Honeywell

Specialty Materials
Honeywell
P.O. Box 430
Highway 45 North
Metropolis, IL 62960

618 524-2111
618 524-6239 Fax

40-3392

March 30, 2006 (UPS: 301-415-6334)

Mr. Michael G. Raddatz, Sr. Project Manager
U.S. Nuclear Regulatory Commission
Uranium Processing Section, Div. of Fuel Cycle Safety and Safeguards
Fuel Cycle Facilities Branch, Mail Stop T-8A33
Office of Nuclear Material Safety and Safeguards
Two White Flint North, 11545 Rockville Pike
Rockville, MD 20852-2738

Dear Mr. Raddatz,

As you are aware, Honeywell International, Inc., operates the Metropolis Works Uranium Conversion Facility (MTW) in accordance with NRC Source Materials License SUB-526. In the course of these operations, a variety of waste products are produced. In the interest of providing for the safe and economical disposal of these waste products, Honeywell has completed an evaluation of certain waste streams to determine if they meet the definition of "byproduct" material as provided in Section 11e(2) of the Atomic Energy Act and 10 CFR Part 40. The affected waste streams are those from the front end (i.e., ore preparation and reduction) of the MTW processes and are similar to uranium milling. The results of our evaluation, including referenced correspondence and other documents, are enclosed.

We request that the NRC undertake a review of the enclosed materials and pertinent regulations and confirm that the waste material in question is byproduct material as defined in the Act and 10 CFR Part 40. We also request that the NRC coordinate with the State of Illinois to clarify that the NRC has the authority to make this determination. Clarification of these issues will provide a path forward for disposal of waste materials from MTW operations.

If you should have any questions on the enclosed information, please contact Mr. James Tortorelli, Regulatory Affairs Manager, at 618-524-6221.

Sincerely,

David B. Edwards
Plant Manager

NMSS01

11e(2) Waste Material Assessment

Prepared for:

Honeywell International, Inc.
Metropolis Works Uranium Conversion Facility

March 7, 2006

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Attachments

Honeywell International, Inc.
Metropolis Works Uranium Conversion Facility
11e(2) Waste Material Assessment

Executive Summary

Honeywell Metropolis Works (MTW) has evaluated waste materials from the ore preparation and reduction operations at the Metropolis, Illinois uranium conversion plant. MTW has concluded that waste streams and other incidentally contaminated materials from the ore preparation and reduction processes, as well as other incidentally contaminated materials, may be considered "byproduct material" as defined in Section 11e(2) of the Atomic Energy Act (the Act). Designation as byproduct material will provide opportunities for Honeywell to pursue disposal options that are more appropriate and economical than those currently in place while maintaining protection of the public health and safety. MTW is requesting that the Nuclear Regulatory Commission (NRC) review this submittal and concur in Honeywell's determination that the 11e(2) material classification is appropriate. Honeywell is also requesting that the NRC coordinate with the State of Illinois and re-affirm NRC jurisdiction over classification of MTW waste material as initially established in the 1987 Agreement State Delegation to Illinois.

Background

While source material is defined by the presence of uranium or thorium, the definition for 11e(2) byproduct material is a process-related definition and is not restricted to either a particular location of activity or the physical characteristics of a material. 10 CFR 40.4 defines byproduct material as "the tailings or waste produced by the extraction of concentration of uranium or thorium from any ore primarily for its source material content ... ."[1] As a result, certain tailings and wastes could fall under the legislative and regulatory definitions of two different licensed materials: source material and Part 40 (or 11e(2)) byproduct material. 10 CFR 40.4 further defines uranium milling as "any activity that results in the production of byproduct material." Material may therefore be classified as 11e(2) byproduct material if the process that generates the waste is considered a continuation of uranium milling.

In its assessment of a similar Sequoyah Fuels Corporation (SFC) request for 11e(2) classification, the NRC staff considered the issue of classifying wastes from the ore preparation and reduction

[1] This regulatory definition is identical to the statutory definition of byproduct material. *See* Section 11e(2) of the Atomic Energy Act; 42 U.S.C. § 2014.

(front-end) processes at a uranium conversion facility similar to MTW and concluded that such wastes are 11e(2) byproduct material. SFC's ore preparation and reduction processes involved drying, purification, and concentration of ore, which are nearly identical to MTW's ore preparation and reduction processes. With respect to the SFC facility, the NRC stated that the plain, fundamental working definition of uranium milling was "an activity or series of activities or processes that extracts or concentrates uranium or thorium from any ore primarily for its source material content." Applying the regulatory definitions of byproduct material and uranium milling in 10 CFR 40.4, the NRC concluded that the resulting tailings or wastes from ore preparation and reduction processes are 11e(2) byproduct material. As a result, the front-end wastes from the SFC uranium conversion facility were determined to meet the legislative and regulatory definitions of two different licensed materials – source material as defined in 10 CFR 40.4, and byproduct material as defined in 10 CFR 40.4 and Section 11e(2) of the Act. Both materials were regulated under SFC's Part 40 license. The NRC approved this position in a Staff Requirement Memorandum on SECY-02-0095 dated July 25, 2002.

Even prior to this decision, specific waste materials from the Metropolis plant had already been reviewed by the NRC and determined to meet the 11e(2) criteria. On December 7, 1995, NRC approved Amendment 34 to License No. SUA-1473 for Quivira Mining Company (now Rio Algom) to accept crushed ore shipment drums from the Allied Signal Metropolis facility (now MTW) for disposal as 11e(2) waste (see Attachment 1). On September 27, 1999, Quivira submitted data to the NRC requesting approval to classify wood chips from crushed/chipped wood pallets at the Allied Signal Metropolis (now MTW) facility as 11e(2) waste (see Attachment 2). On November 10, 1999, NRC approved this classification (see Attachment 3) and Quivira accepted the material as 11e(2) for disposal.

Regulatory Classification of Metropolis Waste Materials

MTW believes that the legal basis for obtaining 11e(2) waste classification from the NRC for the materials described below is clear and soundly based on several precedents.

As stated previously, the NRC determined that the regulatory definitions of uranium milling and 11e(2) byproduct material are process-related definitions and not restricted to a particular location of activity nor the physical characteristics of a material. NRC developed this interpretation of applicable regulations in SECY-02-0095, *Applicability of Section 11e(2) of Atomic Energy Act to Material at the Sequoyah Fuels Corporation Uranium Conversion Facility.* NRC stated in

SECY-02-0095, that although the tailings and wastes from the front-end of the SFC facility could continue to be classified as source material (physical characteristic of the material), they were also classified as 11e(2) byproduct material because the processes that took place at the front-end of SFC's facility were a continuation of uranium milling. In either case, the materials would be regulated pursuant to 10 CFR Part 40 under the facility's Part 40 license.

SECY-02-0095 and its attachments noted that the regulatory and working definitions of uranium milling and byproduct material are definitions based on a process rather than the location of an activity or the characteristics of a material. The regulations do not address when, or necessarily where, milling is completed. Several milling process stages, some of which are similar to the types of activities performed at MTW, are involved in conventional milling such as crushing, grinding, and leaching of the ore followed by chemical separation, concentration, and drying of the uranium. All process stages for milling, from accepting ore, to extracting, concentrating, and purifying source material, to tailings disposal, are conducted on a continuum.

NRC has further noted that uranium milling has occurred and does occur at different locations under regulatory oversight without having to resort to the construct of individual processing feeds meeting the definition of "ore." For the purposes of alternate feeds at a licensed conventional uranium mill, the NRC staff developed a working definition of ore as "a natural or native material that may be mined and treated for the extraction of any of its constituents or any other matter for which source material is extracted in a licensed uranium or thorium mill." NRC noted that at SFC there was no need to consider the feed as ore, because the front-end process at SFC was simply the last step in the milling activity, which occurred away from a uranium mill, before the material was suitable for conversion to UF_6.

NRC noted in the SECY document that, to its knowledge, uranium milling was not performed at Metropolis in the recent past, but added that the staff would determine whether uranium milling occurred at MTW. The NRC stated that, if so, some wastes potentially could be classified as 11e(2) byproduct material. Indeed, as noted above, specific waste materials from the MTW had already been reviewed by the NRC and determined to meet 11e(2) criteria. On December 7, 1995, NRC approved Amendment 34 to License No. SUA-1473 for Quivira Mining Company (now Rio Algom) to accept for disposal as 11e(2) waste the crushed ore shipment drums from the Allied Signal Metropolis facility (Honeywell). On September 27, 1999, Quivira submitted data to the NRC requesting approval to classify wood chips from crushed/chipped wood pallets at the

Allied Signal Metropolis (Honeywell) facility as 11e(2) waste. On November 10, 1999, NRC approved this classification and Quivira accepted the material as 11e(2) for disposal. The only difference in MTW's current request for 11e(2) waste classification is that MTW is requesting an 11e(2) classification that can be applied uniformly to specific process operations at the MTW facility rather than piecemeal, by submitting individualized determinations for each shipment containing similar waste materials.

As with the SFC facility, the MTW plant was licensed as a conversion facility under 10 CFR Part 40 at the time of the UMTRCA enactment. It would have been possible at that time to conceptually separate the front-end purification processes (*i.e.*, milling activities) from the conversion process, but the distinction would have been unnecessary. SECY-02-0095 described the front-end processes at a uranium hexafluoride conversion plant and discussed how those processes reasonably meet the technical description of a step in the completion of the uranium milling process. MTW has evaluated this description and concluded that the ore preparation and reduction operations at the facility are part of a continuum of uranium milling activities. Additionally, MTW has concluded that the dry active waste from the site, such as contaminated soil and concrete outside the plant buildings, discarded piping, valves, and other plant equipment replaced as part of normal maintenance, are wastes from uranium milling activities. An overview of the Metropolis plant conversion operations is provided below to support this conclusion.

Description of Uranium Hexafluoride Conversion at Metropolis

Processes at the MTW occur in four major steps – ore preparation, reduction, hydrofluorination, and fluorination. Only the latter two steps involve conversion of uranium oxides to uranium fluoride-based derivatives (e.g., uranium tetrafluoride and uranium hexafluoride). MTW receives uranium oxide ore from a number of sources around the world. These feed ores contain natural uranium in varying concentrations and with varying impurities that affect the downstream conversion process. The primary goal of the first two steps is to develop a clean, uniform product acceptable for the fluoride conversion process. These two steps are consistent with the processes at the SFC facility that were determined to be a continuation of uranium ore processing prior to fluorination.

SECY-02-0095 incorrectly stated that the MTW can process U_3O_8 to UF_6 without the risk of impurities compromising the conversion process. In fact, the Metropolis facility must perform the ore preparation and reduction processes to achieve an acceptable product for fluorination.

Natural uranium oxide content can vary by nearly 20%. Impurities such as phosphorus, fluorides, and calcium vary widely between incoming ore shipments, depending on the provider. The concentrations of other impurities, such as chlorides and sodium, can vary by more than an order of magnitude and concentrations of iron impurities can vary by more than two orders of magnitude. Water content can range from almost completely dry up to several percent.

Accordingly, the first two operations (preparation and reduction) at the Metropolis facility are required prior to starting any uranium oxide conversion. As an overview, each of these four major process steps is described below, along with Honeywell's conclusion regarding its 11e(2) classification.

Ore Preparation

Ore preparation at MTW consists of calcining, blending, agglomeration, screening, and finally classification. The raw ores are processed to remove carbonates, water, and other volatile materials. The calcined material is then blended and agglomerated, followed by screening and classification to prepare a consistent raw product. All process operations are consistent with the ore preparation activities performed at SFC prior to its approval of 11e(2) waste streams, with the exception that the additional step of nitric acid digestion was used at SFC. The licensed component of the waste stream is uranium, which remains subject to MTW's Part 40 license. MTW has concluded that the following ore preparation waste materials are 11e(2) waste:

- Wood pallets
- Discarded ore shipment drums
- Sampling materials and residues
- Dry active wastes from handling, sampling, and other ore preparation activities
- Discarded piping, valves and other ore preparation plant equipment replaced during maintenance

Reduction

After ore preparation, the material is passed through a fluidized bed reactor where it is contacted with hydrogen to reduce the U_3O_8 to UO_2 and extract impurities out of the uranium oxide. Impurities such as sodium and iron are removed in a waste gas stream to achieve a uranium oxide product that is acceptable for hydrofluorination and fluorination. All process operations are

consistent with the ore preparation activities performed at SFC prior to approval of 11e(2) waste streams, with the exception that the additional step of denitration is not needed at MTW since nitric acid digestion is not performed. The licensed component of the waste stream is uranium, which remains subject to MTW's Part 40 license. MTW has concluded that the following reduction process waste materials are 11e(2) waste:

- Wood pallets
- Discarded ore shipment drums
- Sampling materials and residues
- Dry radioactive wastes from handling, sampling, and other ore operations activities
- Discarded piping, valves and other reduction plant equipment replaced during maintenance

Hydrofluorination

After reduction, the reduced uranium oxide (UO_2) is reacted with anhydrous hydrofluoric acid to produce UF_4. Honeywell has concluded that radioactive wastes from this process are not likely to meet 11e(2) criteria.

Fluorination

After hydrofluorination, the UF_4 is contacted with elemental fluorine in a fluid bed reactor to complete the reaction to UF_6. The product is filtered, heated, and distilled to obtain the final product purity. The high purity finished UF_6 product is then sampled, weighed, and placed into cylinders for cooling and solidification. Honeywell has concluded that radioactive wastes from this process are not likely to meet 11e(2) criteria.

NRC Jurisdiction Over Waste Classification

The State of Illinois Department of Nuclear Safety has disagreed with the NRC's previous grants of 11e(2) waste determinations at MTW. Honeywell believes that in these past instances the NRC correctly asserted regulatory authority under the agreement between the NRC and the State of Illinois. Correspondence and discussions between MTW, MTW's legal counsel, and the State of Illinois prompted MTW to submit this issue to the NRC on March 2, 2001 (see Attachment 4). On September 20, 2002, MTW supplemented this request by forwarding additional correspondence, and requested the NRC to consider the Commission's decision presented in

SECY-02-0095 (see Attachment 5). NRC responded by letter on October 25, 2002 that all interested parties would be notified of the final determination (see Attachment 6). As of the date of this letter, no final determination has been received.

