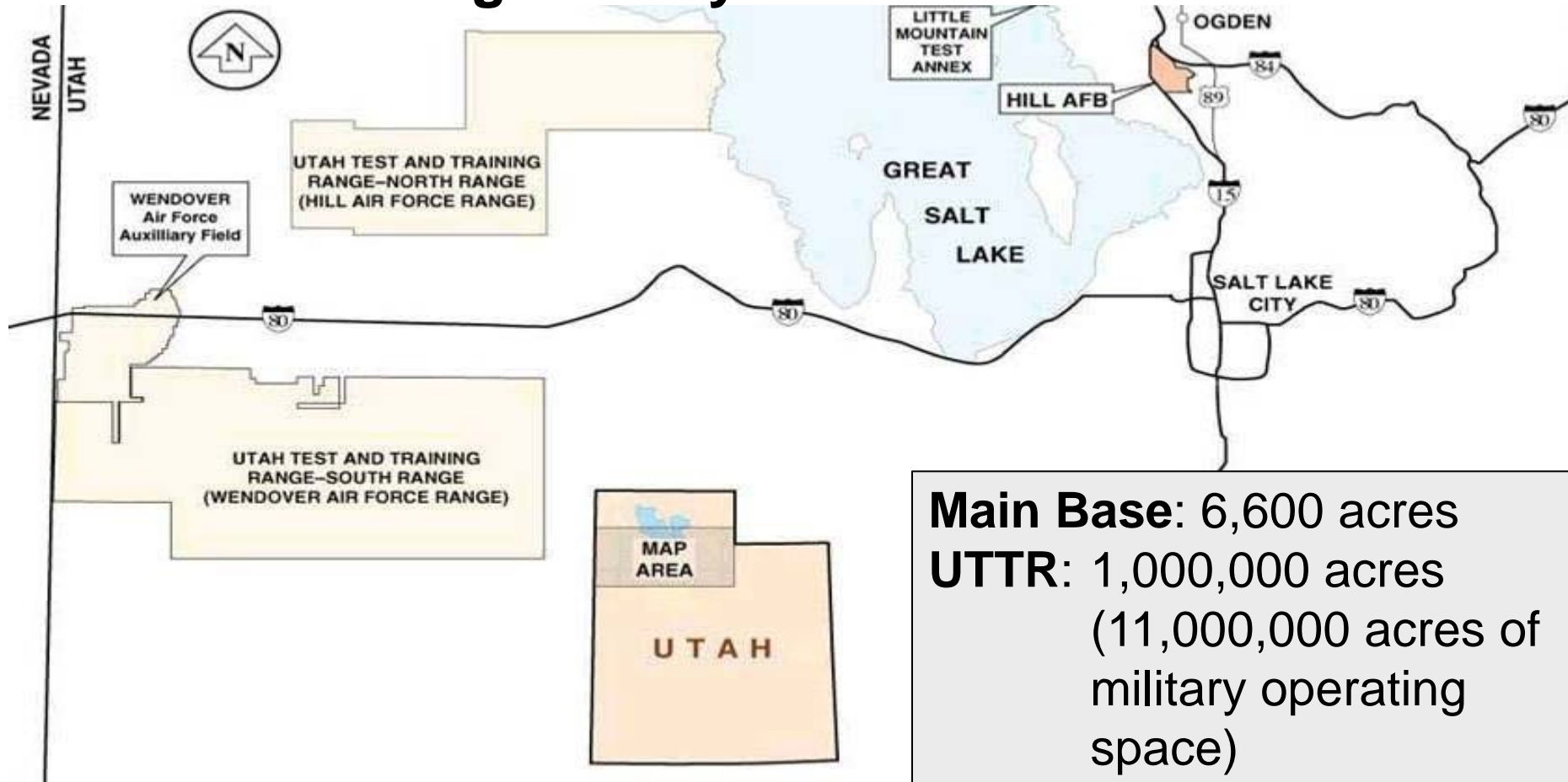
- **Background**
- **Issue**
- **Solution**
- **Centralized Management**
- **Lessons Learned**
- **Summary**



Background: Hill AFB

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■ Hill AFB—a large facility:



