



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931**

April 17, 2004

CAL No. 2-2003-003
NMED No. 031001

Honeywell International, Inc.
ATTN: Mr. Rory J. O'Kane
Plant Manager
P.O. Box 430
Metropolis, IL 62960

**SUBJECT: RESTART OF FLUORINATION AND DISTILLATION OPERATIONS AT
HONEYWELL INTERNATIONAL, INC. FACILITY IN METROPOLIS, ILLINOIS**

This is in reference to your letter dated April 16, 2004, in which you stated that you had completed those actions necessary to support the safe restart of Fluorination and Distillation operations at your facility, with the exception of certain items as listed in your letter. We understand that the remaining items will be complete prior to startup of Fluorination and Distillation operations. NRC inspectors on site will confirm the completion of these items prior to restart. Based upon our review of your efforts to identify the actions necessary to support the safe restart of Fluorination and Distillation operations and on-site assessments and observations of the implementation of these actions, the NRC has no objection to the restart of Fluorination and Distillation operations at your facility. The NRC has no objection to the full operation of your facility to produce UF₆.

On December 22, 2003, the NRC issued a Confirmatory Action Letter (CAL) that documented Honeywell's commitment to discuss the results of your investigation and proposed corrective actions with the NRC prior to restart of the uranium hexafluoride processes. The NRC conducted an Augmented Team Inspection (AIT) at your site from December 22, 2003, to January 6, 2004, to review the facts and circumstances related to the December 22 event. The results of this inspection were documented in a report dated February 3, 2004. On February 11, 2004, Honeywell met with the NRC to discuss the results of your investigation of the event, and to discuss corrective actions resulting from this investigation and other reviews of operations at your facility. The results of that meeting were documented in a letter to you dated February 13, 2004. On March 4, 2004, you provided a letter that outlined your approach to restart of the uranium hexafluoride processes, listing actions to be completed for each phase of restart (ore preparation, green salt, and fluorination/distillation). On March 18, 2004, you again discussed in a meeting with the NRC the status of your corrective and improvement items to support safe restart and operation of your uranium hexafluoride processing.

As a result of the findings of the AIT and your internal reviews, the NRC developed the Honeywell International Conversion Facility Restart Readiness Oversight Plan, provided to you in our letter dated March 26, 2004, that included a Restart Table of items to be reviewed and completed by Honeywell and reviewed by the NRC prior to restart. The NRC inspected the

items listed in the Restart Table to determine the effectiveness of your actions to address issues that resulted in the December 22, release and resultant emergency response. This included review of an emergency drill involving offsite authorities on March 11, 2004. Based on the results of our review of your actions to support restart of ore preparation and Green Salt operations, the NRC, on March 26, 2004, and April 14, 2004, informed you by letters that we had no objection to restart of these operations. Our subsequent inspections have determined that these operations were restarted and continue to operate safely.

The NRC staff has completed its inspection and assessment of your actions to support Fluorination and Distillation operations and has concluded that you have adequately resolved those items as listed in the Restart Table to support restart of these operations. The NRC has reasonable assurance that you can safely restart and operate your facility. Therefore, the NRC has no objection to the restart of Fluorination and Distillation operations and full operation of your UF₆ production. You remain accountable to comply with all requirements in NRC regulations and your license. The NRC will continue to inspect your activities on an enhanced basis. A copy of the Restart Table showing the closure of items is enclosed.

In accordance with 10 CFR 2.390 of NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in NRC's Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA BY LOREN A. PLISCO
ACTING FOR/**

Luis A. Reyes
Regional Administrator

Docket No. 040-03392
License No. SUB-526

Enclosure: Honeywell International Conversion
Facility Restart Table

cc w/encl:
Gary Wright
Emergency Management Agency
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DATE	04/16/2004	04/16/2004	04/16/2004	04/16/2004	
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO
PUBLIC DOCUMENT					