The Illinois Agreement State Delegation (see Attachment 7) in 1987 gave the State of Illinois authority over certain specific categories of material, but not 11e(2) byproduct material. In an *Order to Protect the Common Defense and Security*, the NRC specifically excluded the MTW from State control (see Attachment 7). The Order was based on the U.S. Department of Energy's determination that the MTW was a national asset important to maintaining the common defense and security of the United States. The Order states that the NRC retains jurisdiction over the MTW license (SUB-526) during the term of the Agreement State Delegation to Illinois unless the Commission determines otherwise.

Amendment 1 to the Illinois Agreement State Delegation (see Attachment 8) in October 1990 extended the State of Illinois authority to encompass 11e(2) byproduct material. Even though the source and 11e(2) material at the MTW is regulated under NRC license SUB-526, which was excluded from State control by the terms of the 1987 Order, the State maintains that the 1990 Amendment gave it direct regulatory authority over the 11e(2) material at MTW (see Attachment 9). The State argues that, regardless of the NRC's continuing responsibility for the MTW license, the State of Illinois has the legal authority to allow or disallow classification of a waste as 11e(2). However, Amendment 1 did not change the status of the MTW facility or the NRC's jurisdiction that was explicitly retained by the NRC at the time of the original 1987 Agreement. Nor did Amendment 1 affect the NRC's jurisdiction over the material at MTW that is subject to the Part 40 license. Since the MTW license encompasses all the source materials at the MTW, including the 11e(2) wastes, NRC jurisdiction attaches and the wastes are excluded from State control.

Benefits of Reclassification

Classification of the designated materials as 11e(2) waste provides a significant cost reduction benefit to the Honeywell. Since 11e(2) material is not subject to the State of Illinois low level radioactive waste (LLRW) fee, classification of the waste materials as 11e(2) waste material will result in an immediate savings to MTW of $3 per cubic foot. Additionally, classification of the materials as 11e(2) wastes permits exploration of additional, and potentially less expensive, disposal options. For example, Envirocare's 11e(2) disposal rates are less than their rates for disposal of LLRW. These savings will further enhance the cost reduction benefit to the licensee.

In addition to these benefits to MTW, the re-direction of 11e(2) wastes from a LLRW disposal facility to an appropriate 11e(2) disposal site will provide a benefit to the nuclear industry generally by allowing for more appropriate usage of limited LLRW disposal facilities. The requested classification achieves these benefits while continuing to maintain protection of human health and safety and the environment since the wastes must still be disposed at a licensed site.

Summary

Overall, Honeywell has concluded that waste streams and other incidentally contaminated materials from the ore preparation and reduction processes, as well as other incidentally contaminated dry active wastes, are 11e(2) byproduct materials within the scope of the MTW's Part 40 license.

Honeywell requests that the NRC review this submittal and concur in Honeywell's determination that the 11e(2) material classification is appropriate. Honeywell also requests that NRC coordinate with the State of Illinois and re-affirm NRC jurisdiction over classification of MTW waste material as initially retained in the 1987 Agreement State Delegation to Illinois.

Attachment 1

NRC Letter to Quivira Mining Company
License Amendment No. 34, Disposal of Allied Signal Yellowcake Drums

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 7, 1995

Mr. Bill Ferdinand, Manager
Radiation Safety, Licensing and
Regulatory Compliance
Quivira Mining Company
6305 Waterford Bldg., Suite 325
Oklahoma City, Oklahoma 73118

SUBJECT: LICENSE AMENDMENT NO. 34, DISPOSAL OF ALLIED SIGNAL YELLOWCAKE DRUMS

Dear Mr. Ferdinand:

The U. S. Nuclear Regulatory Commission staff has completed its review of Quivira Mining Company's (QMC's) November 16, 1995, amendment request to dispose of Allied Signal crushed yellowcake drums. The staff finds the requested amendment acceptable based on QMC's statement that the drums, and disposal methods, will be the same as previously approved in License Condition (LC) No. 30.

Therefore, pursuant to Title 10 of the Code of Federal Regulations (10 CFR), Part 40, Source Material License SUA-1473 is hereby amended by revising License Condition No. 30 as requested in QMC's November 16, 1995, letter. All other conditions of this license shall remain the same.

The license is being reissued to incorporate the above modification (enclosure). An environmental report is not required from QMC because the amendment does not meet the criteria of 10 CFR 51.60(b)(2). An environmental assessment for this action is not required since this license revision is categorically excluded under 10 CFR 51.22(c)(11).

If you have any questions concerning this letter or the enclosure, please contact Ken Hooks at (301) 415-7777.

Sincerely,

John O. Thoma for

Daniel M. Gillen, Acting Chief
High-Level Waste and Uranium Recovery
Projects Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Enclosure: As stated

Docket No. 40-8905
License No. SUA-1473, Amendment No. 34

Attachment 2

Quivira Mining Company Letter to NRC
Disposal of Byproduct Material for Allied Signal

Quivira Mining Co.

William Paul Gorasson, P.E.
Manager, Radiation Safety, Regulatory Compliance and Licensing

September 27, 1999

CERTIFIED MAIL Z 277 714 120
RETURN RECIEPT REQUESTED

John Surmeier, Branch Chief
U.S. Nuclear Regulatory Commission
Uranium Recovery Branch
Division of Waste Management
Mail Stop 8A23
Rockville MD 20850

Subject: **Disposal of Byproduct Material from AlliedSignal Ambrosia Lake Facility**
License No.: SUA-1473
Docket No.: 40-8905

Dear Mr. Surmeier:

Quivira Mining Co. has an agreement to accept 11e(2) byproduct material from AlliedSignal Inc. The bulk of that material will be crushed drums authorized for receipt under license condition 30. However, it is intended that a portion of that material will consist of contaminated wood chips, which result from chipping up the wooden pallets contaminated in handling and storing drums filled with U_3O_8. There is a question from NRC Fuel Cycle Branch to AlliedSignal as to whether the contaminated wood chips constitute 11(e)2 byproduct material. Therefore, to expedite this determination, Quivira is requesting that NRC Uranium Recovery Branch confirm that since this material in its useable form was contaminated while being used to handle and store drums of source material resulting from the extraction process, it meets the criteria for classification as 11(e)2 byproduct material on the same basis as the crushed drums.

These wood chips, which were originally wood pallets used to handle and store 55-gallon drums of source material, are to be disposed as byproduct material. The source material originated from several uranium recovery facilities including Quivira and facilities operated by other companies. When source material is transported to the converter by truck, the drums are palletized either prior to shipment or on unloading. It is Quivira's understanding that essentially all, if not all, of the pallets were contaminated with source material in this process.

According to a letter dated July 16, 1999 from William Lessig, AlliedSignal, to Marvin Freeman, Quivira Mining Co., the wood chips are contaminated with the same source material as the crushed drums currently being disposed at Quivira. The contamination occurs when source material is leaked or spilled during the storage or handling of the drums containing the source material. The referenced letter is provided as Attachment I, and states that AlliedSignal believes the wood chips are 11e(2) byproduct material.

Additionally, Quivira has performed an analysis on a representative sample of the wood chips. The analysis, performed by ACZ Laboratories of Steamboat Springs, CO 80487, is also

6305 Waterford Blvd., Suite 325, Oklahoma City, OK 73118 (405) 858-4807 (voice) (405) 810-3860 (fax)

attached. Based on Quivira's review, the analytical analysis of the sample is consistent with what would be expected from pallets used for handling and storage of source material as part of the extraction process. Therefore, Quivira requests that NRC Uranium Recovery Branch provide Quivira or the NRC Fuel Cycle Branch some documentation that the AlliedSignal wood chip material is considered 11(e)2 byproduct material.

If you have any questions, please call me at (405) 858-4807.

Sincerely,

William Paul Goranson, P.E.
Manager, Radiation Safety, Regulatory
Compliance and Licensing

Enclosures

CC: Marvin Freeman, QMC
Terry Fletcher, QMC
Alex Del Priore, AlliedSignal
Peter Luthiger, QMC

AlliedSignal

AlliedSignal Inc.
Nuclear/Fluorine Specialties
Route 45 North
P.O. Box 430
Metropolis, IL 62960 USA

618 524 2111
618 524 6239 Fax

ATTACHMENT I

July 16, 1999

Quivira Mining Company
Mr. Marvin D. Freeman, Vice President
6305 Waterford Boulevard
Suite 325
Oklahoma City, OK 73118

Dear Mr. Freeman:

Re: Contaminated Wood Chips

The Ambrosia Lake facility is receiving crushed metal drums that have been contaminated with source material as 11e(2) waste. Your NRC license allows these shipments under Amendment No. 44.

At the present time we have approximately ——— of wood chips which were originally wooden pallets used for storage of 55-gallon drums of source material. This wood was contaminated with the same source materials as the crushed 55-gallon drums. This waste stream is the results of leaking or spilled source material.

We are requesting that you receive this waste stream (wood chips) as classified under the Atomic Energy Act as Section 11e(2) material.

We would appreciate a timely response to this request. If you have any questions, please contact Mr. Alex Del Priore at 618-524-6245 or Mr. Hugh Roberts at 618-524-6349.

Sincerely,

J. William Lessig
Plant Manager

JWL/sm

cc: M. Shepherd
H. Roberts
A. Del Priore
File

ACZ

Analytical Results

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493

Lab Sample ID: *L24152-01*
Client Sample ID: *Wood Chips*
Client Project ID: *54959*
ACZ Report ID: *RG99420*

Quivira Mining Company
P.O. Box 218
Grants, NM 87020
Peter Luthiger

Date Sampled: *7/28/99*
Date Received: *8/2/99*
Date Reported: *8/27/99*

Sample Matrix: *Miscellaneous*

Metals Analysis

Parameter	EPA Method	Result	Qual	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M7060 GFAA	4.8		mg/Kg	0.2	1	8/18/99	jl
Barium, total (3050)	M6010B ICP	70		mg/Kg	2	5	8/13/99	kr
Beryllium, total (3050)	M6010B ICP		U	mg/Kg	1	5	8/20/99	jb
Cadmium, total (3050)	M6010B ICP		U	mg/Kg	2	8	8/13/99	kr
Chromium, total (3050)	M6010B ICP	92		mg/Kg	5	30	8/13/99	kr
Lead, total (3050)	M6010B ICP	40	B	mg/Kg	20	100	8/13/99	kr
Mercury, total	M7471 CVAA	0.22		mg/Kg	0.02	0.1	8/11/99	ms
Molybdenum, total (3050)	M6010B ICP	33		mg/Kg	1	5	8/12/99	jb
Nickel, total (3050)	M6010B ICP	91		mg/Kg	5	30	8/13/99	kr
Selenium, total (3050)	M7742 Modified, AA-Hydride	2.5		mg/Kg	0.2	1	8/18/99	ms
Silver, total (3050)	M6010B ICP	8	B	mg/Kg	3	10	8/20/99	jb
Uranium, total (3050)	M6020 ICPMS	10300		mg/Kg	10	50	8/25/99	fep

Soil Analysis

Parameter	EPA Method	Result	Qual	Units	MDL	PQL	Date	Analyst
Free liquid by Paint Filter	M9095	No Free Liquid					8/5/99	sw
Moisture Content	M209F, Gravimetric - 105 C	36.9		%	0.1	0.5	8/5/99	bs/sw
Solids, Percent	CLPSOW390, PART F, D-98	96.8		%	0.1	0.5	8/10/99	sw

Soil Preparation

Parameter	EPA Method	Result	Qual	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972						8/5/99	as
Digestion	M3050						8/23/99	as
Digestion - Hot Plate	M3050 ICP						8/12/99	sw
Digestion - Microwave (Rad Chem)	M3052						8/10/99	sw
Plant Tissue Pulverization	USDA #60, Method 53						8/9/99	as
Water Extraction	ASA No. 9 10-2.3.2						8/12/99	sw/as

Wet Chemistry

Parameter	EPA Method	Result	Qual	Units	MDL	PQL	Date	Analyst
Cyanide, total	M9012 - Automated Colorimetric		U	mg/Kg	0.5	3	8/21/99	ss
Fluoride, soluble (Water)	M340.2 - ISE	390		mg/Kg	30	100	8/13/99	mh

Note: The Cadmium value is estimated due to matrix interferences.

Indicator Qualifiers (as defined by EPA CLP 3.90)

U = Analyte was analyzed for but not detected at the indicated MDL
B = Analyte concentration detected at a value between MDL and PQL
PQL = Practical Quantitation Limit

Vice President of Operations: Ralph Poulsen

ACZ

Radiochemistry Results

ACZ Laboratories, Inc.
30400 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493

ACZ Project ID: *L24152*
Client Project ID: *54959*
ACZ Report ID: *RG101090*

Quivira Mining Company
P.O. Box 218
Grants, NM 87020
Peter Luthiger

Date Sampled: *7/28/99*
Date Received: *8/2/99*
Date Reported: *9/9/99*

ACZ ID	Client ID	Matrix	Parameter	Result	Error(+/-)	MDA	Units	Preparation Method	Preparation Date	Analyst	Analysis Method	Analysis Date	Analyst
L24152-01	Wood Chips	Miscellaneous	Radium 226 (3052)	7.1	5.4	12	pCi/g	M3052	8/10/99	sw	M9320	9/7/99	jd
			Radium 226 (3052)	10	2.9	5.2	pCi/g	M3052	8/10/99	sw	M9315	9/3/99	cjs
			Thorium 228	0.61	1.6	1.1	pCi/g	M3052	8/10/99	sw	ESM 4506	9/3/99	cbr
			Thorium 230	70	6.9	2.8	pCi/g	M3052	8/10/99	sw	ESM 4506	9/3/99	cbr
			Thorium 232	2.4	1.4	1.1	pCi/g	M3052	8/10/99	sw	ESM 4506	9/3/99	cbr

Notes:
L24152-01: Ra228 LCS recovery is out of control at 40%.

