

NRC FORM 313
(10-2005)
10 CFR 30, 32, 33,
34, 35, 36, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0120

EXPIRES: 10/31/2008

Estimated burden per response to comply with this mandatory collection request: 4.4 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

APPLICATION FOR MATERIAL LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-4005

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

☐

A. NEW LICENSE

☒

B. AMENDMENT TO LICENSE NUMBER Sub-526 Docket40-3392

☐

C. RENEWAL OF LICENSE NUMBER _____

2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)

Honeywell Metropolis Works
2768 North US 45 Road
Metropolis, IL 62960

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

2768 North US 45 Road
Metropolis, IL 62960

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Larry Parscale, Regulatory Affairs Manager

TELEPHONE NUMBER

(618) 524-6221.

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL

a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY

AMOUNT
ENCLOSED \$

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

Mitch Tillman, Plant Manager

SIGNATURE

Mitch Tillman

DATE

7/17/08

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	

Specialty Materials

Honeywell
P.O. Box 430
Highway 45 North
Metropolis, IL 62960
618 524-2111
618 524-6239 Fax

July 17, 2008

US Nuclear Regulatory Commission
ATTN: Document Control Desk
Director, Office of Nuclear Material Safety and Safeguards
Mail Stop T-8A33, Two White Flint N.
11545 Rockville Pike
Rockville, MD 20852-2738

(UPS: 301-415-8147)

SUB-526, Docket # 40-3392.

US Nuclear Regulatory Commission
ATTN: Document Control Desk
Director, Office of Nuclear Material Safety and Safeguards
USNRC, Washington, DC 20555-0001

(UPS: 301-415-8147)

SUB-526, Docket # 40-3392.

Subject: SMALL CYLINDER FILLING PROCESS APPROVAL AND LICENSE
AMENDMENT REQUEST

Honeywell Metropolis works requests NRC approval for a new process of filling small UF6 cylinders, 12B and 30B, using the UF6 Continuous Sampling System. We are attaching, a detail process description and all other pertinent documentation.

According to the Source Material License, Honeywell is required to establish a configuration management system to evaluate, implement and track all changes to the site, structures, processes, systems, components, computer programs, and activities of personnel. The Right Of Approval (ROA) determination for changes proposed to NRC-license related systems and components is a critical element of the Honeywell's configuration control system, Management of Change (eMOC). The proposed process of product cylinder filling has been evaluated according to the eMOC procedure, including the ROA review. This evaluation was supported by the Process Hazard Analysis (PHA) to ensure that the proposed changes will not introduce any additional hazards. The ROA review determined that, according to the License Condition 18 of the Materials License (Amendment 1) and the License Application dated May 12, 2006 (Section 2.6.3, Configuration Control), the proposed change requires prior approval of the NRC as a "new process ...for which Honeywell has no prior experience".

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In addition, the ROA analysis identified some changes to the Honeywell Metropolis Works Application for Renewal of USNRC Source Materials License and the Integrated Safety Analysis Report necessitated by the new cylinder filling process.

Honeywell is pursuing commercial opportunities related to the filling of 12B and 30B cylinders. However, in order for us to be successful, we must respond quickly with a commitment (and capability) to supply the requested product. We have evaluated alternative production methods, but find these will not allow us to meet both these, new and our current production demands. Therefore, in order for us to be successful in this commercial opportunity, we find it necessary to request your expedited review of this amendment request.

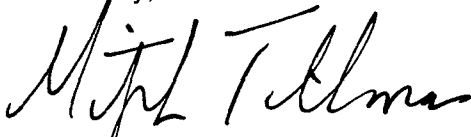
We hope that listed below and attached documentation will aid the "fast-track" processing of the Honeywell's application.

NO.	DOCUMENT DESCRIPTION
1.	NRC Form 313.
2.	Description and technical justification of the new process, UF6 Cylinder Filling Using the Distillation Sampling System.
3.	Proposed Flow Diagram of 12B/30B UF6 Cylinder Filling.
4.	Copy of the Right of Approval (ROA) Pre-Screening and ROA Screening Form, including ROA Determination.
5.	Copy of the Process Hazard Analysis (PHA) Final Report.
6.	Proposed Changes to the Honeywell Metropolis Works Application for Renewal of USNRC Source Materials License SUB-526.
7.	Proposed Changes to the Honeywell Metropolis Works Honeywell Metropolis Works Integrated Safety Analysis Report.

We are prepared to assist your review in any possible way, including meeting with you and your reviewing staff in Washington, D.C.

If you have any questions on the submitted information or other issues associated with the Honeywell Metropolis Works expedited approval request, please contact Mr. Larry Parscale, Nuclear Regulatory Affairs Manager, at 618-524-6221.

Sincerely,



Mitch Tillman
Plant Manager

Enclosures

Cc: U.S. Nuclear Regulatory Commission
Attention: Michael Raddatz, NMSS
Fuel Cycle Licensing Branch
Mail Stop T-8A33
Two White Flint North, 11545 Rockville Pike
Rockville, MD 20852-2738

(UPS: 301-415-6334)

U.S. Nuclear Regulatory Commission
Attention: Tilda Liu
Fuel Cycle Licensing Branch
Mail Stop T-8A33
Two White Flint North, 11545 Rockville Pike
Rockville, MD 20852-2738

(UPS: 301-415-6334)

Larry Parscale
Michael Greeno
Lidia Litinski

UF6 Cylinder Filling Using the Distillation Sampling System

PROCESS DESCRIPTION

Honeywell Inc. requests NRC approval for an alternative method of small UF6 cylinder filling using the UF6 Continuous Sampling System. Type 12B cylinders will be filled to an administrative limit below the 460 lbs maximum mandated by ANSI N14.1 for UF6. This administrative limit will not exceed 440 lbs. In addition, Honeywell is planning to package 30B cylinders with the quantities of UF6 significantly lower than the 5020 lbs maximum allowed by ANSI N14.1. The amount of UF6 needed in the 30B cylinders would be less than 100 lbs (or approximately 2% of the permissible administrative limit).

In each case “the package” – the cylinder and its cradle/frame – will allow for safe movement of the UF6 liquid-containing cylinder without the concern for instability due to sloshing within the cylinder. The “package” arrangement has been used by Honeywell for 30B cylinders filling for many years. Each package arrangement will be transported to a designated cooling area after filling. These areas will be less than 150 yards from the Feeds Material Building (FMB).

Model 48 Cylinders Filling Process

Model 48 cylinder filling follows established procedure and up to 6 or 7 of these cylinders can be filled in a given 24-hour period. A cylinder fill rate is set by Metropolis Works management and, then, the Standard Operating Procedures (SOPs) dictate the steps and actions taken to monitor the actual filling process, to ensure that there are no leaks of UF6 to the environment, and to prevent a cylinder from being overfilled. Orifice meter flow totalization, dual and independent fill spot load cell indications and a manual fill time calculation are used to supervise filling. Any significant deviation between these methods of managing flow or a high weight event will stimulate an alarm and terminate filling. Furthermore, Metropolis Works administrative weight limits set below the ANSI N14.1 allowable maximum weight protect against overfilling.