Main Base: 6,600 acres
UTTR: 1,000,000 acres
 (11,000,000 acres of military operating space)

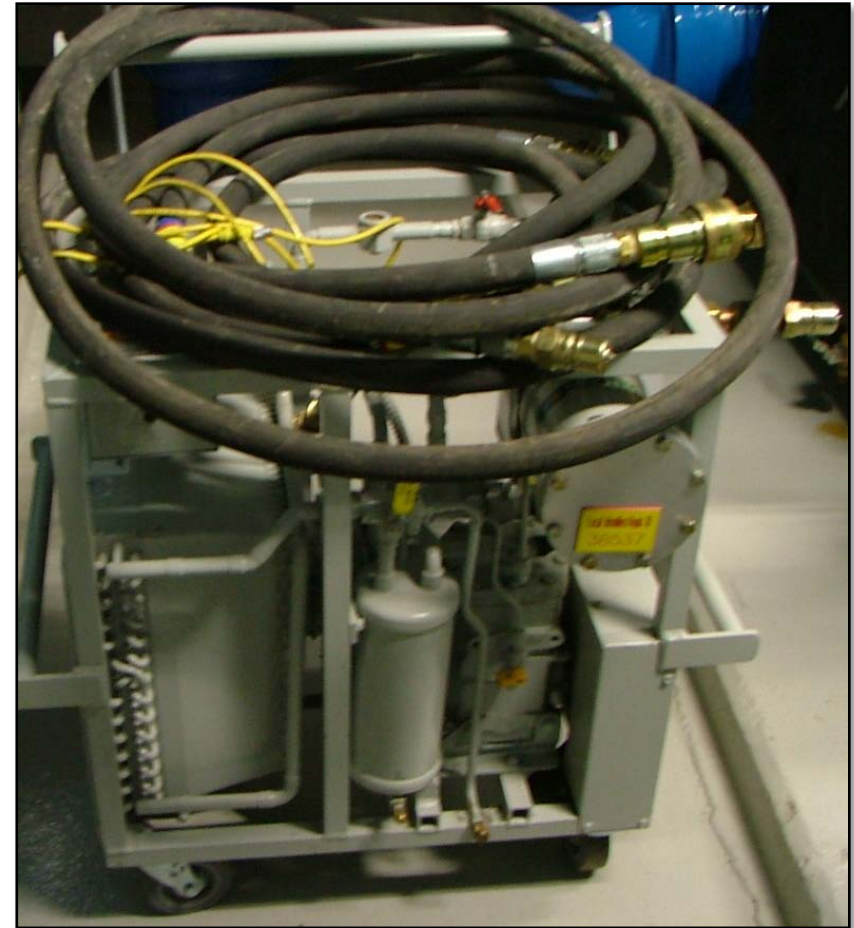


Background: Hill AFB ODS



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- Appliances subject to 40 CFR 82
 - Over 300 appliances > 50 lbs
 - Over 1000 appliances < 50 lbs
 - 16 refrigerant recycling processes
- Largest units:
 - Two 1,200 lb units supporting mission-critical applications



Hill AFB-owned refrigerant recycling unit



Background: Regulatory Drivers



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- **Code of Federal Regulations (CFR) Title 40, Part 82, “Refrigerant Recycling and Emissions Reduction”:**
 - **Addresses the handling, recycling and disposal of ODS-containing appliances**
- **Hill AFB Title V Air Quality Operating Permit:**
 - **Requires Hill AFB to adhere to 40 CFR 82 requirements**
- **Amendments to Title 40, Part 82 Proposed on 15 Dec 2010**
 - **EPA is revising the rule to ensure that facilities repair appliances and don’t just keep adding refrigerant for the same issue repeatedly**



Issue



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- **Managing ODS-possessing organizations dispersed throughout the base**
- **Disconnected data systems used by these various organizations to capture ODS data**
- **Managing the activities of off-base ODS maintenance contractors**
- **Common ODS violations:**
 - **Inadequate recordkeeping associated with equipment/technician certifications**
 - **Inadequate recordkeeping involving servicing details, leak checks, and leak rates**