Radiochemistry Notes

MDA: Calculated sample specific Minimum Detectable Activity
Error(+/-): Calculated sample specific uncertainty
Solid matrices reported on a dry weight basis
Preparation Method: "Method" indicates preparation defined in analytical method
Method Prefix Reference:
M = EPA SM = Standard Methods D = ASTM RP = DOE ESM = DOE/ESM

REPRC001.98.01.02

R Poulsen
Vice President of Operations: Ralph Poulsen

ACZ

Analytical Results

ACZ Laboratories, Inc
2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493

Lab Sample ID: *L24152-01*
Client Sample ID: *Wood Chips*
Client Project ID: *54959*
ACZ Report ID: *RG100544*

Quivira Mining Company
P.O. Box 218
Grants, NM 87020
Peter Luthiger

Date Sampled: *7/28/99 10:00*
Date Received: *8/2/99*
Date Reported: *9/1/99*

Sample Matrix: *Miscellaneous*

Base Neutral Acid Extractables by GC/MS

Analysis Method: M8270
Extract Method: SW3540

Analyst: *dno*
Extract Date: *8/27/99*
Analysis Date: *8/30/00*
Dilution Factor: *1*

Compound

Compound	CAS	Result	QUAL	Units	MDL	PQL
Phenol	000108-95-2		U	ug/Kg	67	330
bis(2-Chloroethyl) Ether	000111-44-4		U	ug/Kg	67	330
2-Chlorophenol	000095-57-8		U	ug/Kg	67	330
1,3-Dichlorobenzene	000541-73-1		U	ug/Kg	67	330
1,4-Dichlorobenzene	000106-46-7		U	ug/Kg	67	330
1,2-Dichlorobenzene	000095-50-1		U	ug/Kg	67	330
Benzyl Alcohol	000100-51-6		U	ug/Kg	67	330
2-Methylphenol	000095-48-7		U	ug/Kg	67	330
bis(2-Chloroisopropyl) Ether	000108-60-1		U	ug/Kg	67	330
4-Methylphenol	000111-44-5		U	ug/Kg	67	330
n-Nitroso-di-n-propylamine	000621-64-7		U	ug/Kg	67	330
Hexachloroethane	000067-72-1		U	ug/Kg	67	330
Nitrobenzene	000098-95-3		U	ug/Kg	67	330
Isophorone	000078-59-1		U	ug/Kg	67	330
2-Nitrophenol	000088-75-5		U	ug/Kg	67	330
2,4-Dimethylphenol	000105-67-9		U	ug/Kg	67	330
Benzoic Acid	000065-85-0		U	ug/Kg	300	1650
Bis(2-chloroethoxy)methane	000111-91-1		U	ug/Kg	67	330
2,4-Dichlorophenol	000120-83-2		U	ug/Kg	67	330
1,2,4-Trichlorobenzene	000120-82-1		U	ug/Kg	67	330
Naphthalene	000091-20-3		U	ug/Kg	67	330
4-Chloroaniline	000106-47-8		U	ug/Kg	67	330
Hexachlorobutadiene	000087-68-3		U	ug/Kg	67	330
4-Chloro-3-methylphenol	000059-50-7		U	ug/Kg	67	330
→ 2-Methylnaphthalene	000091-57-6		U	ug/Kg	67	330
Hexachlorocyclopentadiene	000077-47-4		U	ug/Kg	67	330
2,4,6-Trichlorophenol	000088-06-2		U	ug/Kg	67	330
2,4,5-Trichlorophenol	000095-95-4		U	ug/Kg	300	1650
2-Chloronaphthalene	000091-58-7		U	ug/Kg	67	330
2-Nitroaniline	000088-74-4		U	ug/Kg	67	330
→ Dimethyl phthalate	000131-11-3		U	ug/Kg	67	330
Acenaphthylene	000208-96-8	140	J	ug/Kg	67	330

Organic Notes and Qualifiers

MDL = Method Detection Limit; PQL = Practical Quantitation Limit
LCL = Lower Control Limit; UCL = Upper Control Limit
Qualifiers: (Based on EPA CLP 3/90)
U = Analyte was analyzed for but not detected at the indicated MDL
J = Analyte concentration detected at a value between MDL and PQL
B = Analyte found in daily method blank

D N Osborne
Organic Laboratory Supervisor: David N. Osborne

ACZ

Analytical Results

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493

Lab Sample ID: *L24152-01*
Client Sample ID: *Wood Chips*
Client Project ID: *54959*
ACZ Report ID: *RG100544*

Quivira Mining Company
P.O. Box 218
Grants, NM 87020
Peter Luthiger

Date Sampled: *7/28/99 10:00*
Date Received: *8/2/99*
Date Reported: *9/1/99*

Sample Matrix: *Miscellaneous*

Volatile Organics by GC/MS

Analysis Method: M8260
Extract Method: SW5030

Analyst: *lcj*
Extract Date: *8/11/99*
Analysis Date: *8/11/99*
Dilution Factor: *1*

Compound

Compound	CAS	Result	Qual	Units	MDL	PQL
Chloromethane	000074-87-3		U	ug/Kg	2	10
Bromomethane	000074-83-9		U	ug/Kg	2	10
Chloroethane	000075-00-3		U	ug/Kg	2	10
Methylene Chloride	000075-09-2		U	ug/Kg	2	5
Acrylonitrile	000107-13-1		U	ug/Kg	2	10
Acetone	000067-64-1		U	ug/Kg	2	10
Carbon Disulfide	000075-15-0		U	ug/Kg	2	5
1,1-Dichloroethene	000075-35-4		U	ug/Kg	2	5
1,1-Dichloroethane	000075-34-3		U	ug/Kg	2	5
cis-1,2-Dichloroethene	000540-59-2		U	ug/Kg	2	5
trans-1,2-Dichloroethene	000156-60-5		U	ug/Kg	2	5
Chloroform	000067-66-3		U	ug/Kg	2	5
1,2-Dichloroethane	000107-06-2		U	ug/Kg	2	5
2-Butanone	000078-93-3		U	ug/Kg	2	10
Bromochloromethane	000074-97-5		U	ug/Kg	2	5
1,1,1-Trichloroethane	000071-55-6		U	ug/Kg	2	5
Carbon Tetrachloride	000056-23-5		U	ug/Kg	2	5
Vinyl Chloride	000075-01-4		U	ug/Kg	2	10
Bromodichloromethane	000075-27-4		U	ug/Kg	2	5
1,2-Dichloropropane	000078-87-5		U	ug/Kg	2	5
cis-1,3-Dichloropropene	010061-01-5		U	ug/Kg	2	5
Trichloroethene	000079-01-6		U	ug/Kg	2	5
Dibromochloromethane	000124-48-1		U	ug/Kg	2	5
1,1,2-Trichloroethane	000079-00-5		U	ug/Kg	2	5
Benzene	000071-43-2		U	ug/Kg	2	5
trans-1,3-Dichloropropene	010061-02-6		U	ug/Kg	2	5
Bromoform	000075-25-2		U	ug/Kg	2	5
4-Methyl-2-Pentanone	000108-10-1		U	ug/Kg	2	10
2-Hexanone	000591-78-6		U	ug/Kg	2	10
Tetrachloroethene	000127-18-4		U	ug/Kg	2	5
1,1,2,2-Tetrachloroethane	000079-34-5		U	ug/Kg	2	5
Toluene	000108-88-3		U	ug/Kg	2	5

Organic Notes and Qualifiers

MDL = Method Detection Limit; PQL = Practical Quantitation Limit
LCL = Lower Control Limit; UCL = Upper Control Limit
Qualifiers: (Based on EPA CLP 3/90)
U = Analyte was analyzed for but not detected at the indicated MDL
J = Analyte concentration detected at a value between MDL and PQL
B = Analyte found in daily method blank

Organic Laboratory Supervisor: David N. Osborne

ACZ

Analytical Results

ACZ Laboratories, Inc
2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493

Lab Sample ID: L24153-01
Client Sample ID: Wood Chips
Client Project ID: 54959
ACZ Report ID: RG100544

Quivira Mining Company
P.O. Box 218
Grants, NM 87020
Peter Luthiger

Date Sampled: 7/28/99 10:00
Date Received: 8/2/99
Date Reported: 9/1/99

Sample Matrix: Miscellaneous

Volatile Organics by GC/MS

Analyst: lcj
Analysis Method: M8260
Extract Date: 8/11/99
Extract Method: SW5030
Analysis Date: 8/11/99
Dilution Factor: 1

Compound

Compound	CAS	Result	QUAL	Units	MDL	PQL
Chlorobenzene	000108-90-7		U	ug/Kg	2	5
Ethylbenzene	000100-41-4		U	ug/Kg	2	5
Styrene	000100-42-5		U	ug/Kg	2	5
Xylenes (Total)	001330-20-7		U	ug/Kg	2	5
1,2-Dichlorobenzene	000095-50-1		U	ug/Kg	2	5
1,3-Dichlorobenzene	000541-73-1		U	ug/Kg	2	5
1,4-Dichlorobenzene	000106-46-7		U	ug/Kg	2	5
1,2-Dibromo-3-chloropropane	000096-12-8		U	ug/Kg	2	5
1,2-Dibromoethane	000106-93-4		U	ug/Kg	2	5
Dichlorodifluoromethane	000075-71-8		U	ug/Kg	2	5
Dibromomethane	000074-95-3		U	ug/Kg	2	5
1,1,1,2-Tetrachloroethane	000630-20-6		U	ug/Kg	2	5
Trichlorofluoromethane	000075-69-4		U	ug/Kg	2	5
1,2,3-Trichloropropane	000096-18-4		U	ug/Kg	2	5
2,2-Dichloropropane	000594-20-7		U	ug/Kg	2	5
1,1-Dichloropropene	000563-58-6		U	ug/Kg	2	5
1,3-Dichloropropane	000142-28-9		U	ug/Kg	2	5
Isopropylbenzene	000098-82-8		U	ug/Kg	2	5
Bromobenzene	000108-86-1		U	ug/Kg	2	5
n-Propylbenzene	000103-65-1		U	ug/Kg	2	5
2-Chlorotoluene	000095-49-8		U	ug/Kg	2	5
4-Chlorotoluene	000106-43-4		U	ug/Kg	2	5
1,3,5-Trimethylbenzene	000108-67-8		U	ug/Kg	2	5
tert-Butylbenzene	000098-06-6		U	ug/Kg	2	5
1,2,4-Trimethylbenzene	000095-63-6		U	ug/Kg	2	5
sec-Butylbenzene	000135-98-8		U	ug/Kg	2	5
4-Isopropyltoluene	000099-87-9		U	ug/Kg	2	5
n-Butylbenzene	000104-51-8		U	ug/Kg	2	5
1,2,4-Trichlorobenzene	000120-82-1		U	ug/Kg	2	5
Hexachlorobutadiene	000087-68-3		U	ug/Kg	2	5
Naphthalene	000091-20-3		U	ug/Kg	2	5
1,2,3-Trichlorobenzene	000087-61-6		U	ug/Kg	2	5

Organic Notes and Qualifiers

MDL = Method Detection Limit; PQL = Practical Quantitation Limit
LCL = Lower Control Limit; UCL = Upper Control Limit

Qualifiers: (Based on EPA CLP 3/90)

U = Analyte was analyzed for but not detected at the indicated MDL
J = Analyte concentration detected at a value between MDL and PQL
B = Analyte found in daily method blank

Organic Laboratory Supervisor: David N. Osborne

Attachment 3

NRC Letter to Quivira Mining Company
Disposal of Byproduct Material From Allied Signal

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 10, 1999

Mr. William Paul Goranson
Manager, Radiation Safety,
Regulatory Compliance and Licensing
Quivira Mining Company
6305 Waterford Blvd., Suite, 325
Oklahoma City, OK 73118

SUBJECT: DISPOSAL OF BYPRODUCT MATERIAL FROM ALLIED SIGNAL

Dear Mr Goranson:

This is in response to your letter dated September 27, 1999, requesting the Uranium Recovery and Low Level Waste Branch evaluate potential 11e(2) material for disposal at the Quivira - Ambrosia Lake facility. In your letter, you stated that the wood chips considered for disposal were originally wood pallets used to handle and store 55-gallon drums of source material at the AlliedSignal processing facility. The source material originated from several uranium recovery facilities including Quivira. Your letter further stated that the contamination is source material.

We have reviewed your letter and attached data. Based on our review of the information provided to us, we have determined that the wood chips can be classified as 11e(2) material and may be disposed of at the Quivira - Ambrosia Lake facility. The terms and conditions of the license apply to this waste product. Good construction practices should be followed during the disposal of the material, which includes proper placement of the material to maintain the structural integrity of the disposal cell.

If you have any questions concerning this letter, please contact Jill Caverly, the NRC Project Manager.

Sincerely,

John J. Surmeier, Chief
Uranium Recovery and
Low-Level Waste Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 40-8905
License No. SUA-1473

Attachment 4

Mayer, Brown & Platt Letter to NRC
Honeywell International, Metropolis, Illinois (License SUB-526),
Illinois Department of Nuclear Safety Letter of February 16, 2001

MAYER, BROWN & PLATT

190 SOUTH LA SALLE STREET

CHICAGO, ILLINOIS 60603-3441

PERCY L. ANGELO
DIRECT DIAL (312) 701-7330
DIRECT FAX (312) 706-9106
pangelo@mayerbrown.com

MAIN TELEPHONE
312-782-0600
MAIN FAX
312-701-7711

March 2, 2001

VIA U.S. MAIL & UPS

Philip Ting, Chief
Fuel Cycle Licensing Branch, FCSS
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Honeywell International, Metropolis, Illinois (License SUB-526)
Illinois Department of Nuclear Safety Letter of February 16, 2001

Dear Mr. Ting:

We represent Honeywell International with respect to issues arising from the Illinois Department of Nuclear Safety's ("IDNS") efforts to reclassify certain materials at its uranium hexafluoride conversion facility at Metropolis, Illinois. (License SUB-526). Honeywell has asked us to submit this letter in response to the IDNS letter dated February 16, 2001 from its Director, Thomas Ortciger, to you. We respectfully disagree with the analysis and the conclusions in the IDNS letter and are writing this letter to give you the background of these issues and to provide you with an explanation of our position, which we believe is consistent with NRC's guidance in this area.