Throughout the filling process operating personnel remotely monitor for UF6 leaks and have the capability to remotely terminate all critical process flows. Cylinder handling is done via an overhead crane. All equipment and instrument components that function during the filling process (as well as the crane and various scales) are routinely inspected and maintained per an established preventive maintenance program.

The filling of the 12B and the partial filling of the 30B cylinders could be accomplished with the above equipment and procedures, but such action would cost Metropolis Works 2-3 hours of normal production for each event, which is not desirable commercially. This proposed amendment would allow the filling of the 12B and 30B cylinders without interfering with routine production activities.

UF6 Continuous Sampling System

Currently, the UF6 Distillation Sampling System continuously collects a sample (about 50 cc/min of UF6 gas) while a 48 inch cylinder is being filled. The sample collection vessel contains an internal condensing coil for changing the state of the UF6. When the 48 inch cylinder is full (reached its desired administrative limit), the continuous sampling collection vessel has accumulated about 60 lbs of liquid UF6. Laboratory personnel then drain a few pounds of liquid UF6 from the collection vessel for performing product analysis and quality assurance tests. The collection vessel will hold 560 lbs of liquid UF6 below the bottom of the condensing coils.

The UF6 Sampling System is managed by the Metropolis Works (MTW) Laboratory, which is responsible for all administrative, operational and safety related activities. The sampling system safety is currently supported by the following features:

- Flow/weight control. The inlet to the collection vessel has a flow totalizer (mass flow meter) which accumulates the amount of UF6 flowing into the vessel. This value is checked against material weight in the collection vessel measured by the load cells. If the flow total exceeds a set point or the deviation between the load cell weight and the flow totalizer exceeds a preset amount, the UF6 flow into the collection vessel is automatically stopped.
- Automatic shut-off. A remote high weight alarm and automatic shut-off on the inlet UF6 flow will be initiated, if the weight in the collection vessel measured by the load cells exceeds a preset amount.
- Limited quantity of UF6. The maximum measured flow of UF6 through the inlet flow control valve and piping is approximately 60 lbs/ hr. Over the course of a "normal" 48 inch cylinder fill (3.5-6.0 hours), the quantity of UF6 in the collection vessel can not exceed 360 lbs.
- High pressure relief. The collection vessel possesses a relief system that will relieve high pressure in the vessel from whatever the reason. Relieved volume will enter the Distillation Safety Relief System and travel to the Dump Tank.
- Double-block valves. All UF6 bearing lines attached to the collection vessel (inlet, drain and evacuation source) contain double-block valves.
- UF6 evacuation capability. The FMB UF6 Evacuation System, a vacuum source, is connected to the sample system at several strategic locations.
- Temperature and pressure control. Temperature and pressure indication along with high alarms are also available on the sample collection vessel.

- Preventive maintenance. The sample collection vessel and its components have scheduled preventive maintenance.

Employing the above engineering controls, Honeywell can predetermine a specified amount of UF₆ to be accumulated in the collection vessel and reliably and safely collect the desired quantity.

There are no physical changes to the sampling system to accommodate filling the 12B and partial filling the 30B cylinders.

All Plant Features and Procedures (PFAP) required by the MTW material license to support prevention or mitigation of accident scenarios associated with cylinder filling will be implemented in the proposed filling process. These PFAP descriptions will be summarized in the last section of this document.

12B Cylinders Filling

The 12B cylinder filling process will follow practices and procedures employed in filling the 48 inch cylinders. The engineering and administrative controls and safety features will also be consistent with the present processes.

A 12B cylinder which has been certified per ANSI N14.1 will be positioned in a frame for support during the filling sequence. The cylinder and frame will be moved by a fork truck into and out of the Distillation filling area (1st floor of the FMB). In accordance with MTW procedures the cylinder(s) to be filled will also be certified (by the owner) to be free of organics, trans-uranics and/or fissionable material, if appropriate.

Type 12B cylinder and frame (the package) will be placed on a floor scale equipped with 2 sets of load cells and attached via a flexible metal hose (pigtail) to a portable filling manifold. The filling manifold will have a manual block valve, a remotely actuated automatic fill/shut-off valve, a nitrogen source and a dual scale pressure gauge. In the event of a UF₆ connection leak, the remotely actuated automatic fill/shut-off valve will close and prevent further cylinder filling. In addition, personnel will remotely activate a cylinder valve closure device to prevent back flow. This will prevent an UF₆ release due to connection failure.

The integrity of the filling manifold and connection to the cylinder will be verified by pressure checking with nitrogen, and the temperature of the fill lines will be checked for sufficiency.

Personnel will drop the predetermined amount of UF₆ accumulated in the collection vessel into the cylinder. The cylinder can not be over-filled if the quantity to be dropped to the 12B cylinder is less than the ANSI prescribed limit. Cylinder weight will be controlled by the load cells connected to the automatic fill/shut-off valve through a controller. If the material weight in the cylinder exceeds the preset administrative limit, an alarm will be activated and the automatic fill valve will close.

Cylinder weight control will be ensured by another method - a drop time calculation performed by personnel initiating the cylinder fill.

Once the 12B cylinder is full, personnel will disconnect it from the filling manifold and subsequently secure both the package and the manifold.

The package will be removed from the floor scale and placed on the product scale for final weight determination. This is approximately 20 feet of package movement and will be performed by a certified wheeled cylinder mover. Once weighed, the package is moved outside by a fork truck to a specified location (<150 yards from the FMB), where UF6 in the cylinder is allowed to solidify. When necessary, the cylinder is removed from the frame and prepared for shipment. Outside cylinder handling will be consistent with current practices for 48 inch and full 30B cylinders.

30B Cylinder Filling

The 30B cylinder filling process will follow practices and procedures and utilize applicable safety features already established for filling 30B cylinders. The required engineering and administrative controls will also be utilized.

The most salient and inherent safety feature of this filling option is that we will be putting into the 30B cylinders less than 2% of the maximum allowable quantity of UF6. The ANSI standard establishes a 5020 lb net limit. Based on customer's specifications, Honeywell will put no more than 100 lbs into the cylinder using the UF6 Continuous Sampling System. Therefore, this process is essentially safe from a vessel overfill.

All 30B cylinders filled with more than 2500 lbs of UF6 will be filled in a regular Distillation fill spot.