Solution



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- **Improve compliance monitoring, record keeping, and reporting of Ozone Depleting Substances (ODS) at Hill AFB by:**
 - **Add language to contracts regarding compliance with ODS requirements**
 - **Implementing centralized refrigerant management application**
 - **Reducing the risk of non-compliance involving recordkeeping for ODS**
 - **Meet software certification and accreditation requirements**
 - **Ensure fast records availability for regulators**
 - **Conduct periodic audits of ODS equipment**



Centralized Management: Selection of Data System



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■ Application of APIMS:

- The logical choice for comprehensive ODS management
- Database infrastructure already in place—just needed modifications for ODS
- The official air quality data system for the Air Force
 - In use at over 60 U.S. military installations
- Managed by the Department of Defense Information System Agency



Centralized Management: APIMS Enhancements



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- **APIMS will house:**
 - **Equipment model numbers and serial numbers**
 - **Charge capacities**
 - **Service dates**
 - **Net refrigerant loss**
 - **Annualized leak rates**
 - **Amounts of refrigerant recovered and added**
 - **Types of refrigerants used**
 - **Technicians' names**

Create ODC Usage Record

Equipment: *

Model #:

Serial #:

Capacity:

Last Service Date:

Technician: *

Refrigerant: *

Recovered: *
(in lbs)

Added: *
(in lbs)

Net Loss:
(in lbs)

Service Date: *
yyyy/mm/dd

Repair Description:

Validate Net Loss? Yes No



Centralized Management: Implementation



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- **Hill AFB data collection and management efforts include:**
 - **Inventorying equipment subject to Title VI requirements**
 - **Archiving refrigeration compliance information**
 - Technician certification
 - Maintenance information
- **Data collection methods:**
 - **Using existing appliance information mined from disconnected systems**
 - **Conducting inspections and research to fill in gaps**



Centralized Management: Implementation



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- **Inventory results:**
 - **1,350 refrigerant-containing appliances identified**
- **Greatest benefit of inventory:**
 - **Identifying appliances with multiple circuits and the refrigerant charge of each circuit:**
 - **Enables Hill to identify circuits > 50 lbs. charge subject to leak rate requirements**



Multi-Circuit Industrial
Cooling System at Hill AFB



Centralized Management: Inspections



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- Hill AFB improvements to APIMS for ODS management include:
 - Increased inspection frequency for refrigerant recovery equipment from annually to semi-annually
 - Improved checklists for ODS source inspections
 - Identification of refrigerant-containing equipment maintenance contractors to ensure compliance with 40 CFR 82
 - Identification of construction projects with new equipment subject to 40 CFR 82



Lessons Learned--Risk Reduction



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- **ODS compliance risks:**
 - Maintenance and repair contractors
 - Leak rate calculation and reporting
 - New/Modified appliances
- **By improving ODS recordkeeping, the AF-approved air quality data management system will reduce risk**



Convenience Store Cooler

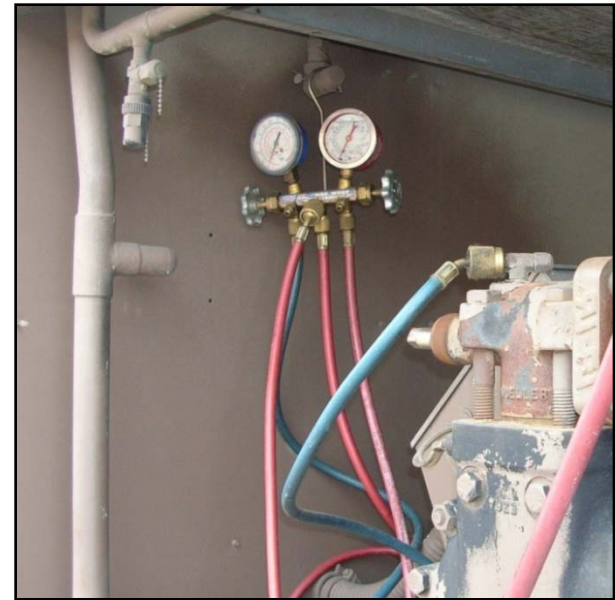


Benefits and Results



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- **The improvements will support:**
 - **Leak rate recordkeeping and reporting**
 - **5-year records archive:**
 - **Technician credentials**
 - **Equipment certifications**
 - **Equipment maintenance logs**
 - **Repair reports**



Air Conditioning Repair in Progress



Summary



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- **EPA is cracking down on ODS non-compliance**
- **There are many compliance risks associated with ODS**
- **To improve ODS data management, Hill AFB is improving their air data management system**
- **The AF-approved air quality data management system will improve recordkeeping and ease reporting for ODS**



Questions?