Honeywell International Conversion Facility Restart Table

ISSUE	LEAD	STATUS	CLOSURE
1. Develop restart list in table	Henson to review conclusions of inspections and licensee reviews to assure complete	Reviewed week of 2/23. Letter from Honeywell sent 3/5. Restart list now in table. Undergoing Office Director approval 3/6. Plan approved 3/23/04.	3/23/04
ORE PREP RESTART ITEMS			
EMERGENCY RESPONSE PLAN			
2. Issue final, amended Emergency Response Plan/Radiological Control Plan	NMSS/Gooden	Incomplete as of 3/25/04; expect completion by COB 3/26/04; Plan completed 3/27/04.	3/26/04
3. Amendments include: a. clarification of responsibilities and response actions b. definitions for Emergency Action Levels and Shelter-in-Place protocol c. Plan coordinated with local and state planners	NMSS/Gooden	Incomplete as of 3/25/04; expect completion by COB 3/26/04; Plan completed 3/27/04. Amendments included a, b and c.	3/26/04
4. Public notification systems selected and installation/repairs of sirens	Gooden	CAN has been selected and purchase order has been issued. Based on contractor recommendations, two new sirens will be installed on Honeywell property that will reach the required population. Plan is to have sirens installed and tested before restart of green salt.	3/24/04

ISSUE	LEAD	STATUS	CLOSURE
5. Dedicated phone number for communication with outside emergency responders	Gooden	Unlisted phone number has been provided to local emergency responders which will ring on a phone in the Feed Materials Control Building and the security desk. This number was tested during the table-top drill.	3/11/04
6. Provide training for (1) local emergency groups, (2) Honeywell ER team/HAZMAT responders, and (3) Wackenhut Security Guards	Gooden	Incomplete as of 3/26/04 (Security guards have not been trained); scheduled for completion by COB 3/26/04. Based on 3/26/04 letter, licensee will complete before restart; inspectors will confirm. NRC inspectors confirmed completion.	3/27/04
7. Establish public awareness and education initiatives	Gooden	Identified topics to be provided to public. Currently developing format to publish and deliver information (as of 3/24/04).	3/24/04
8. Publish initial Community Bulletin	Gooden	Bulletin completed and mailed out to over 5000 addresses.	3/1/04
9. Conduct table top drill, critique and resolve critique issues	Gooden	Drill conducted 3/11. Critique items have been placed in corrective actions tracking system and scheduled for resolution.	3/24/04
10. Public meeting with NRC	Gooden	Conducted 3/18.	3/18/04

ISSUE	LEAD	STATUS	CLOSURE
POLICIES & PROCEDURES			
11. Assess licensee decision that no new or amended policies required.	Hartland	Current policies adequate for low risk operations in ore preparation.	3/24/04
12. Assess licensee decision that now new or amended administrative procedure required	Hartland	Current administrative procedures adequate for low risk operations in ore preparation.	3/24/04
13. Review procedural gap analysis and determine if proposed procedure amendments and new procedures adequate	Hartland	Gap analysis reviewed and it was determined that the proposed procedure amendments and new procedures were adequate.	3/24/04
14. Revise/amend following technical procedures: a. Ore Preparation System Startup and Operation Procedure b. Ore Preparation System Shut Down Procedure c. Ore Preparation Abnormal Operations Procedure d. Ore Preparation Emergency Operation Procedure e. Confirm no alarm response procedure applicable.	Hartland	a. through d. - these procedures have been rewritten in new format. No deficiencies have been identified in these procedures. e. No separate procedure for alarm response, but an alarm response procedure was included in Ore Operation Procedure as an attachment. Procedures continue to be subject to revision, but final version will be reviewed as is before ore preparation restart. Final versions reviewed and considered adequate.	3/26/04

ISSUE	LEAD	STATUS	CLOSURE
15. Implement procedure for situations where specific procedures may not exist	Hartland	<p>No available as of 3/26/04, but expect before COB.</p> <p>Based on licensee's 3/26/04 letter, this will be complete before restart; inspectors to confirm. NRC inspectors confirmed completion on site.</p>	3/27/04
TRAINING			
16. Identify trainers for restart	Hartland	<p>Awaiting closure package; expect by COB 3/26/04</p> <p>Closure package provided and this item was adequate.</p>	3/26/04
17. Provide training on instructional techniques	Hartland	<p>Awaiting closure package; awaiting closure package to confirm; expect by COB 3/26/04</p> <p>One incomplete item regarding records of training that training was complete; licensee plans to complete before restart; inspectors will confirm. NRC inspectors confirmed on site.</p>	3/27/04