A 30B cylinder certified per ANSI N14.1 will be positioned in a cradle for support during the filling sequence. The cylinder and cradle (the package) will be moved by a fork truck while within the Distillation filling area (1st floor of the FMB); no movement will exceed 20 feet. The cylinder to be filled will also be certified to be free of organics, trans-uranics and fissionable material, if appropriate.

The package will be placed on a scale where the cylinder is attached, via a flexible metal hose (pigtail), to a portable filling manifold. The package will then be tared.

The filling manifold will have a manual block valve, an automatic fill/shut-off valve, a nitrogen source and a dual scale pressure gauge. In the event of a UF6 connection failure, personnel will remotely activate a cylinder valve closure device and close the auto valve on the filling manifold. This will prevent an UF6 release to the atmosphere.

The integrity of the filling manifold and connection to the cylinder will be verified by pressure checking with nitrogen, and the temperature of the fill lines will be checked for

sufficiency. Personnel will drop the predetermined weight in the sample system collection vessel into the cylinder. The cylinder can not be over-filled since the capacity of the 30B is about 50 times the needed amount. Once the cylinder contains the desired amount of UF₆, personnel will disconnect it from the filling manifold and subsequently secure the manifold.

The package will be already on the product scale, so a final weight will be determined. Once weighed, the package is moved outside of the FMB by a fork truck to a designated cooling area (<150 yards from the FMB), where the UF₆ in the cylinder is allowed to freeze. The cylinder removed from the cradle will be prepared for shipment. Handling will be consistent with current practices for 30B cylinders.

ACCIDENT SCENARIOS AND PLANT FEATURES AND PROCEDURES (PFAP) FOR 12B AND 30B CYLINDER FILLING PROCESS

The MTW Integrated Safety Analysis (ISA) provides an evaluation of credible accident sequences related to cylinder filling and handling. The following table presents a list of accident sequences identified in the ISA and the Plant Features and Procedures (PFAP) required to prevent and/or mitigate these accidents. The table lists three accident scenarios (DI-3, DI-4 and DI-6), the PFAP associated with each scenario, and the Risk Index Level with all PFAP functional. (This Risk Index was calculated in the ISA for 48 inch cylinders. The ISA defines a risk level of 4 or lower as acceptable, and a risk level greater than 4 as unacceptable.)

The Process Hazard Analysis (PHA) performed for the proposed cylinder filling and handling determined that this process will not introduce any new accident scenarios, and will not increase the likelihood and consequences of the existing events. Therefore, the new process is designed to provide all the PFAP already identified in the ISA, which are applicable to the proposed small cylinder filling process.

Table

PFAP	Description	ISA Accident Scenario	ISA Risk Index
<i>Figure Withheld Under 10 CF 2.390</i>			

12B Cylinder Filling Process

Text Withheld Under 10 CFR 2.390

Text Withheld Under 10 CFR 2.390

30B Cylinder Filling Process

Text Withheld Under 10 CFR 2.390

REFERENCES

1. Honeywell Metropolis Works Application for Renewal of USNRC Source Materials License SUB-526 dated May 12, 2006
2. Honeywell Metropolis Works Integrated Safety Analysis Report dated January 31, 2008
3. NUREG 1513, Integrated Safety Analysis Guidance Document, published May 2001
4. ANSI N14.1-2001, American National Standard for Nuclear Materials – Uranium Hexafluoride – Packaging for Transport

Figure Withheld Under 10 CFR 2.390

SECTION A-A

Figure 6 - UF₆ Cylinder 12B (See 6.9) (continued)

Figure Withheld Under 10 CFR 2.390

Figure 6 - (concluded)

Figure Withheld Under 10 CFR 2.390

Figure 7 - UF₆ Cylinder 30B (See 6.10) (continued)

Figure Withheld Under 10 CFR 2.390

Figure 7 - (concluded)

PROPOSED FLOW DIAGRAM OF 12B/30B UF6 CYLINDER FILLING

Figure Withheld Under 10 CFR 2.390

Date Drawn 06/09/08

SK-060908 12B/30B Cyl Filling

RIGHT OF APPROVAL (ROA) PRE-SCREENING AND ROA SCREENING

Change No. # 081660684

Date: 06/20/2008

Requestor's Name: B. Mohny

Description of Change: Proposal to fill customer 12B cylinders. Piping, scales, controls, and procedures to filling the 12B customer cylinders on a new first floor scale from the second floor UF6 Continuous Sampling System vessels. Dual weight measurements and redundant vacuum systems will meet regulatory requirements

No.	Section I — Pre-Screening (both questions must be answered)	Yes	No
1	Does the change involve or impact any License-Related System or Component (LRSC)? (List of LRSCs is provided in SAP database by technical ID number.)	X	
2	Does the change involve or impact any procedure for systems or equipment listed in MTW-ADM-PRO-0121, Management of Plant Features and Procedures, Table 5?	X	
3	Does the change affect the level of safety as described in the Safety Demonstration Report?		X

- If the answer is "No" to all questions, no additional questioning is required. Sign for pre-screening and forward the requested change within MOC process.
- If the answer is "Yes" to any question, sign for pre-screening and proceed with ROA screening. ALL ROA Screening questions must be asked and answered.

Pre-screening Complete: _____ Date: 06/20/2008

(Signature of Pre-screener)

Proposed change does involve items related to the Source Material Licensed activities.

RIGHT OF APPROVAL (ROA) PRE-SCREENING AND ROA SCREENING

No.	Section II — ROA Screening (each question and sub-question must be answered)	Yes/ Maybe	No
1	Does the change create any new types of accident sequences that have not previously been described in the MTW-ISA? ¹		X
2	Does the change use new processes, technologies, or control systems for which Honeywell-MTW has no prior experience? <i>This change proposes a new process – 12B product cylinder filling using the UF6 Continuous Sampling System.</i>	X	
3	Does the change remove a Plant Feature and Procedure (PFAP) relied on for safety as identified in the MTW-ISA, without a replacement PFAP that is at least equivalent? (PFAP status is maintained by Production and PFAPs are listed within the SAP database.)		X
4	Does the change affect any item relied upon for safety, as listed in the MTW-ISA that is a sole item preventing or mitigating an accident sequence (PFAP—Class A) that exceeds regulatory requirements?		X
5	Does the change create any condition or configuration that is otherwise prohibited by the MTW Source Materials License, the license conditions or 10 CFR 40? (This question is answered by answering the following sub-questions; any of them answered "Yes" requires this question to be "Yes")		X
	a. Could the proposed change increase the consequences (to workers or the public) or the probability of occurrence of an accident previously evaluated in the ISA?		X
	b. Could the proposed change create the possibility of an accident sequence of a different type than any previously evaluated in the ISA?		X
	c. Could the proposed change remove from service or function a PFAP described in the ISA? (PFAP as identified in the ISA are listed in MTW-ADM-PRO-0121, Management of Plant Features and Procedures, Table 4 to the process instruction.)		X
	d. Could the proposed change increase the consequences of a malfunction of a PFAP (system or component) described in the ISA?		X
	e. Could the proposed change create the possibility of a PFAP malfunction of a different type (or method of failure) than any previously evaluated in the ISA?		X
	f. Could the change reduce the level of safety as described in the SDR?		X

NOTE: All ROA Screening questions must be answered. A "Yes/Maybe" answer to any of the ROA Screening questions above may require NRC approval of the change. If all questions are answered "No" and are technically justified, Honeywell-MTW can approve the change.