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BE AMERICA'S BEST



Background: Regulatory Drivers



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- **Montreal Protocol of 1987:**
 - **Intent to cease production of ODS**
 - **Incorporated into Clean Air Act (CAA)**
- **Title VI of the CAA 1990 amendments, “Stratospheric Ozone Protection”:**
 - **Encourages using safer chemicals**
 - **Requirements incorporated into 40 CFR 82**

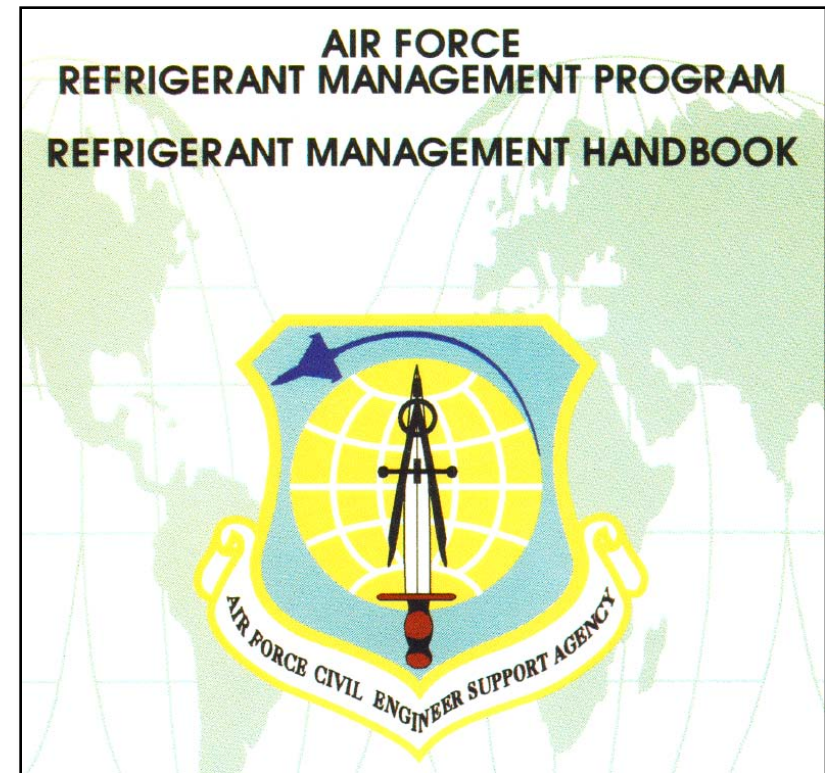


Hill AFB ODS Background



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- ODS Compliance Drivers, cont'd:
- AFD-070613-041, *Air Force Refrigerant Management Handbook* does NOT address:
 - Recent Green House Gas (GHG) inventory regulations
 - EPA's Significant New Alternatives Policy (SNAP) covering phase-out and alternative products



AFD-070613-041



Hill AFB ODS Background



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- **Nation-wide increased focus on ODS compliance during EPA multi-media inspections**
- **Common ODS violations:**
 - **Inadequate recordkeeping associated with equipment/technician certifications**
 - **Inadequate recordkeeping involving servicing details, leak checks, and leak rates**
- **Air Force Material Command initiated Notice to Airmen (NOTAM):**
 - **Prompted facilities to proactively gather data to illustrate ODS compliance in case of inspection**



Improving ODS Procedures



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- **Partially in response to the NOTAM, Hill AFB data collection and management efforts include:**
 - **Inventorying certain equipment subject to Title VI requirements**
 - **Creating a refrigerant leak rate calculation algorithm, and archiving refrigeration technician certification documents in the AF-approved air quality data management system**
- **Data collection methods:**
 - **Using existing appliance information**
 - **Conducting inspections and research**