Background

The Metropolis facility receives its uranium ore concentrates or yellowcake in 55 gallon drums from mines throughout the world. It receives approximately 30,000 drums per year. Historically it stored those drums on wooden pallets. Empty drums were either free released or crushed and shipped out of state for disposal. The wooden pallets, which often contained some residues from the drums, were initially stored, use of the pallets was discontinued in 1995 to eliminate a radioactive waste stream and reduce costs, but it was recognized that the pallet pile presented a fire hazard and the pallets were then chipped. On November 10, 1999, in a letter from John J. Surmeier to Quivira Mining Company, the NRC made a determination that the wood chips from the pallets were properly considered Section 11e.(2) byproduct material. Pursuant to that determination, a copy of which is attached as Exhibit A, the Metropolis facility

has shipped such materials to Quivira for disposal. Some have been shipped to Waste Control Specialists of Texas for disposal as Section 40.13 material. All such shipments were properly manifested and handled.

We note that we understand that before its close the Kerr-McGee Sequoyah Fuels conversion plant had 11e.(2) status for its waste materials. The Quivira Mining Company received an authorization letter, Amendment No. 2, dated May 6, 1987, for empty drums contaminated with source materials from Sequoyah Fuels for disposal. (Exhibit B). After Sequoyah Fuels shut down, the NRC issued Amendment No. 34 to Quivira, dated December 7, 1995, to receive Allied Signal (Metropolis) crushed drums. (Exhibit C).

In a series of discussions with IDNS, it has become apparent that the state agency disagrees with the NRC determination as to 11e.(2) status with respect to Metropolis. The IDNS personnel have given various reasons for that disagreement, and our correspondence with them is attached as Exhibits D - G. Most recently, in a letter from Michael Klebe dated February 6, 2001, IDNS asserted that NRC has no jurisdiction over this material, and claimed instead that it is subject to IDNS jurisdiction exclusively under the Agreement State program.

Following receipt of the February 6, 2001 letter (Exhibit G), we met with IDNS on February 22, 2001 to explore these issues. At that time, IDNS provided us a copy of the February 16, 2001 letter. We address the issues of IDNS jurisdiction and its interpretation of Section 11e.(2) separately below.

Jurisdiction

Honeywell believes that jurisdiction over the Metropolis facility remains with NRC. Specifically, as set forth in this section, Honeywell believes that the Commission's decisions on Illinois' Agreement State status have generally and expressly excluded this facility from the state's authority.

NRC published notice of the original agreement for discontinuance of certain NRC regulatory authority in Illinois under Section 274 of the Atomic Energy Act ("AEA") on June 16, 1987. 52 FR 22864. (Exhibit H). At that time NRC authority was discontinued generally in Illinois as to Section 11e.(1) byproduct material, source materials, noncritical quantities of special nuclear materials and land disposal of materials received from others. Authority was not discontinued for 11e.(2) byproduct material. In addition, and as required by Section 274c of the AEA, NRC specifically retained authority for:

A. The construction and operation of any production or utilization facility;

B. [Exports and imports]
C. [Ocean disposal]
D. The disposal of such other byproduct, source, or special nuclear material as the Commission from time to time determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission.

The Commission further retained authority for: "The extraction or concentration of source material from source material ore and the management and disposal of the resulting byproduct material." 52 FR 22864, 22866.

The notice further included a specific order under subsection 161b and 274m of the AEA, which provided that as to Allied Chemical Corporation at Metropolis, now Honeywell, NRC regulation of the Metropolis conversion plant should be continued to protect the common defense and security. The Commission cited a Department of Energy ("DOE") comment on the proposed Illinois agreement, which recognized that uranium conversion and enrichment facilities as a complex constituted a vital national asset. DOE stated "the combination of the commercially operated uranium conversion facilities in the U.S. and the DOE operated enrichment facilities represent a complex that is an important national asset essential to maintaining the common defense and security of the United States." DOE further stated that, "it would be prudent for NRC to retain its existing regulatory authority over uranium conversion facilities consistent with its charter to regulate facilities whose operation is in the national interest." 52 FR 22864, 22866.[1] (Exhibit H).

The NRC thus determined in 1987 that "regulation of the Allied Chemical conversion plant in Metropolis should be continued under NRC jurisdiction to protect the common defense and security," and ordered that, despite the general transfer of source material authority to IDNS, the "NRC jurisdiction over the possession and use of source material by Allied Chemical (license SUB-526) shall be retained by the NRC." Id.[2]

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[1] In addition to this specific exclusion, it is notable that the NRC has defined production facilities to include uranium enrichment facilities. 10 CFR § 150.3(h).

[2] While on occasion IDNS has relied on the argument that this national security exemption should be interpreted narrowly to exclude disposal of source material, in fact, no further exemption was necessary to retain NRC jurisdiction over all operations at Metropolis since Section 11e.(2) jurisdiction was not being transferred to the state at all. The Commission's own language is clear that it determined that "regulation of the [Metropolis plant] should be continued under NRC jurisdiction." No fine distinctions as to the degree of retention of authority were

On November 5, 1990 NRC published notice of an amendment to the Section 274 agreement with the state of Illinois. 55 FR 46591. (Exhibit I). The Commission announced that the "Illinois program for regulation of 11e.(2) byproduct material and the facilities that produce 11e.(2) byproduct material generally is compatible with the Commission's program for the regulation of like materials." NRC nevertheless noted the need for further review, including notice and opportunity for hearing, if the state should seek to apply its standards to a particular site:

> However, certain standards adopted by Illinois differ from the standards adopted and enforced by the Commission for the same purpose. In accordance with the requirements of section 274o of the Atomic Energy Act, as amended, the Commission evaluated those differing standards in general, without reference to a particular site, and determined that those standards are adequate for purposes of amending the Commission's agreement with Illinois. <u>If, at some time in the future, the State seeks to apply those or other differing standards to a particular site</u>, including the West Chicago Rare Earths Facility site, <u>section 274o requires the Commission to provide further notice and opportunity for a public hearing</u> and to determine whether the State's differing standards will achieve a level of stabilization and containment of that site, and a level of protection for public health, safety and the environment from both radiological and nonradiological hazards associated with the site, which is equivalent to, or more stringent than, the level which would be achieved by any requirements adopted and enforced by the Commission for the same purpose. (emphasis supplied)

If Illinois' standards were to differ from those of NRC in the future, they were thus to be subject to further public notice and opportunity for hearing. The Commission's notice further stated that the Kerr-McGee Chemical Corporation was "the only licensee in the State affected by this amendment."

Significantly, all four Federal Register publications announcing consideration of the 1990 Amendment also made it clear that the only facility intended to be affected was the West Chicago

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implied or can reasonably be inferred. In fact, with respect to operation of production or utilization facilities the Commission has made clear that "operation" includes the storage and handling of radioactive wastes. 10 CFR § 150.15.

facility, and that the intended effect of the Amendment was to allow supervision of cleanup over certain offsite Kerr-McGee material which was classified under Section 11e.(2): "The State has no active uranium or thorium mills processing ore for its source material content. However, one facility exists under an NRC license at West Chicago, Illinois." See e.g. 55 FR 11459, 11460 (Exhibit J).

Reciting the NRC and state recognition of the "desirability of reciprocal recognition of licenses and exemption from licensing," Article I of the Agreement was amended to allow state jurisdiction of "the extraction or concentration of source material from any ore processed primarily for its source material content and the management and disposal of the resulting 11e.(2) byproduct material" The tying of the regulation of 11e.(2) byproduct material to the extraction or concentration of source material from ore makes it clear that this transfer of authority was intended to cover the former Kerr-McGee mill site, not to create a broad transfer of 11e.(2) authority in conflict with the 1987 actions and the Commission's own public notice. Significantly, under the statute and the 1990 Amendment the continued areas of exclusion from state jurisdiction included authority over production or utilization facilities and the disposal of byproduct material which the Commission determines requires a Commission license.[3] Further, the Commission retained certain authorities regarding byproduct material, including the setting of minimum standards. Everything about the 1990 action made it clear that transfer of authority for byproduct material was limited to Kerr-McGee tailings.

IDNS apparently believes that the 1990 amendment altered the NRC's jurisdiction over the Metropolis site, even though the 1987 findings and order about the significance of Metropolis to the national security remained in effect; even though the 1990 amendment was limited to byproduct material from the mill site; even though production facilities were excluded; even though the 1990 notice specifically stated that the only licensee affected was Kerr-McGee in West Chicago; and even though the public notice and all comments on the proposal were apparently directed solely to the Kerr-McGee issue.

Honeywell believes that jurisdiction over its activities remains with the NRC by virtue of the exclusions found in the 1987 agreement and the 1990 amendment, and by virtue of the Allied Chemical order found in the 1990 agreement and left intact by the 1990 Amendment. Certainly the national security concerns which prompted the order have not changed. In fact the need for uniformity of interpretation is emphasized by the differing IDNS and NRC positions on this very

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[3] As noted above, the NRC had cited DOE's conclusion that the complex of commercial uranium conversion facilities such as Metropolis and the federal enrichment facilities should be considered an important national asset.

matter. If IDNS were correct, the meaning of a federal statute, in this case section 11e.(2), would be subject to varying interpretations among the states. That cannot be the right result.

Consistent with this understanding, historically the NRC, rather than IDNS, has licensed and inspected the Metropolis facility.

Finally, the 1990 Amendment, on which the state apparently relies, specifically recognizes that if the state "seeks to apply [its] . . . differing standards to a particular site," as IDNS seeks to do here, further public notice, opportunity for hearing and Commission determination are required. In fact, even if the state were correct (and it clearly is not), given the stringent public notice requirements applicable to Section 274 agreements, extending the 1990 Amendment to include the Metropolis facility, after notice indicating that only Kerr-McGee West Chicago would be affected, would probably invalidate the Amendment as a whole. Certainly it would invalidate the Amendment as to any facility other than Kerr-McGee.[4]

Scope of 11e.(2)

As for the interpretation of 11e.(2) as applied to its materials, Honeywell urges NRC to adhere to its November 1999 letter regarding wood chips as well as the Commission's prior decisions holding that drums shipped from Metropolis to Quivira should be treated as 11e.(2) material. It believes that these interpretations are fully in accordance with the decision of the D.C. Circuit in Kerr-McGee Chemical Corp. v. U.S. Nuclear Regulatory Commission, 903 F.2d 1 (1990), and the Commission's own rulings.

The consequences of treating these materials as subject to IDNS' jurisdiction and its differing interpretation transmutes them into low-level radioactive waste ("LLRW") under Illinois law and subjects them to the IDNS fee structure.[5] Illinois seeks to collect those fees, currently $3.00 per cubic foot, from the Metropolis facility irrespective of any subsequent waste compaction or disposal out of state. For Honeywell, those fees for the materials in question

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[4] If the state were right on its position regarding jurisdiction, or even if it had any confidence that it were right, surely the place to address its arguments, which call into question central questions of national security, consistency of interpretation and agreement state policies, would be to those at NRC involved with national uniformity concerns, agreement state issues and regional administration. Instead, the state has simply asked the licensing authorities to confirm its jurisdictional interpretation.

[5] The Illinois definition of "low-level radioactive waste" expressly excludes 11e.(2) byproduct material. See e.g. 32 Ill. Adm. Code § 609.20.

would be significant. While the fees were originally imposed by the state to fund siting and construction of the Illinois Low-Level Radioactive Waste Site, that project is now moribund and the fees are being collected and accumulated (over $20 million per year) despite the failure of their original purpose. Significantly, the IDNS has told Honeywell that it does not disagree with the technical and legal suitability of the disposal undertaken by Honeywell. Apparently, only the fees are at issue.

IDNS has made it clear to Honeywell that it differs strongly with NRC's interpretation of the scope of 11e.(2) byproduct material. Its letters and arguments vary, but include the following:

- Only mill sites can have 11e.(2) byproduct material. IDNS apparently believes that once material leaves a mill it can never be 11e.(2) material. This limitation is inconsistent with the statute and NRC practice and leaves the kind of gap in regulatory coverage which was criticized in Kerr-McGee.

- Since the material in question originally came from source material, IDNS apparently believes that it must always be treated as source material. This interpretation is simply too extreme. Presumably all materials regulated by the AEA come initially from source material. Moreover, even IDNS concedes that the 1987 order confirming NRC jurisdiction over Metropolis source material remains in place and effective, and this argument is inconsistent with that conclusion.

- IDNS argues that the wastes are the uranium "product," not the byproduct. In fact, however, it is perfectly common for a product to become a waste when spilled or left as residue in a drum. See e.g. 40 CFR § 261.33(c) and (d). IDNS' attempted argument is not supported by any authority and is contrary to both usual regulatory practice and to common sense.

Finally, the case law supports Honeywell's view. The Kerr-McGee case demonstrates a direction that the AEA definition of 11e.(2) byproduct material is not to be interpreted narrowly or grudgingly but to be given a common sense reading that treats comparable risks in a comparable way no matter where the regulated material has come to be located. In re International Uranium (USA) Corporation, Docket 40-8681, MLA-4, cited by IDNS, is fully consistent with that direction, focusing on the language of the statute and its intent to provide complete coverage and rejecting state attempts to impose interpretive limitations on its coverage. Honeywell submits that it is IDNS' construction which is tortured, unnecessary and leads to

unacceptable results, with each agreement state arriving at and enforcing, its own construction of the Atomic Energy Act, irrespective of the national interest.