Proposed change # 081660684 _____ does require change of the Source Material License.

Right of Approval Determination for change is required.

ROA Screening Complete: *William H. H. H.* Date: 06/20/2008 _____ (Signature)

¹ The original question in the SML Section 2.6.3 asks "Does the change create any new types of accident sequences that, unless mitigated or prevented, would exceed regulatory requirements and that have not previously been described in the MTW-ISA?" The question, as stated above, is a more conservative approach and one that ensures the NRC will be given the opportunity to review and approve the change. Mitigation and/or prevention methodologies should be part of the submittal for NRC approval.

RIGHT OF APPROVAL (ROA) PRE-SCREENING AND ROA SCREENING

Section III — ROA Determination			
NOTE: The ROA Determination must evaluate each ROA Screening question answered "Yes/Maybe" to remove the ambiguity and determine a "Yes" or "No" response.			
List each ROA Screening question that was answered "Yes/Maybe" followed by a brief summary of the Determination basis for the final "Yes" or "No" response.			
Screening Question #	Determination Summary	Final Evaluation Yes No	
2	This change proposes a new process – 12B product cylinder filling using the UF6 Continuous Sampling System. As per Section 2.6.3, Configuration Control, of the Honeywell Metropolis Works Application for Renewal of USNRC Source Materials License SUB-526 dated May 12, 2006, this change requires prior approval of the USNRC as "...new process ... for which Honeywell has no prior experience".	X	

Proposed change # 081660684 _____ does require NRC Approval.	
ROA Determination Complete: _____ (Signature)	Date: <u>6/20/08</u>
ROA Determination Approved: _____ (Signature Regulatory Affairs Manager)	Date: <u>6/20/2008</u>

RIGHT OF APPROVAL (ROA) PRE-SCREENING AND ROA SCREENING

Change No. # 081660685

Date: 06/20/2008

Requestor's Name: B. Mohny_____

Description of Change: Proposal to fill customer 30B cylinders. Piping, scales, controls, and procedures to filling the 30B customer cylinders on a new first floor scale from the second floor UF6 Continuous Sampling System vessels. Dual weight measurements and redundant vacuum systems will meet regulatory requirements.

No.	Section I — Pre-Screening (both questions must be answered)	Yes	No
1	Does the change involve or impact any License-Related System or Component (LRSC)? (List of LRSCs is provided in SAP database by technical ID number.)	X	
2	Does the change involve or impact any procedure for systems or equipment listed in MTW-ADM-PRO-0121, Management of Plant Features and Procedures, Table 5?	X	
3	Does the change affect the level of safety as described in the Safety Demonstration Report?		X

- If the answer is "No" to all questions, no additional questioning is required. Sign for pre-screening and forward the requested change within MOC process.
- If the answer is "Yes" to any question, sign for pre-screening and proceed with ROA screening. ALL ROA Screening questions must be asked and answered.

Pre-screening Complete: _____ Date: 06/20/2008 _____
 (Signature of Pre-screener)

Proposed change does involve items related to the Source Material Licensed activities.

RIGHT OF APPROVAL (ROA) PRE-SCREENING AND ROA SCREENING

No.	Section II — ROA Screening (each question and sub-question must be answered)	Yes/ Maybe	No
1	Does the change create any new types of accident sequences that have not previously been described in the MTW-ISA? ¹		X
2	Does the change use new processes, technologies, or control systems for which Honeywell-MTW has no prior experience? <i>This change uses UF6 Continuous Sampling System for a new process – product cylinder filling. 30 B cylinders filling is addressed in MTW ISA, however, only as performed using the regular filling system.</i>	X	
3	Does the change remove a Plant Feature and Procedure (PFAP) relied on for safety as identified in the MTW-ISA, without a replacement PFAP that is at least equivalent? (PFAP status is maintained by Production and PFAPs are listed within the SAP database.).		X
4	Does the change affect any item relied upon for safety, as listed in the MTW-ISA that is a sole item preventing or mitigating an accident sequence (PFAP–Class A) that exceeds regulatory requirements?		X
5	Does the change create any condition or configuration that is otherwise prohibited by the MTW Source Materials License, the license conditions or 10 CFR 40? (This question is answered by answering the following sub-questions; any of them answered “Yes” requires this question to be “Yes”)		X
	a. Could the proposed change increase the consequences (to workers or the public) or the probability of occurrence of an accident previously evaluated in the ISA?		X
	b. Could the proposed change create the possibility of an accident sequence of a different type than any previously evaluated in the ISA?		X
	c. Could the proposed change remove from service or function a PFAP described in the ISA? (PFAP as identified in the ISA are listed in MTW-ADM-PRO-0121, Management of Plant Features and Procedures, Table 4 to the process instruction.)		X
	d. Could the proposed change increase the consequences of a malfunction of a PFAP (system or component) described in the ISA?		X
	e. Could the proposed change create the possibility of a PFAP malfunction of a different type (or method of failure) than any previously evaluated in the ISA?		X
	f. Could the change reduce the level of safety as described in the SDR?		X

NOTE: All ROA Screening questions must be answered. A “Yes/Maybe” answer to any of the ROA Screening questions above may require NRC approval of the change. If all questions are answered “No” and are technically justified, Honeywell-MTW can approve the change.

Proposed change # 081660685 _____ does require change of the Source Material License. Right of Approval Determination for change is required. ROA Screening Complete: <u>hura h. ky</u> _____ Date: 06/20/2008 _____ (Signature)
--

¹ The original question in the SML Section 2.6.3 asks “Does the change create any new types of accident sequences that, unless mitigated or prevented, would exceed regulatory requirements and that have not previously been described in the MTW-ISA?” The question, as stated above, is a more conservative approach and one that ensures the NRC will be given the opportunity to review and approve the change. Mitigation and/or prevention methodologies should be part of the submittal for NRC approval.