ISSUE	LEAD	STATUS	CLOSURE
18. Training on technical procedures; include procedural adherence expectation for operators and supervisors	Hartland	<p>Some training observed and did include expectation on procedural adherence. Awaiting closure package; expect by COB 3/26/04.</p> <p>One incomplete item regarding records of training that training was complete; licensee plans to complete before restart; inspectors will confirm. NRC inspectors confirmed on site.</p>	3/27/04
19. Establish JPMs; include abnormal events for operations and maintenance	Hartland	In progress; expect completion by COB 3/26/04; item completed and reviewed by inspectors; deemed adequate	3/26/04
20. Train operators and supervisors on JPMs	Hartland	<p>In progress; expect completion by 3/26/04</p> <p>One incomplete item regarding records of training that training was complete; licensee plans to complete before restart; inspectors will confirm. NRC inspectors confirmed on site.</p>	3/27/04
MANAGEMENT OF CHANGE			
21. Require management of change procedure be applied for all process changes	Baker	Closure package reviewed and confirmed procedure applied for all process changes.	3/24/04
22. Revise process change form (PT-101) to clarify responsibilities	Baker	Closure package reviewed and confirmed responsibilities clarified.	3/24/04

ISSUE	LEAD	STATUS	CLOSURE
23. Create or revise a PSSR checklist to be used before all changes are implemented	Baker	Closure package reviewed and PSSR checklist established.	3/24/04
MECHANICAL INTEGRITY			
24. Confirm no items applicable for restart of Ore Prep	Baker	Confirmed based on review of Failure Modes and Effects Analysis and ore preparation area.	3/12/04
ENGINEERING CONTROLS			
25. Confirm no items applicable for restart of Ore Prep.	Baker	Confirmed based on review of Failure Modes and Effects Analysis and ore preparation area.	3/12/04
CORRECTIVE ACTIONS PROGRAM & AUDITS			
26. Establish on-shift auditors	Hartland	Reviewed closure package and confirmed auditors trained and established (contract auditors).	3/24/04
27. Establish on-shift audit procedures to include: - areas to be audited - audit standards - reporting of findings - response to findings	Hartland	Reviewed closure package and audit procedures include listed topics.	3/24/04

ISSUE	LEAD	STATUS	CLOSURE
28. Implement web-based corrective action tracking system	Hartland	E-CATS system established and legacy issues entered in system. Awaiting closure package. Expect by COB 3/26/04; Package provided 3/26/04, reviewed and deemed adequate.	3/26/04
29. Assess corrective action program	Hartland	This was not required for ore preparation. Required completion before start-up of fluorination/distillation.	3/24/04
GREEN SALT RESTART ITEMS			
EMERGENCY RESPONSE			
30. Siren notification system functioning	Gooden	Two sirens tested on 3/31/04. NRC inspectors confirmed it could be heard out to 1.3 miles from the FMB. Periodic testing and maintenance procedures being developed (tracked via E-CAT System).	3/31/04
31. Pre-recorded messages for shelter-in-place notification and recovery available at local radio stations	Gooden	Messages reviewed by offsite emergency responders and distributed to radio stations. Inspectors obtained confirmation.	4/13/04
32. Informational bulletin mailed to public with instructions for shelter-in-place	Gooden	Bulletin complete and reviewed by NRC inspectors. NRC inspectors confirmed via returned bulletins that bulletin was mailed 4/3/04.	4/3/04

ISSUE	LEAD	STATUS	CLOSURE
POLICIES AND PROCEDURES			
<p>33. Revise or establish policies for:</p> <ol style="list-style-type: none"> 1. Stop work authority 2. Policy to define requirement for work scheduling/planning 3. Procedure for procedural use by operators 4. Management and supervisory oversight for restart defined 	Hartland	<p>As of 4/8/04:</p> <ol style="list-style-type: none"> 1. Reviewed by inspectors 2. Reviewed by inspectors 3. Reviewed by inspectors 4. Reviewed by inspectors <p>Closure package reviewed, no issues noted.</p>	4/13/04
<p>34. Administrative procedures and actions:</p> <ol style="list-style-type: none"> 1. Procedure development guide 2. Reporting deficient plant conditions procedure 3. Procedure defining requirements for pre-job briefs 4. Training matrix for operator qualifications 	Hartland	<p>As of 4/13/04:</p> <ol style="list-style-type: none"> 1. Reviewed by inspectors. Closure package reviewed 2. Reviewed by inspectors. Closure package reviewed 3. Reviewed by inspectors. Closure package reviewed 4. Reviewed by inspectors. Closure package reviewed 	4/13/04

