HONEYWELL METROPOLIS

Meeting WITH NRC

SEPTEMBER 20, 2007

Honeywell

Enclosure 2

AGENDA

Honeywell presentation – efforts/programs to build Nuclear Safety Culture

Discussion of Metropolis ISA

HONEYWELL METROPOLIS-Meeting

Honeywell

- NRC INSPECTION PROCESS
  - Is compliance focused (or non-compliance)
  - Does not evaluate Licensee developmental/reinforcement efforts
- HONEYWELL EFFORTS
  - We want to describe some of our efforts
  - These describe our commitment to our employees, community, nuclear industry

- Nuclear Safety Culture (Doing the Right Thing First)
  - Our BUILDING BLOCKS for developing the training and programs to accomplish this are:
    - Be Self-Critical, and
    - Be Self-Correcting
  - We are working to make this the mindset of every employee
  - We are using training like: STOP; STAR

PROCEDURES AND COMPLIANCE

Honeywell

- **EFFORTS TO IMPROVE PROCEDURE COMPLIANCE**

  - **PROCEDURE RESULTS FROM NEW LICENSE**
    - Over 90% complete
    - Full implementation by November 7
    - Statistics:
      - 30 new procedures added
      - 84 total procedures revised
      - 17 operations/maintenance
      - 19 radiation protection procedures
      - 48 other programs

  - **PROCEDURAL COMPLIANCE**
    - Need to maintain compliance even (especially) with so many changes
    - Actions being taken:
      - Procedure training for all new operators and new supervisors
      - Continuous process training for all operators
      - Conduct of Operations on procedure use and compliance
      - Annual procedure verification
      - B Council
      - Dedicated procedure writers
      - Special training (e.g. PFAP)

PROGRAMS

• MAINTENANCE EXCELLENCE

- Work Management

- Defined work prioritization system – Operations selects the priority
- Performance indicators measure success and improvement opportunities. Reviewed weekly by sub-teams & leadership
  - Safety, Reactive Work, Scheduling, Preventive Maintenance, Backlog, Overtime & Cost
- Standardized process to request, plan and schedule work
- Work orders – work instructions, condition reporting, worker feedback
- MTW's most experienced Operations Coordinator assigned in August to assist in improved focus on implementing process for UF6 area
- Goals of process:
  - Enhanced safety focus
  - Shift from reactive to proactive work – In conjunction with Reliability Engineering improvements
  - Standardized work practices – Better control of work and more efficient use of resources
  - Operations in control of work priority

PROGRAMS

Honeywell

• MAINTENANCE EXCELLENCE

- Equipment Reliability and Availability

- Improvements in preventive/predictive maintenance program
  - Review and update of preventive maintenance (PM) control plans based on failure modes and effects analysis
  - Emphasis given to equipment relied on to perform safety functions identified in the Integrated Safety Analysis of the renewed Source Materials License
- Equipment classifications assigned based on safety/economics
- Evaluations of equipment performance and process impact
  - Attainment team including UF6 Operations validated Reliability Engineering's focus
  - 3 Reliability Engineers dedicated to effort. Contract/corporate engineers added as projects defined
  - Task Force headed by S. Eason, Dir of Engineering on site since end of August
- Increased MTW Reliability Engineering permanent staff from one to four over the last year
  - Four additional Maintenance Engineers authorized. Recruiting/hiring efforts in progress
- Honeywell corporate supplying temporary engineers to assist Reliability Engineering with program and process improvements

PROGRAMS

- **CONFIGURATION CONTROL**

  - **SIGNIFICANT IMPROVEMENTS:**

    - Control of Change scope to enhance Process Hazard Analysis (PHA) and Right of Approval (ROA) reviews
    - Initiating PHAs based on potential of Change to impact to ISA/PFAPs
    - Increase PHA scope to include review of PFAPs
    - Implementing ROA process to identify need for NRC pre-approval of Changes

PROGRAMS

Honeywell

- **CORRECTIVE ACTION PROGRAM**

  - **Different from "Tracking Program"**
  - **Improvements include:**

    - Procedure issued in March
    - Process requires a **problem owner**
    - Problem coding for data trending
    - Program metrics
    - Establishment of a Management Review Committee

PROGRAMS – Corrective Action Program

Honeywell

- **MANAGEMENT REVIEW COMMITTEE**
  - **Comprised of senior management team**
  - **Weekly review meetings**
  - **Two benefits:**
    - Problem management
      - All CAP PERs reviewed
      - Select SA's and RCA's reviewed
      - Data trend and analysis
      - Resource prioritization
    - Team Unification and NSC Building
      - Problem reviews and decisions by team
      - Expectations developed and communicated with consistency
      - Improvements in SA and RCA
      - NSC becomes consistent focus