RIGHT OF APPROVAL (ROA) PRE-SCREENING AND ROA SCREENING

Section III — ROA Determination			
NOTE: The ROA Determination must evaluate each ROA Screening question answered "Yes/Maybe" to remove the ambiguity and determine a "Yes" or "No" response.			
List each ROA Screening question that was answered "Yes/Maybe" followed by a brief summary of the Determination basis for the final "Yes" or "No" response.			
Screening Question #	Determination Summary	Final Evaluation Yes No	
2	This change uses UF6 Continuous Sampling System for a new process – cylinder filling. 30 B cylinders filling is addressed in MTW ISA, however, only as performed using the regular filling system. As per Section 2.6.3, Configuration Control, of the Honeywell Metropolis Works Application for Renewal of USNRC Source Materials License SUB-526 dated May 12, 2006, this change requires prior approval of the USNRC as "...new process ... for which Honeywell has no prior experience".	X	

Proposed change # 081660685 _____ does require NRC Approval:	
ROA Determination Complete: _____ (Signature)	Date: 6/20/08
ROA Determination Approved: _____ (Signature) Regulatory Affairs Manager	Date: 6/20/2008

PHA Final Report

SUBJECT: Filling of Small Quantities of UF6 into 30B or 12B Cylinders.

FACILITY: Honeywell, Metropolis Works – UF6 Process

PHA METHOD: HAZOP

PHA TYPE: Initial resulting from RFC #081660685

PROCESS AREA: Distillation, Yard, and Laboratory Activities

REPORT FILED: PHA Files

ISSUE DATE: June 3, 2008

PHA LEADER: Richard C. Allshouse



PHA Proceedings

A Process Hazards Analysis team was formed to review the hazards associated with filling small quantities (<460 pounds) into 12B and 30B UF6 cylinders per special customer requests. The intent of the change would be to fill 12B UF6 cylinders (not to exceed their 460 pound regulatory limit). 30B UF6 cylinders would receive less than 25 kg of UF6 which is approximately 1% of their regulatory maximum fill limit. The team consisted of:

Rich Allshouse – PHA Leader
Ernie Robinson – Engineering and Technical Expert
Bruce Mohney – Engineering and Technical Expert
Douglas Caldwell – Distillation Operator
Jonathan Thompson – Reliability Engineer and Maintenance
Holly Burgess – Safety Representative
Don Heine – Nuclear Services Specialist
Lidia Litinski – Senior Compliance Specialist
Sean Patterson – Health Physics Supervisor
Shane Robinson - Laboratory Supervisor
Dan Huffman - Consultant

The team used the HAZOP methodology to identify and rank the hazards associated with the change. The following factors were assessed during the course of the PHA:

- Facility Siting
- Human Factors
- Hazards of the Process
- Previous Incidents
- Engineering and Administrative Controls and their Failures

- Individual Nodes of the Process
- License Related Issues and PFAP's

Facility Siting

The facility siting checklist was utilized to address the issue created as a result of the addition of the new filling equipment near the sampling manifold. The Facility Siting checklist was completed. In most cases, the change did not impact facility siting issues beyond the current situation. One item noted was the location of the Emergency Equipment cabinet outside of the Distillation door. This cabinet may not be accessible in the case of a significant UF6 release. Alternate cabinets exist including the mobile equipment van. There will be no remote operated shutdown button beyond what already exists for the Distillation unit.

Human Factors

Human factors such as errors in operations were evaluated throughout the PHA. In many cases, the causes for deviation in parameters may have been due to human factors. In addition, activities surrounding the proposed operation will be performed with a laboratory employee and a distillation employee providing a check and balance against human error.

Draft procedures were written for the operation. These are subject to change. A team recommendation is to perform a prestartup review of the finalized procedure in addition to the routine scrutiny of the procedure approval process.

Hazards of the Process

Hazards of the process include the hazards associated with handling UF6. These include properties unique to UF6 such as its unusual coefficient of expansion, especially in the liquid phase. Employees are well versed in the handling of UF6 so as to prevent hydrostatic rupture of piping and other equipment. MSDS for UF6 was available on demand but was not utilized in the conduct of the PHA.

Previous Incidents

Although no previous incidents were discussed, the team was familiar with the larger scale UF6 Cylinder overfill accident that resulted in a fatality at another facility outside of Honeywell. Safety systems are in place or will be installed to preclude a similar event.

Engineering and Administrative Controls and Their Failures

Engineering controls and their failures were addressed in a manner analogous to the existing cylinder fill spots. It was proposed that mitigating equipment include remote operated shutoff valves and redundant load cell scales (as appropriate).

Individual Nodes of the Process

The process was initially divided into 3 nodes: 30B filling, 12B filling, and Cylinder Handling. During the course of the PHA, a 4th node was added to address issues in the draft procedure.

Individual parameters were selected and assigned to each node. The nodal analysis addressed deviation in the assigned parameters using the HAZOP methodology. Consequences were risk

ranked in accordance with the guidance in SMHSE390 and team recommendations were developed and agreed upon by consensus.

License Related Issues and PFAP's

License requirements and licensing issues were discussed. Lidia Litinski provided the team with applicable portions of MTW-ADM-OPS-0121, Management of Plant Features and Procedures.

Recommendations were made to address licensing document requirements. These included dual element load cells and remote operated cylinder closers. Hydrocarbon contamination issues were also discussed.

The final result of the PHA was a list of 10 recommendations (attached). In some cases, regulatory compliance created a risk ranking of 3. This was due to the fact that the current design lacked mitigating equipment required in the license or ISA. Completion of the recommendation related to these would eliminate the regulatory risk.

Aside from the regulatory risk, no other risk before recommendation was ranked lower than 6. There are two recommendations that address incomplete information. These recommendations must be addressed prior to commencement of cylinder filling. These two recommendations relate to lack of information of the final configuration of the cylinder complete package including framework and overpack; and the potential for the "Draft" procedure to change prior to beginning operations.

Management Acceptance

It is the responsibility of Metropolis works Management to:

- Maintain this PHA report for the life of the process;
- Ensure appropriate timing and provision of resources for the resolution of recommendations;
- Communicate the results of the PHA to all affected employees;
- Enter the recommendations of the PHA into an Event Tracking System

All action items and deliverables will be entered into IT&CA for tracking to completion.


MTW Management accepts this PHA and acknowledges its responsibilities as listed above.

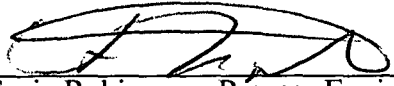

MTW Management Representative

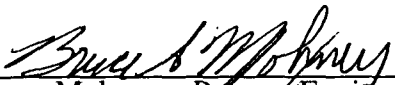
Team Signature Page

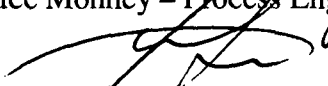
This PHA is the result of a team effort. Team members are identified in the body of this report. The results of the PHA Team for the Filling of Small Quantities of UF₆ into 30B or 12B Cylinders are documented in this report. The PHA Team has reached a consensus that this process is safe to operate as proposed in RFC #081660685 and the documents attached to this report.