ISSUE	LEAD	STATUS	CLOSURE
<p>35. Technical procedures established:</p> <ol style="list-style-type: none"> 1. Green salt operations 2. Green salt startup sequence 3. Reductor startup 4. Hydrofluorinator startup 5. Green salt shut down/cool down 6. Green salt maintenance support 7. Green salt alarm response procedure 8. Green slat abnormal operations procedure 9. Green salt emergency operations procedure 	Hartland	<p>As of 4/8/04: 1, 3, 4, 5, 6,8 and 9 reviewed by inspectors. Closure package reviewed. No issues.</p> <p>Item 2 - Licensee will develop a "night order," instead of a procedure, for each startup that will be approved by Phil Bryan that will be specific to the equipment status. There will be a pre-job brief.</p> <p>Item 7 - an attachment to normal OP will discuss alarms response, potential causes, follow up responses, etc. rather than a separate procedure.</p> <p>Item 2 and 7 were reviewed by inspectors and no issues were noted.</p>	4/13/04
TRAINING			
<p>36. Trainers</p> <ol style="list-style-type: none"> 1. Identify trainers 2. Complete train-the-trainer training 	Hartland	NRC inspectors confirmed that trainers have been identified and trained as of 3/31/04. Additional trainers being trained, but sufficient supervisors are trained to complete necessary training.	3/31/04

ISSUE	LEAD	STATUS	CLOSURE
37. Training for restart a. all policy training completed b. all administrative procedure training completed c. all technical procedure training completed	Hartland	In progress as of 4/13/04. Inspectors have reviewed training and found effective. Inspectors confirmed that staff on shift were trained.	4/16/04
38. Demonstration of Operations experience a. Job performance measures developed b. Operators and supervisors trained on JPMs	Hartland	Inspectors confirmed that staff on shift were trained.	4/16/04
39. Remedial training a. remedial training requirements defined b. remedial training conducted as required	Hartland	As of 4/16/04, three operators that needed remedial training for tank farm operations will receive it before they perform the operations.	
MANAGEMENT OF CHANGE			
40. Confirm all items completed	Baker	MOC process changes completed and confirmed prior to ore preparation restart. No new issues identified.	3/31/04

ISSUE	LEAD	STATUS	CLOSURE
MECHANICAL INTEGRITY			
<p>41. Actions completed include:</p> <ul style="list-style-type: none"> a. Preventative maintenance and inspection requirements for critical equipment b. Vibration testing for pumps and other rotating equipment in Green Salt and repair equipment out of specification, except for items that are not currently running or that operate below 1800 rpm c. Vibration analysis of rotating equipment after Green Salt startup 	Baker	<p>As of 4/12/04</p> <ul style="list-style-type: none"> a. Reviewed by inspectors. Identified that emergency stop buttons not on list (identified in license application). Licensee now reviewing list against license application. b. Reviewed by inspectors. c. None for Green Salt <p>The review against the license application was completed and no issues were noted.</p>	4/13/04
ENGINEERING CONTROLS			
<p>42. Complete the following:</p> <ul style="list-style-type: none"> a. Upgrade controls, alarms, and interlocks for HF tank car unloading b. Install level control on "C" filter fine hopper c. Install emergency relief valve tank 	Baker	<p>As of 4/12/04:</p> <ul style="list-style-type: none"> a. Closure packages received, awaiting finalization of one PT-101 to move to operational status. b. Fluorination item. Inspectors reviewed and adequate. c. Closure packages received, no issues noted by inspectors. <p>Base on licensee's 4/12/04 letter, item "a" will be complete before restart; inspectors to confirm</p>	<p>4/13/04</p> <p>b. 4/16/04</p>

ISSUE	LEAD	STATUS	CLOSURE
CORRECTIVE ACTIONS AND AUDITING			
43. Confirm licensee restart audit complete and no additional items for green salt.	Hartland	Audit completions 4/13/04.	4/13/04
RESTART PLAN FOR FLUORINATION AND DISTILLATION			
EMERGENCY RESPONSE			
44. Procedure for ERP copy control included as part of ERP/RCP	Gooden	Reviewed by inspectors and adequate.	4/16/04
POLICIES AND PROCEDURES			
45. Confirm no additional revised/new policies required	Hartland	none identified	n/a
46. Confirm no additional revised/new procedures required	Hartland	none identified	n/a