IDNS argues for a system where its interpretation of 11e.(2) applies in Illinois and NRC's interpretation (which IDNS describes orally as 180° opposite from its own) applies elsewhere. But such a division is entirely incompatible with the concept of Agreement States administering programs which are consistent with the NRC's; it can lead to great difficulty where wastes are shipped from one state to another for disposal; it is apparently motivated by no compelling state need other than the collection of fees which no longer have a purpose; and it jeopardizes the only remaining uranium conversion facility in the country, a facility which has been identified as presenting a strong common defense interest. It also undermines one of the purposes of federal legislation, which is uniformity of legal standards throughout the nation in an area of compelling national concern.

Honeywell believes that the Commission should adhere to the determination in its November 1999 letter, and confirm both its authority to regulate materials from the Metropolis uranium conversion facility, and its conclusion that the waste in question is 11e.(2) byproduct material.

Of course, we are ready to answer any questions and to provide further facts and discussion or to meet with you to discuss this matter further.

Very truly yours,

Percy L. Angelo

Percy L. Angelo

PLA/dd
Enclosures
cc: Russell Eggert, Esq., Mayer, Brown & Platt
Gordon Quin, Esq., Honeywell International
Hugh C. Roberts, Honeywell International
Marshall Shepherd, Honeywell International
Michael Weber, Director, Division of Fuel Cycle Safety & Safeguards, NRC
Thomas Essig, Chief, Uranium Recovery & Low-Level Waste, NRC
James Dyer, Regional Administrator, NRC, Region III
Cynthia Pederson, Director, Division of Nuclear Materials Safety, NRC, Region III
James Lynch, State Agreements Program Officer, NRC, Region III
Stephen J. England, Esq., Illinois Department of Nuclear Safety

Attachment 5

Mayer, Brown, Row & Maw Letter to NRC Nuclear Safety Letter of September 20, 2002

MAYER, BROWN, ROWE & MAW

190 SOUTH LA SALLE STREET

CHICAGO, ILLINOIS 60603-3441

PERCY L. ANGELO
DIRECT DIAL (312) 701-7330
DIRECT FAX (312) 706-9106
pangelo@mayerbrown.com

MAIN TELEPHONE
(312) 782-0600
MAIN FAX
(312) 701-7711

September 20, 2002

VIA U.S. MAIL & UPS NEXT DAY AIR

Philip Ting, Chief
Fuel Cycle Licensing Branch, FCSS
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Honeywell International, Metropolis Illinois (License SUB-526)
Supplement to March 2, 2001 Letter re: Illinois Department of
Nuclear Safety Letter of February 16, 2001

Dear Mr. Ting:

We wrote you previously on March 2, 2001 in connection with the efforts of the Illinois Department of Nuclear Safety ("IDNS") to reclassify certain materials at Honeywell International's uranium hexafluoride conversion facility at Metropolis, Illinois (License SUB-526). This letter supplements and updates our previous correspondence, and asks that you take into account a recent NRC decision as you consider the status of these materials. We are attorneys representing Honeywell with respect to that IDNS effort (see February 16, 2001 letter to you from IDNS Director, Thomas Ortciger).

Specifically, in its February 16, 2001 letter, IDNS contended that crushed drums containing residues from yellowcake shipped to Metropolis and chipped pallets contaminated with yellowcake shipped to Metropolis are subject to IDNS jurisdiction and may not be considered Section 11e.(2) byproduct material. In our previous correspondence we asked you to reject the IDNS position and to clarify NRC's jurisdiction over these materials and to confirm NRC's prior direction that they constitute 11e.(2) byproduct materials.[1]

---

[1] In support of this request we pointed out the letter from R. Dale Smith, NRC, to Quivira Mining Company, Amendment No. 2, dated May 6, 1987, and the letter from Daniel M. Gillen, NRC, to Quivira Mining Company, Amendment No. 34, dated December 7, 1995, allowing disposal of crushed yellowcake drums from the Metropolis facility and the Sequoyah Fuels Facility. Honeywell also notes the letter from John J. Surmeier, NRC, to William Paul Goranson, Quivira Mining Company (Nov. 10, 1999), confirming that certain uranium recovery wastes (i.e. chipped wooden pallets contaminated by licensed source material concentrates –

Recently the Nuclear Regulatory Commission has determined that certain wastes from the front-end of the process at the Sequoyah Fuels Corporation uranium conversion facility may be treated as 11e.(2) byproduct materials under the Atomic Energy Act ("AEA"). SECY-02-0095. Several of these wastes are entirely similar to the crushed drums and chipped pallets previously addressed in our March 2, 2001 letter.[2] We are writing to ask you to review the *Sequoyah Fuels* precedent in connection with our response to the IDNS letter.

We are aware that the NRC's *Sequoyah Fuels* decision makes reference to the circumstances of Honeywell's Metropolis plant and the scope of the effect of that decision on that plant. *Sequoyah Fuels* at 9. Honeywell believes that while its overall process differs in some respect from that operated at Sequoyah Fuels, the front end of the Honeywell process produces wastes which, in fact, qualify as 11e.(2) byproduct material. Honeywell is reviewing the *Sequoyah Fuels* decision and its applicability to Honeywell and at a later date intends to ask for NRC review of these issues as well. At this point, however, Honeywell asks only that you consider the significance of the *Sequoyah Fuels* decision for the crushed drums and chipped pallets addressed in our March 2, 2001 letter.

As previously described, the drums in question are those in which Metropolis receives yellowcake directly from the mine/mill. There is no question that those drums and their residues would be 11e.(2) byproduct material at the mill site itself. Based on the recent *Sequoyah Fuels* decision they will be treated as 11e.(2) material at Sequoyah Fuels. They should be 11e.(2) material at Metropolis as well, and indeed the December 7, 1995 NRC letter to Quivira reached exactly that conclusion.

Similarly, the chipped pallets at Metropolis were originally used to store yellowcake drums received from the mines/mills before Metropolis processing and became contaminated with yellowcake residues. These contaminated pallets would be 11e.(2) byproduct material at the mills, they have now been held to be 11e.(2) material at Sequoyah Fuels and the November 10, 1999 letter has already reached the conclusion that those pallets are 11e.(2) material at Metropolis. Honeywell asks that the NRC reject the attempt by IDNS to assert jurisdiction over and reclassify those materials.

"yellow-cake" – at Honeywell's facility) are 11e.(2) byproduct material. See Exhibits A, B & C to our March 2, 2001 letter.

[2] At Sequoyah Fuels these front end wastes also included wastes from processing steps prior to conversion, including contaminated soils from spills and sludges from raffinate processing.

The materials in question are from the front end of the Honeywell process, indeed they are produced before processing of any kind begins. They are comparable to the yellowcake loading, management and storage activities at the mill, and "can reasonably be viewed as a continuation of the milling process that was started at a licensed uranium mill." *Sequoyah Fuels* at 3. The *Sequoyah Fuels* decision makes clear that activities related to milling may take place at locations other than the mill itself and may include steps at least through the "extraction or concentration terms in the definition of 11e.(2) byproduct material." *Id.*

Section 11e.(2) byproduct material is defined by the AEA as:

> The tailings or wastes produced by the extraction or *concentration* of uranium or thorium from *any ore* processed primarily for its source material content.

42 U.S.C. § 2014e.(2) (emphasis added).

Under this definition, the tailings or wastes must be produced by the extraction or concentration of uranium or thorium; the uranium or thorium must be extracted or concentrated from any ore; and the ore must be processed primarily for its source material content. There is no question that the Metropolis crushed drums and chipped pallets with their yellowcake residues are a result of the milling process; they have just come to be located at Metropolis rather than at the mill.

Treatment of drums and pallets as 11e.(2) requires no change in policy or reinterpretation on the part of the NRC and is entirely consistent with its interpretations even prior to *Sequoyah Fuels*.[3]

Rejection of the IDNS position in this matter will have no adverse consequences. The wastes themselves have been sent out of state for disposal at properly licensed facilities. As described in our March 2, 2001 letter, jurisdiction over this issue at the Metropolis uranium conversation facility, an important national asset and the only remaining uranium conversion facility in the U.S., is and should remain with the NRC. IDNS' interpretation of the scope of 11e.(2) is entirely contrary to that of the NRC and it appears that its interest in the Metropolis materials is almost wholly monetary: the State seeks to collect fees from Metropolis for those materials under its low-level radioactive waste rules, even though Illinois' compact has no

---

[3] While *Sequoyah Fuels* comments in dicta that Honeywell does not currently have mill processing, we ask that the NRC leave that issue open at this time as some of the pre-conversion ore preparation processing activities performed at Metropolis may correspond to the milling type activities producing 11e.(2) wastes in *Sequoyah Fuels*.

LLRW disposal facility and no current plans to construct such a facility and even though the Metropolis materials are sent out of state for disposal. In Honeywell's case such fees are substantial and can impact its profitability, especially given current market conditions and the necessary focus on security concerns.

The decision in Kerr-McGee Chemical Corp. v. U.S. Nuclear Regulatory Commission, 903 F.2d 1 (1990), represents a strong direction that the AEA definition of 11e.(2) byproduct material is not to be interpreted narrowly. The *Sequoyah Fuels* decision makes clear generally that front end preparation activities at a conversion facility may result in 11e.(2) byproduct materials and that this interpretation clearly applies to crushed drums and chipped pallets bearing residues from licensed source materials (yellowcake). Honeywell asks that you consider the effect of the *Sequoyah Fuels* decision, along with the presentation in my letter of March 2, 2001, and reject the IDNS request, confirming NRC authority at Metropolis and NRC's own prior conclusion that the waste in question is 11e.(2) byproduct material.

Sincerely,

Percy L. Angelo

Percy L. Angelo

cc: Russell Eggert, Esq., Mayer, Brown, Rowe & Maw
Gordon Quin, Esq., Honeywell International
Hugh C. Roberts, Honeywell International
Marshall Shepherd, Honeywell International
Michael Weber, Director, Division of Fuel Cycle Safety & Safeguards, NRC
Thomas Essig, Chief, Uranium Recovery & Low-Level Waste, NRC
Jame Dyer, Regional Administrator, NRC, Region III
Cynthia Pederson, Director, Division of Nuclear Materials Safety, NRC, Region III
James Lynch, State Agreements Program Officer, NRC, Region III
Stephen J. England, Esq., Illinois Department of Nuclear Safety

Attachment 6

NRC Letter to Mayer, Brown, Rowe & Maw
Response to Letter Dated September 20, 2002
Regarding Honeywell International

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 25, 2002

Percy L. Angelo
Mayer, Brown, Rowe & Maw
190 South La Salle Street
Chicago, Illinois 60603-3441

SUBJECT: RESPONSE TO LETTER DATED SEPTEMBER 20, 2002, REGARDING HONEYWELL INTERNATIONAL, METROPOLIS, ILLINOIS

Dear Mr. Angelo:

I am responding to your letter dated September 20, 2002, in which you represented Honeywell International with respect to the Illinois Department of Nuclear Safety's (INDS) classification of waste (wood chips) at the Honeywell facility. In that letter, you updated an earlier correspondence, dated March 2, 2001, and asked that we consider a recent U.S. Nuclear Regulatory Commission (NRC) decision as we review this matter.

You addressed the recent decision in which the NRC determined that certain wastes from the front end of the process at the Sequoyah Fuels Corporation uranium conversion facility may be treated as Atomic Energy Act, Section 11e.(2) byproduct materials. Specifically, you stated that Honeywell believes its process is similar to that of Sequoyah Fuels and asked that we consider this while reviewing the classification of the wood chips from Honeywell.

We are currently reviewing this matter and intend to consider all of NRC's recent decisions regarding 11e.(2) byproduct material when making a final determination. We will advise all interested parties of this determination when it is finalized.

In accordance with 10 CFR 2.790 of NRC's "Rules of Practice," for Domestic Licensing Proceedings and Issuance of Orders, a copy of this letter will be available electronically for public inspection in the NRC 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).

Should you have any questions regarding this matter, please feel free to call Jill Caverly, of my staff, at 301-415-6699 or email at jsc1@nrc.gov.

Sincerely,

Daniel M. Gillen, Chief
Fuel Cycle Facilities Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Attachment 7

NRC Re: Discontinuance of Certain Regulatory Authority and Responsibility Within The State

NUCLEAR REGULATORY COMMISSION

Illinois: Discontinuance of Certain Regulatory Authority and Responsibility Within the State

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of Agreement with the State of Illinois.

SUMMARY: Notice is hereby given that on May 14, 1987, Lando W. Zech, Jr., Chairman of the Nuclear Regulatory Commission, and on May 18, 1978, James R. Thompson, Governor of the State of Illinois, signed the Agreement set forth below for the discontinuance by the Commission and assumption by the State of certain Commission regulatory authority. The Agreement was published in accordance with the requirements of Public Law 86-373 (Section 274 of the Atomic Energy Act of 1954, as amended). The exemptions from the Commission's licensing authority have been published in the Federal Register and codified as Part 150 of the Commission's regulations in title 10 of the Code of Federal Regulation.

On May 13, 1987, the Commission with Chairman Zech and Commissioners Asselstine, Bernthal and Carr agreeing, approved the Agreement between the State of Illinois and the NRC pursuant to section 274b of the Atomic Energy Act, as amended.

Commissioner Bernthal approved the Agreement between the State of Illinois and the Commission. In his judgment, however, all materials and contaminated areas which have resulted from operations of the West Chicago Rare Earths Facility would more properly be classified as "byproduct material" under section lle.(2) of the Atomic Energy Act. As such,

Commissioner Bernthal believes that jurisdiction for these materials and contaminated areas should remain with the Commission until such time as the State of Illinois elects to seek authority for *all* byproduct material.

In addition, the Commission, with Chairman Zech and Commissioners Bernthal and Carr agreeing, approved an Order to Allied-Chemical, Placing its uranium conversion plant under continued NRC regulatory authority based on common defense and security considerations. Commissioner Asselstine disapproved the order.

Commissioner Roberts did not participate in these actions.

FOR FURTHER INFORMATION CONTACT:

Joel O. Lubenau, State, Local and Indian Tribe Programs, Office of Governmental and Public Affairs, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Phone (301) 492-9887.