Team Members:

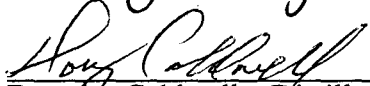

Richard C. Allshouse – Team Leader


Ernie Robinson – Process Engineer



Bruce Mohnhey – Process Engineer

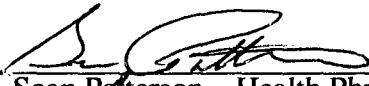

Jonathan Thompson – Reliability Engineer

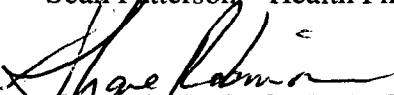

Holly Burgess – Safety Representative

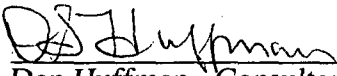

Douglas Caldwell – Distillation Operator


Lidia Litinski – Senior HP Specialist


Don Heine – Nuclear Services Specialist


Sean Patterson – Health Physics Supervisor


Shane Robinson – Laboratory Supervisor


Dan Huffman – Consultant

PHA Final Report

SUBJECT: Filling of Small Quantities of UF6 into 30B or 12B Cylinders - Supplemental

FACILITY: Honeywell, Metropolis Works – UF6 Process

PHA METHOD: HAZOP

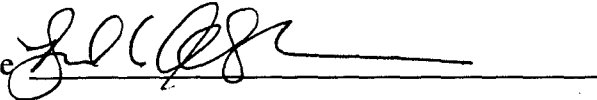
PHA TYPE: Initial resulting from RFC #081660685

PROCESS AREA: Distillation, Yard, and Laboratory Activities

REPORT FILED: PHA Files

ISSUE DATE: July 14, 2008

PHA LEADER: Richard C. Allshouse



Supplemental PHA Proceedings

A PHA was performed to assess the risk of dumping 2S UF6 sample cylinders into dump or 12B UF6 cylinders. As part of this PHA, the team also assessed the risk of in plant movement of full 12B cylinders. The result of this study satisfies an open requirement from the Small Quantities UF6 PHA. The excerpt of the study pertaining to the in plant transport follows. Additional details for this assessment can be found in the PHA for dumping 2S cylinders.

The PHA Team had considerable discussion concerning cylinder in plant transport. This type of cylinder is significantly different from the 48Y cylinder normally transported within the plant. The size and capacity of the 12B cylinder and dump cylinder is considerably less. When considering the postulated accident scenarios, the resultant severity is less due to the fact that less than 2% of the UF6 is involved.

Several options were discussed and the team evaluated a dual method of transport. Cylinders would be transported short distances such as from the filling area to a staging area by a heavy duty hand truck that would be rated well in excess of the load of a full 12B cylinder (600 pounds). This truck would have 4 wheels to add stability to the operation. Longer distance movements such as from the staging area to the cylinder yard for storage would be done on a rack designed for the transport of cylinders. Metropolis Works has considerable experience with such a rack for transporting cylinders of SF6. More than one dozen SF6 cylinders are routinely transported on this rack. This weight exceeds 2000 pounds as compared to the approximately 600 pound gross weight of a 12B cylinder.

The dropping of a 12B cylinder under any credible scenario was evaluated. The 12B cylinder is required to pass a 1.2 meter or 4 foot drop test without loss of contents. None of the scenarios discussed exceeded this height and none of them involve a scenario that would cause the cylinder to land on the most damaging configuration which would be on the valve. The result was no hazard determined from these means of transport for any credible scenario.

PHA RECOMMENDATION — MANAGEMENT RESOLUTION

Unit: Distillation

Date: June 2, 2008

PHA: Filling of 30B and 12B cylinders with small amounts of UF6

Recommendation No.: 1

Item: Issue: UF6 may freeze out in the piping due to tracing failure. Risk Before Recommendation = 6

Recommendation: Consider a temperature indicator on line using either procedure in hand or checklist. 1 safeguard Risk After Recommendation 7 may be combined with additional recommendations to reduce the risk to 8 or 9.

Management Review Decision:

- ☒ Approved as recommended
- ☐ Approved with modifications as documented.¹
- ☐ Alternate measure implemented to address the hazard.¹
- ☐ Rejected because the PHA team recommendation is no longer valid.¹
- ☐ Rejected because a detailed analysis indicates that the PHA team recommendation is not a good one (i.e., erroneous or infeasible).¹
- ☐ Rejected because implementation of other PHA team recommendations or existing safeguards adequately addresses the risk addressed by this recommendation (i.e., implementing the recommendation is not necessary to protect the safety of plant personnel or the public).¹

¹Explanation:

Prepared by: Richard C. Allshouse

Approved by:



PHA RECOMMENDATION — MANAGEMENT RESOLUTION

Unit: Distillation

Date: June 2, 2008

PHA: Filling of 30B and 12B cylinders with small amounts of UF₆

Recommendation No.: 2

Item: Issue: UF₆ may freeze out in the piping due to tracing failure. Risk Before Recommendation = 6

Recommendation: Consider installing dual (steam/electric) heat tracing. 1 safeguard Risk After Recommendation 7 may be combined with additional recommendations to reduce the risk to 8 or 9.

Management Review Decision:

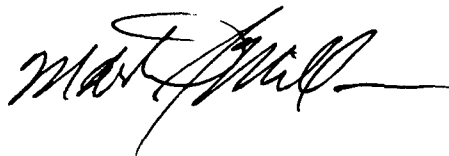
- ☐ Approved as recommended
- ☐ Approved with modifications as documented.¹
- ☐ Alternate measure implemented to address the hazard.¹
- ☐ Rejected because the PHA team recommendation is no longer valid.¹
- ☐ Rejected because a detailed analysis indicates that the PHA team recommendation is not a good one (i.e., erroneous or infeasible).¹
- ☒ Rejected because implementation of other PHA team recommendations or existing safeguards adequately addresses the risk addressed by this recommendation (i.e., implementing the recommendation is not necessary to protect the safety of plant personnel or the public).¹

¹Explanation:

Single mode heat tracing in use has proven to be effective.

Prepared by: Richard C. Allshouse

Approved by:



PHA RECOMMENDATION — MANAGEMENT RESOLUTION

Unit: Distillation

Date: June 2, 2008

PHA: Filling of 30B and 12B cylinders with small amounts of UF6

Recommendation No.: 3

Item: Issue: UF6 may freeze out in the piping due to tracing failure. Risk Before Recommendation = 6

Recommendation: Consider adding the piping temperature to the DCS (may include a temperature alarm as well). 1
safeguard Risk After Recommendation 7 may be combined with additional recommendations to reduce the risk to 8 or 9.

