

NNSA

Kansas City Plant

Utility Location and Excavation Permitting

Kent Klug
Plant Operations Manager
Facility Management Services
October 2007



Kansas City Plant
National Security Asset



Kansas City Plant is the primary tenant of the Bannister Federal Complex

10.19.07

KSK

The Kansas City Plant is operated and managed by Honeywell Federal Manufacturing & Technologies, LLC, for the NNSA.

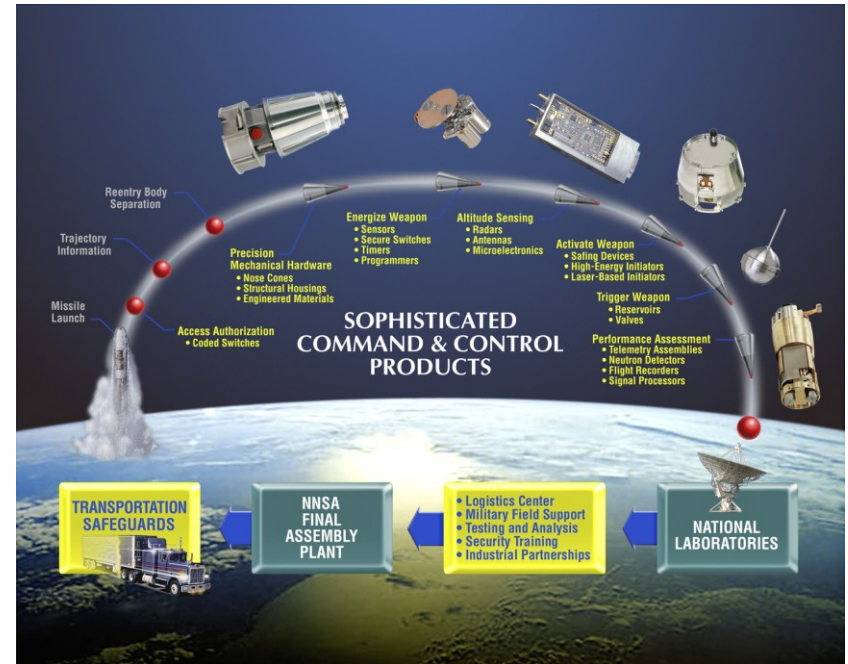




Kansas City Plant
National Security Asset

KCP Overview

- 3.1M sq. ft. sophisticated manufacturing facility
- One-of-a-kind facility for integrating mechanical, electronic, and engineered materials production in secured environment
- This provides 85% of nuclear weapon components
- Weapons support nuclear weapons arsenal from concept through production to retirement
- Provides federal applied engineering, prototyping, and advanced manufacturing facility accessible to other government agencies, universities, and U.S. industry
- Focus on national defense, homeland security, non-proliferation and government laboratory technologies and support
- Provides manufacturing for the advancement of science and technology



Products range from semiconductors to semitrailers

10.19.07

KSK

The Kansas City Plant is operated and managed by Honeywell Federal Manufacturing & Technologies, LLC, for the NNSA.



Need for Effective Program

- **Significant Risk Activity**
- **Excavation – Inherent Hazards and Unknowns**
- **Safety Expectations/Focus**
- **Utility Damage Prevention**
- **Utility Service Reliability**

ISM Application

Program Overview

- **Process/Procedure**
- **Utility Locating**
- **Excavation Permitting**
- **Underground Utility Drawings**
- **Audits/Assessments/Feedback**

Comprehensive approach

Process/Procedure

- **Roles/Responsibilities**
- **Process Owner/Core Team**
- **Clear Expectations/Requirements**
- **Communication is Key!**
 - **Multiple Owners, Utilities, Agencies**
- **Adherence to Process**
- **Feedback and Improve**

Risk requires formality

KCP Process Evolution

- **6/2003 Formal Process Implemented**
- **4/2004 HV Duct Bank Incident**
- **12/2004 LLNL Peer Review/Information Exchange**
- **1/2005 OA Audit – Electrical Safety during Excavations and Penetrations**

Continual process revision / improvements



Kansas City Plant
National Security Asset

HV Duct Bank Incident

- **Drill Rig Bored Through 13.8V Electrical Cable**
 - Limited Property Damage
 - No Injuries
 - Significant Near Miss
- **Formal Investigation Initiated**
 - Stop Work Issued
 - Restart Plan Required
- **Causal Factors**
 - Utility Scan Not Performed/Assumptions
 - Underground Drawing Inaccuracy
 - Planning Process Not Followed
- **Improved Process Results**



Assumptions and failure to follow process

10.19.07

KSK

The Kansas City Plant is operated and managed by Honeywell Federal Manufacturing & Technologies, LLC, for the NNSA.



Utility Locating

- **Locator Training/Qualification (NULCA, Staking U.)**
- **Utility Locate Process**
 - Checklist, APWA Markings, Communication
- **Locating Equipment**
- **Utility Owner Review**
- **1800 DIG RITE – Public Utility Easements**
- **Underground Utility Configuration/Drawings**
- **Limitations/Disclaimer**

Reliability / consistency

Excavation Permitting

- **Required Permit Content**
- **Safety & Environmental Review/Signatures**
- **On-site Competent Person**
- **30” Non-Destructive Excavation Means**
- **PPE/Excavation Safety Requirements**
- **LOTO/De-energize Utilities**
- **Marker Ball Installation**
- **STOP WORK**

Reliability / consistency

Underground Utility Drawings

- **Key Source of Information**
- **As-Built Process/Configuration Management**
- **Photographs/Marker Balls**
- **Inaccuracies/Disclaimer**
- **High Risk/Major Underground Utility Locate**
 - HV Electrical, Natural Gas, City Water
 - Positive Locate, Marker Ball, Drawing Update

Significant aspect

Assessments

- **Annual Audit Requirement of Process**
 - Process Gaps, Adherence
- **Peer Review/Information Exchange**
- **Continuous Improvement**

ISM feedback

Conclusion

- **Stewardship/Management**
 - **Continuous Improvement**
 - **Site Specific Configurations**
 - **Site Specific Processes**
- “Tailored Approach”**

Key principles apply