PROGRAMS – Self-Assessment Program

Honeywell

- Built on principles of Self-Critical/Self-Correcting
- Involves many organizations/individuals in the improvement process
- 54 scheduled and over 20 completed
- Improvements occurring:
  - Reports reflecting more critical reviews
  - Findings are captured in CAP
- MRC driving maturity
  - Periodic reviews of select SAs
  - Critical reviews and feedback by MRC

Efforts/Programs

- **Honeywell meeting intent:**

  - **To describe Honeywell MTW programs that are:**
    - Part of our continuing improvement program
    - Contributing to our developing Nuclear Safety Culture (NSC)
    - Leading us to becoming more Self-Critical and Self-Correcting

  - **To convey that our goals are beyond simple regulatory compliance**

  - **To convince that we intend to continue to work on strengthening our NSC as a means for continued improvements**

METROPOLIS ISA

Honeywell

- **Concern: Based on information received by Honeywell during the NRC inspection conducted the week of August 13, 2007, MTW does not have a clear understanding of the standards for regulatory inspection/enforcement applicable to the MTW ISA as contained in our renewed license of May 11, 2007.**

- **History:**
  - **Met with NRC Project Manager (PM) approx June 13 (during FCIX)**
    - Discussed our ISA (and PFAPs)
      - Essentially "has no rules"
      - Falls in between Part 40 and Part 70
      - Concern about how will be inspected
    - Agreed this was an opportunity for MTW
      - Develop how Honeywell wants to manage
      - Work with NRC to finalize
  - **Met again with PM Aug 28 (end of Security meeting)**
    - Discussed inspection results from week of Aug 13 inspection on Ops/Maint/Mgmt Controls
    - Informed PM of intent to discuss at R II meeting then scheduled for Sept 5

METROPOLIS ISA

Honeywell

- **Review summary of information received during NRC inspection at MTW week of Aug 13**
- **Based on this information, two conclusions:**

(1) Some comments concerned with how PFAPs are managed, i.e. how well MTW is implementing the Management Measures intended to ensure compliance with the performance requirements of the ISA

- PHA Teams
- Configuration Management
- Maintenance
- Training and Qualifications
- Procedures
- Audits and Assessments
- Incident Investigations
- Records Management

- **Based on input received:**
  - Recognized improvements warranted
  - Initiated PFAP review
    - To verify and/or establish relationships between ISA- procedures-operational actions
  - Agree this is legitimate area for inspection
  - Concerned that inspection criteria to be used is 10CFR70

METROPOLIS ISA

(2) Remaining comments question the adequacy of the ISA conclusions/results. Further, they suggest:

(a) That the requirements applicable to Honeywell in the development of the MTW ISA are clear and known, and

(b) That the inspection criteria applicable to the MTW ISA is also clear and known.

Response:

- **Clear that MTW ISA developed <u>utilizing methodologies</u> of 10CFR70 (Section 1 of ISA)**
  - ISA developed to provide an industry standard analysis (Section 3 of ISA)
  - Not intended to be a full part 70 ISA (Section 6.5.2 of Technical Evaluation Review)
- **Also clear that Honeywell not subject to the requirements of 10CFR70**
  - ISA requirements of 10CFR70 are not applicable to MTW (Section 3 ISA)
- **The MTW ISA is a unique document for which clear development and inspection criteria/regulations do not exist**

METROPOLIS ISA

- Honeywell is committed to continued improvement
- Honeywell has spent considerable time, money, effort to:
  - Improve the physical plant conditions and equipment
  - Train the staff and instill a Nuclear Safety Culture
  - Develop and implement programs and procedures necessary for consistent and safe operations
- Honeywell believes the ISA and PFAPs are a tool for achieving continued improvement
- Honeywell is fully committed to implementing the ISA and the PFAPs consistent with:
  - The new license effective date, and
  - The intent and purpose for which the ISA was developed by Honeywell

METROPOLIS ISA

- **What we want is to look forward to the effective date of the new license:**
  - **As an opportunity for continued improvement**
  - **NOT as the beginning of a period of inspection/enforcement**
  - **NOT as the beginning of a period of violations (we have worked very hard to reduce/eliminate these)**