Management Review Decision:

- ☐ Approved as recommended
- ☐ Approved with modifications as documented.¹
- ☐ Alternate measure implemented to address the hazard.¹
- ☐ Rejected because the PHA team recommendation is no longer valid.¹
- ☐ Rejected because a detailed analysis indicates that the PHA team recommendation is not a good one (i.e., erroneous or infeasible).¹
- ☒ Rejected because implementation of other PHA team recommendations or existing safeguards adequately addresses the risk addressed by this recommendation (i.e., implementing the recommendation is not necessary to protect the safety of plant personnel or the public).¹

¹Explanation:

Local temperature indication has proven effective in numerous similar installations.

Prepared by: Richard C. Allshouse

Approved by:



PHA RECOMMENDATION — MANAGEMENT RESOLUTION

Unit: Distillation

Date: June 2, 2008

PHA: Filling of 30B and 12B cylinders with small amounts of UF6

Recommendation No.: 4

Item: Issue: License and ISA require that the cylinder has a remote operated closer. Risk Before Recommendation = 3

Recommendation: Consider adding a remote cylinder valve closer. This will eliminate the regulatory risk. Rank after Recommendation = 10

Management Review Decision:

- ☒ Approved as recommended
- ☐ Approved with modifications as documented.¹
- ☐ Alternate measure implemented to address the hazard.¹
- ☐ Rejected because the PHA team recommendation is no longer valid.¹
- ☐ Rejected because a detailed analysis indicates that the PHA team recommendation is not a good one (i.e., erroneous or infeasible).¹
- ☐ Rejected because implementation of other PHA team recommendations or existing safeguards adequately addresses the risk addressed by this recommendation (i.e., implementing the recommendation is not necessary to protect the safety of plant personnel or the public).¹

¹Explanation:

Prepared by: Richard C. Allshouse

Approved by:



PHA RECOMMENDATION — MANAGEMENT RESOLUTION

Unit: Distillation

Date: June 2, 2008

PHA: Filling of 30B and 12B cylinders with small amounts of UF6

Recommendation No.: 5

Item: Issue: Slow filling may hamper routine filling operations. Operations may want to consider simultaneous filling of 12B and 48 inch cylinders. This could be prohibited by the license or ISA. If so the Risk Before Recommendations would be 3

Recommendation: Review licensing documents for prohibition of simultaneous filling. Adjust procedures accordingly. This will eliminate the regulatory risk. Risk After Recommendation = 10.

Management Review Decision:



Approved as recommended



Approved with modifications as documented.¹



Alternate measure implemented to address the hazard.¹



Rejected because the PHA team recommendation is no longer valid.¹



Rejected because a detailed analysis indicates that the PHA team recommendation is not a good one (i.e., erroneous or infeasible).¹



Rejected because implementation of other PHA team recommendations or existing safeguards adequately addresses the risk addressed by this recommendation (i.e., implementing the recommendation is not necessary to protect the safety of plant personnel or the public).¹

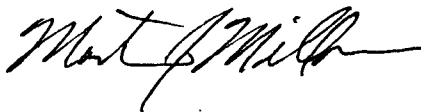
¹Explanation:

License documents have been reviewed with
no restriction noted.

Prepared by:

Richard C. Allshouse

Approved by:



PHA RECOMMENDATION — MANAGEMENT RESOLUTION

Unit: Distillation

Date: June 2, 2008

PHA: Filling of 30B and 12B cylinders with small amounts of UF6

Recommendation No.: 6

Item: Issue: A scale malfunction may allow the cylinder to be overfilled. Risk Before Recommendation = 6

Recommendation: Consider a procedural requirement to test load cells with 1000 pound weight prior to a series of weighings. (1 safeguard credit) Risk After Recommendation = 7.

Management Review Decision:



Approved as recommended



Approved with modifications as documented.¹



Alternate measure implemented to address the hazard.¹



Rejected because the PHA team recommendation is no longer valid.¹



Rejected because a detailed analysis indicates that the PHA team recommendation is not a good one (i.e., erroneous or infeasible).¹



Rejected because implementation of other PHA team recommendations or existing safeguards adequately addresses the risk addressed by this recommendation (i.e., implementing the recommendation is not necessary to protect the safety of plant personnel or the public).¹

¹Explanation:

Prepared by: Richard C. Allshouse

Approved by:



PHA RECOMMENDATION — MANAGEMENT RESOLUTION

Unit: Distillation

Date: June 2, 2008

PHA: Filling of 30B and 12B cylinders with small amounts of UF6

Recommendation No.: 7

Item: Issue: A scale malfunction may allow the cylinder to be overfilled. Risk Before Recommendation = 7 (assuming recommendation 6 is implemented)

Recommendation: Consider purchasing a scale with redundant load cells. (1 safeguard credit). Risk After Recommendation 8.

Management Review Decision:

- ☒ Approved as recommended
- ☐ Approved with modifications as documented.¹
- ☐ Alternate measure implemented to address the hazard.¹
- ☐ Rejected because the PHA team recommendation is no longer valid.¹
- ☐ Rejected because a detailed analysis indicates that the PHA team recommendation is not a good one (i.e., erroneous or infeasible).¹
- ☐ Rejected because implementation of other PHA team recommendations or existing safeguards adequately addresses the risk addressed by this recommendation (i.e., implementing the recommendation is not necessary to protect the safety of plant personnel or the public).¹

¹Explanation:

Prepared by: Richard C. Allshouse

Approved by:



PHA RECOMMENDATION — MANAGEMENT RESOLUTION

Unit: Distillation

Date: June 2, 2008

PHA: Filling of 30B and 12B cylinders with small amounts of UF6

Recommendation No.: 8

Item: Issue: There was insufficient information on the configuration of the 12B cylinder including any attachments, framework or overpack. Unable to risk rank.

Recommendation: Do not fill any 12B cylinders until the cylinder handling portion of the PHA is complete.

Management Review Decision:

- ☐ Approved as recommended
- ☒ Approved with modifications as documented.¹
- ☐ Alternate measure implemented to address the hazard.¹
- ☐ Rejected because the PHA team recommendation is no longer valid.¹
- ☐ Rejected because a detailed analysis indicates that the PHA team recommendation is not a good one (i.e., erroneous or infeasible).¹
- ☐ Rejected because implementation of other PHA team recommendations or existing safeguards adequately addresses the risk addressed by this recommendation (i.e., implementing the recommendation is not necessary to protect the safety of plant personnel or the public).¹

¹Explanation:

PHA to reconvene to review 12B cylinder filling system as soon as PSI is available

Prepared by: Richard C. Allshouse

Approved by:



PHA RECOMMENDATION — MANAGEMENT RESOLUTION

Unit: Distillation

Date: June 2, 2008

PHA: Filling of 30B and 12B cylinders with small amounts of UF6

Recommendation No.: 9

Item: Issue: The procedure submitted to the PHA Team was a DRAFT procedure. Modifications to this procedure should be reviewed prior to use. Not risk ranked.