SUPPLEMENTARY INFORMATION

On December 31, 1987, the Nuclear Regulatory Commission initially published for public comment a proposed agreement with the State of Illinois for discontinuance by the Commission and assumption by the State of certain regulatory authority and the staff's assessment of the proposed Illinois program for regulation of radioactive materials covered by the proposed agreement.

As required by Section 274 of the Atomic Energy Act, the proposed Agreement and the staffs' assessment of the State's proposed radiation control program were to be published in the **Federal Register** once a week for four consecutive weeks. Interested persons were invited to submit comments by January 30, 1987. The 2nd publication was made on January 7, 1987. The December 31st and January 7th publications were determined to have been

the subject of **Federal Register** printing errors. As a result, they were incomplete and also contained errors. A corrected notice was published January 21, 1987 at 52 FR 2309. Since the initial notice was incomplete and also contained significant errors, the 4 consecutive week publication cycle required by the Act was restarted beginning with the January 21, 1987 notice. A revision of the date for public comments was also published at the time (52 FR 2309) changing it to February 20, 1987. The 2nd consecutive weekly notice was published January 28, 1987, at 52 FR 2898. The 3nd consecutive weekly notice was published February 4, 1987 at 52 FR 3503 but printing errors again occurred, this time resulting in the omission of text. A correction notice for this omission was published February 12, 1987 at 52 FR 4589. The 4th consecutive weekly notice was published February 11, 1987 at 52 FR 4438.

The proposed agreement would have included the Allied Chemical plant which is one of plants in the United States licensed to convert uranium "yellowcake" to UF. (The other plant is Kerr-McGee's Sequoyah plant in Oklahoma). The Commission, in its **Federal Register** notices, noted that it was considering whether continued NRC regulation of the Allied Chemical Plant is necessary in the interest of the common defense and security of the United States. The Allied Chemical plant was identified by DOE as having a potential common defense and security significance. Section 274m of the Atomic Energy Act, as amended, provides that:

No agreement entered into under subsection b...shall affect the authority of the Commission under subsection 161b. or i to issue rules, regulations, or orders to protect the common defense and security...

The Commission has decided to retain regulatory authority over licensees subject to section 274b Agreements which have common defense and security significance. An order to effectuated this policy with respect to the Allied Chemical license has been issued and is published below. The order became effective May 14, 1987.

Public comments: Five written comments on the proposed Agreement and NRC staff assessment were received prior to the end of the comment period on February 20, 1987. Three comment letters were submitted by Conner and Wetterhahn, P.C., counsel for US Ecology which holds the license for the Sheffield low-level waste disposal site. One comment letter was received from A. Eugene Rennels, the Mayor of the City of West Chicago. One comment letter was received from Covington and Burling, counsel representing Kerr-McGee which holds a license for the Kerr-McGee West Chicago Rare Earths Facility where thorium processing and recovery operations were conducted under an AEC/NRC license. These comments were fully considered by the Commission in its deliberations on the Illinois request. Summaries of the comments and the staffs responses are available in the Commission's public document room at 1717 H Street, NW., Washington, DC and the Commission's Region III Office, 799 Roosevelt Road, Building No. 4, Glen Ellyn, Illinois.

Agreement Between the United States Nuclear Regulatory Commission and the State of Illinois for Discontinuance of Certain Commission Regulatory Authority and Responsibility Within the State Pursuant In Section 274 of the Atomic Energy Act of 1954, as Amended

Whereas, the United States Nuclear Regulatory Commission (hereinafter referred to as the Commission) is authorized under section 274 of the Atomic Energy Act of 1954, as amended (hereinafter referred to as the Act), to enter into agreements with the Governor of any State providing for discontinuance of the regulatory authority of the Commission within the State under Chapters 6, 7, and 8, and section 161 of the Act with respect to byproduct materials as defined in sections 11e.(1) and (2) of the Act, source materials, and special nuclear materials in quantities not sufficient to form a critical mass; and,

Whereas, the Governor of the State of Illinois is authorized under Illinois Revised Statutes, 1985, ch.111 1/2, par, 216b and ch. 111 1/2, par 242-19, to enter into this Agreement with the Commission; and,

Whereas, the Governor of the State of Illinois certified on October 2, 1986, that the State of Illinois (hereinafter referred to as the State) has a program for the control of radiation hazards adequate to protect the public health and safety with respect to the materials within the State covered by this Agreement, and that the State desires to assume regulatory responsibility for such materials; and

Whereas, the Commission found an May 13, 1987 that the program of the State for the regulation of the materials covered by this Agreement is compatible with the Commission's program for the regulation of such materials and is adequate to protect the, public health and safety, and,

Whereas, the State and the Commission recognize the desirability and importance of cooperation between the Commission and the State in the formulation of standards for protection against hazards of radiation and in assuring that State and Commission programs for protection against hazards of radiation will be coordinated and compatible; and.

Whereas, the Commission and the State recognize the desirability of reciprocal recognition of licenses and exemptions from licensing of those materials subject to this Agreement; and,

Whereas, this Agreement is entered into pursuant to the provisions of the Atomic Energy Act of 1954, as amended;

Now, therefore, it is hereby agreed between the Commission and the Governor of the State, acting in behalf of the State, as follows:

Article I

Subject to the exceptions provided in Articles Il, IV and V, the Commission shall , discontinue, as of the effective date of this Agreement, the regulatory authority of the Commission in the State under Chapters 6, 7, and 8, and section 161 of the Act with respect to the following:

A. Byproduct material as defined in section lle.(1) of the Act;

B. Source material;

C. Special nuclear materials in quantities not sufficient to form a critical mass; and

D. The land disposal of source, byproduct and special nuclear material received from other persons.

Article II

The Agreement does not provide for discontinuance of any authority and the Commission shall retain authority and responsibility with respect to regulation of:

A. The construction and operation of any production or utilization facility;

B. The export from or import into the United States of byproduct, source, or special nuclear material, or of any production or utilization facility;

C. The disposal into the ocean or sea of byproduct, source or special nuclear waste materials as defined in regulations or orders of the Commission;

D. The disposal of such other byproduct source, or special nuclear material as the Commission from time to time determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission and;

E. The extraction or concentration of source material from source material ore and the management and disposal of the resulting byproduct.

Article III

This Agreement may be amended, upon completion by the State and approval by the Commission, to include the additional area discussed in Article II, paragraph E, whereby the State can exert regulatory control over the materials stated therein.

Article IV

Notwithstanding this Agreement, the Commission may from time to time by rule; regulation or order, require that the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source, byproduct or special nuclear material shall not transfer possession or control of such product except pursuant to a license or an exemption from licensing issued by the Commissioner.

Article V

This Agreement shall not affect the authority of the Commission under subsection 161 b. or i. of the Act to issue rules, regulations or orders to protect the common defense and security; to protect restricted data or to guard against the loss or diversion of special nuclear material.

Article VI

The Commission will use its best efforts to cooperate with the State and other Agreement States in the formulation of standards and regulatory programs of the State and the Commission for protection against hazards of radiation and to assure that State and Commission programs for protection against hazards of radiation will be coordinated and compatible. The State will use its best efforts to cooperate with the Commission and other Agreement States in the formulation of standards and regulatory programs of the State and the Commission for protection against hazards of radiation and to assure that the State's program will continue to be compatible with the program of the Commission for the regulation of like materials. The State and the Commission will use their best efforts to keep each other informed of

proposed changes in their respective rules and regulations and licensing, inspection and enforcement policies and criteria, and to obtain the comments and assistants of the other party thereon.

Article VII

The Commission and the State agree that it is desirable to provide reciprocal recognition of licenses for the materials listed in Article I licensed by the other party or by any Agreement State. Accordingly, the Commission and the State agree to use their best efforts to develop appropriate rules, regulations and procedure, by which such reciprocity will be accorded.

Article VIII

The Commission, upon its own initiative after reasonable notice and opportunity for hearing to the States or upon request of the Governor of the State, may terminate or suspend all or part of this agreement and, reassert the licensing and regulatory authority vested in it under the Act if the Commission finds that (1) such termination or suspension is required to protect the public health and safety, or (2) the State has not complied with one or more of the requirements of section 274 of the Act. The Commission may also, pursuant to section 274j of the Act, temporarily suspend all or part of this Agreement if in the judgment of the Commission an emergency situation exists requiring immediate action to protect public health and safety and the Sate has failed to take necessary steps. The Commission shall periodically review this Agreement and actions taken by the State under this Agreement to ensure compliance with section 274 of the Act.

Article IX

This Agreement shall become effective on June 1, 1987, and shall remain in effect unless and until such time as it is terminated pursuant to Article VII.

Done at Washington, DC, in triplicate this 14th day of May, 1987.

For the United States Nuclear Regulatory Commission.

Lando W. Zech, Jr,

Chairman.

Done at Springfield Illinois, in triplicate, this 18th day of May, 1987.

For the State of Illinois.

James R Thompson,

Governor.

Order To Protect the Common Defense and Security

I

Allied-Chemical Corporation, Metropolis, Illinois, (the "licensee") is the holder of License No. SUB-526 (the "licensee") issued by the Nuclear Regulatory Commission (the "Commission" or "NRC') which authorize, the licensee to use source material in a UP_5 conversion plant in Metropolis, Illinois. The license was last issued on May 28, 1985 and will expire on June 1, 1980 (Docket No.0400-3392).

II

In a letter dated October 2, 1986, Governor James P. Thompson of the State of Illinois requested that the Commission enter into an Agreement with the State of Illinois requested that the Commission enter into an Agreement with the State pursuant to section 274 of the Atomic Energy Act, as amended. The specific authority requested includes the category, source material. An

NRC staff assessment and the proposed agreement were published is the Federal Register for public comment (52 FR 2309, 2988, 3503, and 4436; correction notice at 52 FR 4569). The staff assessment noted that with respect to the Allied Chemical plant, the Commission was considering whether continued NRC regulation was necessary in the interest of the common defense and security of the United States:

III

In a letter dated November 17, 1986, the Department of Energy, ("DOE") commenting to NRC on the matter of the proposed inclusion of the NRC license to Allied Chemical among the category of source material licenses to be transferred to Illinois under a section 274b Agreement, stated that the combination of the commercially operated uranium conversion facilities in the U.S. and the DOE operated enrichment facilities represent a complex that is an important national asset essential to maintaining the common defense and security of the United States. DOE further expressed the view that, "it would be prudent for NRC to retain its existing regulatory authority over uranium conversion facilities consistent with its charter to regulate facilities whose operation is in the national interest."

IV

Upon consideration of these facts, the Commission has determined that regulation of the Allied-Chemical conversion plant in Metropolis should be continued under NRC jurisdiction, to protect the common defense and security.

V

In view of the foregoing and pursuant to sections 161b and 274m of the Atomic Energy Act, as amended, 42 U.S.C. 2201(b), 2021(m). It is hereby ordered effective immediately, that:

a. Notwithstanding the provisions of a section 274b Agreement with the State of Illinois as approved by the Commission the NRC jurisdiction over the possession and use of source material by Allied Chemical (license SUB-526) shall be retained by the NRC, and

b. NRC jurisdiction over the license shall remain in effect during the term of such section 274b Agreement unless the Commission shall determine that continued regulation by NRC is no longer needed to assure the protection of the common defense and security of the United States.

Any person whose interest may be adversely affected by this order may within 30 days of the date of this order file written comments with supporting analysis with the Secretary of the Commission explaining why this order should not have been issued. The Commission will consider any comments that are filed with a view to possible modification or rescission of the order. The filing of any comments does not stay the effectiveness of this order.

Commissioner Asselstine disapproved this Order.

Dated at Washington, DC this 14th day of May, 1987.

For the United States Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary, Office of the Secretary of the Commission.

Dated at Washington, DC this 9th day of June, 1987.

For the United States Nuclear Regulatory Commission.

Harold R Denton,

Director, Office of Governmental and Public Affairs.