- **Our proposal/Request:**
  - **Establish a framework for inspection/oversight of PFAPs**
    - Use early inspection/audits to develop inspection procedures and manual chapters
    - Allow an opportunity for interaction on adequacy of procedures to implement management measures
    - Permit MTW to present its views on whether an issue identified by the NRC is a regulatory violation
    - Exchange of perspectives to illuminate areas of uncertainty
  - **Proceed cautiously with enforcement activity**
    - Use early inspections/audits to discuss and establish expectations
    - Consider enforcement discretion for "violations" until expectations stabilize

NRC Comments Concerning MTW ISA

During NRC inspection 2007-005 conducted in August, inspectors found "issues" that they felt warranted opening an IFI for further follow up at a later visit. Because of these items the inspectors articulated to the MTW Senior Management Staff that they felt like the ISA was flawed. In no specific order:

1. PFAP55 Control of exposure to R-123 via a multi-port sampling system (respond to Level 1 or Level 2 alarm).
    - Inspector Comment – This PFAP was not adequately identified and the response from the sensor did not satisfy the PFAP. The situation discovered was the PFAP describes a piece of equipment which is a refrigerant (R123) detection system. They entered the control room where they found that the detector had been in alarm state. When they questioned the operator as to how he would respond he replied that he would ignore the alarm; as instructed by Maintenance. The inspectors then moved to Maintenance/Calibration to inquire further. There they found that the alarm levels were different than what was described by the PFAP. The combination of the operator's verbal response to the alarm and the alarms not being consistent with the description in the PFAP lead the inspectors to conclude that this PFAP was not adequate. (1) (2)
2. PFAP48 All vessels used in fluorine and UF6 service are degreased prior to being put in service
    - Inspector Comment – There was no evidence of formal training associated with this training. It is not adequate to have a PFAP that does not have formal training. (Skill of the craft may not be sufficient.) (1) (2)
3. PFAP33 Potential HF piping leaks are indicated by a reduction of HF flow on the HF flow recorder/totalizer. PFAP34 Manual control of HF leak. (2)
    - Inspector Comment – The inspectors felt that these PFAPs were redundant
4. PFAP37 Automatic temperature overrides and shutdowns are provided on all heated equipment in the reductor section to prevent overheating. PFAP38 The reductors are provided with cooling and heating systems to maintain control of the chemical reaction in the vessel. Automatic shut off valves are provided for gas supply to the furnaces if a malfunction of the furnace occurs. (2)
    - Inspector Comment – The inspectors felt that these PFAPs were redundant
5. PFAP39 Manual emergency shutdown.
    - Inspector Comment – The inspectors felt that this PFAP was the same as PFAP34. (2)
6. An inspector expressed doubt that a Likelihood Index (which provides the link between the number and type of PFAPs applied to an accident scenario, and the acceptability of risk) was correct (exact case of discussion not documented). (2)
7. Other comments made during the week:
    - These are indications that the ISA is a flawed document
    - Some of these (above examples) do not meet the intent of the ISA (2)
    - At the exit meeting it was stated that if this were November 8 (day after effective date for the new license), there would be a lot of violations.
    - Show me the PHA to support this PFAP. (1) (2)

Examples: Application of Regulatory Framework

- NRC inspector disagrees with designation of item as PFAP.
  - ISA and PFAPs were identified and approved at license issuance
  - License requires application of management measures to PFAPs
  - ISA/PFAPs are "starting point" against which future actions are assessed
  - No regulatory violation
- NRC of MTW identify new accident sequences not covered by existing PFAPs
  - ISA and PFAPs were identified and approved at license issuance
  - License requires application of management measures to PFAPs
  - ISA/PFAPs are "starting point" against which future actions are assessed
  - No regulatory violation
- Believing a PFAP to be redundant, MTW eliminates the PFAP without seeking prior NRC approval
  - ISA and PFAPs were identified and approved at license issuance
  - License requires application of management measures to PFAPs
  - NRC approval required to eliminate PFAP
  - Regulatory violation may be cited
- MTW employee replaces a PFAP, but does not follow Configuration Management procedures
  - ISA and PFAPs were identified and approved at license issuance
  - License requires application of management measures to PFAPs
  - Employee fails to properly apply Configuration Management procedures
  - Regulatory violation may be cited
- NRC inspector disagrees with details of procedures for implementing management measures
  - Legitimate area for disagreement
  - Attempt to resolve interpretation issues and professional judgments outside enforcement
  - Regulatory violation may be cited in the end, but subject to licensee appeal
- NRC inspector disagrees with how a management measure was applied
  - Legitimate area for disagreement
  - Attempt to resolve interpretation issues ad use of professional judgment outside enforcement
  - Regulatory violation may be cited in the end, but subject to licensee appeal