Recommendation: Consider to perform and document a PSSR on the final procedure prior to startup. Minimum reviewers to include an operator, laboratory specialist, regulatory, engineering. This is in addition to routine procedure control and V&V.

Management Review Decision:



Approved as recommended



Approved with modifications as documented.¹



Alternate measure implemented to address the hazard.¹



Rejected because the PHA team recommendation is no longer valid.¹



Rejected because a detailed analysis indicates that the PHA team recommendation is not a good one (i.e., erroneous or infeasible).¹



Rejected because implementation of other PHA team recommendations or existing safeguards adequately addresses the risk addressed by this recommendation (i.e., implementing the recommendation is not necessary to protect the safety of plant personnel or the public).¹

¹Explanation:

PSSR to be reviewed when Draft Procedure is finalized.

Prepared by: Richard C. Allshouse

Approved by:



PHA RECOMMENDATION — MANAGEMENT RESOLUTION

Unit: Distillation

Date: June 2, 2008

PHA: Filling of 30B and 12B cylinders with small amounts of UF6

Recommendation No.: 10

Item: Issue: Possibility of overfilling a cylinder due to having greater than 460 pounds in the sample vessel. Risk Before Recommendation = 6

Recommendation: Consider a procedural requirement to test scale (load cells) with 1000 pound weight prior to a series of weighings. (1 safeguard credit) Risk After Recommendation 7.

Management Review Decision:



Approved as recommended



Approved with modifications as documented.¹



Alternate measure implemented to address the hazard.¹



Rejected because the PHA team recommendation is no longer valid.¹



Rejected because a detailed analysis indicates that the PHA team recommendation is not a good one (i.e., erroneous or infeasible).¹



Rejected because implementation of other PHA team recommendations or existing safeguards adequately addresses the risk addressed by this recommendation (i.e., implementing the recommendation is not necessary to protect the safety of plant personnel or the public).¹

¹Explanation:

Prepared by:

Richard C. Allshouse

Approved by:



Changes to the Honeywell Metropolis Works Application for Renewal of USNRC Source Materials License SUB-526

Section 1.6, UF₆ Cylinder Safety Controls, pages 1-4 and 1-5 currently state the following:

1.6 UF₆ Cylinder Safety Controls

1.6.1 Safety Controls for Cylinder Filling and Handling

1.6.1.1 Leak Isolation

Honeywell's UF₆ cylinder filling system uses the following features to isolate potential leaks and minimize the amount of UF₆ that might be released in the event of a pigtail failure:

- A remotely-operated shut-off valve in the liquid UF₆ filling manifold to prevent further cylinder filling if a UF₆ leak occurs in the pigtail piping.
- A remotely-operated drive motor on the product cylinder valve to prevent back flow of UF₆ from the cylinder

These two controls may be simultaneously activated from several locations.

1.6.1.2 Cylinder Weight Measurement and Limitation

The maximum fill limits for the uranium hexafluoride cylinders shall not exceed the packaging limit specified by American National Standards Institute (ANSI) Standard N 14.1 (Ref. 3). Plant administrative fill limits shall be established at levels less than those listed in ANSI Standard N14.1.

Cylinder filling operations shall not be conducted unless at least two independent methods exist for determining the amount of UF₆ filled into the cylinder. At least one of these methods shall involve measurement of the cylinder weight; the second method may involve either physical measurement or manual or automatic calculations.

1.6.1.3 Cylinder Lifting, Handling, and Storage

Honeywell shall limit the likelihood and consequences of any incidents involving handling of filled UF₆ cylinders as follows:

- Honeywell shall establish administrative controls over UF₆ cylinder lifting and handling processes.
- Honeywell shall limit lifting and handling of filled UF₆ cylinders consistent with the plant layout and construction. Filled cylinders are lifted only to the height necessary to provide clearance over any cylinders located in the intervening fill spots (e.g., the cylinder diameter plus a safety margin determined by the crane operator). Cylinders are then moved horizontally approximately 50 feet (depending on the originating fill spot) for final product weight determination. Following final weight determination, cylinders are lifted several feet vertically and approximately ten feet horizontally for

placement on a mobile storage buggy, which is then moved approximately 150 yards to a designated storage/cooling area.

- Filled UF₆ cylinders are stored on the mobile storage buggy for four or more days to allow for complete solidification of the UF₆ product prior to shipment or transfer to a designated cylinder storage area.

A revised section 1.6 shall read:

1.6 UF₆ Cylinder Safety Controls

1.6.1 Safety Controls for Cylinder Filling and Handling

1.6.1.3 Leak Isolation

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placement on a mobile storage buggy, which is then moved approximately 150 yards to a designated storage/cooling area.

- Filled UF₆ cylinders are stored on the mobile storage buggy for four or more days to allow for complete solidification of the UF₆ product prior to shipment or transfer to a designated cylinder storage area.

Small product cylinder packages (12B or 30B partially filled cylinder and their frames) are moved inside the Feeds Material Building by a fork truck. Once weighed, the package is moved outside by the fork truck to a specified location and UF₆ in the cylinder is allowed to solidify. The cylinder after being removed from the frame will be prepared for shipment.

Changes to the Honeywell Metropolis Works Honeywell Metropolis Works Integrated Safety Analysis Report

Section 8.8, Distillation and Product Packaging, (pages 8-11 and 8-12) currently states the following:

8.8 Distillation and Product Packaging

Table Withheld Under 10 CFR 2.390

Hazards	Safety Features
<p><i>Table Withheld Under 10 CFR 2.390</i></p>	

The revised Section 8.8, Distillation and Product Packaging, (pages 8-11 and 8-12) shall read:

8.8 Distillation and Product Packaging

Hazards	Safety Features
<p><i>Table Withheld Under 10 CFR 2.390</i></p>	

Table Withheld Under 10 CFR 2.390

Section 9.3.1 (pages 9-5 and 9-6), UF₆ Cylinder Safety Limits, currently states the following:

9.3.1 UF₆ Cylinder Safety Limits

Additional safety limits are applied to filling and heating the UF₆ product cylinders as discussed below.

9.3.1.1 Safety Controls for Cylinder Filling and Handling

Text Withheld Under 10 CFR 2.390

¹ Honeywell expects to eliminate the flow totalizer during the 2005-2006 time frame. The flow totalizer will be replaced by a system that automatically monitors for inconsistencies between the two independent element load cells.

² If the indicated weights are within 300 pounds then a designated load cell is used as the default weight indicator as specified in operating procedures.

Text Withheld Under 10 CFR 2.390

9.3.1 UF₆ Cylinder Safety Limits

Additional safety limits are applied to filling and heating the UF₆ product cylinders as discussed below.

9.3.1.1 Safety Controls for Cylinder Filling and Handling

Text Withheld Under 10 CFR 2.390

Text Withheld Under 10 CFR 2.390