(FR Doc. 87-13729, Filed 8-15-87: 8:45 am)

Attachment 8

Amendment Number One to the Agreement Between the NRC and the State of Illinois for Discontinuance of Certain Commission Regulatory Authority and Responsibility Within The State Pursuant to Section 274 of the Atomic Energy Act of 1954, As Amended

AMENDMENT NUMBER ONE TO THE AGREEMENT
BETWEEN THE
UNITED STATES NUCLEAR REGULATORY COMMISSION
AND THE STATE OF ILLINOIS
FOR
DISCONTINUANCE OF CERTAIN COMMISSION REGULATORY AUTHORITY AND RESPONSIBILITY WITHIN THE STATE PURSUANT TO SECTION 274 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED

WHEREAS, The United States Nuclear Regulatory Commission (hereinafter referred to as the Commission) is authorized under Section 274 of the Atomic Energy Act of 1954, as amended, (hereinafter referred to as the Act) to enter into agreements with the Governor of any State providing for discontinuance of the regulatory authority of the Commission within the State under Chapters 6, 7, and 8, and Section 161 of the Act with respect to byproduct materials, as defined in Sections 11e.(1) and (2) of the Act, source materials, and special nuclear materials in quantities not sufficient to form a critical mass; and

WHEREAS, The Governor of the State of Illinois is authorized under Illinois Revised Statues, 1987, ch. 111 1/2 par. 216b, and ch. 111 1/2, par. 241-19 to enter into this Agreement with the Commission; and

WHEREAS, on June 1, 1987, an Agreement between the Commission and the State of Illinois became effective which provided for State assumption under State law regulatory authority over byproduct as defined in Section Ile.(l) of the Act, source materials, special nuclear materials in quantities not sufficient to form a critical mass, and the land disposal of source, byproduct, and special nuclear material received from other persons; and

WHEREAS, Article III of that Agreement provides that the Agreement may be amended upon application by the State and approval by the Commission, to include the extraction or concentration of source material from source material ore and the management and disposal of the resulting byproduct material; and

WHEREAS, The Governor of the State of Illinois certified on April 11, 1989 that the State of Illinois (hereinafter referred to as the State) has a program for the control of radiation hazards adequate to protect the public health and safety with respect to the extraction or concentration of source material from source material ore and the management and disposal of the resulting byproduct material, and that the State of Illinois desires to assume regulatory responsibility for such materials; and

WHEREAS, The Commission found on October 17, 1990, that the program of the State for the regulation of extraction or concentration of source materials from source material ore and the management and disposal of the resulting byproduct material is compatible with the Commission's program for the regulation of such materials and is adequate to protect the public health and safety; and

WHEREAS, the State and the Commission recognize the desirability and importance of cooperation between the Commission and the State in the formulation of standards for protection against hazards of radiation and in assuring that State and Commission programs for protection against hazards of radiation will be coordinated and where necessary compatible; and

WHEREAS, The Commission and the State recognize the desirability of reciprocal recognition of licenses and exemptions from licensing of those materials subject to Amendment Number One to the Agreement; and

WHEREAS, Amendment Number One to the Agreement is entered into pursuant to the provisions of the Atomic Energy Act of 1954, as amended;

NOW, THEREFORE, IT IS HEREBY AGREED between the Commission and the Governor of the State, acting in behalf of the State, as follows:

1) Article I of the Agreement is hereby amended to expand the scope of the Agreement to include the extraction or concentration of source material from any ore processed primarily for its source material content and the management and disposal of the resulting byproduct material as defined in Section lle.(2) of the Act. As amended, Article I now reads as follows:

ARTICLE I

Subject to the exceptions provided in Articles II, IV, and V, the Commission shall discontinue, as of the effective date of this Agreement, the regulatory authority of the Commission in the State under Chapters 6, 7, and 8, and Section 161 of the Act with respect to the following materials:

A. Byproduct materials as defined in Section 11e.(1) of the Act;

B. Source materials;

C. Special nuclear materials in quantities not sufficient to form a critical mass.

D. The land disposal of source, byproduct, and special nuclear materials received from other persons.

Pursuant to Article III, and subject to the exceptions provided in Articles II, IV, and V, the Commission shall discontinue, as of the effective date of this Amendment

Number One to this Agreement, the regulatory authority of the Commission in the State under, Chapters 6, 7, and 8, and Section 161 of the Act with respect to the following.

E. The extraction or concentration of source material from any ore processed primarily for its source material content and the management and disposal of the resulting byproduct material as defined in Section 11e.(2) of the Act.

2) Article II of the Agreement is hereby amended by inserting "A." before "This Agreement," by redesignating paragraphs A. through D. as subparagraphs 1. through 4., by deleting paragraph E., relating to the extraction or concentration of source material from source material ore and the management and disposal of the resulting byproduct material and by adding a new paragraph B., relating to authorities that will be retained by the Commission. As amended, Article II now reads as follows:

ARTICLE II

A. This Agreement does not provide for discontinuance of any authority and the Commission shall retain authority and responsibility with respect to regulation of:

1. The construction and operation of any production or utilization facility;
2. The export from or import into the United States of byproduct, source, or special nuclear material or utilization facility;

3. The disposal into the ocean or sea of byproduct, source, or special nuclear waste materials as defined in regulations or orders of the Commission; and

4. The disposal of such other byproduct, source, or special nuclear material as the Commission from time to time determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission.

B. Notwithstanding this Agreement, the Commission retains the following authorities pertaining to byproduct material as defined in Section 11 e.(2) of the Atomic Energy Act:

1. Prior to the termination of a State license for such byproduct material, or for any activity that results in the production of such material, the Commission shall have made a determination that all applicable standards and requirements pertaining to such material have been met.

2. The Commission reserves the authority to establish minimum standards governing reclamation, long-term surveillance or maintenance, and ownership of such byproduct material and of land used as a disposal site for such material. Such reserved authority includes:

a. The authority to establish terms and conditions as the Commission determines necessary to assure that, prior to termination of any license for such byproduct material, or for any activity that results in the production of such material, the licensee shall comply with

decontamination, decommissioning, and reclamation standards prescribed by the Commission; and with ownership requirements for such materials and its disposal site;

b. The authority to require that prior to termination of any license for such byproduct material or for any activity that results in the production of such material, title to such byproduct material and its disposal site be transferred to the United States or the State at the option of the State (provided such option is exercised prior to termination of the license);

c. The authority to permit use of the surface or subsurface estates, or both, of the land transferred to the United States or a State pursuant to paragraph 2.b. in this section in a manner consistent with the provisions of the Uranium Mill Tailings Radiation Control Act of 1978, provided that the Commission determines that such use would not endanger the public health, safety, welfare, or the environment;

d. The authority to require, in the case of a license for any activity that produces such byproduct material (which license was in effect on November 8, 1981), transfer of land and material pursuant to paragraph 2.b. in this section, taking into consideration the status of such material and land and interests therein, and the ability of the licensee to transfer title and custody thereof to the United States or the State;

e. The authority to require the Secretary of the Department of Energy, other Federal agency, or State, whichever has custody of such byproduct material and its disposal site, to undertake such monitoring, maintenance, and emergency measures as are necessary to protect the

public health and safety, and other actions as the Commission deems necessary; and

f. The authority to enter into arrangements as may be appropriate to assure Federal long-term surveillance or maintenance of such byproduct material and its disposal site on land held in trust by the United States for any Indian Tribe or land owned by an Indian Tribe and subject to a restriction against alienation imposed by the United States.

3) Article IX of the Agreement is hereby amended by redesignating it Article X and by inserting a new Article IX As amended, Articles IX and X now read as follows:

ARTICLE IX

In the licensing and regulation of byproduct material as defined in Section lle.(2) of the Act, or of any activity which results in production of such material, the State shall comply with the provisions of Section 274o of the Act. If in such licensing and regulation, the State requires financial surety arrangements for the reclamation or long-term surveillance and maintenance of such material,

A. The total amount of funds the State collects for such purposes shall be transferred to the United States if custody of such material and its disposal site is transferred to the United States upon termination of the State license for such material or any activity which results in the production of such material. Such funds include, but are not limited to, sums collected for long-term surveillance or maintenance. Such funds do not, however, include

monies held as surety where no default has occurred and the reclamation or other bonded activity has been performed; and

B. Such State surety or other financial requirements must be sufficient to ensure compliance with those standards established by the Commission pertaining to bonds, sureties, and financial arrangements to ensure adequate reclamation and long-term management of such byproduct material and its disposal site.

ARTICLE X

This agreement shall become effective on June 1, 1987, and shall remain in effect unless and until such time as it is terminated pursuant to Article VIII.

The Agreement effective June 1, 1987 remains in effect except as modified by amendments contained in Paragraphs 1), 2), and 3) of this Amendment Number One.

This Amendment Number One to the June 1, 1987 Agreement shall become effective on November 1, 1990 and shall remain in effect until such time as it is terminated pursuant to Article VIII.

Done at Rockville, Maryland, in triplicate, this 18th day of October, 1990.

FOR THE UNITED STATES NUCLEAR
REGULATORY COMMISSION

Kenneth M. Carr,
Chairman

Done at Springdale, Illinois, in triplicate, this 23rd day of October, 1990.

FOR THE STATE OF ILLINOIS

James R. Thompson,

Governor

Attachment 9

Department of Nuclear Safety Letter to NRC
Honeywell International Uranium Hexafluoride Conversion Facility in Metropolis, Illinois

STATE OF ILLINOIS
DEPARTMENT OF NUCLEAR SAFETY
1035 OUTER PARK DRIVE • SPRINGFIELD, ILLINOIS 62704
217-785-9900 • 217-782-6133 (TDD)

Rod R. Blagojevich
Governor

Thomas W. Ortciger
Director

COPY

January 16, 2003

Philip Ting, Chief
Fuel Cycle Licensing Branch, FCSS
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Honeywell International uranium hexafluoride conversion facility in Metropolis, Illinois

Dear Mr. Ting:

The Illinois Department of Nuclear Safety (Department) has received and carefully reviewed a copy of the September 20, 2002, letter to you from Percy L. Angelo of Mayer, Brown, Rowe & Maw regarding the classification of certain radioactive wastes from the Honeywell International uranium hexafluoride conversion facility in Metropolis, Illinois (Metropolis). Ms. Angelo requested that you consider the significance of the decision of the Commission in SECY-02-0095 for the contaminated crushed drums and chipped pallets that were generated at Metropolis. The Department has carefully reviewed the Commission's July 25, 2002, decision in SECY-02-0095 (including the comments of Chairman Meserve, Commissioner Dicus and Commissioner McGaffigan) and the June 4, 2002, memorandum from EDO Travers to the Commissioners (EDO memorandum). The Department agrees that you should consider the record in SECY-02-0095 but disagrees that SECY-02-0095 supports Honeywell's arguments. To the contrary, SECY-02-0095 supports the Department's position that Honeywell wastes at issue are source material.

Mischaracterization of the Department's position

The Department initially disagrees with the posture attributed to the Department by Ms. Angelo. Ms. Angelo makes several arguments regarding background facts and the Department's purported motivation that are incorrect and have presumably been made to taint your objective review of the issues that the Department has raised. The first such argument is that the wastes in question have

always been classified as byproduct material as defined under Section 11e.(2) of the Atomic Energy Act (11e.(2) material), and it is the Department that has undertaken to reclassify them as source material. Ms. Angelo has it wrong. At the core of the Department's position is the fact that the Metropolis conversion facility is a source material licensee. To our knowledge, the facility is not licensed, and has never been licensed, for 11e.(2) material. The facility is a uranium conversion facility, not a mill. As stated in my previous letter of February 16, 2001, the NRC retained jurisdiction over the facility's source material license when it discontinued, and the State of Illinois assumed, jurisdiction over other source material licenses when Illinois became an Agreement State in 1987. The order issued by NRC at that time expressly stated that,

> Notwithstanding the provisions of a Section 274b Agreement with the State of Illinois as approved by the Commission the NRC jurisdiction over the possession and use of source material by Allied-Chemical[1] (license SUB-526) shall be retained by the NRC ....

Order to Protect the Common Defense and Security (In the Matter of Allied-Chemical Corporation, Metropolis, Illinois, Docket No. 0400-3392, License No. Sub-526).

The Department would also like to point out that the owners of the Metropolis facility have paid state fees assessed upon the generators of low-level radioactive waste every single year from 1983 through 2001. Source material wastes fall within the definition of "low-level radioactive waste." 11e.(2) material does not.

NRC, the owners of the Metropolis facility and the Department have all been in agreement, until recently, that the facility is licensed by the NRC for source material and produces waste that is classified as source material. The Department submits that it is Honeywell that is seeking to change the classification of the subject waste from source material to 11e.(2) material.

Second, Ms. Angelo alludes several times to the importance of the Metropolis facility remaining under NRC jurisdiction. Suffice it to say that the Department is not requesting jurisdiction over the facility. We have pointed out, however, that if the NRC agrees with Honeywell (wrongly, in our view) that wastes produced at the facility are 11e.(2) material instead of source material then the wastes are subject to the Department's jurisdiction based on NRC's previous

[1] Honeywell's predecessor in interest.

decisions to retain authority over source material at the facility but to discontinue jurisdiction over 11e.(2) material within the State of Illinois.[2]

Finally, Ms. Angelo states that,

> it appears that [the Department's] interest in the Metropolis facility is almost entirely monetary: the State seeks to collect fees from Metropolis for those materials under its low-level radioactive waste rules, even though Illinois' compact has no facility and no current plan to construct such a facility and even though the Metropolis materials are sent out of state for disposal.

Ms. Angelo's factual statements are largely correct, although incomplete. Her conclusion is incorrect. Ms. Angelo is correct in that generators of low-level radioactive waste are subject to fees under Illinois law and that Illinois has no operating low-level radioactive waste disposal facility. She neglects to point out that the owners of the Metropolis conversion facility have paid the fees for other, essentially identical, radioactive wastes for almost two decades and that Illinois has not had an active radioactive waste disposal facility for over two decades. Ms. Angelo is correct that radioactive wastes from the Honeywell facility are sent out of the state for disposal. That also has been correct for over two decades, not just for Honeywell but also for all Illinois radioactive waste generators, including the class of generators that generates more waste than Honeywell—the nuclear power plants.

The Department is supported by fees and collects fees assessed by law—as does NRC. The Department disagrees with Ms. Angelo's statement that the Department's interest is "almost entirely monetary." The Department's primary interest is that the law that applies to its programs and the NRC's programs is interpreted logically, consistently, and in accordance with legislative intent.

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[2] Honeywell's previous argument that the NRC discontinued jurisdiction over the Kerr-McGee facility in West Chicago but retained jurisdiction over all other 11e.(2) licensees in the state reflects a misunderstanding of the Agreement State process and a misreading of NRC's clear statements that Kerr-McGee was the <u>only</u> 11e.(2) licensee in state. If you have any uncertainty regarding the scope of Illinois' agreement under Section 274b of the Atomic Energy Act, we suggest that you consult with the Office of State and Tribal Programs. There is no basis whatsoever for an argument that NRC has retained regulatory jurisdiction over Section 11e.(2) licensees in the State of Illinois other than the Kerr-McGee facility.

SECY-02-0095 (Applicability of Section 11e.(2) of the Atomic Energy Act to Material at the Sequoyah Fuels Corporation Uranium Conversion Facility)

Having addressed Ms. Angelo's attempts to taint the Department's request, I will now proceed to discuss the Commission's Sequoyah Fuels decision in SECY-02-0095.

The Sequoyah Fuels proceeding and decision

The Sequoyah Fuels Corporation (SFC) facility in Gore, Oklahoma is an inactive uranium conversion facility included in the Site Decommissioning Management Plan.[3] Operations at the facility ceased in 1992. In 1993, SFC submitted a preliminary decommissioning plan in which it argued that wastes resulting from the concentration of uranium from yellowcake met the definition of 11e.(2) material, and that the site could be remediated under the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA). NRC declined to allow remediation under UMTRCA based on advice from the Office of General Counsel to the EDO that, "hexafluoride conversion plants were never considered as uranium mills and were not contemplated as such in [UMTRCA]." EDO memorandum, pp. 2-3. The EDO concluded in a July 6, 1993, memorandum to the Commission that, "The uranium contaminated decommissioning wastes at Sequoyah Fuels do not fit the definition of 11e.(2) byproduct material." EDO memorandum, Attachment 8, p. 3.