ISSUE	LEAD	STATUS	CLOSURE
<p>47. Confirm technical procedures identified as required are implemented:</p> <ol style="list-style-type: none"> 1. Fluorination Startup 2. Fluorination Operation 3. Fluorination Shutdown 4. Fluorination Abnormal Operations 5. Fluorination Emergency Operations 6. KOH Startup and Operation 7. KOH Shutdown 8. KOH Abnormal Operations 9. KOH Emergency Operations 10. Distillation Startup 11. Distillation Operation 12. Distillation Shutdown 13. Distillation Abnormal Operations 14. Distillation Emergency Operations 15. Distillation Support 	Hartland	Except as noted below, procedures reviewed by inspectors, but closure package to be reviewed by inspectors prior to restart. Two items, Abnormal Operation and Startup Sequence, are punch list items to be reviewed by inspectors prior to startup.	
TRAINING			
48. Trainers identified and trained on instructional techniques.	Gooden	Trainers completed train the trainer class.	4/16/04
49. Training on new/revised policies and administrative and technical procedures completed	Gooden	Inspectors observed training to be adequate. Punch list item to complete training for sufficient staff prior to startup. To be reviewed by inspectors prior to startup.	

ISSUE	LEAD	STATUS	CLOSURE
50. Job Performance Measures established and operators and supervisors trained	Gooden	Inspectors observed training to be adequate. Punch list item to complete training for sufficient staff prior to startup. To be reviewed by inspectors prior to startup.	
51. Remedial training requirements defined and conducted as required	Gooden	To be provided as needed.	
MANAGEMENT OF CHANGE			
52. Confirm no additional program changes required.	Hartland	PT-101 closure will be done by line manager rather than Safety and Regulatory Manager	4/16/04
MECHANICAL INTEGRITY			
53. Complete all preventative maintenance and inspection requirements on critical equipment as a result of gap analysis	Baker	Complete and adequate except three items from license. Punch list item to be reviewed by inspectors prior to startup.	
54. Complete vibration testing for pumps and other rotating equipment and repair equipment out of specification, except equipment not currently running or operating below 1800 rpm	Baker	Inspectors reviewed and adequate.	4/16/04

ISSUE	LEAD	STATUS	CLOSURE
55. Pressure test fluorination and distillation system and repair any leaks identified.	Baker	Inspectors reviewed and adequate.	4/16/04
56. Inspect and replace, if needed rupture discs on cold traps within the distillation system	Baker	Inspectors reviewed and adequate. Rupture discs replaced except those replaced late in 2004 prior to event.	4/16/04
57. Establish procedures for leak testing expansion joints during operations	Baker	Leak test done prior to restart per item 55 established integrity of system. Procedure issued for subsequent in-leakage testing. Equipment to do testing during operation not yet available. Adequate test for startup.	4/16/04
58. Complete vibration analysis of rotating equipment after startup	Baker	Equipment identified to check for vibration during startup .	4/16/04
ENGINEERING CONTROLS			
59. Validate relief valve system design for cold traps and low boiler condensers	Baker	Cold trap relief system adequate. Procedure for low boiler condenser valve positioning to be completed. Plan to use a standing order to control line-up for maintenance. Punch list item to be reviewed by inspectors prior to startup.	
60. Improve controls for fluidizing air addition to fluorinators	Baker	Inspectors reviewed and adequate.	4/16/04

ISSUE	LEAD	STATUS	CLOSURE
61. High pressure alarms and/or interlocks to fluorinators and cold traps	Baker	Inspectors reviewed and adequate.	4/16/04
62. Upgrade controls and alarms for KOH scrubbers	Baker	Inspectors reviewed and adequate.	4/16/04
63. Improve drain and containment for dust collector scrubber	Baker	Licensee states this is green salt item. Closure packages received, no issues noted by inspectors.	4/13/04
CORRECTIVE ACTIONS AND AUDITING			
64. Confirm licensee restart audit complete and no additional program changes required.	Hartland	Received 4/17/04. To be reviewed by inspectors prior to startup.	