In 1999, SFC proposed a decommissioning plan that involved remediating the site and terminating the license under restricted conditions pursuant to NRC's license termination rule (LTR) in 10 CFR 20.1403. EDO memorandum, Attachment 1. The plan foundered, however, when SFC was unable to obtain an independent third party/custodian for institutional control. The State of Oklahoma, the U.S. Army Corps of Engineers and the Cherokee Nation declined to be responsible for institutional controls and DOE indicated that it was not interested in accepting ownership of the site under the Nuclear Waste Policy Act of 1982. Subsequently, in January 2001, SFC asked NRC staff whether waste from the front-end process at the facility could considered to be 11e.(2) material, allowing decommissioning under 10 CFR Part 40, Appendix A. EDO memorandum, p. 2. If decommissioned under Appendix A, DOE would be required under Title II of UMTRCA to assume responsibility under a general license after termination of SFC's license by NRC.

[3] The background of the SFC proceeding has been extracted from the EDO memorandum and the attachments thereto.

In response to SFC's request, NRC's Division of Waste Management prepared a Commission Paper that discussed two options: Option (1), adhering to the previous position and continuing with decommissioning under the LTR, and Option (2), agreeing with SFC's arguments and allowing some of the wastes at the site to be classified as Section 11e.(2) byproduct material. The staff concluded that both options were viable and recommended Option 2.

The Commission Paper gave rise to a Differing Professional View (DPV) submitted November 9, 2001, by a senior project manager and a health physicist in the Fuel Cycle Licensing Branch. EDO memorandum, Attachment 9. The DPV identified several legal, programmatic and technical issues and concluded that the SFC wastes should not be reclassified as 11e.(2) byproduct material, and that Option 1 should be chosen.

The DPV was then reviewed by a three-member Differing Professional View Panel, which issued a report on March 8, 2002. The panel concluded that, "it did not appear that the Draft Commission Paper has made a complete case for recommending Option 2, i.e., the acceptance of the SFC proposal" and identified seven areas in which the paper was lacking. EDO memorandum, Attachment 8, pp. 8-9. The last such deficiency was that, "the Draft Commission Paper does not address the possible unintended consequences of its recommendation with regard to other facilities in the fuel cycle making similar arguments." Finally, the panel stated:

> The Commission will need a clear presentation of all the issues discussed above to make a well-informed policy decision. The Panel recommends that the Draft Commission Paper be revised to address the areas itemized above. With this additional information included in the Commission Paper, the Panel's opinion (given the information available to it and the regulatory framework as it exists) is that the case for Option 2 as it stands is not a strong one, and that the staff may wish to consider other options.

EDO memorandum, Attachment 8, p. 9.

On June 4, 2002, the EDO sent the Policy Issue (Notation Vote) memorandum to the Commissioners in SECY-02-0095. The memorandum included nine attachments, providing the background documentation for the Commissioners. The Policy Issue memorandum discussed the advantages and disadvantages of the two options and concluded with the following recommendation:

> Both options are legally viable and protective of public health and safety and the environment. Based on the above considerations, and after weighing the advantages and disadvantages of the options, the staff recommends that the Commission approve Option 2 -- that SFC front-end waste can be classified as Section 11e.(2) byproduct material.

EDO memorandum, p. 10.

In the discussion of the disadvantages of Option 2, the EDO expressly addressed the issue raised by the DPV Panel regarding possible unintended consequences:

> There is the potential for unknown and unintended consequences from this change in the staff's position on the classification of this waste as 11e.(2) byproduct material. The staff position limits the flexibility offered in this case to the milling process (i.e., activities involved with the extraction or concentration of uranium). The staff cannot foresee any adverse consequences in this limited decision. The only other commercial conversion facility in the U.S., the Honeywell plant at Metropolis, IL, currently does not perform milling operations.[10] The three other sites in the SDMP that are considering restricted release, and in need of a third party/custodian, are clearly not involved in milling activities, and therefore could not be considered for an 11e.(2) byproduct material classification of their wastes. Once the fuel cycle is beyond natural uranium oxide, and the conversion processes take place, the milling process is clearly completed. Although the staff is mindful of a concern that there may be unintended consequences from Option 2, each case must be considered on its own merits to determine if the milling process is involved. If, however, other licensees were to argue for additional flexibility in classification of their wastes, in order to reduce disposal costs, for example, it is possible that schedules for remediating sites could be affected and additional staff resources would be needed to address any licensee proposals.
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> ***
>
> [10]Although uranium milling was not performed at Honeywell in the recent past, the staff is determining whether uranium milling was ever performed at this facility. If so, some wastes could be potentially be classified as 11e.(2) byproduct material. Honeywell has not indicated that it would pursue this classification with NRC.

EDO memorandum, p. 9.

On July 25, 2002, the Commission, by a 3-1 vote, approved Option 2. Chairman Meserve submitted comments in which he concluded that the staff's

recommendation was defensible. The Chairman focused on the statutory definition of 11e.(2) byproduct material as "the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content." 42 U.S.C.A. § 2014(e)(2). With regard to the "processing" element of the definition the Chairman stated,

> There is a strong basis for concluding that the wastes at issue arise from the extraction or concentration of uranium primarily for its source material content. SFC's front-end processing is intended and does serve to concentrate uranium. In fact, the processes are largely identical to similar stages at a uranium mill. And there is no suggestion in the definition of 11e.(2) byproduct material that all stages involved in the extraction or concentration of uranium or thorium must take place in a mill in order for the wastes to be encompassed by the definition.

Commissioner Comments on SECY-02-0095, Comments of Chairman Meserve.

The Chairman then addressed "the question of whether the extraction or concentration should be deemed to be from an 'ore'" and concluded, based on the precedent of the two proceedings cited in my previous letter to you, that wastes from the processing of material other than virgin ore for its source material content did constitute 11e.(2) byproduct material. Referring to the decision of the United States Court of Appeals in *Kerr-McGee Chemical Corp. v. NRC*, 903 F.2d 1 (D.C. Cir. 1990),[4] the Chairman stated that, "the Court determined that the fact that certain material had previously been processed through a mill did not preclude that material from being considered "ore" if it were <u>processed again for source material</u>." Id. at 7-8 (emphasis added). In addition the Chairman commented that the Commission's holding in *International Uranium (USA) Corp.*, CLI-00-1, 51 NRC 9, 23 (2000), that tailings from processing FUSRAP material are 11e.(2) byproduct material, was directly applicable to the SFC petition: "the fact that the SFC feedstock had previously been processed at a uranium mill does not preclude <u>the wastes from the subsequent processing</u> at SFC from being 11e.(2) byproduct material." (emphasis added)

Having concluded that the SFC wastes could be classified as 11e.(2) byproduct material, the Chairman then assessed whether it was appropriate to do. He concluded that it was because Option 2 enabled resolution of the long-term control of the wastes in that DOE had indicated that it was prepared to take title to the land and the 11e.(2) byproduct material whereas selection of Option 1 "would

[4] The Illinois Department of Nuclear Safety was an aligned party with Kerr-McGee Chemical Corp. in opposing NRC's interpretation of the definition of 11e.(2) byproduct material in the litigation.

unnecessarily impose the difficult challenge of finding an independent custodian for long-term institutional controls if on-site disposal is pursued."

The following key elements are to be discerned from the Chairman's comments:

1. The wastes were created from the front-end processing at the SFC facility, processing that was largely identical to similar activities at the mill.

2. Based on precedent, it was not determinative that the material processed at the SFC facility was not virgin ore, the more significant issue being that the material was processed at the facility for the source material content.

3. Selection of Option 2 was appropriate because it facilitated a long-term solution to the decommissioning of the facility whereas Option 1 did not.

Commissioner McGaffigan commented that he agreed with the Chairman's vote and approved Option 2. He concluded by stating that since the SFC wastes could be classified as 11e.(2) byproduct material, it was appropriate to do so because a determination otherwise "would only serve to slow the decommissioning at the Sequoyah Fuels' facility." Commissioner Comments on SECY-02-0095, Comments of Commissioner McGaffigan. Commissioner Diaz also voted in favor of Option 2 but had no comments.

Commissioner Dicus was the only Commissioner voting to approve Option 1 and to disapprove Option 2. Commissioner Dicus stated in her comments as follows:

> I do not believe that the front-end of the SFC UF_6 conversion process is a continuation of the milling process or that the U_3O_8 milling process product, which is the feedstock to the SFC UF_6 conversion process, is **ore**. The very nature of SFC's UF_6 front-end operations (i.e., nitric acid dissolution, solvent extraction, and evaporation/concentration) were designed and sequenced to accommodate the complete UF_6 process. In my view, a fair comparison of this example is the UF_6 conversion process currently in operation at the Honeywell facility.

Commissioner Comments on SECY-02-0095, Comments of Commissioner Dicus (emphasis in the original). No other Commissioner agreed with Commission Dicus's comment that the front-end process at SFC, which produced the wastes

that the Commission agreed could be classified as 11e.(2) byproduct material, was like the process at Honeywell's facility.

Relevance of SECY-02-0095 to Honeywell's waste

The Department submits that the first important point from SECY-02-0095 is that the proceeding involved a drawn out licensing process to decommission a facility included in NRC's Site Decommissioning Management Plan. Despite years of effort, the decommissioning project faced failure because of the inability of the licensee to obtain an independent custodian for long-term institutional controls under the LTR. In his memorandum to the Commissioners on the two options in SECY-02-0095, the EDO listed the following as the first advantage of Option 2:

> This option provides a more certain resolution of long-term control for most, if not all, of SFC's waste, by using DOE as the long-term custodian under UMTRCA, if these wastes are left on site. This option provides what may be the only viable path forward for site decommissioning, given the uncertainties associated with implementing the existing restricted release provisions of the LTR.

EDO memorandum, p. 7.

The importance of allowing SFC to proceed with decommissioning was clearly important to NRC staff and was expressly mentioned in the comments of Chairman Meserve and Commissioner McGaffigan. Considering the staff's original position in 1993, the numerous problems raised in the DPV and the concerns of the DPV Panel, it appears very doubtful that Option 2 would have been selected were it not necessary to allow the licensee to proceed with decommissioning. In contrast, the Metropolis facility is not in decommissioning, is not in the Site Decommissioning Management Plan and is not facing the near intractable dilemma faced by SFC.

Second, as is clear from Chairman Meserve's comments and his reliance on the precedent from *Kerr-McGee Chemical Corp. v. NRC* and *International Uranium (USA) Corp.*, the wastes at issue in SECY-02-0095 resulted from continued processing activity at the SFC facility. In contrast, the Metropolis wastes at issue did not result in any way from processing at the Honeywell facility. As IDNS has stated repeatedly, they are source material wastes from a uranium conversion facility. Source material is not transformed into 11e.(2) byproduct material merely by becoming a waste.

Third (and perhaps most important to the decision in SECY-02-0095), SFC argued and the staff concluded that, "the front-end of the Sequoyah processing was uranium milling ... and can reasonably be viewed as a continuation of the milling process that was started at a licensed uranium mill." EDO memorandum, p. 3. Chairman Meserve adopted this position in his comments. The processing consists of source material purification and is performed at the front-end of the SFC process for the same reason it is conducted at end of the process at the mill. EDO memorandum, Attachment 5, p. 5.

In contrast, the crushed drums and wood chips from Metropolis did not result from any process at Metropolis that could be viewed as a continuation of the milling process at a mill. The front-end source material purification process performed at SFC is not performed at Metropolis. *Id.*

As discussed above, the staff revised SECY-02-0095 upon the recommendation of the DPV panel to more fully advise the Commission on possible adverse consequences of allowing the front-end processing wastes at SFC to be classified as 11e.(2) byproduct material. In the June 4, 2002, memorandum from the EDO to the Commissioners, which provided the basis for the Commission's action, the staff expressly stated, "The staff cannot foresee any adverse consequences in this limited decision. The only other commercial conversion facility in the U.S., the Honeywell plant at Metropolis, IL, currently does not perform milling operations." EDO memorandum, p. 9.

The EDO's statement that Metropolis does not currently perform milling operations had the footnote quoted above that although milling was not performed at Metropolis in the recent past the staff was determining whether milling was ever performed at the facility, and if so, some of the wastes could be potentially classified as Section 11e.(2) material. The EDO also stated that, "Honeywell has not indicated that it would pursue this classification with NRC."[5] *Id.* The staff's determination of whether milling was ever performed at Metropolis would of course be irrelevant to the crushed drum and wood chip wastes, which were clearly not the result of any milling at Metropolis.

The EDO's memorandum to the Commissioners of June 4, 2002, advised the Commissioners that selection of Option 2 was "a limited decision," and that staff could not foresee any adverse consequences of selection of Option 2. One of the reasons that there would not be adverse consequences is that Honeywell does not conduct uranium milling at the Metropolis facility. We suspect that the

[5] Apparently, the EDO had not been advised of Ms. Angelo's correspondence of March 2, 2001, on behalf of Honeywell. The Department assumes that the EDO will be properly informed.

Commission will be surprised indeed if the staff were now to conclude that the processes at Metropolis are in fact comparable to the processes at SFC as argued unsuccessfully by Commissioner Dicus, the only Commissioner voting against Option 2 in SECY-02-0095.

Thank you for your assistance. We believe that a thorough review of SECY-02-0095 will lead you to concur with the Department that the Commission's decision in that proceeding supports the Department's position that the Honeywell wastes in issue should be classified as source material. If you have any questions, please contact the Department's Chief Legal Counsel Stephen J. England at 217/524-5652.

Sincerely,

Thomas W. Ortciger
Director

TWO:kw
cc: Paul Lohaus
Percy Angelo